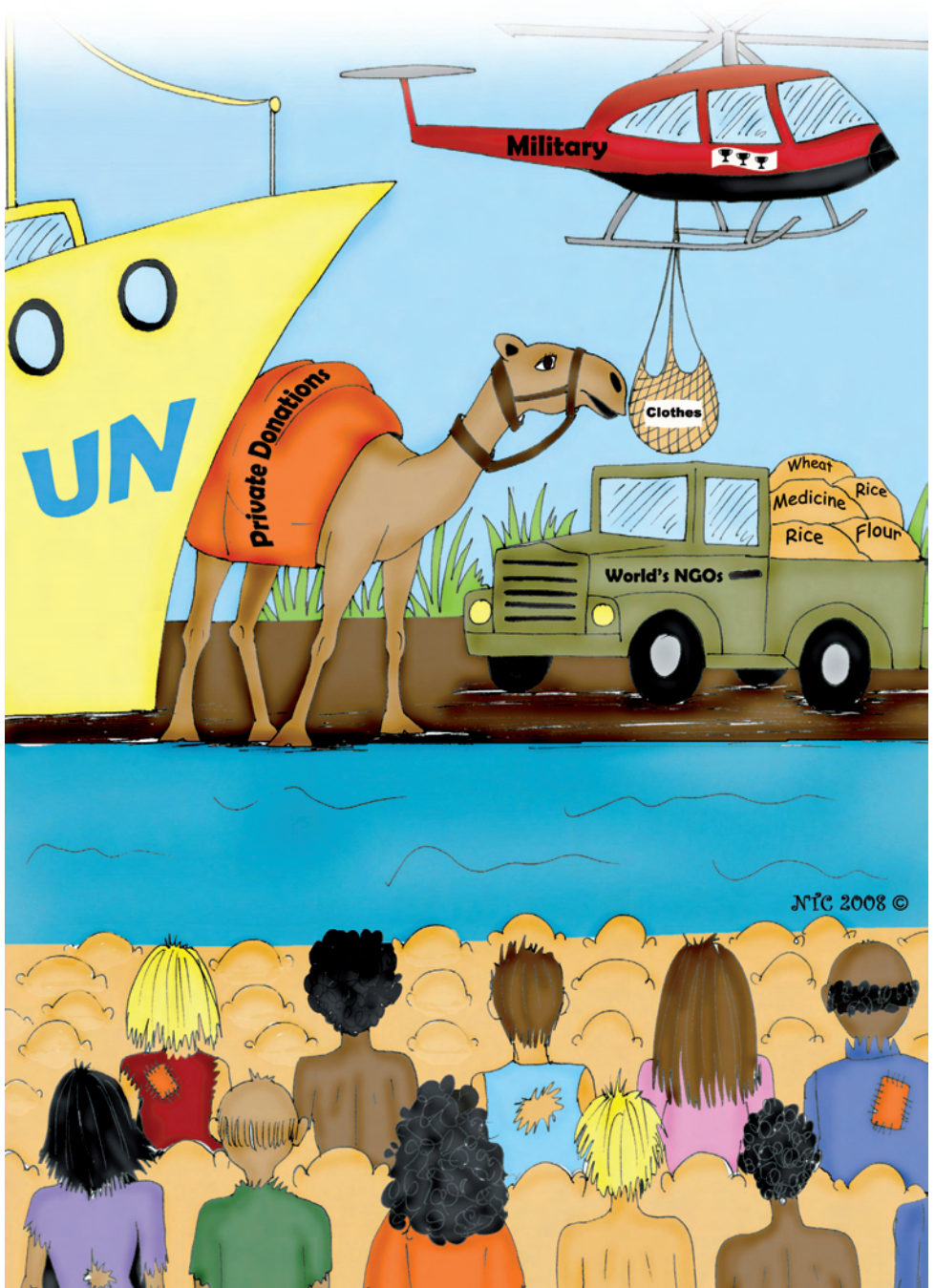


RAMINA SAMII

Leveraging Logistics Partnerships

Lessons from Humanitarian Organizations



LEVERAGING LOGISTICS PARTNERSHIPS

Lessons from humanitarian organizations

LEVERAGING LOGISTICS PARTNERSHIPS

Lessons from humanitarian organizations

Het verbeteren van logistieke partnerschappen
Lessen van humanitaire organisaties

Thesis

**to obtain the degree of Doctor from the
Erasmus University Rotterdam
by command of the
rector magnificus**

Prof.dr. S.W.J. Lamberts

and in accordance with the decision of the Doctorate Board

The public defense shall be held on

Monday 15 December 2008 at 10:00 hours

by

RAMINA SAMII

born in Teheran

Iran



DOCTORAL COMMITTEE

- Promoters:** **Prof.dr.ir. J.A.E.E. van Nunen**
Prof.dr.ir. L. N. van Wassenhove
- Other Members:** **Prof.dr. S.L. van de Velde**
Prof.dr. R.J.M. van Tulder
Dr. A. Hak
- Copromoter:** **Dr. E. van der Laan**

Erasmus Research Institute of Management – ERIM
Rotterdam School of Management (RSM)
Erasmus School of Economics (ESE)
Erasmus University Rotterdam
Internet: <http://www.irim.eur.nl>

ERIM Electronic Series Portal: <http://hdl.handle.net/1765/1>

ERIM PhD Series in Research in Management, 153
Reference number ERIM: EPS-2008-153-LIS
ISBN 978-90-5892-186-4
© 2008, Ramina Samii

Design: B&T Ontwerp en advies www.b-en-t.nl

Print: Haveka www.haveka.nl

Cover illustration by N. Tabatabai-Chury

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the author.

This is a tribute to the work of humanitarian operators and their partners.

ACKNOWLEDGEMENTS

I would like to thank a number of people without whom this thesis would not have been possible.

As my research on humanitarian logistics started at the time I was at INSEAD, my deep gratitude goes to the people who made a difference. First and foremost I would like to thank Luk Van Wassenhove for having involved me in this research area, David Kaatrud for having invested his time in making me understand and build a passion for humanitarian logistics, and the Fritz Institute for having initially sponsored research on disaster management at INSEAD.

Jo Van Nunen and Luk were instrumental in helping me overcome the psychological barrier that comes with the task of writing a dissertation. I am indebted to them as well as Erwin van der Laan for their guidance and encouraging comments, without which the finalization of this thesis from Vienna would have not been possible.

I am also grateful to Tony Hak for the final and important phases of this research and the members of the committee for their suggestions and comments. Their inputs have helped further improve the quality of this study.

Special thanks goes to Mum and Rox for their enthusiastic and unwavering support throughout these four long years.

TABLE OF CONTENTS

Acknowledgements

| | |
|--|-----|
| PART I: Introduction | 19 |
| Chapter 1 Introduction and Overview | 21 |
| 1.1 Research Objective and Questions | 24 |
| 1.2 Research Design | 26 |
| 1.3 Relevance and Contribution of Research..... | 26 |
| 1.4 Outline of the Thesis..... | 28 |
| PART II: Development of a Theoretical Framework | 31 |
| Chapter 2 Partnerships and Organizational Performance | 33 |
| 2.1 Business versus Humanitarian Organizations..... | 36 |
| 2.2 Disaster Response: A Specific Supply Chain Scenario | 39 |
| 2.3 Emergency Supply Chains and Networks | 42 |
| 2.4 Supply Chain Sourcing Strategies for Predictable & Unpredictable Disasters | 46 |
| 2.5 Humanitarian Partnerships:A Response to Disaster Management Challenges | 50 |
| 2.6 Organizational Performance | 51 |
| 2.6.1 Literature Review on Humanitarian Performance Indicators..... | 53 |
| 2.6.2 The Humanitarian Organization Balanced Scorecard..... | 54 |
| 2.7 Partnerships and Organizational Performance..... | 59 |
| 2.7.1 Temporary Supply Networks..... | 59 |
| 2.7.2 Coordination Networks..... | 64 |
| 2.7.2.1 Coordination Mechanism..... | 68 |
| 2.7.3 Business-Humanitarian Partnerships | 70 |
| 2.8 Drivers Behind Humanitarian Partnerships | 76 |
| 2.9 Conclusions | 79 |
| Chapter 3 Literature Review | 83 |
| 3.1 Networks Theory and Supply Chain Management..... | 83 |
| 3.2 Coordination Theory and Supply Chain Failure Modes | 88 |
| 3.2.1 Coordination Theory..... | 89 |
| 3.2.1.1 Coordination Structure: Virtual Organizing | 93 |
| 3.2.1.2 The Virtual Organization's Building Blocks | 98 |
| 3.2.1.3 Drawbacks to Virtual Organizing | 101 |
| 3.2.2 Supply Chain Failure Modes | 104 |
| 3.3 Resource Based View and Corporate Social Responsibility | 107 |
| 3.3.1 Demand for Resource and Capability Enhancement | 108 |
| 3.3.1.1 Contribution of Business Processes, HR & IT to Org'l Performance..... | 111 |
| 3.3.2 Supply of Resource and Capability Enhancement | 115 |
| 3.3.2.1 Business' Contribution to Non-Profit Organizations | 115 |
| 3.3.2.2 Drivers of Business-Non-Profit Partnerships..... | 117 |
| 3.3.2.3 Risks of Business-Non-profit Partnerships | 120 |

TABLE OF CONTENTS

| | | |
|------------------|---|------------|
| 3.4 | Social Capital Theory..... | 121 |
| 3.5 | Conclusions..... | 126 |
| Chapter 4 | <i>Research Framework</i> | 135 |
| 4.1 | Supplier Network..... | 137 |
| 4.2 | Coordination..... | 138 |
| 4.3 | Business-Humanitarian Partnerships..... | 142 |
| 4.4 | Social Capital..... | 146 |
| 4.4.1 | Network Actors and Social Capital..... | 148 |
| 4.4.2 | Contribution of Social Capital to Organizational Performance..... | 151 |
| 4.5 | Summary..... | 152 |
| PART III: | Empirical Research..... | 157 |
| Chapter 5 | <i>Empirical Research</i> | 159 |
| 5.1 | Research Philosophy..... | 159 |
| 5.2 | Empirical Research Methodology..... | 160 |
| 5.2.1 | Case Study Design..... | 162 |
| 5.2.2 | Selection Criteria..... | 162 |
| 5.2.3 | Data Collection..... | 164 |
| 5.3 | Research Design..... | 167 |
| 5.3.1 | Unit of Analysis..... | 167 |
| 5.3.2 | Propositions and Research Questions..... | 168 |
| 5.3.3 | Linking Data to Propositions..... | 168 |
| 5.3.4 | Research Methodology for Necessary Condition..... | 169 |
| 5.4 | Summary..... | 171 |
| Chapter 6 | <i>IFRC</i> | 173 |
| 6.1 | IFRC..... | 173 |
| 6.2 | Disasters..... | 181 |
| 6.2.1 | Gujarat Earthquake..... | 181 |
| 6.2.2 | Hurricane Mitch..... | 185 |
| 6.3 | IFRC-Fritz Institute Partnership..... | 187 |
| 6.4 | Discussion..... | 189 |
| 6.4.1 | IFRC Sourcing Strategies and Practices..... | 190 |
| 6.4.2 | IFRC Supply Chain Configuration..... | 191 |
| 6.4.3 | IFRC: Goods Mobilization and Distribution..... | 192 |
| 6.4.4 | IFRC-Fritz Institute Partnership..... | 194 |
| 6.5 | Summary..... | 198 |
| Chapter 7 | <i>UNJLC</i> | 201 |
| 7.1 | History..... | 201 |
| 7.2 | Disasters..... | 206 |
| 7.2.1 | The 2000 Mozambique Floods..... | 206 |
| 7.2.2 | Gujarat Earthquake..... | 212 |
| 7.2.3 | Afghanistan Crisis..... | 213 |
| 7.2.3.1 | Phase I: First Six Months..... | 213 |

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN
ORGANIZATIONS

| | | |
|-------------------|---|------------|
| 7.2.3.2 | Phase II: Next 18 months | 227 |
| 7.2.4 | Iraq Crisis..... | 239 |
| 7.3 | The Institutionalization Process..... | 247 |
| 7.4 | Discussion | 259 |
| 7.4.1 | The Structure of the UNJLC..... | 259 |
| 7.4.2 | UNJLC Services | 263 |
| 7.4.3 | Contribution of the UNJLC to Relief Operations | 270 |
| 7.4.4 | The UNJLC Building Blocks..... | 272 |
| 7.4.4.1 | Strategic Building Blocks | 273 |
| 7.4.4.2 | Operational Aspects..... | 277 |
| 7.4.5 | Risks and Opportunities Facing the UNJLC..... | 281 |
| 7.4.5.1 | The UNJLC in Afghanistan | 284 |
| 7.4.5.2 | The UNJLC in Iraq | 286 |
| 7.5 | Summary | 287 |
| Chapter 8 | WFP..... | 289 |
| 8.1 | WFP..... | 289 |
| 8.2 | Disaster Response..... | 290 |
| 8.3 | Business-Humanitarian Partnerships | 293 |
| 8.3.1 | WFP-TNT ‘Moving the World’ Partnership..... | 294 |
| 8.3.2 | WFP Emergency Network | 309 |
| 8.4 | Discussion | 310 |
| 8.4.1 | Disaster Response at WFP..... | 310 |
| 8.4.2 | WFP Partnerships | 312 |
| 8.4.2.1 | WFP-TNT Partnership..... | 312 |
| 8.4.2.2 | WFP Emergency Network | 322 |
| 8.5 | Summary | 323 |
| Chapter 9 | Fritz Institute | 325 |
| 9.1 | Fritz Institute | 325 |
| 9.2 | Discussion | 330 |
| 9.3 | Summary | 336 |
| Chapter 10 | Case Analysis..... | 337 |
| 10.1 | Supplier Network..... | 338 |
| 10.2 | Coordination | 342 |
| 10.2.1 | Agency-Specific Measures..... | 343 |
| 10.2.2 | Coordination Mechanisms | 346 |
| 10.2.2.1 | Inter-Organizational Coordination Mechanisms | 346 |
| 10.2.2.2 | Extra-Organizational Coordination Mechanisms | 350 |
| 10.3 | Virtually Organized Logistics Coordination Platform (VOLCP) | 352 |
| 10.3.1 | Operationalization and Success of VOLCP | 353 |
| 10.3.1.1 | Structural Elements of VOLCP..... | 353 |
| 10.3.1.2 | Building Blocks of a VOLCP | 356 |
| 10.3.2 | VOLCP and Performance | 360 |
| 10.3.3 | Risks & Opportunities Facing the Humanitarian VOs..... | 365 |

TABLE OF CONTENTS

| | | |
|-------------------|--|------------|
| 10.4 | Business/CSO-Humanitarian Partnerships..... | 369 |
| 10.4.1 | Risks and Benefits of Strategic Compared to Brokered Partnerships..... | 370 |
| 10.4.2 | Humanitarian Organizations and Strategic Partnerships..... | 375 |
| 10.4.3 | Partnership Best Practices..... | 376 |
| 10.5 | Social Capital..... | 382 |
| 10.5.1 | Bonding Social Capital..... | 383 |
| 10.5.2 | Bridging Social Capital..... | 388 |
| 10.5.2 | Partnerships and Social Capital..... | 392 |
| 10.5.3 | Social Capital and Disaster Management Capability..... | 399 |
| 10.6 | Summary..... | 407 |
| PART IV: | Conclusions..... | 411 |
| <i>Chapter 11</i> | <i>Key Findings, Contributions and Future Research.....</i> | <i>413</i> |
| 11.1 | Factors Contributing to Performance during Disaster Response..... | 414 |
| 11.2 | Management of Disaster Response Activities..... | 417 |
| 11.3 | Virtual Organizing..... | 419 |
| 11.4 | Lessons for Business..... | 422 |
| 11.4.1 | Business-Humanitarian Partnerships..... | 423 |
| 11.4.2 | Commercial Supply Chains and Logistics Coordination platform..... | 424 |
| 11.4.3 | Institutionalization Process of LCP: Lessons Learnt..... | 429 |
| 11.5 | Lessons for Humanitarian Organizations..... | 432 |
| 11.5.1 | UNJLC and the Humanitarian Community..... | 432 |
| 11.5.1.1 | Capitalizing on Opportunities..... | 434 |
| 11.5.1.2 | Consolidating the Facility..... | 435 |
| 11.5.2 | Role of IT in Humanitarian Supply Chain Management..... | 437 |
| 11.5.3 | Business–Humanitarian Partnerships..... | 438 |
| 11.6 | Limitations and Future Areas for Research..... | 439 |
| <i>Appendix A</i> | <i>– Overview of Humanitarian Organizations.....</i> | <i>445</i> |
| A.1 | “The Humanitarian Space”..... | 445 |
| A.2 | The Humanitarian Constellation..... | 447 |
| A.2.1 | Humanitarian Organizations..... | 447 |
| A.2.2 | Policy Making Organ of the Humanitarian Community..... | 450 |
| <i>Appendix B</i> | <i>- Acronyms of Organizations and Facilities.....</i> | <i>457</i> |
| <i>Appendix C</i> | <i>- Functions Interviews at each Site.....</i> | <i>461</i> |
| | BIBLIOGRAPHY..... | 463 |
| | SUMMARY IN ENGLISH..... | 481 |
| | SUMMARY IN DUTCH..... | 487 |
| | ABSTRACT IN ITALIAN..... | 493 |
| | CURRICULUM VITAE..... | 495 |

List of Figures

Chapter 1

| | |
|---|----|
| 1.1 – Impact of Disasters on World Population | 21 |
| 1.2 – Overview of the Thesis | 28 |

Chapter 2

| | |
|--|----|
| 2.1 – Preliminary Conceptual Framework | 36 |
| 2.2 – Business versus Operational Humanitarian Organization | 37 |
| 2.3 – Buyer and User in Commercial Supply Chains | 38 |
| 2.4 – Buyer and User in Humanitarian Supply Chains | 38 |
| 2.5 – Supply Chain Management Scenarios | 40 |
| 2.6 – Main Actors in Commercial Supply Chains | 42 |
| 2.7 – Main Activities in Commercial Supply Chains | 42 |
| 2.8 – Main Actors in the Humanitarian Organization’s Supply Chain | 43 |
| 2.9 – Main Activities in Emergency Supply Chains | 44 |
| 2.10 – Characteristics of Emergency Supply Chains and Networks | 44 |
| 2.11 – Characteristics of Functional and Innovative Products | 47 |
| 2.12 – Sourcing Strategies | 47 |
| 2.13 – Humanitarian Supply Chain Sourcing Strategies | 49 |
| 2.14 – Humanitarian Organization Disaster Response Balanced Scorecard | 56 |
| 2.15 – Description of Goals and Metrics | 57 |
| 2.16 – Supply Chain Actors and their Contribution to Performance | 60 |
| 2.17 – Layers of Failure Modes | 65 |
| 2.18 – Contribution of Coordination Networks to Performance | 67 |
| 2.19 – Logistics Coordination Platform: Inter-Organizational Coordination Function | 68 |
| 2.20 – Logistics Coordination Platform: Extra-organizational Coordination Function | 69 |
| 2.21 – Partnership Possibilities | 73 |
| 2.22 – Impact of Business-Humanitarian Partnerships on Organizational Performance | 74 |
| 2.23 – Factors that Promote Trust at Different Levels | 77 |
| 2.24 – Preliminary Conceptual Framework | 80 |

Chapter 3

| | |
|---|-----|
| 3.1 – A Model of Network | 85 |
| 3.2 – Role of Actors in Network Development | 86 |
| 3.3 – Relative Merits of Broad versus Narrow Networks | 87 |
| 3.4 – Forms of Interdependencies | 90 |
| 3.5 – Typology of Dependencies and Coordination Mechanisms | 91 |
| 3.6 – Coordination Structures: Relationship between Network & Coordination Theories | 93 |
| 3.7 – Major Features of Virtual Organization | 94 |
| 3.8 – Management Figures of Virtual Organizing | 97 |
| 3.9 – Examples of Sources of Supply Chain Challenges | 104 |

LIST OF FIGURES

| | |
|---|-----|
| 3.10 – Types of Failure Modes and Dependencies | 105 |
| 3.11 – Mitigation Measures against Supply Chain Shocks and Disruptions | 106 |
| 3.12 – Relationship between Resource Based Approach & Business/CSO Partnerships | 111 |
| 3.13 – Performance and Three Organizational Resources and Capabilities | 112 |
| 3.14 – The Dimensions of Social Capital | 123 |
| 3.15 – Recurrent and Common Failure Modes: Dependencies and Duplications | 129 |
| 3.16 – Potential Benefits & Risks of Business-Humanitarian Partnerships | 132 |
| 3.17 – Conceptual Framework | 134 |

Chapter 4

| | |
|--|-----|
| 4.1 – Risks and Benefits of Strategic and Brokered Partnerships | 143 |
| 4.2 – Research Framework: Business-Humanitarian Partnerships Subsection | 146 |
| 4.3 – Level of Interaction and Duration of Relationship with Network Actors/ Different Humanitarian Partnership Schemes | 149 |
| 4.4 – Level of Interdependence and Closure with Network actors/Different Humanitarian Partnership Schemes | 150 |
| 4.5 – Research Questions and Propositions | 153 |
| 4.6 – Research Framework | 154 |

Chapter 5

| | |
|--|-----|
| 5.1 – Main Research Questions | 161 |
| 5.2 – Scope of Research Project | 165 |
| 5.3 – Overview of Cases | 166 |
| 5.4 – Linking Data to Propositions | 168 |
| 5.5 – Linking Data to Research Questions | 169 |

Chapter 6

| | |
|---|-----|
| 6.1 – Federation Secretariat Structure: November 2001 | 199 |
| 6.2 – Logistics and Resource Mobilization Department: November 2001 | 200 |
| 6.3 – IFRC Good Mobilization and First Shipment Process Flow | 177 |
| 6.4 – Goods Distribution Flow and Replenishment Process | 178 |
| 6.5 – IFRC-NS Partnership | 193 |
| 6.6 – Fritz Institute | 195 |
| 6.7 – Risks and benefits of the IFRC-Fritz Institute Partnership | 196 |

Chapter 7

| | |
|--|-----|
| 7.1 – UNJLC Research | 201 |
| 7.2 – UNJLC in Brief | 203 |
| 7.3 – The UNJLC Key Activities and Events, 2000-2004 | 204 |
| 7.4 – Air Management: Prioritization, Tasking and Scheduling | 210 |
| 7.5 – The <i>Loya Jirga</i> Process | 233 |
| 7.6 – Currency Conversion Program: 7/10/2002 – 2/01/2003 Facts & Figures | 236 |

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

| | |
|--|-----|
| 7.7 – The Services & Activities of the UNJLC Core Unit | 249 |
| 7.8 – The UNJLC Structure | 260 |
| 7.9 – UNJLC Mitigation Services and Activities | 263 |
| 7.10 – UNJLC Activities and Benefits | 268 |
| 7.11 – Logistics and Nation Building | 285 |

Chapter 8

| | |
|--|-----|
| 8.1 – Enablers of the WFP- Donor/Implementing Partner/Repeat Suppliers Partnership | 312 |
| 8.2 – WFP-TNT Partnership | 313 |
| 8.3 – Drivers and Benefits of the WFP-TNT Partnership | 314 |
| 8.4 – The WFP-TNT Partnership: Excerpt from <i>The Economist</i> | 315 |
| 8.5 – Risks and benefits of the WFP-TNT Partnership | 321 |
| 8.6 – WFP Emergency Network | 323 |

Chapter 9

| | |
|---|-----|
| 9.1 – The Fritz Institute Process | 326 |
| 9.2 – Fritz Institute Initiatives | 327 |
| 9.3 – Fritz Institute Partnership Roles | 331 |
| 9.4 – Fritz Institute: Identifying Needs and Bridging the Gaps | 331 |
| 9.5 – Level of Interaction and Duration of Relationship of Different Fritz Institute Partnerships | 333 |
| 9.6 – Level of Interdependence and Closure of Different Fritz Institute Partnerships | 333 |
| 9.7 – Risks and benefits of the Fritz Institute Brokered Partnerships | 334 |

Chapter 10

| | |
|--|-----|
| 10.1 – Propositions and Research Questions | 337 |
| 10.2 – Assistance Mobilized by IFRC: Gujarat Earthquake, 2001 | 340 |
| 10.3 – Results of Tests Related to Proposition 1 | 342 |
| 10.4 – Agency Specific Mitigation Measures | 344 |
| 10.5 – Inter-Organizational Coordination Mechanisms | 347 |
| 10.6 – Additional Inter-Organizational Coordination Mechanisms | 349 |
| 10.7 – Extra-Organizational Coordination Mechanisms | 350 |
| 10.8 – The Structure of the Virtually Organized Logistics Coordination Platform | 354 |
| 10.9 – Intra, Inter & Extra-Organizational Linkages of Virtual Organizations | 355 |
| 10.10 – Strategic & Operational Building Blocks | 356 |
| 10.11 – Operationalization of Virtual Corporations | 358 |
| 10.12 – Virtually Organized Logistics Coordination Platform & Good Service | 361 |
| 10.13 – Results of our Tests Related to Proposition 2 | 364 |
| 10.14 – Risks & Opportunities facing Humanitarian Virtual Organizations & the UNJLC Response | 368 |

LIST OF FIGURES

| | |
|--|-----|
| 10.15 – Benefits and Risks of Strategic Partnerships (WFP-TNT & IFRC-Fritz Institute Partnerships) | 371 |
| 10.16 – Benefits and Risks of Brokered Partnerships (Fritz Institute Initiatives) | 373 |
| 10.17 – Result of Tests Related to Proposition 3 | 374 |
| 10.18 – WFP-TNT Partnership: Problems encountered and risks avoided | 377 |
| 10.19 – The Strategic Partnership Checklist | 379 |
| 10.20 – Strengthening of Individual and Group-level Bonding Social Capital | 384 |
| 10.21 – Enablers of the Goods Mobilization and Delivery Process | 389 |
| 10.22 – Building and Strengthening of Bridging Social Capital | 391 |
| 10.23 – IFRC: Interaction & Duration of Relationships with Network Actors/Partners | 396 |
| 10.24 – IFRC: Interdependence and Closure with Network Actors/Partners | 396 |
| 10.25 – WFP: Interaction & Duration of Relationships with Network Actors/Partners | 397 |
| 10.26 – WFP: Interdependence and Closure with Network Actors/Partners | 397 |
| 10.27 – UNJLC: Interaction & Duration of Relationships with Network Actors/Partners | 398 |
| 10.28 – UNJLC: Interdependence and Closure with Network Actors/Partners | 398 |
| 10.29 – Results of Tests Related to Proposition 4 | 399 |
| 10.30 – Results of Tests Related to Proposition 5 | 403 |
| 10.31– Results of Tests Related to Proposition 6 | 406 |

Chapter 11

| | |
|---|-----|
| 11.1 – Structural Components of UNJLC | 420 |
| 11.2 – Mitigation Measures Pursued by Business & Humanitarian Organizations | 426 |
| 11.3 – Contribution of Partnership Schemes to Key Challenges | 439 |

Appendix A

| | |
|---|-----|
| A.1 – Humanitarian Space | 445 |
| A.2 – Humanitarian Coordination Mechanisms | 449 |
| A.3 – IASC’s Full Members and Standing Invitees | 451 |
| A.4 – Relationship between IASC, Non-Operational and Operational Entities | 452 |
| A.5 – Global Humanitarian Contributions, 2007 | 453 |
| A.6 – Global Humanitarian Contributions 2007: Totals per Sector | 453 |
| A.7 – Funds Raised by Select Humanitarian Organizations, 2007/2006 | 454 |
| A.8 – WFP, UNHCR and UNICEF Top 10 Donors | 455 |

PART I

INTRODUCTION

Chapter 1 Introduction and Overview

According to the International Federation of the Red Cross and Red Crescent Societies (IFRC), the number of natural and man-made disasters has increased since the beginning of the 21st century. While an average of 470 disasters per year was reported during the 1991-2000 decade, the number has almost doubled to an average of more than 700 disasters since 2000 (IFRC, 2004). Over the past decade, weather-related disasters have more than doubled outnumbering geophysical disasters - which have remained fairly steady - by nine to one (IFRC, 2001 & 2004).

Natural disasters result in the temporary displacement of approximately five million people per year. Among natural disasters, floods affect the highest number of people: an average of 140 million per year (IFRC, 2003) while droughts claim the highest number of deaths. The effects of civil conflict and war are even more devastating. They result in an average of 13 million refugees and up to 20 million Internally Displaced People (IDP) each year. Figure 1.1 summarizes the impact of disasters on the world population.

Figure 1.1- Impact of Disasters on World Population

| | 1991-2000 (Avg/year) | 2000 | 2001 | 2002 | 2003 |
|-------------------------------|---------------------------------|-------------|-------------|-------------|-------------|
| No. of People Killed | 75,250 | 20,000 | 39,073 | 24,500 | 77,000 |
| No. of People Affected | 211m | 256m | 170m | 680m | n.a. |

Source: IFRC, *World Disaster Reports*, 2001, 2002, 2003 & 2004.

Data shows that the world’s least developed countries are particularly hit by disasters. Indeed, 88% of all those affected are in countries of medium human development where more than half of natural disasters occur (IFRC, 2001). Two-thirds of those killed, however, are from countries of low human development (IFRC, 2001).

The economic and financial implications of disasters for the international community are substantial. From the economic point of view, in a matter of minutes, natural or man-made disasters destroy the very infrastructure of a country, nullifying years of investments and development gains. Economic loss continues as long as businesses are interrupted and afflicted populations engage in extensive asset liquidation to provide for their daily needs.

The price tag of humanitarian aid - estimated at over \$18 bn only in 2005 (Riddell, 2007) - is typically borne by the international community out of their earmarked development assistance budgets. Emergency aid and reconstruction efforts decrease the amount of resources available for other development initiatives. Emergency response, recovery and reconstruction activities financed out of national budgets of the affected countries divert funds from regular development activities. They can also increase a country's debt profile. Climate change is expected to produce environmental effects that will result in an ever-increasing number of intense natural disasters. The high impact of natural disasters and conflicts on the livelihood of so many people, most of whom are particularly vulnerable as they are concentrated in the least developed parts of the world, and the implied economic loss and financial cost, calls for a closer look.

Disaster management is primarily the responsibility of the affected government. However, large-scale natural and man-made disasters often require the contribution of the international community. Humanitarian organizations are the primary governance mechanism through which the international community channels emergency funds. This thesis aims to provide a first overview on how these organizations can respond to the growing challenge of attending to more people with less resources. It aims to bring to the forefront and discuss the importance of logistics and supply chain management for the humanitarian sector. Hence, it follows an operational view of humanitarian organizations without taking into consideration their performance in terms of meeting other needs (e.g. psychological including protection against acts of atrocity) of those affected.

The logistics literature has its origins in military operations. Over the last decades, given the growing importance of logistics and supply chain management in commercial operations, an extensive literature has emerged to cover the civil sector. More recently, research on the logistics and supply chain literature have converged around issues related to responsiveness (e.g. Lee, 2002; Fine, 2000 & Fisher, 1997), adaptation (e.g. Lee, 2004), resilience (e.g. Rice & Caniato, 2003a; Sheffi, 1990), and collaboration (e.g. Bowersox, 1990).

Research on humanitarian supply chains is in its infancy. Lack of any basis in terms of conceptual and methodological apparatus on the topic has been the real motivation behind this research work. Humanitarian organizations, the relief arm of the international

community, address the basic needs of populations that experience a tragic disruption in their daily lives. Since society picks up the bill, it is important to learn more about the context in which humanitarian organizations operate and how they can best manage their supply chains. For example, it is important to know if and how humanitarian operations overcome challenges related to responsiveness, adaptation, resilience and collaboration. To this end, questions like, ‘What are the main traits of emergency supply chain’, ‘What is the context in which humanitarian organizations operate in?’, ‘What strategies can they pursue to address such challenges?’ need to be explored.

This thesis first defines humanitarian supply chains and then grounds research on humanitarian relief operations in existing theoretical frameworks. To this end, it has identified the network/alliance literature, coordination theory and the resource-base view of the firm as relevant. To build the basis for research in this important area, this thesis combines these three streams of literature with social capital, the supply chain management and the corporate social responsibility literatures.

The main thrust of this thesis is to develop a framework that helps explain the contribution of partnerships to the performance of humanitarian organizations during disaster response. As a first step, it explores the importance of a humanitarian organization’s ability to manage temporary supply networks in response to each and every emergency. It then identifies the ability of an organization to coordinate its response with other humanitarian organizations as well as key stakeholders as an effective mitigation measure against disaster-specific logistics failure modes. It argues that select private sector and Civil Society Organizations (CSOs) partnerships can enhance an organization’s ability to overcome existing resource/capability weaknesses. Finally and most importantly, it identifies social capital as the differentiating factor in organizational performance.

In a second instant, to relate humanitarian supply chain management to commercial operations, this research verifies the relevance of the humanitarian logistics partnership schemes to commercial supply chains. More specifically, it explores when, to what extent and under what conditions strategies pursued by humanitarian organizations in terms of organizational structures and practices can be applied to improve the resilience of commercial supply chains.

This chapter is organized as follows. After defining the main research objective and questions, we briefly describe our research design. In section 1.3, we elaborate on the relevance and contribution of this research to the supply chain literature. The last section provides an overview of the structure and chapters of the thesis. Given the novelty of the research subject, to ensure a common footing to the reader, Appendix A provides a snapshot of key humanitarian concepts, organizations and existing structures.

1.1 Research Objective and Questions

The goal of this research is to examine the role and contribution of humanitarian partnerships to the organizational performance of a humanitarian organization during large-scale disasters. Therefore, the object of our study is humanitarian organizations and our domain is response to large-scale disasters. The proposed propositions and research sub-questions try to explain the relations between our independent variable, i.e., partnerships and our dependent variable, i.e., performance by defining relevant mediating factors and mechanisms influencing performance.

For the purpose of this thesis, humanitarian organizations are defined as those *non-for-profit* organizations - regardless of their size, geographical or thematic focus - whose activities facilitate or include the delivery of aid or assistance in order to save lives and alleviate human suffering. This definition includes operational and non-operational humanitarian organizations but excludes for-profit organizations and those non-for-profit organizations that do not address humanitarian emergencies and operate merely at the policy level or have an advocacy role (e.g. fight for the rights and needs of the vulnerable). Operational humanitarian organizations are those organizations that manage emergency supply chains while non-operational humanitarian organizations provide a service (e.g. in the area of logistics) to operational humanitarian organizations.

Since the focus of this thesis is response during large-scale disasters, the performance of humanitarian organizations is measured against short-term, disaster-specific objectives as opposed to reconstruction and long-term development objectives related to man-made or natural emergencies.

Humanitarian organizations are expected to operate in accordance with the principles of humanity, neutrality and impartiality (Appendix A). In full respect of these humanitarian principles, in this thesis, organizational performance is studied using process and output indicators. The process indicators relate to a humanitarian organization's ability to meet its own operational targets for each disaster (internal perspective) and improve its activities and create value (innovation & growth perspective). The output indicators are related to how well a humanitarian organization meets donor expectation (financial perspective) and responds to the needs of the beneficiaries (beneficiary perspective) during each disaster.

We set the stage for our research project by first defining disaster management and organizational performance. We then state the focus of our thesis, which is how partnerships can help humanitarian organizations address the challenges of disaster response. To gain a better understanding of the impact of partnerships on the performance of humanitarian organizations, we develop a conceptual framework. We then derive a number of research questions that are explored and propositions that are tested against our empirical evidence. The research objective of this research is as follows:

Research Objective:

To develop a comprehensive framework that explains the relationship between partnerships and the performance of humanitarian organizations during disaster response.

Research Questions:

To reach this research objective, the following research questions are defined:

1. *What factors contribute to the performance of humanitarian organizations during disaster response?*

This research question is explorative. It aims to identify the range of factors that impact the performance of humanitarian organizations.

2. *How do humanitarian organizations manage their disaster response activities?*

This research question is explorative. It aims to identify the underlying mechanisms, resources, structures, and best practices used by humanitarian organizations during disaster response and explore how they are developed.

1.2 Research Design

The study of the humanitarian sector is in its initial stages. The aim of this thesis is to develop definitions and a framework for future studies on disaster management. To put emergency supply chains into context, this study builds on the theoretical frameworks of organization sciences, operations management and corporate social responsibility. Based on the following branches of literature, a conceptual model is developed. The conceptual model serves as a basis for a number of propositions tested and verified with empirical data.

This research is mainly exploratory in nature. Since we try to understand what explains the performance of humanitarian organizations during disaster response, this research also contains elements of explanatory research. To support our research objective, we start by the definition of disaster management and emergency supply chains and describe the context in which humanitarian organizations operate.

1.3 Relevance and Contribution of Research

The results of this research are relevant to researchers, business and humanitarian organizations.

An understanding of the state of humanitarian supply chains is necessary to identify future research on the subject as well as guide humanitarian organizations in their development path. This research project can be considered as the first attempt to define, explain and explore the operations of the humanitarian sector. As such, it aims to provide the basis for future research in this area by providing a rich description of humanitarian operations and proposing a framework applicable across organizations explaining organizational performance.

This research contributes to the scientific study of supply chain management in two significant ways. First, it establishes humanitarian supply chains as a distinct topic of scientific research worthy of study and analysis. Second, by relating commercial supply chains to humanitarian supply chains, it shows under which circumstances we can expect commercial supply chains to leverage and resort to their portfolio of partnerships to

improve their organizational performance. It achieves the latter by applying theories and insights gained from different disciplines and empirically grounded in the commercial sector to the humanitarian sector.

This research has also practical relevance for business and the humanitarian sector. Part of its social responsibility activities, business is increasingly interested in engaging with non-profit organizations. This research articulates the steps business needs to take prior and during its partnership with a non-profit. It emphasizes best practices and proposes a checklist. Second, while humanitarian organizations can learn from business when it comes to managing large-scale routine operations, business may be able to learn from the experience of humanitarian organizations when it comes to the need to respond to unpredictable large-scale events that affect commercial operations. We argue that humanitarian organizations manage temporary, global, dynamic and multiple supply chains and face a range of logistics failure modes. As more and more commercial supply chains operate supply chains with similar traits and meet a similar range of challenges, this research helps identify areas of mutual interest and application.

As far as its practical contribution to the humanitarian sector is concerned, this research project provides a different perspective to humanitarian operators. It articulates, brings together and analyzes the recent experience of different humanitarian organizations on networks, coordination mechanisms and partnerships. In so doing, it helps outline the future challenges and opportunities faced by the sector. It also provides an understanding of when and why certain supply chain strategies can optimize the response capability of humanitarian organizations.

The results of this research are structured into a framework that explains the performance of humanitarian organizations during emergency response. A framework is a useful approach in gathering and analyzing insights, arguments and empirical evidence from multiple theories and disciplines. It is useful in identifying gaps in our understanding of a phenomenon. It is also useful in identifying uncovered areas.

1.4 Outline of the Thesis

This thesis consists of four parts (Figure 1.2). Part I presents the topic of research and the research objective and questions. Part II includes three chapters. By referring to the humanitarian literature, Chapter 2 derives at our preliminary conceptual framework by describing and defining humanitarian emergency supply chains, organizational performance and the range of partnership schemes humanitarian organizations engage in. To derive at our final conceptual framework, we review relevant literature to identify what enhances the disaster management capability of a humanitarian organization. In Chapter 4, we develop our research framework to be tested and explored by our empirical research. Our empirical research is collated in Part III. In Chapter 5, we present the empirical research methodology pursued by this study. Chapters 6, 7, and 8 present and discuss our field research conducted at IFRC, United Nations Joint Logistics Center (UNJLC), and World Food Programme (WFP). Chapter 9 presents our desk research on the Fritz Institute. Chapter 10 analyzes the data and presents our conclusions by relating the results to the conceptual model. Part IV concludes our research by highlighting major contributions, limitations and suggestions for future research.

Figure 1.2 - Overview of the Thesis

| | |
|-----------------|---|
| PART I | Introduction Chapter 1: Introduction and Overview |
| PART II | Development of a Theoretical Framework Chapter 2: Partnerships and Organizational Performance Chapter 3: Literature Review Chapter 4: Research Framework |
| PART III | Empirical Research Chapter 5: Empirical Research Chapter 6: IFRC Chapter 7: UNJLC Chapter 8: WFP Chapter 9: Fritz Institute Chapter 10: Case Analysis |
| PART IV | Conclusions Chapter 11: Key Findings, Contributions and Future Research |

PART II

DEVELOPMENT OF A THEORETICAL FRAMEWORK

Chapter 2 Partnerships and Organizational Performance

Today, one of the biggest challenges and opportunities facing a company is related to its supply chain. The source of temporary competitive advantage (Fine, 2000) - the ability to deliver a wide range of items and services to customers at the request time and place - is believed to lie in the characteristics of the supply chain. Although efficiency remains important, firms that manage supply chains that are not responsive to unexpected changes or fail to adapt to gradual structural shifts loose market share. Companies that continually assess their supply and distribution chains with a view to redesign and adjust them to the changing environment tend to lead in their respective industries. Supply chain management is equally important to humanitarian organizations as it determines the effectiveness and efficiency of their disaster response operations.

The primary goal of humanitarian organizations is to limit human loss and suffering by quickly restoring acceptable living conditions prior or after natural and man-made disasters. To respond to the needs of populations in need and at risk, humanitarian organizations manage three distinct types of supply chains: development, recovery and emergency supply chains. Development supply chains address the needs of the most disadvantaged populations on a medium to long-term basis. Examples include assistance to semi-permanent refugee camps or school feeding programs for children. Recovery supply chains address the post-emergency needs of an afflicted population including reconstruction. The focus of this thesis is supply chains and networks set up in response to emerging and sudden natural or man-made disasters.

To master disaster management and ensure the arrival of the right goods at the right place at the right time, humanitarian organizations have to excel in disaster preparedness¹ and disaster response (Chomilier et al., 2003). Samii et al. (Samii et al., 2002b) have identified the five pillars of disaster preparedness. These are a stand-by and qualified humanitarian personnel; robust knowledge and information management systems; well-established disaster response plans and processes; sufficient contingency funding and adequate level of

¹ Disaster preparedness is not to be confused with disaster prevention which includes actions such as construction standards against earthquakes that aim to reduce the vulnerability of segments of population vis-à-vis certain disasters.

inventory and stand-by equipment; and inter-organizational cooperation agreements with donors, recipient governments, and suppliers. While preparedness issues are referred to throughout this study, the thrust of this thesis is the second component of disaster management, namely disaster response mainly from the supply chain perspective.

The humanitarian literature has highlighted the importance of partnerships in disaster response. Although research on partnerships in humanitarian relief is scarce, in a recent study, Binder & Witte (Binder & Witte, 2007) study the role of private sector companies in humanitarian operations. They conclude that private sector engagement in humanitarian operations, although still marginal in terms of number of companies involved and financial contributions, has increased. Publicly available data shows that the humanitarian sector has attracted in-kind contribution predominately from three sectors: logistics, IT and telecom. Although the literature concludes that business partnerships have the potential to improve the level of disaster relief services (Globalgivingmatters, 2005; Thomas & Fritz, 2006; Binder & Witte, 2007), there has been no attempt to explain the relationship between business contribution and the performance of assisted humanitarian organizations.

Many actors play an active role in the humanitarian supply chain. These include donors, suppliers, the military, host government, neighboring country governments, NGOs, other humanitarian organizations and logistics service providers (Samii & Van Wassenhove, 2002b; Kaatrud et al., 2003). A humanitarian organization depends on these actors for the mobilization, transport and distribution of relief items.

Finally, given a simultaneous call on limited logistics resources by all those actors involved in disaster response, a humanitarian organization also needs to coordinate its relief activities with other humanitarian organizations as well as key stakeholders.

Until recently, humanitarian organizations were evaluated mainly from the institutional perspective – mission to save lives and reduce human suffering – rather than the operational one. Today, the increased number and scale of disasters coupled by limited access to resources have enhanced the need for more efficient and effective relief operations. Against this background, the thinking among the progressive humanitarian organizations and donors has evolved. Donors require humanitarian organizations to be more results-oriented and their operations more accountable and transparent (Van Wassenhove, 2006). As a result, apart from minimizing the social cost of an emergency,

humanitarian organizations are starting to embrace a wider set of objectives. These include the: i) need to protect development gains, i.e., minimize the long-term and economic cost of a disaster, ii) become cost-effective, i.e., minimize the financial cost of their relief operations, and iii) operate efficiently, i.e., reduce time of delivery.

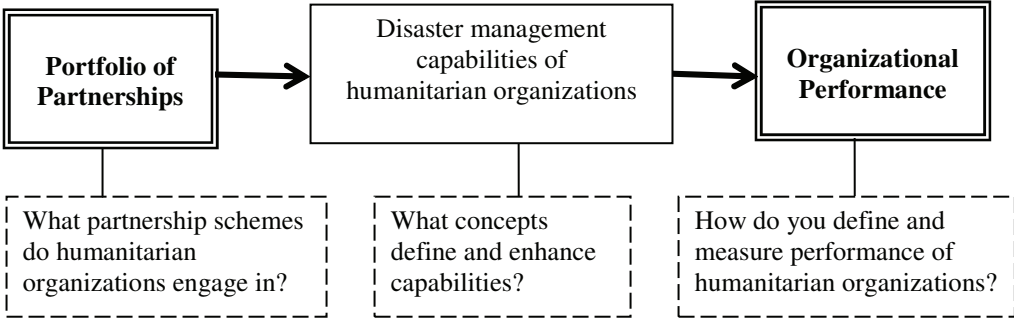
Logistics² efforts account for 80 per cent of disaster relief (Turnick, 2005). Since logistics is central to relief operations (Chomilier et al, 2003) as well as the most expensive part (Van Wassenhove, 2006), Beamon & Balcik (Beamon & Balcik, 2008) argue that measuring the performance of relief chains is of primary importance. To date there have been few attempts to develop performance metrics and measurement systems for humanitarian organizations. None of the proposed performance measurement frameworks provide a holistic view of the performance of humanitarian organizations during disaster response. Performance measurement for emergency chains is not only critical to secure donor funding and improve the relief mission (Beamon & Balcik, 2008), but also to evaluate the contribution of partnerships to performance. In this respect, the literature has identified the need for an effective partnership evaluation framework that can measure the impact and outcome of partnerships on humanitarian operations (Binder & Witte, 2007).

This Chapter aims to achieve three objectives. To identify what partnership schemes humanitarian organizations engage in, it will first review and build upon the existing literature on humanitarian partnerships and networks. To define performance of humanitarian organizations, it will propose a performance measurement framework. Finally, by describing the impact of partnerships on organizational performance, it will try to identify the concepts that can help us understand the disaster management capabilities of humanitarian organizations (Figure 2.1). The concepts will then be further developed through a literature review in Chapter 3.

2

Historically, in the humanitarian community, the term logistics has been used to express the functions of procurement and transportation as well as the supply and distribution flows. In this thesis the terms of logistics and supply chain management are used interchangeably.

Figure 2.1 – Preliminary Conceptual Framework



To build an understanding of emergency supply chains and networks this chapter starts with a brief description of the main differences and similarities between business and humanitarian organizations. Section 2.2 puts disaster response in the context of supply chain management. Section 2.3 distinguishes between commercial and humanitarian supply chains and outlines the structural traits of emergency supply chains. By applying Lee’s (Lee, 2002) “uncertainty framework” to humanitarian supply chains, section 2.4 identifies the most adequate supply chain sourcing strategy given the demand and supply characteristics of relief items and the need to respond to predictable and unpredictable disasters. Section 2.5 identifies the range of challenges facing the sector and helps put into context the need for different partnership schemes. Section 2.6 defines organizational performance in the context of humanitarian organizations by elaborating a humanitarian organization balanced scorecard. Section 2.7 puts into relationship different partnership schemes and organizational performance. Finally, section 2.8 reviews the humanitarian literature with a view to identify the drivers behind humanitarian partnerships.

2.1 Business versus Humanitarian Organizations

In Chapter 1 we defined humanitarian organizations as those non-for-profit organizations whose activities facilitate or include the delivery of aid or assistance in order to save lives, meet basic human needs and alleviate human suffering. As one of the units of analysis of this thesis is a humanitarian organization, below we provide an introductory note on its

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

main characteristics. By comparing humanitarian organizations with for-profit organizations, we can appreciate how the unique goals, features and constraints of operational humanitarian organizations affect their supply chains and performance.

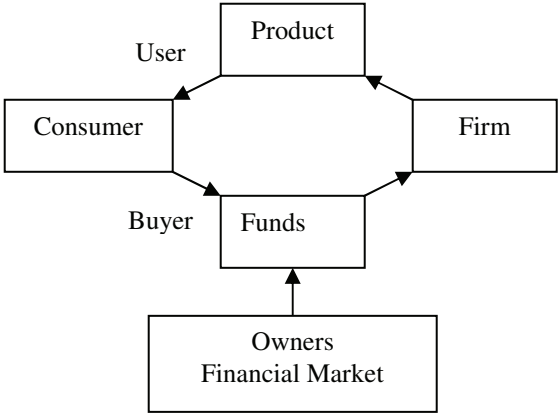
Figure 2.2 – Business versus Operational Humanitarian Organization

| | Business | Humanitarian Organization |
|------------------------------------|---|---|
| Goal | Profit maximization by satisfying a market need | Social Profit, respond to a humanitarian need |
| Ownership | Owners | Members |
| Source of fund/revenue | Consumers | Donors |
| Services/Scope of impact | Commercial Provision of private goods to fulfill private interest | Humanitarian Provision of goods and services to address social interest and need |
| Transactions coordinated by | Primarily by Price | Primarily by humanitarian needs and social and moral obligation |
| Survival & growth | Customer satisfaction, profit | Social acceptance |
| Object of Competition | Product | Donations |
| Performance expectations | Financial: shareholder value (e.g. dividends) through customer satisfaction | Fulfillment of a social contract, conformity with expectations of the environment |

There is a vast body of literature that contrasts and compares for-profit and non-profit organizations. Beamon & Balcik (Beamon & Balcik, 2008) compare these two types of organization by revenue sources (Moore, 2000), goals (Moore, 2000; Boland & Fowler, 2000), stakeholders (Speckbacher, 2003) and performance measurement. Drawing on this literature, we propose to compare business and humanitarian organizations from eight perspectives (Figure 2.2).

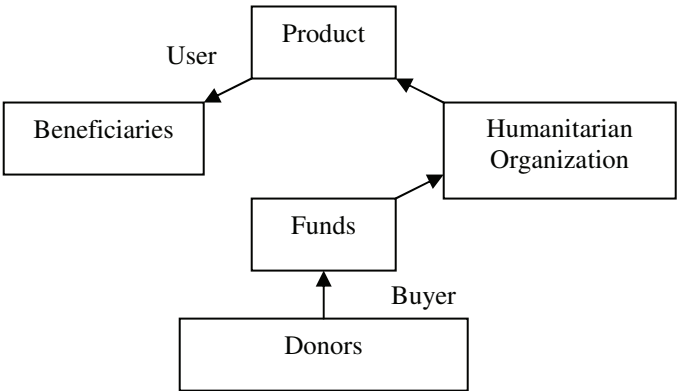
The primary goal of business is to make profit for its owners by selling private goods and services to consumers. Business competes on the market through its products and transactions are regulated by the price mechanism. A firm’s resource generation capacity and performance are directly tied to customer satisfaction as consumers are both users and buyers of a firm’s product (Figure 2.3).

Figure 2.3 – Buyer and User in Commercial Supply Chains



Unlike firms, humanitarian organizations lack any manufacturing or selling function. Moreover, unlike commercial operations, the buyer and user of humanitarian services are two different entities. The user is the beneficiary while the buyer is the donor (Figure 2.4). Transactions are regulated by humanitarian needs and the social and moral obligation of the international community. Competition among humanitarian organizations is centered around the buyer function, i.e., the fund raising capability and to a lesser extent during the procurement stage.

Figure 2.4 – Buyer and User in Humanitarian Supply Chains



It is important to highlight the very different role assumed by customers and end-beneficiaries in the commercial and humanitarian supply chains. In commercial supply chains, the customer drives/pulls, is more and more integrated in the supply chain (e.g. direct sales model). In humanitarian relief, the end-beneficiary, although highly valued, has very little voice in the process. It does not purchase nor pay for the delivered services. Humanitarian organizations dominate the supply chain as service providers while donors, heavily influenced by political and military agendas, actions and decisions, define the scope of the operation through their contribution (Benini, 1999).

A for-profit's shareholders determine the vision and strategies of the firm. The vision of a humanitarian organization is driven by humanitarian needs and its authority derives from a universally shared value: need for solidarity. The survival and growth of non-profit organizations in general and humanitarian organizations in particular depend on how well they match the expectations of society and their stakeholders. In this respect, financial stability is crucial to their survival but financial resources are a constraint rather than a goal (Beamon & Balcik, 2008).

Controlled by their members, humanitarian organizations intervene where the market and government mechanisms have failed. Indeed, the international infrastructure of humanitarian, development and economic organizations exist to support or, in extreme cases, substitute for weak governments in the context of the government-donor relationship (Samii, 2006). This international infrastructure performs a dual intermediation role: It assists beneficiary countries to maximize the use of donor funds and donors to efficiently channel funds to beneficiary countries (Samii, 2006).

2.2 Disaster Response: A Specific Supply Chain Scenario

To understand the context in which humanitarian organizations stage their response operations, we propose a framework that differentiates between different supply chain scenarios. The framework distinguishes between routine and event-related supply chains mounted in response to predictable and unpredictable situations (Figure 2.5).

Fisher (Fisher, 1997) contends that what determines the level of demand volatility is the nature of the product. He provides a definition for functional and innovative products, further developed by Lee (Lee, 2002). Functional products are staples that satisfy basic needs and have long life cycles. They are products for which customer requirement for variety is low, stable and demand is predictable. In contrast, innovative products are those products that have short life cycles, come with high variety, have high innovation and fashion contents and for which there is limited history of customer demand making their demand highly unpredictable.

Figure 2.5 – Supply Chain Management Scenarios

| | | |
|---------|---|--|
| Event | Large Event Organization (Olympic games, music parades, conventions, predictable disasters) | Unpredictable Disasters (Fire, hurricane, terrorism, earthquake) |
| Routine | Functional Products (Basic apparel, food) | Innovative Products (Fashion, hi-tech items) |
| | Predictable | Unpredictable |

Fisher argues that functional products with long product life cycle and low levels of variety have stable demand. Innovative products with short life cycles, high innovation and fashion contents that come in a large variety have unpredictable demand. We advance that producers of functional products by responding to a predictable demand manage a series of routine operations (lower left quadrant of Figure 2.5). Although producers of innovative products do face an unpredictable demand, we argue that they too manage routine supply chain models (lower right quadrant of Figure 2.5).

The third typology of supply chains scenario are those related to large one-off events such as sports competitions, conventions and, to a certain extent, emerging disasters. For example, some parts of the world are vulnerable to cyclical disasters like the hurricanes in Central America and the Caribbean, drought in the Horn of Africa or floods in Bangladesh. Advance planning and monitoring of events (e.g. rainfall data in case of drought) allows for the elaboration of demand data. As these types of events are either fixed in time and space or predictable to a certain extent, they fall within the predictable demand category (upper left quadrant of Figure 2.5).

The last category consists of supply chains designed in response to unpredictable and large-scale one-off events such as sudden disasters. Indeed, most natural and man-made disasters (e.g. 2004 tsunami, 2006 Lebanon crisis) remain unpredictable with respect to their location, nature, intensity, geographical coverage and timing (upper right quadrant of Figure 2.5).

Companies actively manage their supply chains with a view to reduce the gap between demand and supply. To address the front-end uncertainties, they use a set of techniques and blend the power of information technology with human input to forecast predictable and unpredictable demand. They capture and elaborate sales data, use proxies that can serve as guiding indicators, remain close to the market place, postpone final product configuration and keep an eye on structural shifts (Ferdows et al., 2004; Fisher et al. 1994; Lee, 2004; Magretta, 1998). To best respond to the needs of their customers, they make a series of strategic decisions regarding their asset configuration, products, operations and supplier network.

The majority of supply chains managed by business are routine operations that rely on supply chain models designed for repetitious actions. On a recurrent basis, private and public entities manage a series of supply chains related to calendar- and location-fixed one-off and repeated events. Consequently, business has to overcome major and unpredictable failure modes only on an extraordinary basis. This can partially explain why companies have plans against recurrent, low-impact risks while few have plans and are capable to respond to high-impact, low-likelihood risks (Rice & Caniato, 2003a).

In contrast, humanitarian organizations are increasingly tied up in the management of large-scale, sudden and complex³ disasters. Those with a global mandate operate in fast clockspeed environments and need to respond to do not know when, where, what, how much and how many times situations. Consequently, humanitarian organizations need to construct and manage a series of non-routine supply chains in response to predictable and unpredictable large-scale events repeatedly.

³ Complex disasters are defined as ‘a humanitarian crisis in a country, region or society whether there is significant or total breakdown of authority resulting from internal or external conflict and which requires an international response that extends beyond the mandate or capacity of any single humanitarian agency.’ (UNICEF, 2003)

2.3 Emergency Supply Chains and Networks

To produce and sell goods and services to customers, firms manage supply chains and networks. Supply chains refer to the *order* of actors and activities associated to the movement of goods from the raw material stage through to the end-customer while supply networks refer to the series of *relationships* maintained over time by a firm to achieve its supply chain objectives. Supply Chain Management (SCM) is defined as “a set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses and stores, so that merchandise is produced and distributed at the right quantities, to the right location and at the right time, in order to minimize system-wide costs while satisfying service level requirements” (Simchi-Levi et al., 2000). SCM in commercial activities involves a series of actors (Figure 2.6), a forward and backward flow and integration of resources – material, information and finance – among supply chain members and the following processes: planning, sourcing, making, delivering (transport, storing and distribution) and returning through reverse logistics (Figure 2.7).

Figure 2.6 – Main Actors in Commercial Supply Chains

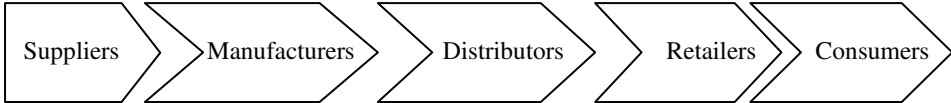


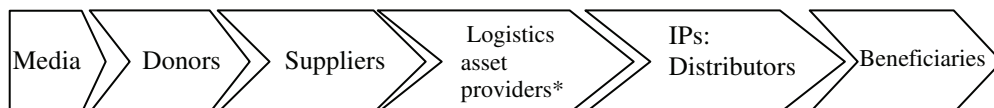
Figure 2.7 – Main Activities in Commercial Supply Chains



Emergency supply chain involves the active participation of seven networks of actors. The media through coverage of a disaster activates an emergency supply chain and provides information. Donors through provision of funds, goods, services and people fuel the emergency supply chain. Donors together with suppliers are a source of relief items. Four actors contribute to a humanitarian organization’s logistics assets requirements: donors, recipient country(s), neighboring countries and military forces. Implementing partners (IPs) who are usually part of the NGO community typically act as distributors (Figure 2.8).

Finally, beneficiaries as passive actors are at the receiving end of a humanitarian organization's supply chain.

Figure 2.8 – Main Actors in the Humanitarian Organization's Supply Chain

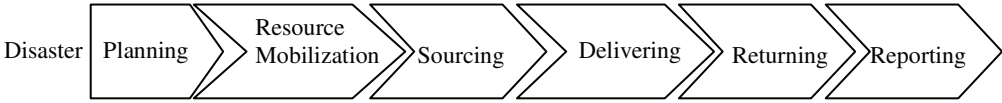


* Donors, recipient and neighboring country & military forces

Humanitarian organizations operate along a consolidated business model (Samii & Van Wassenhove, 2006). When disaster strikes, to plan their activities, they engage in an initial needs assessment exercise. They determine the level of destruction, number of people affected and their initial needs. Then they assess the availability of local resources, magnitude of international assistance required, means of delivery, etc. This is with a view to prepare an initial appeal indicating how much of what type of goods and services are required, when, and where. As more information on the needs of the population becomes available, subsequent appeals are prepared.

After determining needs, humanitarian organizations mobilize cash, people, services, information and in-kind donations. As humanitarian organizations do not have a manufacturing function, resource mobilization activities are central to their operations. The sourced relief items are then transported to the disaster area. Both procured and solicited in-kind donations are stored in warehouses before distribution to the population. Ideally, there is no need for reverse supply chain management since end-beneficiaries consume relief items and non-consumable goods, such as vehicles, are donated to the host country. Reverse supply chain management is required only when unsolicited, contaminated, expired or residual non-consumables and consumables are disposed of or transferred to another disaster (Figure 2.9). Contrary to business, planning does not occur once, that is, at the outset of an emergency but is a continuous activity. Response plans are updated, fine-tuned, and adapted regularly to take into account new environmental conditions and changing demand and supply information. Tracking occurs at different stages while reporting to donors is typically the step before the closure of the emergency account.

Figure 2.9 – Main Activities in Emergency Supply Chains



Multinational enterprises (MNEs) manage global and multiple supply chains repeatedly. Samii & Van Wassenhove (Samii & Van Wassehove, 2002a) have noted that international humanitarian organizations with a global mandate manage global and multiple emergency supply chains and networks that are dynamic and temporary by nature (Figure 2.10).

Figure 2.10 – Characteristics of Emergency Supply Chains and Networks

| Global | Multiple | Dynamic | Temporary |
|--|--|--|---|
| <ul style="list-style-type: none"> • Global operations • Global donors • Global suppliers | <ul style="list-style-type: none"> • Multiple disasters • Multiple supply chains and logistics systems • Multiple origin & destination of supplies • Large no. of SKUs | <ul style="list-style-type: none"> • Volatile demand • Changing supply • Changing sourcing, staging & distribution strategies | <ul style="list-style-type: none"> • Project-like, short-lived supply chains • Temporary collaborations • Quick phase-outs |

Similar to MNEs, international humanitarian organizations with global operations manage supply chains and networks that span national boundaries. On the supply side, they raise and receive monetary and in-kind donations from donors (private and public entities) across the globe and procure from a mix of local and international suppliers. On the demand side, they assist afflicted populations across geographies.

At any given time, humanitarian organizations manage a multitude of disaster-specific supply chains. In response to a given disaster they mobilize and handle a wide range of products. Given the specific characteristics of relief items, they require different transportation modes, handling equipment, storage conditions and cannot be dealt with a unified logistics system. As a result, humanitarian organizations manage and coordinate as many supply chains as those required to move and store a variety of food and Non Food items (NFIs) in bulk and small Stock Keeping Units (SKUs). The number and range of

products handled by the humanitarian supply chain increases the complexity of logistics in supply and distribution.

Hoffman (Hoffman, 2005) notes that humanitarian supply chains are the most dynamic supply chains in the world. Emergency supply chains are particularly dynamic, volatile as information on demand and supply is not available at the outset of a disaster. While demand is subject to continuous change, the flow of contributions from various sources affects supply. In addition, the origin and destination of humanitarian supplies are multiple. They are also in continuous evolution during a given response effort. In order to ensure the mobilization of the right quality and volume of goods and their speedy distribution, organizations adopt multiple and dynamic supply sourcing, staging and distribution strategies. Changes are driven by the evolution of environmental and supply factors such as security, activation of a new transport corridor, availability of a warehouse in a new location and identification of a new supplier.

Emergency supply chains and networks are by definition inherently temporary. With an average life span of three to six months, these short-lived supply chains and networks are disassembled after the emergency phase. From the supply chain perspective, for each disaster, project-like supply chains with a specific set of activity links, actors' bonds and resource ties are constructed and choreographed to cater to the needs of the target population like diet, living styles and climatic conditions.

The unpredictable nature of disasters adds another dimension to the temporary nature of humanitarian supply chains in terms of planned against effective duration. In the context of limited resources, humanitarian organizations confronted with sudden disasters revisit decisions related to the duration and intensity of each operation. In function of their resources, some organizations may phase-out their involvement in a disaster earlier than planned to address new and more urgent crises. Others may fully adhere to their original plans and respond to competing disasters simultaneously.

2.4 Supply Chain Sourcing Strategies for Predictable and Unpredictable Disasters

This section uses the uncertainty framework proposed by Lee (Lee, 2002) to identify the supply chain sourcing strategies that allow humanitarian organizations to best respond to the specific needs of disaster-hit populations during emerging or predictable disasters and sudden or unpredictable disasters.

The supply chain literature argues that undersupply or oversupply are endemic to those industries with considerable product proliferation, short selling season, a limited history of specific customer demand and where demand is heavily dependent on hard-to-predict factors such as weather, fashion trends and the economy. Lee (Lee, 2002) suggests that by pursuing the right sourcing strategy, firms can avoid such supply excesses and stock-outs reducing disruptions in supply. According to him, a simple but powerful way to reduce the risk of undersupply or oversupply is by considering the “uncertainty framework”. The framework specifies two key uncertainties faced by a product: demand and supply.

Fisher (Fisher, 1997) elaborating on the demand side of a product concludes that functional and innovative products require different supply chain strategies (Figure 2.11). Firms dealing with functional products with predictable demand can concentrate more on process efficiencies. For these products, supply chain partners can achieve a nearly perfect match between demand and supply through forecast-based management, that is, if they ensure an adequate flow of information and level of coordination. For innovative products, demand forecasts are not always capable of bridging the gap between demand and supply. Hence, the most appropriate strategy is a responsive supply chain where flexibility is built into the supply chain network.

Lee (Lee, 2002) elaborates on the second half of the equation, namely supply. He distinguishes between a stable and evolving supply process. The stable supply process is one where the manufacturing process is highly automated, the underlying technology is mature and the supply base is long established. In contrast, those of evolving supply processes, the manufacturing processes and technologies are in development and the supplier base limited in size, capacity, experience and level of performance.

Figure 2.11 – Characteristics of Functional and Innovative Products

| Functional | Innovative |
|--------------------------|---|
| Low demand uncertainties | High demand uncertainties |
| More predictable demand | Difficult to forecast |
| Stable demand | Variable demand |
| Long product life | Short selling season |
| Low inventory cost | High inventory cost |
| Low profit margins | High profit margins (utility) |
| Low product variety | High product variety |
| Higher volume per SKU | Low volumes per SKU |
| Low stock out cost | High stock out cost |
| Low obsolescence | High obsolescence (non transferability) |

Source: Lee, H. L. (2002), “Aligning Supply Chain Strategies with Product Uncertainties,” *California Management Review*, Vol. 44 No.32, p. 106.

The uncertainty framework reproduced below assists in the identification of the most adequate supply chain strategy (Figure 2.12). It combines Fisher’s product definitions and the associated level of demand uncertainty with the level of supply uncertainty quantified in stable or evolving supply processes.

Figure 2.12 – Sourcing Strategies

| Uncertainty framework/ Matching Strategies | Functional products | Innovative products |
|---|---|--|
| Stable process | Grocery, basic apparel (efficient supply chains) | Fashion apparel, pop music (responsive supply chains) |
| Evolving process | Some food products (risk-hedging supply chains) | Telecom, high-end computers (agile supply chains) |

Source: Adapted from Lee, H. L. (2002), “Aligning Supply Chain Strategies with Product Uncertainties,” *California Management Review*, Vol. 44 No.3, p. 108 & 114.

Lee (Lee, 2002) sustains that companies providing functional products produced by stable processes should opt for efficient supply chains. As such, they should pursue economies of scale, optimize capacity and distribution utilization and operate with minimum inventory. Companies in this category can establish optimal levels of inventory by turning historical sales data into knowledge about their clients’ consumption patterns and generate demand projections (Fisher, 1997).

Companies providing functional products using evolving processes need to dilute risk associated with their supplier base. They should hedge against supply risks by pooling and sharing resources such as inventory and sourcing from more than one and alternative suppliers.

The uncertainty framework recommends responsive supply chain strategies for companies operating in volatile markets with a stable process. To address the changing, diverse, unpredictable and specific requirements of customers, producers of fashion-related products can forecast for their capacity levels while using a mixture of techniques (e.g. execution against demand, postponement, modular design and products) to respond accurately and quickly to front-end uncertainties.

The framework indicates agile supply chains as the most adequate sourcing strategy for companies that depend on evolving processes to produce innovative products (Figure 2.12). Companies managing agile supply chains are flexible and responsive to volatile, short-term changes in demand and hedged against supply shortages or external disruptions (Lee, 2002). To establish and manage agile supply chains, companies need to promote flow of information among the network partners and develop collaborative relationships with suppliers. They should design for postponement, build inventory buffers, have a dependable logistics system or partner, draw up contingency plans and develop crisis management teams (Lee, 2004). To achieve “accurate response” (Fisher, 1997), they need to combine historical data with knowledge residing in-house as well as with supply chain members.

As discussed in section 2.2, in terms of demand, humanitarian organizations need to forecast for predictable and unpredictable demand. The requirements of the population depend on the nature of the crisis. For example, while disaster victims can still count on their communities for support, the same is not true for refugees and Internally Displaced People (IDP).

For large scale disasters, humanitarian organizations mobilize a couple of hundred food and NFIs. Relief items are standard, mature, discrete products or assembled kits composed of modular products with relatively basic features. The supply base of relief items is mainly stable as the manufacturing processes are highly automated and the underlying

technologies mature. The exceptions relate to products with long lead-time and a limited supplier base in terms of size and capacity.

Relief items although consisting mainly of mature products have the demand characteristics of functional or innovative products depending on the type of emergency. For emerging crises, demand is estimated and an action plan put in place. Stock-outs can be averted and supply constraints overcome. For unpredictable disasters, demand is uncertain and variable. Supply in the larger sense is unpredictable as at the outset of a disaster the level of collaboration and contribution of the humanitarian response network is unknown. The contribution of a humanitarian organization is subject to significant variations and depends on the request of the recipient government and the response of the local and international community and other humanitarian organizations. Moreover, the competing supply chains of humanitarian organizations can result in stock-outs and temporary price hikes.

Figure 2.13 – Humanitarian Supply Chain Sourcing Strategies

| Uncertainty framework/ Matching Strategies | Functional products | Innovative products |
|---|---|--|
| Stable process | Emerging/Predictable Disasters (efficient supply chains) | |
| Evolving process | | Unpredictable disasters (agile supply chains) |

We argue that for predictable/emerging disasters, to save as many lives as possible, humanitarian organizations should aim at process and cost efficiency (Figure 2.13). Indeed, high speed and low cost operations increase the outreach of relief operations. In unpredictable disasters, humanitarian organizations have to respond to a volatile demand and mobilize a high number of SKUs. Given that the price in terms of lives not saved is simply too high, we argue that humanitarian supply chains need to be agile, i.e., flexible and fast.

In conclusion, we advance that humanitarian organizations should excel in two supply chain sourcing strategies and build capabilities and systems that allow for their parallel, simultaneous management.

2.5 Humanitarian Partnerships: A Response to Disaster Management Challenges

Operational humanitarian organizations regardless of their size or area of specialization (refugees, children, food, etc.) face a number of challenges. This section explores the challenges humanitarian organizations face by providing an overview of the context in which they operate. This allows us to set the stage for discussing the first component of our preliminary conceptual framework: Partnerships.

The first challenge facing a humanitarian organization immediately after a disaster is how to bridge the relief resource and capability gap, which is often significant. To stage a response and overcome this gap, humanitarian organizations depend on their supply network composed of a number of loose partnerships with a range of actors.

Response to humanitarian crises is fractioned and organized organizationally along mandates and functional lines (Kent, 1987; Borton, 1993). Therefore, when a large scale disaster strikes, a large number of humanitarian organizations converge to the disaster site. Once in the operating theatre, their supply chains tend to compete over the same range of resources at exactly the same arch of time. Given the plurality of humanitarian organizations, the sector has long identified the need for effective ways and means to ensure inter-agency coordination. The literature has not only recognized the need for inter-agency coordination but also coordination between humanitarian organizations and other stakeholders, all with their own structures and objectives (Long & Wood, 1995).

There is recognition that disaster preparedness enhances disaster response efficiency and effectiveness. However, donors prefer to fund emergency activities and are often reluctant to cover core costs necessary to strengthen organizational capacity and capability (Fritz Institute, 2005a). Secondly, they tend to evaluate humanitarian organizations on the percentage of funds used on direct relief activities. As such, organizations with higher overhead costs, e.g., higher investments in support activities such as IT, are often considered less efficient (Samii et al., 2002b). In contrast, those with lower overhead costs – the most-valued indicator of efficiency – are often rewarded with additional voluntary donations. To improve its operations, a humanitarian organization has to overcome the prevailing donor mind-set and ensure investment in the area of disaster preparedness.

The more inclusive set of objectives has produced a pressing and simultaneous need among humanitarian organizations: A rapid professionalization of the sector and in particular of the logistics function, long overlooked, given its central role in disaster management (Fritz Institute, 2005b). In the logistics area, the challenges facing humanitarian organizations are the formal qualification of logistics staff (Oloruntoba & Gray, 2006), optimization of their logistics activities and the integration of activities across business functions.

Lack of funding for back-office infrastructure and processes and the need to upgrade the logistics function including its information and knowledge management aspect (Van der Laan et al., 2007) have attracted the first wave of structured business-humanitarian partnerships. Binder & Witte (Binder & Witte, 2007) conclude that the role of business in humanitarian relief is becoming more prominent even if it remains a limited phenomenon. They identify three ways in which business can engage with a humanitarian organization and identify the provision of expertise, new technology and in some cases funding as objects of cooperation. Similarly, Thomas & Fritz (Thomas & Fritz, 2006) reviewing the private-public relief partnership scene, identify four ways in which a business can share its wealth of operational expertise and experience, especially in the area of back-office infrastructure and processes, with a humanitarian organization.

In conclusion, operational humanitarian organizations appear to resort to a portfolio of partnerships – temporary supply networks, coordination networks and business-humanitarian partnerships – to tackle preparedness and response challenges related to their operations.

2.6 Organizational Performance

To define the second component of our preliminary conceptual framework - organizational performance - we open a parenthesis on the topic of performance measurement. By drawing on the relevant literature, we first define performance measurement, then review the humanitarian literature on the subject and finally apply the predominant performance measurement framework to humanitarian organizations.

Neely et al. (Neely et al., 1995) define performance measurement as a process of quantifying effectiveness and efficiency of action where “effectiveness is the extent to which customer requirements are met and efficiency is how economically the firm’s resources are utilized to ensure the desired level of customer satisfaction.”

Kaplan & Norton (Kaplan & Norton, 1992) emphasize the importance of a balanced view of organizational performance. They advocate the importance of internal and external, financial and non-financial, short and long term perspectives and the relationships between different measures on performance evaluation. They advance a framework – the balanced scorecard – which focuses on interrelationships between financial and non-financial results from four perspectives: financials, customers, internal processes and innovation and learning. The four aspects of the balanced scorecard can be related to Fitzgerald et al. (Fitzgerald et al., 1991) two basic types of performance measurements: those related to results (customers, financial performance) and therefore outputs and those focused on the determinants of the results (internal, innovation and learning) and therefore processes.

The balanced scorecard concept has been the most influential contribution to the study of performance measurement (Neely, 2005). The framework has found wide application in business and there is growing evidence of its applicability to non-for-profit entities (Phillips, 2004).

As discussed in section 2.1, profitability is key to the survival of private firms while non-for-profit entities in general and humanitarian organizations in particular have to fulfill a particular mission. As such, they can be evaluated along the efficiency and effectiveness criteria, where efficiency indicates the extent to which a humanitarian organization speedily delivers assistance with the least possible use of resources and effectiveness measures the extent of achieved versus intended target.

Parung & Bititci (Parung & Bititci, 2006) argue that given the increasing importance of collaborative networks to firm performance, it is important to measure input (what resources participants contribute into a collaborative network), process (distinguish healthy networks from unhealthy ones) and output (value gained by different stakeholders). For each emergency, an operational humanitarian organization has to orchestrate a response. The ability of a humanitarian organization’s logistics function and the strength and ‘health’ of its network of partners directly affect the success of a relief effort. It is also important to

emphasis that an ever-increasing proportion of a humanitarian organization's assets consist of intangibles, grounded in their human capital.

2.6.1 Literature Review on Humanitarian Performance Indicators

Beamon & Balcik (Beamon & Balcik, 2008) discuss the challenges for performance measurement in the nonprofit sector given the “intangibility of the services offered, immeasurability of the missions, unknowable outcomes, and the variety, interest and standards of stakeholders.” Despite these challenges, there is a need to measure the performance of non-profits in general and humanitarian organizations in particular.

Scholars note that non-profit organizations tend to measure performance in terms of financial and non-financial inputs metrics rather than outputs metrics (Kaplan, 2001 & Henderson et al., 2002). Thomas & Fritz (Thomas & Fritz, 2006) observe that the sector measures itself in terms of how much food it has distributed or how much funding it has raised rather than how many lives it has saved or sufferings it has alleviated. Since such input metrics does not necessarily imply higher levels of services nor higher delivery capacity (Letts et al., 1999), the sector requires a performance measurement framework that can measure how effectively and efficiently it meets its mission.

Although there is an increasing interest in performance measurement of nonprofit organizations, to date there have been only two attempts to measure the supply chain performance of relief operations. More specifically, Davidson (Davidson, 2006) develops a performance measurement framework for relief logistics by proposing four performance metrics. More recently, Beamon & Balcik (Beamon & Balcik, 2008) have applied Beamon's (Beamon, 1999) performance measurement framework consisting of resource metrics, output metrics and flexibility metrics to humanitarian supply chains.

Davidson (Davidson, 2006) argues that disaster response involves trade-offs between speed, cost and accuracy of an operation. This is because speed increases the cost of an operation and not necessarily accurately meets the requirements of the beneficiaries. To make informed decisions regarding these trade-offs, four indicators are proposed: appeal coverage, donation to delivery time, financial efficiency and assessment accuracy. The

appeal coverage helps measure the extent to which an organization is meeting its appeal in terms of both finding donors and delivering items. The donation to delivery time indicator helps measure both the average and the consistency of the delivery lead times. The financial efficiency indicators compare budgeted versus actual cost of an operation. These indicators are to help logisticians make better decisions, measure actual achievements against pre-set targets, provide accountability and develop lessons learnt.

Beamon & Balcik (Beamon & Balcik, 2008) propose three sets of metrics to measure the performance of humanitarian organizations during disaster response, namely resource metrics, output metric and flexibility metrics. Different cost centers (suppliers, distribution, inventory costs) comprise the resource metric. Response time constitutes the output metric. Flexibility metrics measures the ability of a humanitarian organization to respond to different magnitudes of disaster (volume flexibility), time to respond to disasters (delivery flexibility), and ability to provide different types of items (mix flexibility).

2.6.2 The Humanitarian Organization Balanced Scorecard

According to Beamon (Beamon, 1996) an effective performance measurement system has to satisfy at least four conditions; it has to be inclusive, universal, measurable and consistent. Inclusiveness implies the measurement of all pertinent aspects. Universality allows for comparison under various operating conditions and among organizations in the same business. For a performance measurement system to be measurable, the data needs to be measurable. Finally, consistency ensures that measures are consistent with organizational objectives. The last condition implies that a system should derive from strategy. Not confuting the condition of inclusiveness, scholars highlight the importance of having a manageable set of metrics and a predominant number of objectives as opposed to subjective performance criteria (Neely et al., 1995).

The primary objective of humanitarian organizations during disaster response is to rapidly provide the correct amount and mix of relief items to those in sufferance. Since internal and external, financial and non-financial, short and long term indicators are all relevant to how well humanitarian organizations meet their mission, we propose to use the balanced scorecard approach as a way to define the performance of a humanitarian organization

(Figure 2.14). It should be noted that the balanced scorecard approach is not pursued with a view to build a measurement system. It follows that improvement on determinants of result is expected to yield a higher level of performance measured in terms of beneficiary satisfaction and financial stability and growth.

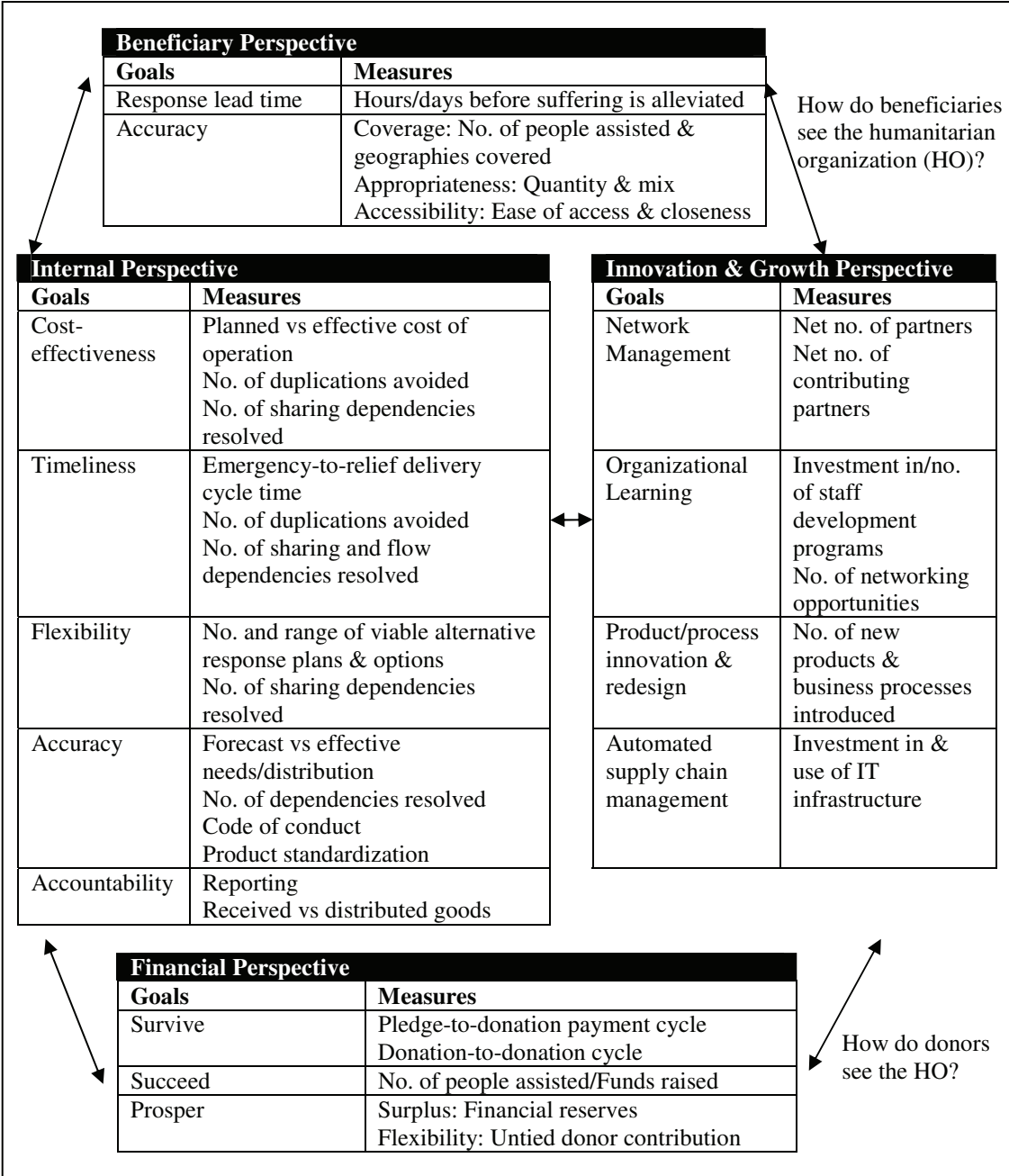
In the remaining part of this section, we define the goals and the related performance metrics of a typical humanitarian organization from four perspectives: internal, innovation and growth, beneficiary and financial. To derive an effective framework, we have tried to develop a universal, measurable, consistent, inclusive yet manageable set of metrics.

We start by describing the determinants of result. Competitive pressure and the priorities of quality, cost, flexibility, speedy delivery, and reliability force firms to operate effectively and efficiently. Priorities are no different in the humanitarian sector. As we saw in section 2.4, depending on whether humanitarian organizations are responding to predictable or unpredictable disasters, they need to aim at low cost and high speed operations or flexible and high speed operations with increasing accuracy. From the internal perspective, to respond to as many beneficiaries as possible, humanitarian organizations aim to find a balance between cost-effectiveness, timeliness, flexibility, and accuracy of their operations. They also seek to ensure accountability, i.e., minimize material losses along the supply chain and ensure reporting of their operations at any given time.

To build a learning and innovative organization with a potential to grow and to improve upon the internal goals of cost-effectiveness, timeliness, flexibility, accuracy and accountability, they endeavor to build and expand their relationships with endowed, motivated and committed partners; provide learning opportunities to their staff; introduce product and process innovation; and make use of the latest information and communication technologies to improve their operations.

In terms of results, the beneficiary perspective measures how timely a humanitarian organization meets the quantitative and qualitative requirements of beneficiaries.

Figure 2.14 – Humanitarian Organization Disaster Response Balanced Scorecard



Humanitarian organizations continually run short of their financial needs. Less visible disasters typically remain undersubscribed. Regardless of market needs, donor priorities can change over time shifting resources from one emergency to another (Samii & Van Wassenhove, 2006). To accommodate donor priority, humanitarian organizations need to be able to set up flexible operations. To respond to market needs, humanitarian organizations need to secure the availability of increasing amounts of untied contingency funds (Samii & Van Wassenhove, 2006) as well as diversify and expand their donor base (Samii & Van Wassenhove, 2004b). It follows that from the financial perspective, the first goal is to achieve a positive net cash flow. Thereafter, it is to achieve the established target with the financial resources mobilized. Lastly, it is to establish a growing reserve of untied financial resources. A description of each goal and the relative metrics is provided in Figure 2.15.

Figure 2.15 – Description of Goals and Metrics

Internal Perspective

1. **Cost-effectiveness** refers to a humanitarian organization's ability to optimize the level of inventory and operating costs (supply, transport, distribution and information processing costs) along the supply chain. The difference between planned versus effective cost, number of sharing dependencies resolved and numbers of overlapping efforts avoided are few measures of cost-effectiveness.
2. **Timeliness** refers to the ability of a humanitarian organization to reduce the time required for the flow of information and resources (people, services & products) along its supply chain and between members of its response network. The metrics emergency-to-relief delivery cycle time measures the time that elapses between the outbreak of an emergency, resource mobilization and assistance. No. of duplications avoided and no. of sharing and flow dependencies resolved are indications of improvement on timeliness.
3. **Flexibility** refers to a humanitarian organization's ability to respond to uncertainty in terms of a changing environment and an unpredictable and volatile demand and supply. It is measured by the number and range of viable alternative plans and options at the disposal of a humanitarian organization, their timely implementation and the no. of sharing dependencies resolved.
4. **Accuracy** refers to the ability of an organization to conduct its needs-assessment exercise with ever-increasing precision and to meet its quantitative and qualitative objectives in terms of goods & services mobilized and delivered. The metric that measures the quantitative aspect of accuracy is the difference between forecast & effective needs/distribution. The metrics that measure the qualitative dimension of

accuracy are: number of sharing, fit and flow dependencies resolved; adherence & enforcement of the code of conduct regarding donations and extent of goods standardization.

5. **Accountability** refers to the ability of an organization to account for its operations and minimize goods diversion and misappropriation. Two metrics help measure this goal: production of timely and comprehensive activity reports and the difference between received versus distributed goods and services.

Innovation & Growth Perspective

1. **Network management** refers to the efforts undertaken by a humanitarian organization to augment and improve the cost-effectiveness, timeliness, flexibility and accuracy of partner contributions by i) increasing the opportunity for resource mobilization and exchange and ii) maintaining and reinforcing the level of commitment to humanitarian causes among well-endowed partners. Two metrics help measure the health of the network: the net number of partners (measures the level of opportunity and motivation) and the net number of contributing partners (measures the level of effective ability and commitment).
2. **Organizational learning** refers to the efforts of an organization to innovate, grow and hence improve upon internal goals by attracting, retaining and developing the best talents. Metrics that help measure this goal are: investment in and no. of staff development programs and number of networking opportunities.
3. **Product/process innovation & redesign** refers to the efforts of an organization to improve the cost-effectiveness, timeliness, flexibility, accuracy and accountability of its operations through product/process innovation and redesign. Numbers of product and process improvements introduced measure this goal.
4. **Automated supply chain management** refers to the ability of a humanitarian organization to coordinate and make accurate, timely, cost-effective, flexible decisions across its supply chain as well as fold-in learnt lessons into its future operations by adopting tailored IT solutions. Investments in and use of an IT infrastructure are metrics that help measure this goal.

Beneficiary Perspective

1. **Response lead time** refers to the time required by a humanitarian organization to deliver aid and it is measured by the number of hours/days that elapses between a disaster and delivery of relief items to beneficiaries.
2. **Accuracy** refers to the ability of a humanitarian organization to i) meet the quantitative and qualitative requirements of populations in need and ii) meet its objectives. Three metrics help measure accuracy: coverage, appropriateness and accessibility of assistance. Coverage measures the number of beneficiaries effectively assisted and the geographical coverage of the assistance. Appropriateness measures assistance in terms of amount and mix of product delivered. Accessibility measures ease of access (expenditures of effort and time, no. of distribution points) and closeness (distance between beneficiaries and distribution centers) to assistance.

Financial Perspective

1. **Survive** refers to a humanitarian organization's net cash flow position and it is measured by two metrics: the pledge-to-payment and donation-to-donation cycle.
2. **Succeed** refers to a humanitarian organization's level of productivity. The ratio that measures this goal is the number of beneficiaries assisted per dollar mobilized.
3. **Prosper** refers to the ability of a humanitarian organization to build financial reserves and increase the amount of untied funds. The two metrics that measure prosperity are financial surplus and financial flexibility.

2.7 Partnerships and Organizational Performance

In this section, we discuss the relationship between each of the three partnership types identified in section 2.5 and the determinants of result - cost-effectiveness, timeliness, flexibility, accuracy and accountability – as described in section 2.6. The section is structured as follows. In section 2.7.1, we discuss the contribution of temporary supply networks to organizational performance. In section 2.7.2, we present the environmental context in which humanitarian organizations operate to set the stage for the discussion on the contribution of two coordination networks – inter-organizational and extra-organizational – to organizational performance. Then we discuss under which circumstances coordination is expected to be outsourced to a logistics coordination platform and highlight the contribution of the platform to organizational performance. In section 2.7.3, we first discuss the impact of business-humanitarian partnerships on determinants of result and then present the different partnership possibilities between business and humanitarian organizations.

2.7.1 Temporary Supply Networks⁴

As mentioned in section 2.3, seven networks of actors (although not necessarily the same entities) repeatedly play a significant role in the activation of emergency supply chains, in

⁴ With permission from the authors, this section refers and quotes without direct reference from the INSEAD IFRC and UNJLC case studies and teaching notes listed in the bibliography.

the definition of beneficiary needs and in bridging the resource and capability gap of a humanitarian organization. These are the media, recipient country(s), military forces, neighboring countries, donors, suppliers and implementing partners. Given the temporary and project-like nature of the emergency supply chains, the effective members and numbers of the players in each network are defined based on the location (country) and nature (natural or man-made) of the disaster. Some of the participants may be involved in a multitude of other humanitarian or non-humanitarian supply chains. For each network of actors, we shall describe their potential contribution to organizational performance during disaster response (Figure 2.16).

Figure 2.16 – Supply Chain Actors and their Contribution to Performance

| Actor | Resources/Capabilities | Contribution to Performance |
|-----------------------|--|--|
| Media | Information & coverage | Timely & accurate assessment of needs Timely mobilization & accurate distribution of relief items |
| Recipient Government | Opens its doors Logistics assets Administrative support Local information | Timely and accurate mobilization, storage and transportation of relief items Timely access by humanitarian staff Lower operating costs Enhances flexibility |
| Military Forces | Information Logistics assets Military staff | Accurate storage and timely transportation of relief items Lower operating costs Enhances flexibility |
| Neighboring countries | Logistics assets Administrative support | Accurate storage and timely transportation of relief items Timely access to logistics assets Lower operating costs Enhances flexibility |
| Donors | Funds Supplies Logistics assets Human resources | Timely and accurate response Lower operating costs Enhances flexibility |
| Suppliers | Supplies | Flexible, timely, accurate (volume and quality) and cost-effective mobilization of relief items |
| Implementing partners | Distribution capacity | Timely and accurate distribution of relief items |

Media. Information is the most valuable resource throughout a crisis, yet, it is scarce, incomplete, dispersed and evolving. In the early phase of a crisis, international, regional and national news agencies and operators are among the few sources of real-time information for the humanitarian community. This is particularly true for natural disasters. Often it is the news on a disaster that activates an emergency supply chain. To a certain extent, the level of media coverage shapes and drives the resource mobilization achievements of an emergency. Similarly, since an organization's fund mobilization capability is determined by its reputation and visibility, coverage and acknowledgement by the media can enhance its fund mobilization outreach.

In brief, we argue that the media by providing information on and coverage of a disaster has the potential to contribute to two aspects of a humanitarian organization's performance: timeliness and accuracy.

Recipient Country. To secure the participation of the international community in a national relief effort, the recipient country has to welcome "acts of solidarity". It is only after acts of solidarity are welcomed that the international community – governments and humanitarian organizations – can contribute and complement the rescue and relief efforts of local authorities.

A humanitarian organization depends on a speedy request for international assistance from the recipient government to ensure a timely activation of its emergency supply chain. Use of key logistics assets under governmental control, authorizations for the movement of goods and people, and access to local information impact its performance. The resources made available to a humanitarian organization by a recipient government increase the level of operational flexibility. A quick request can help improve the cost profile and timeliness of an operation. We contend that a recipient country has the potential to contribute to four output metrics of a humanitarian organization's performance: cost-effectiveness, timeliness, flexibility and accuracy of response.

Military Forces. Military forces can assume three roles during emergencies (Rietjens et al., 2007). They can promote a climate of security for civilian populations and humanitarian organizations and provide protection for the relief effort. They can provide

technical or logistical support to humanitarian organizations. Finally, they can provide direct assistance to populations in need. Below, we elaborate on the second role.

Similar to governments, military forces can have a monopolistic position or control over certain resources. The cooperation of national military staff and the use of military infrastructure and assets such as airports, warehousing facilities, helicopters, vehicles and classified information facilitate response. Similarly, access to internationally available military resources help augment response capacity and ensure a speedier delivery of relief items to the disaster area and their eventual distribution to the afflicted populations. During conflicts, an operational dialogue with combatant forces ensure access to logistics resources and guarantee safe and secure land, sea and air operations. Access to such resources increases the level of operational flexibility, can improve operating costs and level of accuracy with respect to the storage and timely transportation of relief items. In conclusion, we argue that military forces have the potential to contribute to four aspects of a humanitarian organization's performance: cost-effectiveness, timeliness, flexibility and accuracy of response.

Neighboring Countries. Humanitarian organizations depend, one way or another, on the contribution of neighboring countries in choreographing their response. For strategic airlifts, access to the transport infrastructure is critical. For the movement of relief items and humanitarian staff, administrative support for speedy issuance of visas at transit points and streamlined custom clearance procedures is vital.

The use of neighboring country physical infrastructure is necessary in at least two scenarios. These include emergencies in landlocked countries or prevalently mountainous regions that depend on the physical infrastructure of neighboring countries for land or sea access. Secondly, emergencies that occur close to a border or those that involve more than one country are also dependent on neighboring country infrastructure.

Therefore, a humanitarian organization needs to obtain authorizations from and gain access to the resources of neighboring countries for the movement of humanitarian staff and timely, cost-effective and accurate transport and storage of relief items. Access also increases the number of operational options available to humanitarian organizations, enhancing flexibility. In conclusion, neighboring countries have the potential to contribute

to four aspects of a humanitarian organization's performance: cost-effectiveness, timeliness, flexibility and accuracy of response.

Donors. Although most humanitarian organizations dispose of seed money and relief items on stock, these resources need to be significantly scaled up to allow for an appropriate response to any large-scale emergency. Donor support from governments and their institutions, business and individuals is fundamental in the form of funds, services, people and materials in the goods mobilization process (see Appendix A).

Donors can be one or a combination of financial donors, technical assistance donors and donor-suppliers. While the contribution of financial donors is limited to the provision of cash, that of technical assistance donors is in-kind in the form of specialized staff and services. Donor-suppliers provide goods, services and logistics assets such as vehicles, helicopters and boats. Their donations may be disaster-specific or untied annual contributions. Donation of specialized logistics resources increases the speed and efficiency of relief operations. Use of these resources is particularly valuable when commercial markets break down or are non-existent. Donors can also be a source of supply chain disruption when they provide unsuitable and unsolicited donations (Chomilier et al., 2003).

To ensure a timely, accurate, and cost-effective response, a humanitarian organization depends on a network of donors to raise the required amount of cash and right range of relief items, logistics assets, and human resources. Well-resourced and untied donations augment flexibility of operational decisions. In conclusion, donors have the potential to contribute to four aspects of a humanitarian organization's performance: cost-effectiveness, timeliness, flexibility and accuracy of response.

Supplier Network. Given the scale, funding sources and nature of their activities - global, temporary, multiple and dynamic - humanitarian organizations carry limited inventory and buy-to-order. As a result, they depend on disaster-specific supplier networks to mobilize a wide range of standardized and modular products in high volumes. It follows that for each disaster, a humanitarian organization aims to construct a supplier network that best responds to the delivery criteria of a disaster in terms of timeliness, accuracy and cost-effectiveness.

Humanitarian organizations source relief items from a wide and geographically dispersed mix of repeat and first-time local and international suppliers. Humanitarian supply chains are short as there is a direct relationship with either the supplier or the donor. They are typically narrow as for each disaster one or few suppliers are contracted per product. Procurement decisions are taken for each emergency and are based on minimum quality requirements, speed of delivery, logistics costs, and customization to local taste. The supplier network is the only node of the humanitarian response network which is governed by market forces, over which the humanitarian organization exercises discretionary power and is highly flexible.

Implementing Partners. Humanitarian organizations depend on the NGO community, commonly referred to as implementing partners, for eventual kit assembly and distribution of goods to the beneficiaries, i.e., “last mile delivery”. Implementing partners assume a position in the value chain similar to that of retailers in commercial supply chains. NGOs with a proven track record in a country and an extensive local network and knowledge are preferred as they can ensure timely and widespread territorial coverage in the distribution phase. It follows that for each disaster, a humanitarian organization needs to identify and outsource the last mile delivery to the ‘best’ implementing partner. A humanitarian organization’s last mile delivery strategy impacts the speed and accuracy in which relief items are distributed.

2.7.2 Coordination Networks⁵

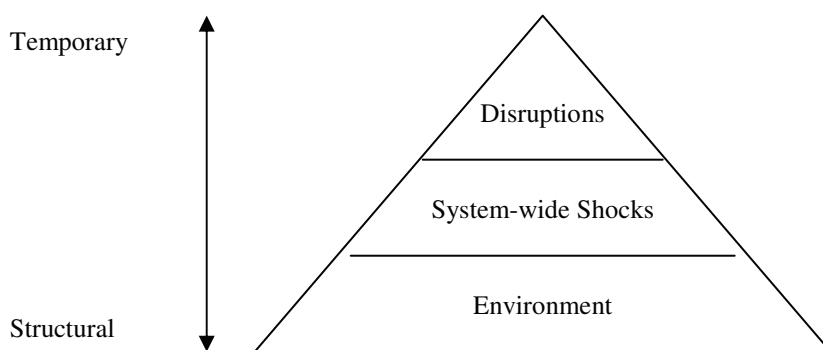
Compared to business, the settings in which humanitarian organizations operate are by definition difficult. As mentioned in the opening chapter of this thesis, they often operate in the world’s least developed countries, that is, the ones with the poorest infrastructure. Humanitarian organizations address large-scale natural or man-made disasters. Such disasters destroy or disrupt, among other things, a country’s receiving infrastructure leaving behinds thousands dead and more people homeless. Disruptions are even more

⁵ With permission from the authors, this section refers and quotes without direct reference from the INSEAD IFRC and UNJLC case studies listed in the bibliography.

pronounced in those countries with a structurally fragile and fragmented physical and institutional infrastructure.

Given the environment in which humanitarian organizations operate as well as the system-wide shocks and disruptions they are exposed to, we argue that they are often confronted with a continuum of “permanent”, recurrent structural and temporary logistics failure modes (Figure 2.17) in the disaster theatre. Indeed, failure modes are endemic and intrinsic to emergency relief operations.

Figure 2.17 – Layers of Failure Modes



As mentioned above, humanitarian organizations often operate in environments where accessibility and a smooth flow of goods and people is constrained by an underdeveloped, depilated, fragmented or insufficient infrastructure. The geographical characteristics of a country - islands, landlocked, or mountainous countries - can add to the infrastructural constraints. Humanitarian organizations often respond to disasters that occur in already politically unstable and unsafe countries and areas. Security concerns associated to guerrilla activities, existence of landmines and unexploded ordinance across the infrastructure and along transport routes can further hamper and constrain relief operations. Administrative hurdles related to customs and immigration can affect the smooth influx and movement of relief items and humanitarian staff. In terms of transport assets, least developed countries typically dispose of a limited pool. As a result, the status of the

infrastructure and transport assets may be insufficient or unprepared to handle large volumes of commercial, humanitarian and at times military traffic.

Disasters themselves result in system-wide shocks. For example, during large-scale natural or man-made disasters, the supporting physical infrastructure, trade lanes, storage and distribution capacity, power and communication lines, and supply networks of the concerned area are often seriously destroyed or disabled.

Humanitarian organizations are also exposed to a range of temporary failure modes. In terms of supply, a surge in demand may lead to temporary relief item stock-outs and shortage. In complex disasters involving military operations, a country's borders or airspace may be temporarily closed and overall access limited. Insecurity related to hostilities can result in temporary interruption of transport and distribution services. The surge in humanitarian and military activity can create shortages in logistics assets such as storage facilities and transport modes. Adverse weather conditions and high traffic volumes can disrupt transport routes. Due to resource constraints, humanitarian organizations may not be able to achieve the required office and distribution network coverage. They might lack access to relevant, reliable and timely logistics-related information necessary for planning purposes. Since disasters have no regard for existing load, relief operations may also suffer from a shortage of logisticians.

To overcome structural and temporary logistics failure modes, humanitarian organizations establish coordination networks with other humanitarian organizations as well as key stakeholders (Samii & Van Wassenhove, 2003b). Inter-organizational coordination ensures that humanitarian organizations share response plans, information and assets, complement each other's activities, contribute to the establishment of common resources, and do not engage in wasteful competition. As such, inter-organizational coordination is expected to contribute to the reduction of operational costs as well as a more accurate, timely and flexible response. In terms of extra-organizational coordination, the humanitarian community needs to coordinate segments of its supply chain activities with donors, local authorities, military forces and service providers.

To avert the arrival of unsolicited and unsuitable goods and improve the predictability of donor contribution, the humanitarian community needs to work closely with the donor community. Predictable donor contribution ensures that donations are accurate and timely

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

conferring a higher degree of flexibility. They also ensure that they do not result in unnecessary disposal costs or duplications.

To ensure timely, accurate and cost-effective inflow and outflow of goods, assets and people and assets into the disaster theatre, the humanitarian community needs to coordinate its activities with both recipient and neighboring countries' authorities. Successful coordination enhances operational flexibility.

Humanitarian organizations often operate in military environments. As such, they need to coordinate their response activities with “legitimate” or “illegitimate” authorities including warlords, occupying, peacekeeping, combatant, national, neighboring countries or regional forces such as the North Atlantic Treaty Organization (NATO). Humanitarian response in militarized environments is complicated. Combatant forces are often in control of common assets and transportation infrastructure such as airspace, airfields, and airport warehouses and equipment. Coordination with military forces improves response time and increases the number of options available to a humanitarian organization, enhancing flexibility.

Humanitarian organizations contract local service providers and suppliers. Often, bilateral negotiations with local logistics service providers (e.g. transport companies) or suppliers during an emergency result in price hikes affecting the operational costs of the entire humanitarian community. Coordinated negotiations help keep operational costs under control and avert temporary stock-outs and delays.

In conclusion, humanitarian organizations by coordinating their activities with various actors can improve upon their internal goals of cost-effectiveness, timeliness, accuracy and flexibility (Figure 2.18).

Figure 2.18 – Contribution of Coordination Networks to Performance

| Coordination | Contribution to Performance |
|----------------------|---|
| Inter-organizational | Cost-effectiveness Timeliness Flexibility Accuracy |
| Extra-organizational | Cost-effectiveness Timeliness Flexibility Accuracy |

2.7.2.1 Coordination Mechanism

Humanitarian organizations can either coordinate jointly or outsource the coordination function to a logistics coordination platform (non-operational humanitarian facility). Under at least two circumstances the coordination function is expected to be outsourced to a logistic coordination platform. First, when humanitarian organizations do not have the resources and expertise to deal satisfactorily with a wide range of coordination needs in a cost-effective and timely manner (Kaatrud et al., 2003). Second, when there is a need to eliminate duplication of efforts and ensure a common strategy vis-à-vis key stakeholders (Samii & Van Wassenhove, 2003a)

A logistics coordination facility can assume two functions: an inter-organizational coordination function (Figure 2.19) and extra-organizational coordination function (Figure 2.20). The inter-organizational function will ensure coordination between the activities of humanitarian organizations in the UN system, NGO and International Organization community. In the second mode, the platform will conduct negotiations on behalf of the humanitarian community and act as focal point on common humanitarian issues vis-à-vis key stakeholders. In the following paragraphs we elaborate on the impact of a logistics coordination platform on organizational performance.

Figure 2.19 – Logistics Coordination Platform: Inter-Organizational Coordination

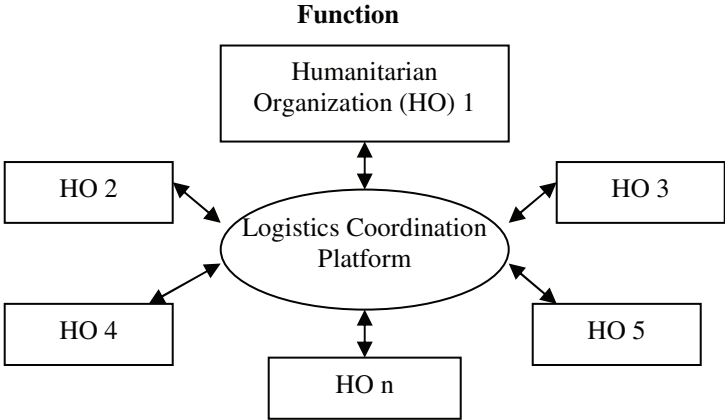
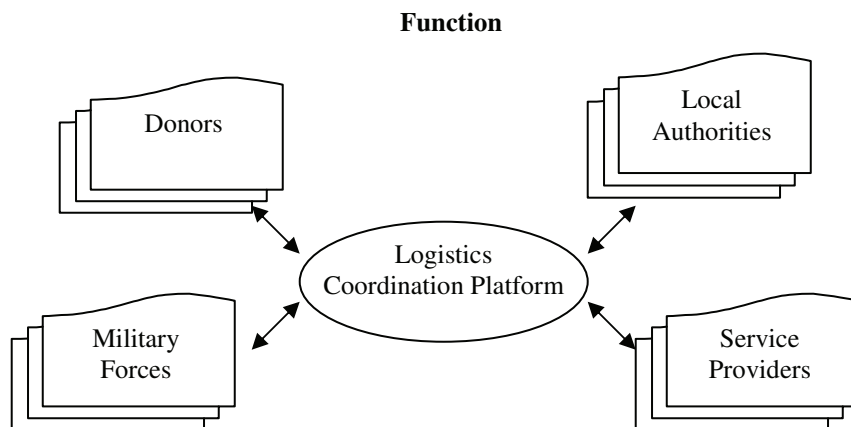


Figure 2.20 – Logistics Coordination Platform: Extra-organizational Coordination



In its first function, a logistics coordination facility can improve the performance of participating humanitarian organizations in several ways. It can manage a consolidated information platform. As such, it will collate information as well as invite and facilitate the flow and exchange of invaluable information between agency staff. As a result, knowledge is produced at a lower cost and more speedily. It can monitor corridor capacities and prioritize the movement of goods ensuring accuracy. By supporting the logistics function of the humanitarian community through the establishment and staffing of a series of antenna offices in the disaster theater, it can confer flexibility and reduce overhead costs and duplications.

To survive disaster victims need a wide variety of low- and high-value, bulk and small Stock Keeping Units (SKUs) food and NFI relief items. However, most humanitarian organizations cater to the specific and complementary requirements of a needy population. As a result, relief operations depend on the participation of a range of large and small humanitarian organizations. A logistics coordination facility is particularly valuable to those humanitarian organizations with small logistics setups and limited logistics capability. It allows them to stimulate 'largeness'. By tapping into information previously accessible only to bigger organizations, these organizations can make more accurate and faster decisions at no additional cost. Instead of struggling with logistics issues alone, they

can rely on the platform's services. Given their limited negotiating power, by joining the platform they can expand their collaborative options and gain access to the resources of other organizations improving their flexibility.

In its second function, a logistics coordination facility can present the logistics asset requirements of the humanitarian community in a more comprehensive and accurate way to key stakeholders. It can formulate a common position vis-à-vis key stakeholders and negotiate on behalf of the humanitarian community. Centralized negotiations with concerned local authorities through a focal point speed up the decision making process, increase bargaining power and help lower operational costs.

The sudden outset of a disaster often finds local authorities unprepared on numerous fronts including the ensuing intense humanitarian activity. Unfamiliar with the host of humanitarian NGOs and organizations mobilized to address a crisis, local and national authorities benefit from interaction with one focal point as parallel negotiations are avoided. As a humanitarian organization starts to rely on the services of a logistics coordination platform, resources otherwise tied in extra-organizational coordination activities are released and are applied in alternative activities.

In conclusion, a logistics coordination platform can help improve the speed, cost, accuracy and flexibility of a humanitarian organization's operations by assuming the inter-organizational and extra-organizational coordination function.

2.7.3 Business-Humanitarian Partnerships

As discussed earlier on, humanitarian organizations depend on donors to stage their disaster response activities. While, governments and governmental institutions provide the lion's share, the scale and scope of business donations is growing (See Appendix A). Business contributions range from ad-hoc donations to donations provided through a partnership structure. In section 2.7.1, we touched upon the disruptive impact of unsolicited and unsuitable donations on humanitarian supply chains. In this section, we first review the literature on business-humanitarian partnerships. Then we propose a framework that distinguishes between four different types of business-humanitarian

partnership. Finally, we explore the contribution of such partnerships to organizational performance.

To overcome the underinvestment in preparedness capability and to improve upon the response function, humanitarian organizations have to go beyond the generic and tied resources offered to them by their traditional donors and tap into specialized and additional resources. In this regard, select resources within business and CSOs are relevant. Business or CSOs can contribute to a humanitarian organization's relief operation with their specialized resources and expertise in a number of ways: sharing of physical logistics resources (e.g., airplanes, trucks, warehouses, etc.), donation of company products (e.g. food and NFIs), secondment or allocation of personnel, access to organizational capability and resources (e.g., tracking and routing systems), etc. (Thomas & Fritz, 2006).

Humanitarian organizations suffer from limited HR training and development programs, few opportunities and limited capability to review existing routines and practices, and a prevailing underinvestment in IT infrastructure (Fritz Institute, 2005a). This is because they have limited resources to invest in the strengthening of their preparedness and response functions.

In terms of HR resources and development, a corporation or a CSO can contribute to the professionalization of the humanitarian sector in general and the logistics function in particular by supporting research on disaster management, delivering formal training, establishing networking initiatives, etc. Business or CSOs can facilitate the transfer of sound and relevant supply chain practices from the commercial sector to the humanitarian community. As far as IT infrastructure is concerned, by leveraging the experience of the commercial sector, business or CSO could contribute to the development of a customized information support infrastructure for a particular organization or the humanitarian community as a whole (Lee & Zbinden, 2003). A tailored system is necessary since humanitarian organizations have not been able to adopt off-the-shelf business ERP software for technical reasons. The standard software often require the definition of origin-destination routes. This is a requirement that humanitarian organizations cannot fulfill given the dynamics of emergency relief: continuous evolution of disaster sites and goods origins. By using IT solutions that generate, store, manage, and transfer information along

the supply chain, humanitarian organizations can improve the management of their dynamic supply chains and their preparedness capabilities.

Binder & Witte (Binder & Witte, 2007) study the impact of business partnerships on the humanitarian principles of impartiality, neutrality, and independence. They acknowledge that business can extend much needed technical expertise to the assisted humanitarian organization and ‘fill gaps in humanitarian action’. They also flag the fact that establishing and maintaining strong partnerships are time consuming affairs that require a lot of effort.

In terms of partnership types, Binder & Witte (Binder & Witte, 2007) argue that business-humanitarian partnerships can take three forms: single company initiatives, partnerships with traditional humanitarian actors or ‘meta-initiatives’. Single company initiatives refer to those initiatives launched and implemented by a single corporation often in response to a specific disaster. Partnerships refer to those multi-stakeholder initiatives that bring together corporations and humanitarian actors. Meta initiatives refer to those initiatives that involve companies and other actors to enhance coordination in humanitarian operations and share lessons learned.

Thomas & Fritz (Thomas & Fritz, 2006) contend that business-humanitarian partnerships can take four forms. They distinguish, at one end, the philanthropic interest of a business in humanitarian operations and at the other end, integrative partnerships that consist in more long-term efforts that intend to leverage the core competencies of an organization to improve the aid delivery process. Thereafter, they distinguish one-to-one partnerships from many-to-many initiatives. They explain the pros and cons involved in the four partnership types.

We argue that humanitarian organizations may find themselves engaged in four types of structured partnership arrangements: strategic, cross-cutting, localized and brokered (Figure 2.21). Arrangements vary depending on the number of parties involved, strength of bond and duration of the partnership with each partnership arrangement having the potential to contribute to performance of the partnered humanitarian organization (Figure 2.22). We equally argue that success of these arrangements depends on the involvement of well-endowed, motivated and committed corporate partners.

Strategic partnerships engage a firm in a detailed partnership with one humanitarian organization over a medium to long period of time. Examples of strategic partnership is the

on-going TNT-WFP ‘Moving the World’ partnership forged in 2002 for an initial five year period which originally encompassed five different initiatives and the IFRC-Fritz Institute collaboration on a humanitarian logistics software. These types of partnerships emerge when there is an organizational fit between the contributing firm and the assisted humanitarian organization (Tomasini & Van Wassenhove, 2004a). The business partner is expected to provide its core competencies in terms of expertise and assets (including in IT) to the assisted organization both in-between and during disasters. In-between disasters, they are meant to contribute to the innovation and growth goals of a humanitarian organization. During disasters, by extending their expertise, time and assets, the corporate partner can directly impact the cost, timeliness, flexibility and accuracy of relief operations.

Figure 2.21 – Partnership Possibilities

| | | | |
|---------------------|----------|----------------------------------|----------------------------|
| Business/CSO | Multiple | Localized Partnerships | Brokered Partnerships |
| | Single | Strategic Partnerships | Cross-Cutting Partnerships |
| | | Single | Multiple |
| | | Humanitarian Organization | |

Cross-cutting partnerships are medium to long-term partnerships that directly and indirectly address both components of disaster management. An example of cross-cutting partnership is the on-going cooperation between humanitarian organizations and Kjaer, the Danish company provider of vehicle fleets and services, concerning the management of humanitarian organizations’ fleets across geographies. These types of partnerships are expected to emerge when a group of humanitarian organizations requires a specific resource or capability available with a given firm or CSO. To be effective, they depend on intense consultation processes among the parties involved on a particular competence or functional area. By upgrading the capability of a range of humanitarian organization in a specific function (including IT), these types of partnerships have the potential to directly

contribute to the learning and innovation aspirations of a group of humanitarian organizations in a specified area and indirectly to their internal goals.

Figure 2.22 - Impact of Business-Humanitarian Partnerships on Organizational Performance

| Partnership Type | Contribution to Performance | |
|------------------|---|--|
| | Direct | Indirect |
| Strategic | In-between disasters <ul style="list-style-type: none"> • Organizational learning • Network management • Product & process innovation • Automated supply chain During Disasters <ul style="list-style-type: none"> • Cost-effectiveness • Timeliness • Flexibility • Accuracy | |
| Cross-Cutting | In-between disasters <ul style="list-style-type: none"> • Organizational learning • Network Management • Product & process innovation • Automated supply chain | During Disasters <ul style="list-style-type: none"> • Cost-effectiveness • Timeliness • Flexibility • Accuracy |
| Localized | During Disasters <ul style="list-style-type: none"> • Cost-effectiveness • Timeliness • Flexibility • Accuracy | |
| Brokered | During Disasters <ul style="list-style-type: none"> • Cost-effectiveness • Timeliness • Flexibility • Accuracy In-between disasters <ul style="list-style-type: none"> • Organizational learning • Network management • Product & process innovation • Automated supply chain | |

Localized partnerships refer to those partnerships that involve a stable or dynamic group of corporations and one humanitarian organization. The corporations can be repeat or one-time donors. An example of localized partnerships is the WFP Emergency Network

spearheaded by Citigroup and involving some 20 enterprises in the provision of relief items to WFP in case of disasters (Giarraputo, 2006). These types of partnerships are built upon the concept of pre-positioned goods and standby capacity. Corporations keen to respond to disasters channel their voluntary donations to an organization based on the latter's requirements. The humanitarian organization that receives the donations or has a standby agreement with a corporation has the responsibility to decide, for each emergency, what can be utilized for its operation, what can meet the needs of the afflicted population and what remains in the depots or is "uncalled". Consequently, localized partnerships are important disaster preparedness resource that can directly improve the cost, timeliness, accuracy and flexibility of an organization's disaster response. This is because they help limit the arrival of unsolicited and excess goods and ensure the timely and accurate arrival of required donations.

Finally, brokered partnerships are necessary when transactions involve a group of companies and a range of humanitarian organizations over a sustained period of time. A nodal structure or organization is designated as broker to match the demand for goods and services of humanitarian organizations with the contribution of individual companies. An example of brokered partnerships is the activities of the Fritz Institute, a non for profit CSO dedicated to the improvement of logistics in the humanitarian sector. Given the wide range of services and goods companies can provide humanitarian organizations, the scope of action of this type of partnership is not limited to emergencies but also in-between disasters.

By nature, brokered partnerships emerge when there is a need to coordinate the actions of many parties. These types of partnerships i) channel voluntary corporate contributions where they are required, ii) mobilize contributions based on identified humanitarian needs and gaps, and iii) build standby capacity. In the context of disaster response, they facilitate the participation of corporations in humanitarian relief, confer flexibility to a relief operation, reduce response time and transaction costs as well as ensure accuracy by limiting the dispatch of ad hoc and unsolicited donations. They can also contribute to the innovation and growth objectives of a humanitarian organization by creating or facilitating

learning opportunities, addressing inefficiencies in existing business processes, and strengthening the IT infrastructure and skills.

In conclusion, business partnerships, apart from improving the speed, cost, accuracy and flexibility of relief operations by donating their specialized resources, can contribute to the innovation and growth objectives of a humanitarian organization.

2.8 Drivers Behind Humanitarian Partnerships

Kovács & Spens (Kovács & Spens, 2007) acknowledge that many actors are involved in the humanitarian supply network but they fail to see “clear or stated linkages” between them. Scholars while comparing nonprofits with for profit organizations have noted that nonprofits raise funds and goods from donors that expect no economic benefits in return (Moore, 2000; Henderson et al., 2002; Oster et al., 2004) implying the existence of other types of benefits.

In this section, we review the humanitarian relief literature to identify the motivations and drivers behind the participation of different actors, via partnerships and networks, to disaster response and disaster preparedness. More specifically, we shall review the inter-agency and civil-military coordination and business-humanitarian partnership literatures.

Although the humanitarian sector disposes of a number of coordination mechanisms and has a policy making body (See Appendix A), no agency has the authority to take the lead and coordinate the actions of others. Moreover, as Stephenson (Stephenson, 2004) contends, a strong competition among agencies for resources, competition for media attention, high staff turnover, and the different organizational backgrounds, cultures and incentives do not create a conducive environment for inter-agency coordination.

While some researchers have advocated for a ‘coordination by command’ approach, Stephenson (Stephenson, 2004) tries to identify what can drive and contribute to inter-agency coordination. By taking a social network perspective, he identifies trust and shared culture as key determinants of inter-agency coordination. He argues that although trust may not be a sufficient condition, it can help establish the conditions for effective inter-agency coordination. In his view, organizations should rise above their egos by giving priority to coordinated action. To achieve more effective cooperation, agency leaders

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

should change the organizational culture by promoting a shared sense, trust, and intense exchange of information and communication among agency staffs.

Humanitarian organizations are connected to one another through their mandates and their willingness to provide aid effectively (Stephenson, 2004). However, given their operating environment and competing missions, their common goal – provision of aid – does not ensure coordination. Since trust is considered a key precondition to coordination, organizational networks that help develop a robust variety of communication channels are believed to foster inter-agency awareness and trust (Stephenson & Schnitzer, 2006). In light of above, Stephenson & Schnitzer (Stephenson & Schnitzer, 2006) contend that relationships at the inter-organizational, organizational and interpersonal levels play a major role. They suggest that each of them - by contributing to the creation and development of trust at the strategic, organizational and individual level - help explain the level and extent of inter-agency coordination during disaster response (Figure 2.23).

Figure 2.23 – Factors that Promote Trust at Different Levels

| Strategic | Organizational | Individual |
|--|--|--|
| <ul style="list-style-type: none"> • Pre-existing network paths • Strong foundation of shared values and standards | <ul style="list-style-type: none"> • Complementary competencies between organizations • Knowledge of service delivery in particular sectors, standing capacity for carrying out mission • Shared service and professional standards | <ul style="list-style-type: none"> • Past personal and professional interaction • role equivalence |

Source: Adapted from Stephenson & Schnitzer (2006), “Inter-organizational Trust, Boundary Spanning, and Humanitarian Relief Coordination,” *Non-Profit Management & Leadership*, Vol. 17, No.2

Stephenson & Schnitzer (Stephenson & Schnitzer, 2006) argue that humanitarian organizations operate within a set of pre-existing relationships and that coordination takes place within a relational network. Each emergency brings together independent organizations. Since often there is no time to develop relationships during a disaster with unknown actors, new actors are often excluded from coordination opportunities.

They contend that individuals and personal relationships are key. Based on incentives at play, personalities, professional capacities, and prior coordination experience, individuals

may either foster or curb coordination. Their knowledge and perception of an organization and the individuals who work within them and the level of prevailing trust are critical in an individual's coordination decision-making process. For example, they argue that an aid worker doubtful about a given organization might coordinate with the organization if he believes in the competence and trustworthiness of its counterpart. Likewise, organizational or individual complementary competencies improve the chances for coordination. They observe that working relationships are self-reinforcing: good cooperation experience during one disaster increases the chance for coordination in future operations.

Finally, Stephenson & Schnitzer (Stephenson & Schnitzer, 2006) observe that humanitarian organizations and their staff can set their own rules and standards but cannot impose them on others. On the other hand, trust could contribute to the establishment of common norms and standards that facilitate inter-agency coordination. They also found informal dialogues as well as coordination and sectoral meetings held during disaster response extremely useful for the information sharing and networking opportunities they provided.

Similarly, Beaugard (Beaugard, 1998) in his study of civil-military activities during a number of disasters identifies six principal factors that hamper coordination and cooperation. These include differences in cultures and ideologies, differences in organizational structures and chain of command, communication breakdowns due to incompatible equipment or absence of communication procedures, refusal by humanitarian organizations of military assistance to protect independence and impartiality, and the threat or use of force by the military. He concludes by suggesting a range of solutions (training, better communication and consultation processes through events that improve mutual understanding, liaison teams) to improve the civil-military relationship.

Similar to inter-agency coordination, coordination between military forces and humanitarian organizations is found to be driven primarily by personalities rather than well-developed standard operating procedures (Brocades-Zaalberg, 2005). Since efforts are person-dependent, they vary within and between different army contingents.

In a study of coordination between military and humanitarian organization during peace-keeping operations, Rietjens et al. (Rietjens et al., 2007) take an information processing view of coordination. Since effective coordination implies an effective use and exchange

of information and there is a need to bridge the gap between information required and information available, they apply Galbraith's (Galbraith, 1973) four coordination mechanisms – slack resources, self-contained tasks, vertical information systems and lateral relations – to military-humanitarian relationships.

Rietjens et al. (Rietjens et al., 2007) conclude that self-contained tasks in combination with lateral relations are the main civil-military coordination mechanisms in complex emergencies. They suggest that the management of humanitarian operations can be improved by adopting an information system based on a variety of sources of information. To improve the quality of information and support the dominant coordination mechanism of self-contained tasks, they stress the importance of strengthening and structuring of lateral relations between humanitarian and military organizations.

Binder & Witte (Binder & Witte, 2007) identify four reasons for which a business may engage in a partnership with a humanitarian organization. The listed motivational drivers are positive branding, improved staff motivation, access to business intelligence - learn how to operate supply chains in stressed environmental conditions - and a desire to 'do good'. They also identify the networking value of such partnerships and how corporate social responsibility (CSR) activities can open new markets for the company.

What emerges from the literature review is the importance of organizational culture and structure, personalities, and personal and organizational trust in inter-agency and military-humanitarian coordination. Given the contribution of these factors to successful coordination, the literature identifies the strengthening of lateral relations through various mechanisms – informal dialogues, meetings and consultation processes, liaison teams, etc. – as a means to improve and secure coordination. As for business-humanitarian partnerships, the humanitarian literature refers us to the CSR literature.

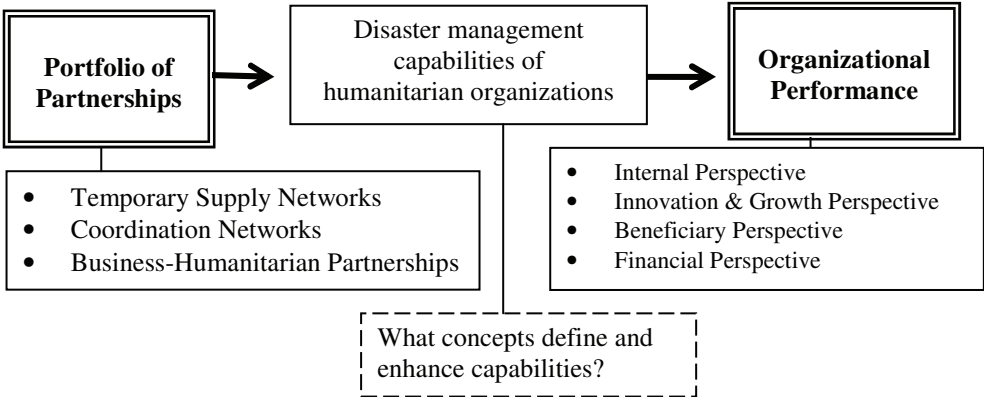
2.9 Conclusions

By building on the humanitarian literature, applying an explorative stance and our own understanding of the subject, this chapter provides an overview of humanitarian operations,

describes the operational context in which humanitarian organizations operate and defines the characteristics of their emergency supply chains and networks.

We set out by identifying the two components of disaster management: disaster preparedness and disaster response. In terms of supply chains, we distinguish between those responding to development and recovery objectives from the ones set up in response to emergencies. We argue that humanitarian organizations manage non-routine supply chains in response to predictable and unpredictable disasters. Since the focus of this thesis is disaster response, we then proceed to define the main traits of emergency supply chains and networks. We also conclude that in response to predictable disasters, humanitarian organizations should manage efficient supply chains while in case of unpredictable disasters they should manage agile supply chains.

Figure 2.24 – Preliminary Conceptual Framework



In this chapter, we develop a preliminary framework to help explain the contribution of different partnership schemes to organizational performance (Figure 2.24). After defining performance through the development of a humanitarian balanced scorecard, we present and discuss three different partnership schemes – temporary supply networks, coordination networks, and business-humanitarian partnerships – and their potential impact on organizational performance.

To set the stage for the development of our final conceptual framework in Chapter 3, we propose to conduct a literature review on a number of theories that may help us understand what enhances disaster management capabilities.

Humanitarian organizations resort to temporary supply chains given their intermediation role between donors and those affected by a disaster: beneficiaries. Since they are not structured to cope independently with the resource demands imposed on them by emergencies, to gain access to a range of key resources, they call upon the resources and capabilities of other entities. Reference to network theory allows us to distinguish between different network types as well as shed some light on the contribution of networks to organizational performance.

Humanitarian organizations have to overcome structural and temporary logistics challenges. To discuss the relevance and consequences of failure modes on emergency supply chains, there is a need to integrate that branch of the supply chain management literature that explores the challenges of creating secure and resilient supply chains with coordination theory. This will allow us to study the interface between actor, process and resource interdependencies and supply chain challenges.

Humanitarian organizations have to address their resource and capability weaknesses and inadequacies. To achieve long-lasting competitive advantage, the resource-based view of the firm argues that firms need to gain access and build valuable, rare, inimitable and non-substitutable resources and capabilities (Barney, 1991) and negate resource weaknesses and inadequacies (West & Decastro, 2001).

Scholars have argued that business can have a comparative advantage over individuals, governments, and other non-profits in addressing the resource and capability requirements of organizations engaged in a social cause (Porter & Kramer, 2002; Hess et al., 2002). By calling upon the resources of business during emergencies, a humanitarian organization can increase the speed and reduce the cost of its relief operations. By tapping into these additional resources, it can improve its operational flexibility and accuracy. Given the potential contribution of business to humanitarian operations and the increasing interest of business in humanitarian activities, we will review one form of corporate social responsibility from the resource-based view.

There is a gap in the humanitarian literature in terms of what drives and ensures the participation of different actors to disaster management. Management researchers have concluded that social capital embodied in a manager's relationships and an organization's network affects individual and firm opportunities and performance. Evidence has been gathered on the social capital's effect on the establishment of inter-firm networks (Walker et al., 1997; Uzzi, 1997; Chung et al., 2000), ability to help actors coordinate critical task interdependencies and to overcome the difficulties of cooperation and collective action; and access to resources, information and opportunities (Gabbay, 1997; Uzzi, 1999; Granovetter, 1974; Burt, 1992). Given the relevance of networks, coordination ability and resources to humanitarian operations, we argue that to understand what drives and helps develop the linkages that result in flows of goods and services between humanitarian organizations and other actors, there is a need to review the social capital literature.

In conclusion, to derive at our conceptual framework in the next chapter, we will conduct a literature review of network theory in combination with supply chain management, coordination theory in combination with supply chain management, the resource-based view of the firm in combination with corporate social responsibility, and social capital theory.

Chapter 3 Literature Review

This Chapter aims to develop a conceptual framework that explains how partnerships through the development of disaster management capabilities impact the performance of humanitarian organizations during emergency response. Chapter 2 identified four streams of literature – network theory, coordination theory, the resource-based view of the firm and social capital theory – as relevant to the development of our conceptual framework. To understand the complexity of humanitarian organizations, there is a need to combine the above mentioned theories with studies of supply chain management and corporate social responsibility. The literature review allows us to define the main disaster management capabilities that a humanitarian organization must master. It also allows us to draw some conclusions with respect to how these capabilities interact with each other.

This chapter is organized as follows. Section 3.1 provides an overview of network theory and integrates the network approach with supply chain management. To have a framework for the study of interdependencies that emerge during disaster response, section 3.2 links coordination theory with that branch of the literature that elaborates on secure and resilient supply chains. In that section, we also introduce the concept of virtual organizing. Section 3.3 reviews the resource based view and discusses the consequences of resource strengths and weaknesses on firm performance. The corporate philanthropy literature is also reviewed given the relevance of resources and capabilities available only with private actors to humanitarian organizations. Given the contribution of social capital to the establishment and well-functioning of networks and partnerships, section 3.4 reviews the social capital theory. In the closing section of this chapter, we present the findings of the literature review and conclude by presenting our conceptual framework.

3.1 Networks Theory and Supply Chain Management

There is a vast literature that explains the different aspects of inter-firm interaction and cooperation. While there are three forms of inter-firm cooperation - dyad, chain and

network, the approaches can be grouped into two major categories: Fundamental theories such as network theory and applied theories such as those on supply chain management.

Snow et al. (Snow et al., 1992) argue in favor of network structures as the most adequate organizational type in rapidly changing market environments. The literature indicates networks as the most apt organizational structure when an organization is unable or unwilling to cope independently with i) the complexity and risks of a rapidly changing environment and ii) the skill and resource demands imposed on it in global markets (Cravens et al., 1996).

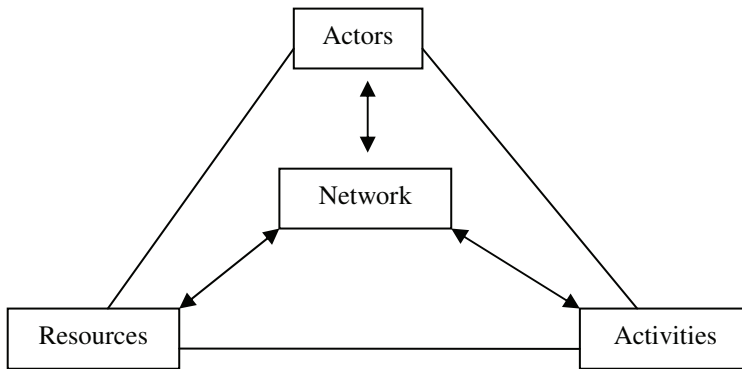
To compete more effectively in a complex and dynamic global environment, network structures allow firms to cope with new threats, seize new opportunities and gain flexibility. By focusing on their core competencies and relying on external, specialist partners for other business functions, firms share the risks and gain access to new resources and skills. It is argued that firms which are part of a network can reduce operational and innovation costs, gain access to new markets, and innovate faster.

The network approach puts emphasis on both direct and indirect relationships and brings to the forefront the importance of resources. It starts with the assumption that each actor controls a range of resources, performs a series of activities and is connected to others via these resources and activities (Figure 3.1). In other words, business units are connected through actor bonds, activity links and resource ties (Hakansson & Snehota, 1995). To create bonds, link activities and processes, as well as tie or integrate resources, the network theory stresses the need for a range of networking activities. Activities consist of partner selection, resource integration, information processing, knowledge capturing, social coordination, resource and business sharing, decision making, conflict resolution and motivation building (Johnsen et al., 2000).

Snow et al. (Snow et al., 1992) identify and describe three different types of networks: stable, dynamic, and internal networks. Internal networks are intra-organizational structures that imply collaboration between the different business units of a given organization. In the stable network, firms owning different assets required for the production of a particular good or service combine their assets. In stable networks, partners benefit from stability and continuity as relationships are close and long-term. In dynamic networks, complementary members come together on a temporary basis and, similar to the

stable network, combine their assets recognizing their interdependence. Members of dynamic networks are loosely coupled. They can be changed as well as assembled and reassembled without much cost and effort to meet complex and changing competitive conditions (Miles & Snow, 1986).

Figure 3.1 – A Model of Network



Source: Hakansson, H. (1987), Industrial Technological Development: A Network Approach. Croom Helm, London, UK, p. 17

Miles & Snow (Miles & Snow, 1986) identify the stable and dynamic networks as inter-organizational forms that allow firms to downsize and focus on their core competencies, outsourcing the rest to a network of independent firms. Dynamic network organizations are particularly suitable for turbulent environments as they provide for specialization and agility in complex situations (Snow et al., 1992; Saabeel et al., 2002).

Newell & Swan (Newell & Swan, 2000) have identified three major forms of inter-organizational networks, each characterized by different forms of coordination. Social networks are the least formal types of network since they are based primarily on personal and interpersonal exchange. On the other extreme are proprietary network, which as relatively formal networks where parties are tied together through either financial or intellectual property rights. In between, there are the bureaucratic networks. These types of networks are governed by formal agreements that specify roles and coordination mechanisms.

The network literature also proposes a framework for the analysis of network development (Pihkala et al., 1999). It argues that firms with excellent networking capability and a strong resource base in terms of amount and quality are best positioned to take the lead (Figure 3.2).

Figure 3.2 – Role of Actors in Network Development

| | | | |
|---------------------------|--------|-------------------------------|------------------------------|
| Resource base | Strong | | Best positioned actor |
| | Weak | Worst positioned actor | |
| | | Poor | Excellent |
| Network capability | | | |

Source: Pihkala et al. (1999), Virtual Organization and the SMEs: a Review and Model development”, *Entrepreneurship & Regional Development*, Vol. 11, p.341

The supply chain management (SCM) literature studies activities that have an impact on the speed, reliability and cost performance of the supply chain and on the buyer-supplier relationship. Studies on logistics flows and structural aspects of supply networks are mainly from the perspective of powerful focal firms that create and manage vertical or horizontal networks to their advantage.

Network theory and supply chain management literature come together when firms i) organize their internal functions and activities using a network structure as a governance mode, ii) resort to the ‘buy’ option by outsourcing part of their supply chain activities to external network partners, or iii) engage in a series of alliances which they call upon on a needs-basis. The application of the network approach to supply chain management ensures the inclusion of indirect connection along side sequential linkages between actors. It also emphasizes the importance of resource ties and integration in the creation and development of a supply network (Jahre & Fabbe-Costes, 2005).

The integration of the SCM and network approach allow us to consider supply chains as a complex network consisting of a high number of linear and non-linear, forward and backward, spatio-temporal interactions, relationships and interdependencies among different entities, processes and resources (Surana et al., 2005). From the network perspective, the supply chain is defined as a set of activities by which actors agree to

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

contribute their resources - information, material, money, man power and equipment - towards the completion and supply of a common end-product (Jagdev & Thoben, 2001). The supply chain literature discusses the relative merits of a broad, loosely coupled supply network versus a narrow, integrated one (Figure 3.3). It argues that integrated supply networks are a source of adaptation while loosely coupled supply networks are a source of adaptability (Weick, 1982). Compared to board network, switching (Easton & Quayle, 1990; Sabel et al., 1987) is relatively difficult and costly in integrated networks given the stable configuration. Contacts and opportunities for an extensive knowledge sharing among members are dense in integrated supply networks. However, board networks, not restricted to the number of supply chain members, have a wider access to knowledge. The high level of activity coordination in integrated supply network leads to more efficient processes. Members share a vision and work towards a shared goal. By offering each entity good visibility over the other portions of the supply chain through integration of respective information systems, in integrated supply networks decision making is improved along with the ability to reduce costs and response time.

Figure 3.3 – Relative Merits of Broad versus Narrow Networks

| Broad, loosely coupled supply network | Narrow, integrated supply network |
|--|--|
| Adaptability | Adaptation |
| Fluid configuration | Stable configuration |
| More switching opportunities | Rigid and strong |
| Wider access to knowledge | Dense flow of information |
| Hedge against uncertainty | Improved decision making |
| Cost competitive | Shared destiny |
| High flexibility | Greater visibility |
| Agile | Efficient |

The literature argues that for those organizations that manage temporary chains - engage in time-bound and specific set of activity links, actors bonds and resource ties - a broad network is more indicated. It is equally argued that significant dynamism in the environment necessitates a constant adaptability of the supply network. Altering the boundaries of the network by including or excluding particular entities and by adding or eliminating connections among entities becomes a necessity to face rapidly changing environment.

Supply chain literature discusses the contribution of logistics alliances in lowering the level capital investments in logistical assets. Given the cost of setting up and maintaining a logistics function, firms have various options. These include provision of the function in-house, use of own specialized logistics subsidiaries, out-sourcing to third party logistics providers (3PLPs) and outsourcing on as-needed basis. In terms of logistics alliances, three typologies have been identified: those between customized logistics service providers and producer of goods (vertical), between two service providers (horizontal) and between two clients (horizontal) (Bowersox, 1990).

Logistics alliances have the potential to lower distribution and storage operating costs improve distribution coverage, provide access to superior facilities, equipment and locations, as well as improve the speed and quality of customer service. Through a higher and coordinated use of the alliance's fixed assets, firms can reduce their respective operating costs and achieve better results. Joint investment in specialized logistics assets allows firms to reduce their financial contribution and share the risk with the other parties. Through partnerships with other channel participants that possess or have access to unique or specialized resources not available within a firm (Bowersox & Daugherty, 1995), partner firms can achieve flexibility and meet the changing requirements of their customers.

Scholars have also elaborated on the disadvantages of outsourcing logistics to third parties. Disadvantages include loss of control (Bradi & Tracey, 1991; Bowman, 1995; Byrne, P. M., 1993; Cooke, 1994; Lynch et al., 1994; Richardson, 1993), loss of information, and the inability of the providers to fully meet the company's expectations and needs.

3.2 Coordination Theory and Supply Chain Failure Modes

This section is organized as follows. Section 3.2.1 provides an overview of coordination theory. Section 3.2.1.1 discusses different coordination structures with a particular emphasize on virtual organizing. The next two sub-sections discuss the building blocks and drawbacks of virtual organizing. Finally section 3.2.2 links the discussion on dependencies with that branch of the supply chain literature that elaborates on secure and resilient supply chains.

3.2.1 Coordination Theory

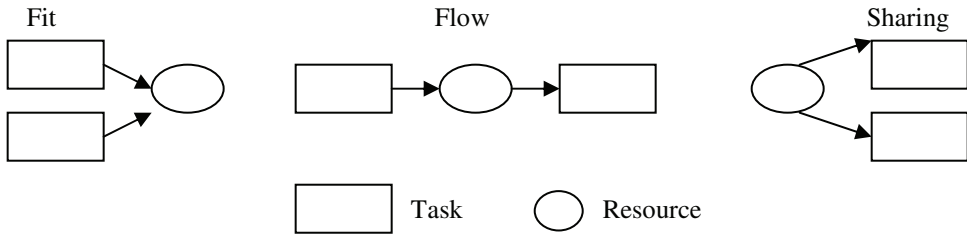
While network theory studies when and how actors are connected to each other via activities and resources, organizational theorists have recognized that interdependencies between different activities and actors need to be managed (March & Simon, 1958). Coordination theory provides a framework for the study of such interdependencies. By focusing on the use of common resources that create the dependency, Malone & Crowston (Malone & Crowston, 1994) define coordination as ‘managing dependencies among activities’. Managing dependencies between activities, however, implies that activities are performed by actors. To overcome coordination problems, actors need to resort to specific or alternative coordination mechanisms.

Coordination theory argues that two types of objects give rise to dependencies: tasks which include goals and activities and resources used or created by tasks (Crowston, 1997). Crowston (Crowston, 1997) lists the various steps required to identify and manage dependencies and eliminate duplication efforts. Malone together with other scholars (Malone & Crowston, 1994; Crowston, 1997; Malone et al. 1999) characterize different kinds of dependencies and propose a variety of alternative coordination processes that can help manage them (Figure 3.5).

Malone et al. (Malone et al., 1999) elaborate on three types of interdependencies: flow, sharing and fit (Figure 3.4). All three dependencies arise because resources are related to multiple activities. Respectively, they argue that fit dependencies arise when multiple activities collectively produce one resource. Flow dependencies occur whenever one activity produces a resource that is required in the next activity. Sharing dependencies arise when a number of activities require the same limited resource (money, storage space, etc.). To manage shared-resource constraints a resource allocation process is needed. It is argued that this type of dependency can be managed by a variety of task assignment mechanisms, such as managerial decision-making, prior assignment according to task type, pricing mechanism or technological coordination mechanisms. Other possible coordination processes that help manage share-resource constraints include priority order, market-like bidding, and first come first serve. It is worth noting that shared resource constraints can

result in conflicting situations as actors performing interdependent activities may have conflicting goals and interests.

Figure 3.4 – Forms of Interdependencies



Source: Malone et al. (1999), "Tools for Inventing Organizations: Toward a Handbook of Organizational Processes", *Management Science*, Vol. 45, Issue 3

Flow dependency can be viewed as a combination of three constraints: prerequisite, accessibility, and usability constraints. Prerequisite constraint is when a producer activity has to be completed before the consumer activity can begin. Managing this dependency involves a notification process - to indicate that the consumer activity can begin - as well as sequencing and tracking processes. Accessibility constraint is when one activity requires the output of another activity. In case of physical goods, the output has to be physically transported. As for information, the information has to be communicated. In the case of services, the service has to be provided. Usability constraint is when what is produced has to be usable by the activity that requires it. One common way of managing this dependency is by standardization. Managing these three dependencies amounts to having the right thing, in the right place, and at the right time (Malone et al., 1999).

The third type of dependency is when to complete a task, product or an overall goal, a number of activities needs to occur at the same time. Managing the fit dependency requires the management of simultaneity constraints that implies satisfying both the accessibility (items produced must be made available for use) and usability (item produced should be usable) constraints.

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

Figure 3.5 – Typology of Dependencies and Coordination Mechanisms

| Dependency/Duplication | Coordination Steps | Examples of Coordination Mechanisms |
|---|---|--|
| DEPENDENCY | | |
| <i>Sharing</i> | | |
| Shareable resources Reusable resources Non-reusable resources | <ul style="list-style-type: none"> • No conflict 1. Notice conflict 2. Schedule use of the resource • Pick one task to do | Task assignment, First-come-first serve, priority order, budgets, managerial decision, market like bidding |
| <i>Flow (Producer- customer relationship)</i> | | |
| Prerequisite (right time) Accessibility (right place) Usability (right thing) Conflicting | <ol style="list-style-type: none"> 1. Order tasks 2. Manage transfer of resources 3. Ensure usability of output <ul style="list-style-type: none"> • Reorder task to avoid conflict • Add another task to repair conflict | <ul style="list-style-type: none"> • Make to order (pull vs. push) • Place orders using economic order quantity, JIT or detained advance planning • Notification, sequencing or tracking • Ship by various transportation modes or make at point of use • Use standards or ask individual users |
| <i>Fit</i> | | |
| Simultaneity constraints Conflicting | <ol style="list-style-type: none"> 1. Manage transfer of resources 2. Ensure usability of output <ul style="list-style-type: none"> • Reorder task to avoid conflict • Add another task/resource to repair conflict | <ul style="list-style-type: none"> • Scheduling • Synchronization |
| DUPLICATIONS | | |
| Same characteristics Overlapping Conflicting | Identify duplications Manage duplications <ol style="list-style-type: none"> 1. Decide 2. Communicate | Task merging Negotiate a mutually agreeable result Decide which task to do <ul style="list-style-type: none"> • Managerial decision-making • Consensus |

Source: Adaptation from Crowston, 1997; Malone & Crowston, 1994; & Malone et al., 1999

Malone & Crowston (Malone & Crowston, 1994) identify two generic processes required for group coordination: decision making and communication. Many coordination processes call for decisions that affect the activities of more actors. For instance, in sharing resources actors must decide on its allocation. Group decisions can be made by command, voting or consensus. Many coordination processes require the communication of useable information. In this case, the establishment of a common language, or a standard of communication becomes crucial.

To determine the cost of coordination and choice between different coordination structures, the coordination theory takes into account two factors: decision making patterns and their related communication requirements (Malone, 1987). Malone (Malone, 1987) decomposes the cost of coordination structure in three categories: production costs (the average delay to process a task), coordinating costs (the number of messages necessary to assign a task) and vulnerability costs (whether the organization functions if one actor does not perform the assigned tasks).

Coordination theory draws our attention to the contribution of IT to the cost of coordination (Malone & Crowston, 1994). Since coordination mechanisms are primarily information processing activities, it is argued that coordination cost depends on the technology available and deployed. Progress in IT changes the relative cost of coordination mechanisms making new processes viable and at times even desirable (Crowston, 1997). IT makes it easier to gather information about available resources and to match resources with a particular task. Database and communication systems enable multiple workers to share, access and make changes to information resources. Widespread use of technology can help reduce both duplication efforts and coordination costs (Malone & Crowston, 1994). A generalized decrease in coordination costs changes the viability of different coordination structures. For example, decreased coordination costs can favor a higher use of markets, closer coordination across firm boundaries, the emergence of flexible organizations, decentralized networks and a shift toward smaller firms (Malone et al., 1987).

3.2.1.1 Coordination Structure: Virtual Organizing

Malone (Malone, 1987) proposes four alternative coordination structures: product hierarchy (separate divisions for different product lines), functional hierarchy (separate divisions for different functions), decentralized market (buyers and suppliers are in contact with each other), and centralized market (a broker is in contact with buyers and suppliers). Malone then evaluates the efficiency and flexibility profile and the relative cost of each of the structures.

In the centralized market structure, decision making is centralized with a broker. Compared to the decentralized market structure, this structure reduces substantially the number of connections and messages exchanged and results in low coordination costs. It has low production costs as each broker coordinates all the tasks and maintains a communication link between actors party to an exchange. Compared to the other coordination structures, the centralized market structure has the highest vulnerability costs, as an eventual failure of the broker disrupts the entire system while the failure of individual actors delays the implementation of tasks.

Figure 3.6 – Coordination Structures: Relationship between Network & Coordination Theories

| Network Theory | Coordination Theory |
|---------------------------|----------------------------|
| Internal Networks | Product Hierarchy |
| Internal Networks | Functional Hierarchy |
| Stable & Dynamic Networks | Decentralized Market |
| Virtual Organizing | Centralized Market |

Miles & Snow (Miles & Snow, 1986) advance that to cope with new environmental conditions, firms undertake experimental actions that lead to new organizational forms. As such, each new form addresses the needs of a specific competitive environment. Below we discuss a new organizational form – virtual organizing – that ensures a centralized market structure as defined by Malone while combining select aspects of the stable, dynamic and internal networks as described by Miles & Snow. Figure 3.6 puts into relationship coordination structures as defined by the coordination and network theories while Figure 3.7 summarized the main characteristics of virtual organizing.

The concept of virtual organization was born out of outsourcing strategies of large firms. To respond to a rapidly changing environment, vertically integrated large firms disintegrated and started to focus on their core competencies outsourcing the rest to suppliers. The terms virtual supply chain or virtual enterprise were coined to describe the large focal firm's effort in coordinating the activities and resources of geographically dispersed suppliers required for the production and distribution of a particular product or service.

Figure 3.7 – Major Features of Virtual Organization

- Structural Components: Virtual Web & Virtual Corporation staffed with virtual teams
- Managerial figures: Architect, caretaker, lead operator
- Cultures: Virtual web, virtual corporation, firm
- Focus of virtual corporations: Temporary, project oriented
- Members:
 - Geographically dispersed
 - With complementary or different competencies
 - Retain their independence and continue with their core competencies
- No change in ownership of resources
- Authority: Non-hierarchical
- Participation unrestricted by industry, size and geographical location
- Horizontal and vertical integration of the value chain
 - shortage in resources, integration of resources
 - share risks and costs, cooperation along the value chain
- Enablers: Trust & IT
- Informal or formal formation
- Within the scope of collaboration, members share vision and goals
- Vision and goals reshaped according to needs
- Collaborative and dynamic network: Members changed according to needs
 - Low barriers to the entry and exit
 - No post-membership financial obligation
- Flat Organization
- Decentralized management: Fast decision making and decision execution
- Lack of physicality

In the literature, the concept of virtual corporation has been mainly applied in the context of small and medium scale enterprises (SME) networks. To compete globally and to stimulate largeness, scholars have verified that on a temporary basis, SMEs pool their specialized resources and capabilities residing within the network to deliver a product.

Virtual teams have emerged mainly when and where there has been a need to temporarily harness, tap into the creativity and talent of geographically dispersed individuals to deliver

a service or product. Contrary to virtual supply chains where the relationship between suppliers and the focal firm are of a hierarchical nature, relationships within a virtual corporation and team are non-hierarchical.

Mowshowitz (Mowshowitz, 1986 & 1994) laid out a theory of virtual organizing based on the notions of simplification, switching and combinatorial freedom. He asserts that companies achieve optimal efficiency and effectiveness if they can switch from one resource to the next without being limited by temporal, geographic or political boundaries. Byrne (Byrne, J. A., 1993) is the scholar who has delivered the most comprehensive definition of virtual corporation. Accordingly, a virtual corporation is:

“A temporary network of independent companies - suppliers, customers, and even rivals - linked by information technology to share skills, costs, and access to one another's markets. This corporate model is fluid and flexible - a group of collaborators that quickly unite to exploit a specific opportunity. Once the opportunity is met, the venture will, more often than not, disband. In the concept's purest form, each company that links up with others to create a virtual corporation contributes only what it regards as its core competencies. Technology plays a central role in the development of the virtual corporation. Teams of people in different companies work together, concurrently rather than sequentially, via computer networks in real time.”

Virtual corporations are created in response to a market opportunity and dissembled upon its achievement. They are value-adding partnerships that ensure a better and higher use of the members' resources; provide access to new abilities, markets and information at lower cost; and reduce time to market (Bremer et al., 2000). Members benefit from the collective expertise as well as tangible and tacit knowledge residing within the virtual web members as opposed to expertise and knowledge available within one member (Venkatraman & Henderson, 1998).

Virtual corporations often give the impression that a large resource base, organization is behind the activities, whereas in reality, perhaps just a group of people networking from different locations contribute to this illusion (Klein, 1994; Fischer, 1995; Jägers et al., 1998; Wicher, 1996). In other words, virtual corporations stimulate largeness and are often indistinguishable from larger organizations to an outsider (Goldman et al., 1995; Scholz, 1994; 1996). This feature of the virtual corporation is particularly attractive for SMEs. SMEs typically have limited resources. Participation to virtual organizations enables them to expand their collaborative options, exploit opportunities previously inaccessible to them, gain access to a wide range of resources and compete with larger companies (Kasper-Fuehrer & Ashkanasy, 2003; Franke, 1999) without losing their independence.

Goldman et al. (Goldman et al., 1995) realize the drawbacks of the dynamically configured virtual corporations mainly in terms of trust building. As such, they introduce the concept of the virtual web. The virtual web is an open-ended pool of relatively stable, pre-qualified, and independent partners loosely bound by a cooperation framework. The cooperation framework sets the mission and vision of the virtual web as well as the general rules of participation. The web is a virtual collection of resources, capabilities, and core competencies that facilitates the speedy configuration of a virtual corporation (Franke, 1999). The virtual web allows members to entertain and build relationships with each other before becoming party to any virtual corporation (Franke, 1999). Similarly, Franke (Franke, 1999) argues that for the initiation and operation of virtual corporations, two functions have to be carried out: initiation and preparation of the virtual web and maintaining and improving the virtual web collaboration.

Pires et al. (Pires et al., 2001) further elaborate the concept of the virtual web. They specify that the need for partnerships between competing firms as well as those between supply chain firms arise only when firms require, on a recurrent basis, to assemble resources to exploit in the speediest manner well-defined market opportunities. In other words, they argue that it is the repeated need and not issues related to trust that make the virtual web a permanent feature of virtual organizing and a necessity for the deriving virtual corporations.

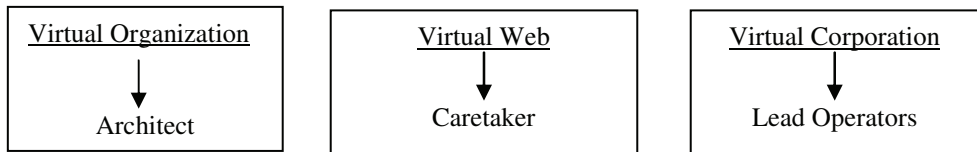
The virtual corporation is composed of virtual teams that operate across space, time and organizational boundaries. Each team member has its own area of specialization and

contributes to the objectives of the project with his/her specific skills. As milestones are accomplished or modified, members adapt their contribution in order to move with the team towards a common goal.

Virtual organizing results in three different levels of interrelated organizational cultures. These are company culture, the culture of each virtual corporation and that of the virtual web (Franke, 1999). Indeed, a virtual corporation is a new organizational structure that has its own and unique identity and internal configuration.

Snow et al. (Snow et al., 1992) in their article “Managing 21st Century Network Organizations” identify and define three managerial roles necessary for the creation and management of network organizations. These are the architect, caretaker and lead operator. In their view, networks require the conceptual inputs of an architect, the negotiating and nurturing skills of the caretaker and the organizational skills of a lead operator.

Figure 3.8 – Management Figures of Virtual Organizing



The managerial network roles identified by Snow et al. (Snow et al., 1992) are applicable to the different components of the virtual organization (Figure 3.8). Bearing in mind that the role and function of the three managerial figures may at times overlap and be even occupied by the same person, the architect is the originator of the virtual organization concept. The caretaker is the person or group of people who administer and nurture the virtual web including its IT functions, define its agenda, establish business processes and standards and provide forums for contact between virtual web members. They are responsible for the establishment of a solid base from which virtual corporations can be configured. They initiate the virtual corporation and mobilize the required resources from the virtual web members. If a required capability is lacking or unavailable, the caretaker considers the engagement of external players. Lead operators are the managers of each

virtual corporation. They operationalize and disassemble the formed virtual corporation(s). Responsible for the structure's performance, they manage the tension between continuity and closure as well as take and communicate the required operational decisions.

Given the low relational investment required to become and remain a member of the virtual web, entry and exit decision are relatively easy and cheap. Nonetheless, adherence to the virtual web is a strategic decision as it is an open-ended, long-term commitment to contribute to virtual corporations as per an agreed cooperation framework. In contrast, the decision to establish and contribute to a virtual corporation is an operational one.

The virtual organization literature also foresees the transfer of virtual corporation activities, temporary in nature, to the core business of some actors. At this stage, the concerned actors need to decide on how to manage the identified activities over a longer period. Possibilities include the setting up of more binding ties with partners involved in the implementation and delivery of the activities or internalization (Shi & Gregory, 2005).

In conclusion, virtual organizations combine selected aspects of the three network types (Franke, 1999). They have the strength of a stable network as they offer member companies a stable framework for cooperation and continuity of relationships. They provide the close and trustworthy cooperative culture of an internal network. Lastly, they offer the agility and competitiveness of a dynamic network.

3.2.1.2 The Virtual Organization's Building Blocks

The literature proposes a combination of commitment, strong leadership, top management support, agreement on vision and key processes, trust, interdependence, limited conflict and organizational compatibility as antecedents to inter-firm strategic alliances (Achrol et al., 1990; Mentzer, 1999; Mentzer et al., 2000). Franke (Franke, 1999) identifies eight key drivers - pre-qualification criteria, trust and culture, direction, finance and legal aspects, marketing, supply chain design, business processes and ICT - behind the successful transition of firms from a stable network to a virtual web. This section aims to describe the most relevant drivers of virtual organization identified by the literature.

In networks, trust and reputation substitute for control mechanisms of rules and contracts available in hierarchies and markets (Ariss et al., 2002, Kasper-Fuehrer & Ashkanasy, 2003; Jägers et al., 1998). Virtual organizations consist of voluntary rather than legally

binding collaboration arrangements. There is broad consensus that trust is one of the most important factors for the initiation, development, and continuation of virtual webs and virtual corporations as it enhances the willingness of partners to cooperate (Clases et al., 2003). Trust facilitates information sharing between members. It enables virtual corporations to cope with time pressures in complex and uncertain situations and helps them retain their operational agility. As more and more virtual corporations are formed and experience and reputation grows, trust is reinforced among members.

Trust along with the interaction of three inter-related organizational cultures – company, virtual corporation and virtual web, play a significant role in the successful transition of companies from a stable to virtual organization. Although members come together if and only when they share a common goal, clear and well defined direction of the virtual web helps focus the scope of cooperation.

Dyer & Singh (Dyer & Singh, 1998) argue that the potential for relational rents hinges on the compatibility of the decision-making processes, organizational systems and cultures of network partners. Strategic and organizational complementarities are said to be critical for realizing the potential benefits of a partnership arrangement that combines complementary resources.

Compatibility between the hard and soft resources of the partners ensures that networks in general and virtual corporation in particular can act effectively as a single organization dedicated to one particular project (Goldman & Nagel, 1993). It is argued that in order to unite quickly, the partnering companies have to be compatible, committed and ready to respond to the unexpected requirements. Firm pre-qualification criteria aims to determine the level of firm logistics systems and philosophy compatibility. So as to avoid free riders, it also ensures that each member possesses a core competency or specialized resources.

Reference business processes, that is, a set of standards to be continuously reviewed are important for the formation of virtual webs and corporations and facilitate the integration of new web members into the virtual web (Franke, 1999). Similarly, a supply chain design that builds on the members' logistics philosophies and logistics management systems ensures the production of a competitive output as fast as possible.

The pre-requisites to trust are shared and transparent goals as well as the assurance of relationship integrity in terms of fair access to and distribution of benefits. In this respect, the finance and legal aspects of cooperation in terms of risks, costs and profits have to be spelt out, fair and acceptable to all parties.

The virtual organization literature highlights the fact that while the outcome of the virtual corporation is visible in the form of a product or service, its structure and organizational boundaries is often blurred. More specifically, the structure and boundaries can remain unclear to the customer (Kasper-Fuehrer & Ashkanasy, 2003; Cooper & Muench, 2000), the participating organizations and at times even to the virtual corporation team members. This is true to the point that the success of the virtual corporation is often measured by its ability to appear and operate in the market as a single organization making it difficult for an outsider to distinguish between the different participating firms (Aken, 1998; Goldman & Nagel 1993; Pires et al., 2001; Kasper-Fuehrer & Ashkanasy, 2003; Rahman & Bhattachryya, 2002). Hence a strategy for marketing of the network helps compensate for lack of physicality and as Forslund et al. (Forslund et al., 1998) suggest a logo can help the identification and bonding process.

As the relevant literature points out, recent developments in IT have blurred organizational boundaries, increased the speed of formal and informal communication and enabled the connection of firms and teams regardless of their number, location or distance. They have made the instantaneous and seamless sharing and exchange of large volumes of information across time, space and teams possible (Mertens & Faisst, 1996). The convergence of ICTs has allowed for the substitution of traditional ways of working in co-located, hierarchical and stable environments with more dynamic organizational structures and virtually organized workforce.

ICT has enhanced the effectiveness and efficiency of cooperation and has facilitated the emergence of decentralized organization structures. It has decreased transaction costs associated to cooperation, coordination and switching, increasing the economic incentives of dynamic collaboration arrangements. It has created new opportunities for learning, reinforcing both cognitive and affective trust among the partners (Scott, 2000). As far as the logistics function is concerned, IT has helped create transparent logistics structures,

facilitated the emergence of strategic alliances and realization of time-based strategies important for time-sensitive industries (Bowersox & Daugherty, 1995).

Virtual organizations use ICT to virtually and dynamically establish a complex network of relationships necessary for the sourcing, creation and deployment of complementary or additional resources and capabilities (Venkatraman & Henderson, 1998). Without it, virtual organizations could not operate, react and communicate as swiftly and effectively as they do now. Members of a virtual organization come together via an electronic network flexibly and cheaply. To align activities and create knowledge, virtual corporations communicate, transfer and exchange large amount of information quickly, accurately, easily, cheaply and over great distances. As such use and compatibility between ICT systems ensures an effective cooperation.

Scholars have stressed the importance of agile workforces (van Oyen et al., 2001) in turbulent environments and networks. Networks require a workforce that can direct, manage, and discipline its activities based on new information and feedback. The network literature provides us with a description of the skills and traits of an agile workforce: intelligence, competencies, collaboration, culture and information system (IS) (Breu et al., 2002). An intelligent workforce quickly reads and interprets external change and adjusts objectives accordingly. A competent one continually acquires and upgrades its skills inline with the requirements of the business. An agile workforce collaborates effectively across projects, functions, teams and organizational boundaries. In terms of culture, it has the social resource, mindset that is conducive to empowerment and decentralized decision-making. An agile workforce is an IT literate one that can use and quickly adapt to new systems.

3.2.1.3 Drawbacks to Virtual Organizing

Scholars have identified a number of drawbacks to virtual organizing. For example, the transition from organization to virtual corporation raises the question of how staff and management overcome the problems arising from geographical distances and a flat organization.

As already mentioned, virtual organizing creates three inter-related cultures. The loose structure blurs organizational boundaries and empowers employees rendering their management, in terms of guiding them towards the final goal, difficult. In this respect, scholars (Hughes et al., 2001; Cooper & Muench, 2000) highlight the importance of monitoring and control in empowered virtual teams as a means to avoid goal displacement. More specifically, for the contribution of the virtual team to remain relevant to the overall objective, Hughes et al. (Hughes et al., 2001) highlight the importance of backward and forward “awareness”. “Awareness” is defined as the knowledge of what has been accomplished prior to the work being handed on to the team and what happens after the team accomplished its task. Similarly, Cooper & Muench (Cooper & Muench, 2000) stress the importance of coordination and communication between virtual teams in flat flexible organizational structure as a means to avoid inconsistency between the actions of dispersed members.

Hughes et al. (Hughes et al., 2001) argue that secondments to a geographically distant virtual corporation may create group loyalties. In the worst-case scenario, when communication between the different components of the virtual organization is poor, it may result in the development of a “them and us” and “buck passing” attitude. Similarly, Bosch-Sijtsema (Bosch-Sijtsema, 2002) argues that staff seconded to virtual corporations has several professional responsibilities which may result in prioritization, loyalty and motivation problems. To counter these types of problems, Cooper & Muench (Cooper & Muench, 2000) stress the importance of fixing responsibilities and establishing reporting lines. Apart from ensuring accountability, clear reporting lines and responsibilities anchor and help the identification process of the virtual team members to the new set up.

Virtual teams can also suffer from the feeling of isolation caused by the lack of day-to-day physical interaction with colleagues (Cascio, 2000). To counter the feeling of isolation, which can affect the productivity and quality of work, lead operators should encourage and seek regular opportunities for face-to-face encounters.

Cascio (Cascio, 2000) identifies the cost disadvantages of the virtual workplace as a drawback to the concept of virtual organizing. He argues that dispersed workplaces increase setup and maintenance costs as administrative and technical support is extended to numerous and possibly distant setups resulting in loss of cost efficiencies.

Upon & McAfee (Upton & McAfee, 1996) focus on the IT challenges facing virtual organizing. They draw our attention to the fact that the design, administration and subsequent technological updating of an IT infrastructure is not a negligible responsibility and task. In addition, the caretaker, whose core competency is typically not in the area of IT, often carries out this function. For these reasons, they argue that virtual organizing may not emerge in all those contexts where needed but in environments where a large, dominant partner can provide for the required impetus and the funding (Upton & McAfee, 1996).

Cooper & Muench (Cooper & Muench, 2000) identify the issue of proprietary information, if not adequately addressed and protected, as a potential drawback to a company's continued participation in virtual organizations.

Finally, scholars warn firms that an increased reliance on virtual organization for critical services can lead to dependence and a gradual loss of control over key resources and competencies as well as strategic decisions (Cooper & Muench, 2000).

In conclusion, by flagging lack of authority and control over the virtual web members and their resources as well as compatibility between cooperating members as the main drawbacks, the literature emphasizes how the very advantages of virtual organizing – flat organizations, temporary and dispersed units – are at the source of the concept's drawbacks.

Miles & Snow (Miles & Snow, 1992) identified the inherent causes of failure in the stable, internal and dynamic network types. They also discussed the dangers of misapplication and deviation from each form's operating logic.

As far as the inherent causes of failure are concerned, in stable networks these are related to the quasi-insulated, protected nature of the customer-supplier relationship. It is argued that internal networks are subject to failure if they are driven by internal motives rather than pure business rationale. Dynamic networks are expected to achieve their potential as long as there is a sufficiently large number of readily deployable, competent and relevant firms operating at each point of the value chain to choose from.

Virtual organizing is not immune from the above mentioned causes of failure. Given the relatively stable nature of the virtual web, if complacent, the deriving virtual corporations

can become disconnected from the effective needs of their constituencies. As such, they can fail to provide value adding services or realize a market opportunity. To ensure that virtual corporations are activated only when clearly needed, it is important that the caretaker resists undue pressure exercised by virtual web members. As any dynamic network that depends on the voluntary contribution of its members, virtual corporations may run the risk of quality variation across deployments as needed expertise might not always be available.

3.2.2 Supply Chain Failure Modes

Humanitarian organizations need to manage a range of dependencies and duplication of efforts that emerge between their supply chains during emergencies. To understand the sources of such dependencies, we review the branch of the supply chain management literature that deals with secure and resilient supply chains.

The integration of the SCM and coordination theory allows us to study the interface between interdependencies between different entities and their supply chains. Supply chain failure modes caused by the structural shortcomings of a country or region, sudden shocks and disruptions have important supply chain and coordination implications. They can create, increase or exasperate actor, process or resource dependencies. Structural supply chain failure modes directly linked to the specificity of a country affect all players. Similarly, shocks produce system-wide affects and, while temporary in nature, can result in structural deterioration of the environment. Firms are also subject to a wide range of industry or firm-specific disruptions that affect their operations and need to be dealt within the network (Figure 3.9).

Figure 3.9 – Examples of Sources of Supply Chain Challenges

| System-Wide | | Industry or firm-specific |
|---|--|---|
| Environment | Shocks | Disruptions |
| Geographical features Logistics infrastructure Business Environment | Large scale disasters Political Instability | Accidents Labor disputes Supplier bankruptcy Industry consolidation Information System breakdown Procurement failures Capacity issues |

Causes of supply chain shock and disruptions are numerous and the literature on the subject is rich. Instead of providing an overview on the topic, we take the pragmatic approach proposed by Rice & Caniato (Rice & Caniato, 2003a) by presenting the impact of disruptions on the supply chain - the failure modes - rather than the risks themselves.

Figure 3.10 – Types of Failure Modes and Dependencies

| Failure mode | Description | Dependency |
|----------------------|---|-------------------|
| Supply | Delay or unavailability of materials from suppliers | Flow, fit |
| Transportation | Delay or unavailability of transportation infrastructure or various modes | Flow, Sharing |
| Facilities | Delay or unavailability of plantations, plants, warehouses, office buildings | Flow, sharing |
| Communication | Delay or unavailability of the information and communication infrastructure and systems | Flow |
| Human Resources (HR) | Delay, loss or unavailability of HR to continue operations | Flow, sharing |

Source: Adapted from Rice Jr., J. B. & F. Caniato (2003a), “Supply Chain Response to Terrorism: Creating Resilient and Secure Supply Chains”, *Supply Chain Response to Terrorism Project, Interim Report of Progress and Learning*, MIT Center for Transportation and Logistics.

As per Figure 3.10, Rice & Caniato (Rice & Caniato, 2003a) identify and define the five failure modes that affect a supply chain. We argue that these failure modes which are related to shocks and disruptions in supply, transportation infrastructure, communication networks as well as those related to loss of human resources and unavailability of facilities can increase the frequency and level of sharing, flow and fit dependencies.

The secure and resilient supply chain literature provides an overview of the type of measures firms apply to mitigate the affect of failure modes on their operations (Figure 3.11). These measures allow firms to manage/overcome interdependencies that emerge in case of supply chain shocks and disruptions in an effective way. In general, the most reactive firms have contingency plans in place, can call upon redundant capacity and adapt to new scenarios leveraging the flexibility built into their operations.

Figure 3.11 – Mitigation Measures against Supply Chain Shocks and Disruptions

| Failure Mode | Mitigation Measures |
|-----------------------|---|
| | Commercial Operations |
| Supply | Contingency planning Redundant capacity <ul style="list-style-type: none"> • Inventory, suppliers, production capacity Flexible operations <ul style="list-style-type: none"> • Supplier substitutability • Design changes • Direct sales model |
| Facilities | Contingency planning <ul style="list-style-type: none"> • Recovery centers Redundant capacity <ul style="list-style-type: none"> • Redundant or standby production facilities Flexible operations <ul style="list-style-type: none"> • Global, dispersed operations |
| Transportation | Flexible operations <ul style="list-style-type: none"> • Transportation mode substitutability (air, road, rail, sea) • Vehicle mode substitutability (airplane, train, boat, truck, car, motorcycle, etc.) • Logistics provider exchangeability • Change in destination, receiving port |
| Communication | Contingency planning <ul style="list-style-type: none"> • Business continuity plans |
| HR | Flexible operations <ul style="list-style-type: none"> • Temporary staff |

For example, flexible supply chains allow companies to respond to new scenarios by rapidly adjusting the speed, destinations and volumes of their supply chain and reallocating existing infrastructure and capabilities to new purposes and use (Prater et al., 2001). Flexibility is a cost-efficient choice as there is no idle capacity. However, it does force companies to prioritize needs and choose between competing activities. By maintaining redundant capacity, firms can equally protect their supply chains from failure modes. However, unused capacity and capabilities imply higher fixed costs. Given the different cost and service characteristics of flexibility and redundancy, firms can combine or choose between the two options on a case-to-case basis.

As the supply chain literature focused on secure and resilient supply chains describes, to be able to react to shocks and unexpected disruptions and restore normal supply network

operations, a company can actively engage in business continuity/contingency planning. Contingency planning allows companies to act upon the five failure modes.

To hedge against facility modes firms envisage the establishment of recovery centers, management of global and geographically dispersed operations, and relationships with redundant, standby production facilities. Opening up of pre-arranged, dedicated emergency control centers, recovery sites upon detection of a disruption allows companies to conduct the “service”, back-office component of their business and overcome human resource, facilities and communication. By envisaging the movement of production to other parts of the world and having secondary suppliers for all critical components, companies can address failure modes deriving from facility and supply.

To counter transportation failure modes, companies draw plans that envisage the use of different transportation routes, modes and vehicle types as well as back-up logistics service provider(s). To counter potential breakdown in their communication and IT systems, they formulate business continuity plans that incorporate the availability of alternative locations and adequate back-up systems. Finally, to overcome the unavailability of human resources, they call upon temporary staff.

3.3 Resource Based View and Corporate Social Responsibility

In this section, we draw upon the resource based view of the firm to understand the importance of resource and capabilities in organizational performance. In section 3.3.1, we review the resource based approach with a view to identify the need for resource and capability enhancement. In Chapter 2 we identified the importance of business processes, human resource and IT to organizational innovation and growth. Hence, section 3.3.1.1 scans the resource based approach literature on the subject. To understand the supply side of resource and capability enhancement and provide an explanation of when and why business can and is interested to contribute to the operations of humanitarian organizations, section 3.3.2 links the resource based view to the corporate philanthropy literature. It also

reviews the benefits and risks of business-humanitarian partnerships as well as what drives business to engage in partnerships with humanitarian organizations.

3.3.1 Demand for Resource and Capability Enhancement

Wernerfelt, the proponent of the resource based view (RBV), argues that since products and resources are the two sides of the firm, a firm can be analyzed from either perspective. The starting point of the RBV of the firm is a firm's resource position in terms of its strengths and weaknesses. Under the RBV, resources are the basis of firm success or failure. The RBV defines resources and capabilities as the stock of tangible and intangible assets controlled by a firm (Wernerfelt, 1984; Barney, 1991). Intangible assets can be both tradable (patents, brands, etc.) or non-tradable. Trust, image, culture, and skills are among the non-tradable and 'invisible' (Conner, 1991) intangible assets of a firm.

The RBV literature makes a clear distinction between resources and capabilities. It considers resources as the source of a firm's capabilities and capabilities as the main source of competitive advantage. Firm resources can be categorized in five major categories: financial, physical, human, technological, and reputation. Firm capabilities consist of a series of complex interacting routines that express the capacity of a firm to deploy and combine resources under its control to perform a task or activity. They are information based, tangible or intangible processes that are firm specific. They are developed over time through complex interactions among the firm's resources particularly its human capital.

The RBV assumes that all firms are idiosyncratic and that their strategic resources are heterogeneous (Barney, 1991). The thesis of the RBV is that while common resources ensure a firm's survival, certain resources lead to higher rents and are the fundamental drivers of performance and competitive advantage. Resources and capabilities that confer such competitive advantage are those that are valuable, rare, imperfectly imitable, and not substitutable (Barney, 1991). Path dependency, causally ambiguity (Lippman & Rumelt, 1982) and social complexity make resources imperfectly imitable (Dierickx & Cool, 1989). When resources are not perfectly mobile, inimitable and difficult to identify and understand, heterogeneity is long lasting and competitive advantage is sustained.

The RB approach is concerned with the most effective deployment of core resources and capabilities and with the continuous development of existing and new resources. Replacement investment, commitment to upgrade and resource augmentation – that is filling ‘resource gaps’ (Stevenson, 1976) - are viewed as necessary actions to meet the challenges of the future. Grant (Grant, 1991) argues that those firms that develop and exploit their internal resources and capabilities are more prepared to confront external opportunities and threats. Dierickx & Cool (Dierickx & Cool, 1989) argue that the stock of resources a firm possesses influences the pace of resource accumulation. It follows that the study of a firm’s resource portfolio can provide indications of its growth opportunities and point to its strategic options.

Scholars have also identified the limit to the RBV. The extent to which a firm’s strategic advantage is based on casually ambiguous resources, it is not possible to know, with certainty, which resources are the cause of that strategic advantage (Barney, 2001) limiting the opportunity for its transferability and replication across a firm’s business units (Grant, 1991).

The RBV while concentrating on the positive side, that is, unique benefits of core resources and distinctive competencies, refers to resources weaknesses (Wernerfelt, 1984) and competitive disadvantage (Dierickx & Cool, 1989; Barney, 1991). Scholars have discussed the constraining effects of particular resource positions for the performance and growth potential of the firm. For example, the resource-based view prescribes building core resource as well as capability stocks as a means to achieve competitive advantage (Barney 1991; Dierickx & Cool, 1989). This is with a view to avoid that firms develop particular resource strengths, but neglect the development of effective capabilities required for organizing and coordinating such resources.

West & Decastro (West & Decastro, 2001) have argued that the inability to leverage and extend a particular set of resources or the possession of the wrong set of resources could offset existing advantage or place a firm at a competitive disadvantage. Black & Boal (Black & Boal, 1994) note the possible effect of resources on one another. They argue that resources can either compensate, enhance or suppress/destroy each other. As resource weaknesses and inadequacies interfere with rent generation, they have to be addressed.

Hence the ability to identify, organize, and coordinate resource strengths is as important as the ability to identify and coordinate efforts to mitigate or eliminate resource weaknesses (West & Decastro, 2001).

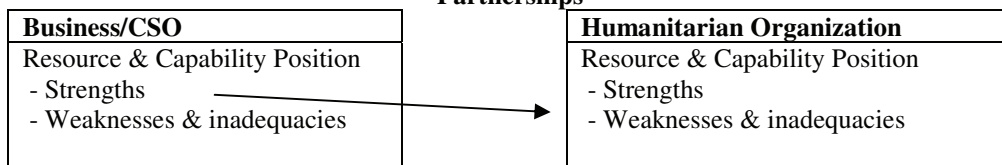
West & Decastro (West & Decastro, 2001) identify two characteristics of resource weaknesses and inadequacies. They argue that weaknesses and inadequacies that undermine a firm's performance capability must be both valuable and rare. Only those weaknesses and inadequacies that cause significant loss of competitive advantage, or place a firm at a competitive disadvantage are valuable.

The weakness/inadequacy perspective elaborates on the source and solution of resource weaknesses and inadequacies. It argues that resource weaknesses may result from deliberate action or from omission. Firms are often confronted with different investment alternatives. Decision to invest in one area may prevent a firm to build core competencies in another. Past firm-specific investments, bounded rationality and developed routines limits a firm's investment choice set (West & Decastro, 2001).

The RBV argues that competitive advantage accrues from stocks of resources and resource stocks cannot be increased instantaneously (Dierickx & Cool, 1989). Similarly, the weakness/inadequacy perspective argues that resource weaknesses develop over time and can be effectively dismantled only over a period of time. Similar to resource strength, resource weakness and inadequacy often grows in an invisible fashion. Both the sources of and solutions to resource weaknesses and distinctive inadequacies are often complex, ambiguous, and difficult to identify. West & Decastro (West & Decastro, 2001) conclude that because they are rare and common solutions do not exist or in any case are not transferable from one firm to another, the solutions to counteract weaknesses are not obvious and require time to be fully developed. Since resource weaknesses and inadequacies like resources strengths are evolutionary within organizations, firms need to continuously invest in activities that offset or destroy them.

West & Decastro (West & Decastro, 2001) argue that it is not only important to invest in existing and new resources strengths but also in i) the reduction of stocks of resource and capability weaknesses and ii) those resource and capability strengths that help neutralize the effect of weaknesses. Investments to reduce weaknesses serve to ensure a position of net resource strength.

Figure 3.12 – Relationship between Resource Based Approach and Business/CSO Partnerships



To address pervasive weaknesses and inadequacies, a humanitarian organization would need to invest in certain capabilities or resources. However, in so doing it may need to access specialized resources and capabilities available only with private actors. As illustrated in Figure 3.12, when a business or civil society organization (CSO) has a strength in a specific resource or capability that if transferred or made available could help bridge a humanitarian organization’s weakness, then a partnership between the two could be desirable.

3.3.1.1 Contribution of Business Processes, Human Resources and IT to Organizational Performance

The resource based view suggests that, among other things, three organizational resources and capabilities can boost the performance of humanitarian organizations. These are HR and HR practices, business processes, and IT infrastructure. Investments in these areas ensure that each organization optimizes the use of its specialized resources and bridges eventual resource gaps improving its performance (Figure 3.13). In the following paragraphs we briefly scan the resource based approach literature on the subject.

Business Processes. Business processes are routines or activities that a firm develops to implement its tasks and reach its objectives (Nelson & Winter, 1982; Porter, 1991). Examples of business processes include the processes of purchasing, production, delivering, and after sales service (Porter, 1985). Ray et al. (Ray et al., 2004) propose the effectiveness of business processes as a dependent variable in the resource based research. Since resources cannot be a source of competitive advantage by themselves, they argue that business processes are the way a firm’s resources and capabilities are exploited. As

such, they can be a source of competitive advantage. They argue that the overall performance of a firm depends, among other things, on the net effect of its business processes. The net effect is considered since each business process can increase or decrease a firm’s overall performance depending on whether the firm excels, does an average or poor job in it.

Ray et al. (Ray et al., 2004) argue that while the ability of a firm to pursue certain activities, routines or business processes may be constrained by its resources and capabilities, efficiently and effectively organized business processes help a firm realize the full competitive potential of its resources and capabilities improving performance. Moreover, they argue that a firm’s routines by themselves can be an important determinant of a firm’s resources and capabilities given the fact that they tend to be inimitable.

Figure 3.13 – Performance and Three Organizational Resources and Capabilities

| Organizational Resource/Capability | Dependent Variable |
|---|---|
| 1. Business Processes | Net effect of business processes |
| 2. Human resources - Pool of HR - HR Skills - HR systems & practices | Teams Firm-specific skills Attract, utilize, retain talented and performing employees |
| 3. IT - IT Infrastructure - IT Investments | Combined with other firm resources Combined with other firm resources |

Human Resources. In line with the resource based view of the firm, Wright et al. (Wright et al., 1994) examine how a firm’s human resources can be a source of sustainable advantage. They argue that a firm’s pool of human resources is a source of sustained competitive advantage since it is a valuable, rare, inimitable and non-substitutable resource. In the same vein, Barney & Wright (Barney & Wright, 1998) argue that sustainable competitive advantage does not come from individuals but from teams.

Scholars have identified HR skills as the source of competitive advantage. Meyers et al. (Meyers et al., 2004) found that while job experience and education level represent minimum or threshold level requirements, an employee skill set is the differentiating factor in employee performance. Human capital theory (Flamholtz & Lacey, 1981) distinguishes

between general skills and firm specific skills. While general skills help achieve competitive parity, greater potential derives from investments in firm-specific skills (Barney & Wright 1998). However valuable, rare, inimitable and non-substitutable, HR can create value only if the firm is organized, has the right HR systems and practices in place to exploit it.

Likewise, Wright et al. (Wright et al., 1994) argue that HR practices used to attract, utilize and retain employees are not themselves sources of sustained competitive advantage but that they can be leveraged to provide a source of competitive advantage. For instance, HR practices can ensure that employees with rare talents are selected and that employees are trained so as to have a unique set of skills.

Empirical studies have consistently shown that more effective HR management leads to superior firm performance (Becker & Huselid, 1998). HR management practices are considered instrumental in releasing the potential of a firm's pool of human resources maximizing its effectiveness. Since HR practices and systems can facilitate or inhibit the development and utilization of organizational capabilities, managers are invited to pursue effective human resource management practices. Failure to invest in HR systems can result in a competitive disadvantage.

The need for HR management is more pronounced in changing competitive environments. In these cases, companies may need a workforce with a different skill set than the one they currently possess. To meet new needs firms can hire new staff. But they also need to continuously develop existing staff through training and other staff development initiatives (Becker & Huselid, 1999). In terms of staff development, Saa-Perez & Garcia-Falcon (De Saa-Perez & Garcia-Falcon, 2002) argue that HR practices and policies such as training programs and socialization systems by enhancing employee skills and motivation can help improve a firm's organizational performance. Given the importance of teams in firm performance, activities that aim to develop and nurture the relationships among organizational members are also deemed important (Barney & Wright, 1998).

Meyers et al. (Meyers et al., 2004) identify four skill types as important for the performance of logistics managers: social skills, decision making skills, problem solving skills and time management skills. Social skills consist of the interpersonal skills of a

logistics manager necessary to build consensus and provide leadership. Decision-making skills reflect the ability of a manager to make decisions in an efficient manner. Problem solving skills involve the ability to manage time and set priorities. Time management skills consist of the ability to set agendas in order to meet goals and accomplish tasks.

Information Technology. Several studies have examined the relationship between investments in IT and firm productivity. The evaluation of individual IT investments has been difficult given the ‘delayed benefits, unintended uses, business changes, and hidden support costs’ (Ross et al., 1996). Nevertheless findings have shown that information systems or information technology by themselves contribute directly to sustained firm performance. There is strong evidence that IT exerts its influence on firm performance indirectly, through complementary relationships and interaction with other firm resources and processes. In this respect, Benjamin & Levinson (Benjamin & Levinson, 1993) conclude that performance depends on how IT is integrated with organizational, technical and business resources. Powell & Dent-Micallef (Powell & Dent-Micallef, 1997) conclude that only human resources combined with IT contribute to improved performance.

It is commonly accepted that for information dependent firms, effective IT resources constitute a competitive necessity (Ross et al., 1996). Ray et al. (Ray et al., 2001) distinguish between IT’s two performance effects: absolute and relative. They argue that IT can improve the efficiency and effectiveness of processes in an absolute sense. That is the cost and/or quality of processes can be higher with the deployment of IT compared to when IT is not deployed. Accordingly, firms should invest in generic technologies as they have an absolute performance effect. However, to improve the relative performance of processes, there is a need to invest in inimitable IT capability.

Ross et al. (Ross et al., 1996) develop a framework to study the relationship between IT and firm performance. They argue that a particular IT application does not provide a firm with a specific advantage. It is the capability of deploying IT to business opportunities and in support of specific activities and processes that is important. More specifically, IT is expected to enhance competitiveness when there is an effective IT capability, IT-related costs are controlled, and when business objectives are expected to be influenced by IT systems. Ross et al. (Ross et al., 1996) decompose IT capability in three IT assets: highly competent IT staff, a reusable technology base, and a strong relationship between IT staff

and the firm's business units. In light of above, they argue that a firm should continuously assess the status of its human, technology and relationship IT assets in order to address eventual weaknesses and leverage strengths.

Rai et al. (Rai et al., 2006) develop the theoretical linkages between IT infrastructure integration, supply chain process integration and firm performance. They suggest that integrated IT infrastructures, which facilitate the integration of resource (information, physical and financial) flows between a firm and its supply chain partners, enable firms to develop their supply chain integration capability. They argue that this capability results in significant and sustained firm performance gains in terms of operational excellence and revenue growth. As such a firm should engage in the development of its IT infrastructure to enable resource flows, coordination of activities and resource optimization.

3.3.2 Supply of Resource and Capability Enhancement

The corporate philanthropy literature discusses the benefits and risks of business-non-profit partnerships to non-profit organizations. To understand how and why business can contribute to the resource and capability enhancement needs of humanitarian organizations and the risks involved, we review the corporate social responsibility literature.

3.3.2.1 Business' Contribution to Non-Profit Organizations

The corporate philanthropy literature argues that non-profits that enter into partnerships with companies that are strategic in their philanthropy, that is, have the intention to add value to the cause they are supporting, can derive substantial benefits. Porter & Kramer (Porter & Kramer, 1999) identify four ways through which foundations can create value through their giving initiatives. These consist of selecting the best non-profit, signaling other donors, improving the effectiveness of the grantee, and advancing the state of knowledge and practice.

These four ways of creating value are equally applicable to corporate philanthropy. Accordingly, business partners can create social impact and value for society by selecting the most effective non-profit, signaling other donors, improving the performance of the

non-profit and advancing the state of knowledge and practice (Porter & Kramer, 1999). The four ways in which business partners contribute to the operations of non-profit organizations are mutually reinforcing and their benefits cumulative (Porter & Kramer, 1999). A brief description of the four forms follows.

Selecting the Best Non-profit. Stable, experienced, and sizable non-profit organizations with low overhead costs, a good image and reputation, strong brand recognition/name equity, a compelling or urgent mission, influential network, and a charismatic or well-known leader are particularly attractive partners for business (Andreasen, 1996; Simon, 1995). More specifically, for corporate giving to achieve a high impact, partnering with a non-profit that has low overhead costs and effective operations can lead to more value created per dollar expended (Porter & Kramer, 2002). Consequently, CSIs create value if they are allocated to recipients that have the organizational capacity to absorb the in-kind and monetary assistance and the ability to deliver and achieve a greater social impact.

Signal other Donors. A reputable, relatively large corporation with a sizable network and well-oiled communication/PR machinery, by publicizing its partnership with a non-profit and sustaining the relationship over time can raise the profile of the non-profit organization among traditional and non-traditional donors. By signaling to other donors, the business partner can help channel and attract additional funding and in-kind contributions from the corporate world to the non-profit. From their end, non-profits after identifying their requirements should be able to use their partner's network as well as the results of the partnership to market their organization with corporations that make a good fit.

Different companies bring different competencies to a given cause. By tapping into specialized expertise, the non-profit can benefit from a series of corporate partnerships. Should a partnership be effective in signaling other donors and in raising the public's awareness of the activities and needs of the non-profit, an increase in cash donations can be expected.

In conclusion, Porter & Kramer (Porter & Kramer, 1999) assert that by selecting the best grantee and signaling to others, the corporation adds value in terms of more effective allocation of overall philanthropic giving.

Improving the Effectiveness of the Grantee. Compared to individual donors, corporations have the scale, the time horizon, and the management skills to tackle

structural social issues and create benefits for society more effectively (Porter & Kramer, 2002). By providing or facilitating access to specialized and complementary expertise and assets, business partners help non-profits upgrade their skills, address their weaknesses and improve their performance. As a result, value is created for society and the social impact per dollar donated is increased.

Advancing the State of Knowledge and Practice. Business partners can also create value by facilitating the transfer of knowledge as well as advancing the state of knowledge and practice in the social sector. By applying their expertise, know-how, capabilities, resources and network, they can change the working culture of non-profits. They can help in two major ways: develop solutions to organizational as well as social problems.

Through the interaction of these four forms, business partners either create value that goes beyond the mere purchasing power of their grants or achieve a social benefit with fewer dollars (Porter & Kramer, 1999). As Porter & Kramer (Porter & Kramer, 2002) summarize, by selecting the right grantee, the business partner assures a better return on its contribution. By signaling other potential donors it ensures a higher return on multiple contributions. By improving the effectiveness of the non-profit, it increases the return on the organization's total budget.

Scholars (Porter & Kramer, 2002; Hess et al., 2002; Simon, 1995) equally agree that since corporate philanthropy is driven by clear goals, it is critical for achievements, objectives and performance to be monitored and evaluated to ensure the effective use of resources.

3.3.2.2 Drivers of Business-Non-Profit Partnerships

Porter & Kramer (Porter & Kramer, 2002) argue that when companies move away from scattered and unfocused support to social initiatives that improve the competitive context of a firm, they achieve value both for the company and society. First, they argue that social and economic objectives are not necessarily conflicting and distinct. In other terms, social support does not come at the expense of economic results, but that they are interlinked. Secondly, they highlight that the contribution corporations can make to a cause may be higher than what individual donors can achieve. In other words, they argue that where the company does not add value nor derives benefit, the cause, as advocated by the Chicago

economist, Milton Friedman, should be pursued by individual donors (Porter & Kramer, 2002).

Hess et al. (Hess et al., 2002) build the business case for corporate philanthropy. They coined programs that are part of the corporate strategy, grounded in the firm's core competencies, go beyond cash donation and imply the use of firm resources, capabilities and relationships as Corporate Social Initiatives (CSIs). CSIs are expected to be long enough to achieve their objectives. They are usually conceived, initiated and guided by the partners' top management. Well resourced and closely linked to the core values of the private sector partner, they depend on employee participation for implementation. What sets them apart from other traditional philanthropic initiatives is that their results are systematically evaluated, assessed, and compiled in company annual reports.

Hess et al. (Hess et al., 2002) recognize that successful CSIs are those that are based on the corporation's values and culture articulated in the firm's mission statement, which the firm's employees have signed up to. Well-designed CSIs can help companies overcome the "rhetoric-reality gap" between the mission statement and the day-to-day operations of the firm (Waddock & Smith, 2000). They can achieve both internal benefits in terms of a motivated workforce as well as external ones, such as enhanced brand recognition. Nesting CSIs firmly in corporate values also demonstrates long-term commitment, which improves the credibility of the initiative with stakeholders.

Hess et al. (Hess et al., 2002) identify three categories of drivers behind CSIs. These are expected gains and improvements in terms of a firm's competitive advantage, the "moral marketplace" and its comparative advantage. This section expands on each of the identified drivers.

Competitive Advantage. Competitiveness depends on how productively a company uses labor, capital, and natural resources to produce goods and services (Porter & Kramer, 2002). In the era of knowledge workers, the availability of skilled and motivated employees has been identified as the key differentiator and source of competitiveness (Drucker, 1989 & 2002; Pfeffer, 1994).

Corporate philanthropy can become an important part of corporate strategy as it contributes to building a firm's competitive advantage. Indeed, more and more firms engage in CSIs with a view to build new, hard to imitate, and less-tangible sources of

competitive advantage such as a motivated and productive workforce, reputation assets and brand recognition (Hess et al., 2002).

In terms of corporate image and reputation building, Hess et al. (Hess et al., 2002) argue that a well-designed CSI is more convincing than cash contribution for two reasons. Firstly because beneficiaries and assisted non-profits value donation of specialized, costly, and scarce products and services - including time and talent of expert employees - more than its equivalent in cash. Secondly, direct engagement signals a real commitment to a cause and as such is far more appreciated by a firm's stakeholders (Simon, 1995).

Moral Marketplace. Given the influence exercised by and the massive resources at the disposal of the private sector, there is growing expectation for it to assume global responsibility and deliver societal value (Heap, 2000; Smith, 2003). More specifically, public opinion no longer views environmental and social concerns as the sole responsibility of governments, but also part of the business community's responsibility (Mathews, 1997); this also in the face of government failure.

In order to respond to shifts in common beliefs, expectations and preferences in the capital, consumer and labor markets, firms need to be socially responsible. As the literature emphasizes, the consumer, labor and capital markets are becoming more and more selective in their choices. For example, consumers increasingly recognize companies for the causes they support as much as the products they produce (Simon, 1995). As such they reward brands that are more than a "product" and may exercise pressure by boycotting products that, by way of example, use child labor or are harmful to the environment. Secondly, employees are more attracted to companies that are socially responsible and have a strong value system. Finally, investors are more inclined to invest in businesses with good corporate reputations and practices (Hess et al., 2002; Smith, 2003).

As Andreason (Andreason, 1996) argues, in highly competitive industries where price and quality are not key differentiators, a company can try to distinguish itself on the moral marketplace. It can build a competitive advantage by supporting a cause and having sound business practices. In other cases, companies may be obliged to launch CSR/CSI programs as a reactive response to similar initiatives undertaken by their competitors.

Comparative Advantage. Similar to Porter & Kramer (Porter & Kramer, 2002), Hess et al. (Hess et al., 2002) argue that a firm can have a comparative advantage over individuals, governments, other non-profit or for-profit entities in addressing a social cause. For example, firms that have developed unique competencies, apart from enjoying competitive advantage over other firms in the marketplace, have comparative advantage over governments and individuals addressing certain problems (Dunfee & Hess, 2000). In an extreme scenario, a firm may be the only or one of the few providers of a particular product or service required by a cause. By contributing with their unique assets and expertise, corporations provide an in-kind assistance that may be out of the financial or technical reach of certain non-profit organizations. Consequently, the participation and contribution of business in social causes is complementary to the role and responsibilities of governments and traditional donors.

3.3.2.3 Risks of Business-Non-profit Partnerships

The previous paragraphs focused on the how business-non-profit partnerships can improve the performance of non-profit organizations and why business is interested to engage in such schemes. To provide a more holistic view, it is important to highlight the main risks associated with these types of partnerships.

Andreasen (Andreasen, 1996) identifies a set of risks facing non-profits partnering with business. He argues that since the implementation of an alliance requires a lot of time and effort, failure results in substantial wastage of resources for both parties. He also emphasizes that only those non-profits that have the required absorptive capacity can benefit from the proposed assistance. He alerts non-profit managers of the negative effect that corporate cash and in-kind donations may have on the organization's traditional donors. Traditional donors may reduce their donations should they believe that the non-profit no longer requires their assistance or if they disapprove of the nature of the non-profit's relationship with business.

A corporation that enters into an alliance with a non-profit organization may impose restrictions such as exclusivity rights that may limit its organizational flexibility. A corporation with a deteriorating reputation may constitute a concrete risk to the image and operations of a non-profit. In addition, the corporate partner may damage the non-profit's

image and strategy through its actions (e.g. misuse of the non-profit logo, uncoordinated or unethical marketing initiatives). He argues that while a failed alliance is damaging, the perils of success can be equally harmful should the non-profit lack the structure, processes and systems to manage the ensuing success and growth. Another potential consequence of a successful partnership is the excessive reliance of the non-profit organization on its corporate partner.

The literature has identified a series of risks facing the corporate partner in a CSI. The shortage of credible and promising non-profits willing and able to benefit from the support of a corporate partner (Elkington & Fennell, 1998) is identified as one of the main drawbacks. The second category of risk is related to the perception among the corporate stakeholders regarding the firm's real motivation (Porter & Kramer, 2002). In other words, by engaging in an initiative that is viewed by the public as self-serving or driven by PR, image building or tax purposes, instead of creating a "halo effect", may harm the company. As it is the case for the non-profit, a failed partnership results in wasted resources. A non-profit suffering from a deteriorating reputation can be equally damaging to a corporation. Finally, divergence in working cultures, especially at the outset of the partnership and until it is duly addressed, can undermine the achievement of established deliverables (Samii et al., 2002a).

3.4 Social Capital Theory

The social capital theory elaborates how networking relationships and ties confer value to actors. It argues that networking relationships and ties enable actors to access resources embedded within their network. The term social capital is defined as 'the sum of the actual and potential resources embedded within, available through and derived from the network of relationships possessed by an individual or social unit' (Nahapiet & Ghoshal, 1998). Therefore, it includes both the network and the assets that may be mobilized through it (Nahapiet & Ghoshal, 1998).

The role of social capital and social networks as a resource have been studied from the individual (Burt, 1992) and group level (Coleman, 1988) perspective. In the individual-

level type, benefits accrue to the individual while in the group-level, social capital has the attributes of ‘collective good’ insofar that its use by the participants is non-rivalrous but excludable (Coleman, 1988).

Within the two above-mentioned levels, two types of relations have been identified: internal and external. Internal ties fostered within communities result in ‘bonding’ forms of social capital whereas external relations result in ‘bridging’ forms of social capital (Putman, 2000).

The bonding view focuses on those features of social capital structure that give the collectivity cohesiveness hence facilitating the pursuit of common goals. Network closure (Coleman, 1988) based on the bonding view stresses the role of cohesive ties in building social norms and trust, both of which facilitate coordination and cooperation (Putman, 1995). One of the benefits of network closure is the intense flow of information between network participants.

The bridging view sees social capital as an inherent resource of the social network as it ties individuals or groups (focal actor) to other actors. The structural hole theory (Burt 1992) based on the bridging view claims that benefits of social capital result from the relational opportunities among disconnected groups. In the structural hole theory, the unconnected are connected increasing the diversity of information and flow of new ideas whereas cohesive ties are seen as a source of rigidity and potential risk.

The internal and external views are not mutually exclusive. As far as the firm is concerned, the amount of social capital available and hence its performance is influenced both by its external linkages to other firms and by the fabric of its internal linkages. Since both individual and group-level, internal and external social capital are relevant in competitive and cooperative environments (Johanson, 2001), organizations have different incentives to invest in them.

Social capital has been equated to other forms of capital (Coleman, 1988). Adler and Kwon (2002) further elaborate on the main characteristics of this intangible resource. First, they argue that social capital developed through internal and external relational investments is an asset that can provide future flow of returns. Second, social capital is ‘appropriable’ (Coleman, 1988) as certain ties can be used for other purposes. It is equally ‘convertible’ (Bourdieu, 1985) because network positions can be converted to economic or

other gains. Moreover, it is costly to develop, reverse or convert. Social capital can substitute or complement other resources and provide access to capabilities and resources that may otherwise be unavailable. To remain effective and grow, it needs maintenance. Unlike other forms of capital, social capital typically increases rather than decrease with use. Since it is located within the structure of relationships, it takes mutual commitment to build it but defection by one party to destroy. Finally, unlike other assets, investments in social capital cannot be quantified but its benefits can be measured.

Figure 3.14 – The Dimensions of Social Capital

| Structural dimension | Cognitive dimension | Relational dimension |
|-----------------------------|----------------------------|-----------------------------|
| Network ties | Shared codes and language | Trust |
| Network configuration | Shared narratives | Norms |
| Appropriable organizations | | Obligations & Expectations |
| | | Identification |

Social capital has three dimensions: structural, relational and cognitive (Nahapiet & Ghoshal, 1998) (Figure 3.14). The structural dimension refers to the ability to make connections with others. Accordingly, it has three facets: network ties, network contribution and appropriable organizations. Network ties refer to the core proposition of social capital theory in terms of ties providing access to resources. Network configuration, that is, the overall pattern of connections in terms of density, connectivity, and hierarchy indicates the level of contact and ease in accessibility to resources residing in the network. Appropriable organization refers to the possibility of using social capital developed in one context in other settings.

The relational or normative dimension refers to the fact that trust, obligations and expectations, norms and a common identity emerges through a history of interaction. For Zaheer et al. (Zaheer et al., 1998), trust is the expectation that an actor is reliable, predictable, will act fairly. They identify four basic types of trust: those based on personal ties, those built on contextual cues, those developed on the basis of perceived competence and those that result from contractual obligations. Trust is expected to encourage people to interact and cooperate as well as help cooperating partners to deal with complexity and uncertainty (Luhmann, 1979).

Norms are an expression of consensus reached among network partners. Obligations and expectations between parties are expected to facilitate access to resources and determine the level of motivation. Identification – the process whereby individuals see themselves as one with another person or group of people – is expected to increase the chances for exchange as the parties involved are motivated and recognize the value of cooperation.

The cognitive dimension refers to the development of a shared context, a common language to ensure there is a common interest or understanding of issues facing the organization. A shared language is expected to facilitate access to people and their resources, while shared narratives are expected to facilitate the exchange of experience enabling the introduction of improved practices.

Nahapiet & Ghoshal (Nahapiet & Ghoshal, 1998) argue that the development of social capital is a function of time, interaction, interdependence and closure. Time captures the importance of a stable and continuous relationship in the development of social capital. Social capital is reinforced and further developed in contexts where actors depend on each other. Interaction helps increase the level of social capital. Finally closure in social relationships is proven to be conducive to the development of relational and cognitive social capital.

Similarly, scholars (Moran & Ghoshal, 1996; Nahapiet & Ghoshal, 1998) argue that four conditions must be met for social capital to be activated and exchange and combination of resources to take place: opportunity, value expectancy, motivation and ability. Social ties increase the opportunity for exchange, interaction and cooperation within the network. Parties must expect deployment of social capital to create value. Parties have to be motivated to help each other. Finally, they need to have the requisite ability either in terms of resources and capabilities or combination capability or else they cannot be a source or beneficial recipient of social capital.

At group-level, internal ties create the opportunity to act together. As the source of social capital lies in the structure and content of the actor's social relations, the frequency, intensity, and multiplicity of ties and their configuration – direct or indirect – provide an indication of the quality of such opportunity and the strength of the social capital. The content of social ties are mainly centered around commonly shared norms and beliefs. Closure of the network structure strengthens social capital as it encourages cohesiveness

(Coleman, 1998) while sparse networks provide greater social capital benefits and more cost-effective resources (Burt, 1992).

Actors are motivated either because of a shared destiny, by obligations created in the process of social exchange, conditions enforced upon them by the broader community (Portes, 1998; Blau, 1964) or by norms of generalized reciprocity (Putman, 1993). The share of resources effectively mobilized depends on the motivation of the 'donor' while the total amount depends on the opportunity created by the network of contacts.

The relevant literature has identified three direct benefits of social capital: information; influence, control and power; and solidarity (Adler & Kwon, 2002). Social capital facilitates access to broader sources of information and improves information's quality, relevance and timeliness (Adler & Kwon, 2002). Power accrues to firms or individuals who bridge disconnected groups (Burt, 1992). Finally strong social norms and beliefs encourage compliance with rules and customs and reduce the need for formal controls. The ultimate value of social capital depends on the match between network configuration and type of tasks on hand. Norms and beliefs, apart from being sources of social capital, influence the value of a given stock of social capital (Adler & Kwon, 2002).

There is growing consensus on the contingency view of the role of social capital on organizational performance. The positive or negative influence of social capital depends, among other things, on the fit between each social network and organizational activities, the costs involved (Hansen et al., 2001; Harrington, 2001), and the ability of the network to promote trust and adherence to common values as opposed to opportunistic behavior.

Indeed, social capital has risks that can even outweigh its benefits (Portes, 1998; Adler & Kwon, 2002). The cost and time of building and maintaining social capital may be too high compared to its benefits. Over-investment may lead to over-commitment. Power benefits may be traded-off against information benefits. Overembeddedness can restrict access to ideas outside the network (Burt, 1992). It can also pave the way to exclusionary effects, inertia or result in reinforced domination. Firms may be oppressed by feelings of obligation and friendship. Wasted effort or missed opportunities for collaboration could be the other risks.

Scholars argue that as long as market and hierarchies give rise to social relations they too contribute, albeit indirectly, to the formation of social capital. It is argued that in arms-length transactions where products and services are exchanged for money or bartered and formal hierarchies where authority regulates transactions are neutral to social capital. In contrast, relational contracting and intra-organizational relationships based on trust and culture are supported by social capital.

In conclusion, the source of social capital lies in the structure and content of the actor's social relations and its effects flow from the information, influence and solidarity it makes available to the actor (Adler & Kwon, 2002). To be able to extract value from social capital, similar to other resources, this too needs to be developed, nurtured and maintained. Once social capital is created, the focus shifts to its growth as higher levels of social capital by fostering stronger network ties facilitates access to resources available within the network for network participants.

3.5 Conclusions

The aim of this thesis is to ground research on disaster response in existing theoretical frameworks. In Chapter 2, we presented and discussed our preliminary conceptual framework. We identified three partnership schemes – temporary supply networks, coordination networks and business-humanitarian partnerships – as independent variables that can help explain the organizational performance of humanitarian organizations during disaster response. To explain what can drive the contribution of diverse actors to disaster relief and to a particular humanitarian organization, we identified social networks as relevant. Against this background, in this chapter we reviewed the network, coordination, resource based view and social capital theories. This allows us to establish supply network management, coordination, access to disaster preparedness resources and capabilities and social capital as key disaster management capabilities.

The above-mentioned theories study the governance structure and/or performance of firms considering one or a combination of the following factors: resources, activities and actors. Network theory is based on the assumption that different business units or firms are connected to each other through actor bonds, activity links and resource ties (Hakansson &

Snehota, 1995). Coordination theory studies the interdependencies between actors, activities and resources that may arise within markets, hierarchies, or networks. To determine the performance of a firm, the resource based view focuses on the stock and traits of a firm's resources and capabilities. By arguing that networking relationships and ties enable actors to access resources embedded within their network, the social capital theory explains how through different types of network relationships and ties, this intangible resource confers value to a firm. In the following paragraphs we highlight what we found relevant in the literature review for our study of humanitarian organizations and disaster response.

Firms resort to network structures when the governance mechanisms of market and hierarchy are not satisfactory. The literature indicates networks as the most apt organizational structure when an organization is unable or unwilling to cope independently with i) the complexity and risks of a rapidly changing environment and ii) the skill and resource demands imposed on it in global markets (Cravens et al., 1996). Humanitarian organizations operate in rapidly changing environments where pressure on their skills and donated resources is high. Therefore it is not surprising that to stage their response they resort to supply networks to gain access to their networks' resources and capabilities rendering supply network management a core disaster management capability.

The increasing number of unpredictable and competing large-scale disasters in less developed countries of the world and the insufficient resources at the disposal of each humanitarian organization for a swift and accurate response make coordination for humanitarian organizations a recurrent and dominating concern. To overcome failure modes and manage dependencies prior and during an emergency, a humanitarian organization needs to coordinate its activities with other humanitarian organizations and key stakeholders. As time is of essence during emergency response, a humanitarian organization also needs to avoid parallel efforts, duplications along the supply chain by merging its activities with other like-minded organizations. Coordination theory helps us identify and categorize different kinds of dependencies emerging during disaster response within a humanitarian organization, along the emergency supply chain as well as with other humanitarian organizations. Figure 3.15 provides an overview of the type of

logistical challenges met by a humanitarian organization and the need for extra and inter-organizational coordination. It also allows us to establish coordination ability as an important disaster management capability.

The resource based view argues that firms possess resources and capabilities a subset of which enables them to achieve competitive advantage and another subset which may contribute to the destruction of value (Barney, 1991; Wernerfelt, 1984; West & Decastro, 2001). Hence, it is not only important to build on unique organizational strengths, but also to disassemble or neutralize those organizational weaknesses that might compromise strength (West & Decastro, 2001). In addition, a firm must develop capabilities to acquire, integrate, reconfigure and release resources embedded in its network of relationships to achieve sustained competitive performance. Since it is not possible to adjust significantly the aggregate amount of stock in the short run, the resource based view stresses the importance of investment flows to ensure an adequate addition of stock.

The situation is no different among humanitarian organizations. Similar to business, these types of organizations must build and nurture strengths and neutralize and negate weaknesses. By enhancing their resources and capabilities, humanitarian organizations improve upon their disaster preparedness capabilities. Increased level of disaster preparedness strengthens the effectiveness of temporary supply networks and coordination efforts.

More specifically, the resource based view suggests that HR, IT and business processes are resources and capabilities that can improve the performance of a firm. Staff motivation and socialization are key to any productivity improvement (Grant, 1991). Scholars in the supply chain literature have emphasized the importance of people in achieving supply chain objectives (van Hoek et al., 2002). Since logistics is a human centric process and central to the performance of humanitarian organizations, the development of logisticians and the logistics function is expected to provide the greatest potential in terms of differentiating an organization from its past performance and competitors. Trained, motivated, well-connected and networked team of logisticians with developed social skills improves the ability of a humanitarian organization to stage effective and efficient relief operations by managing temporary supply networks and coordinating activities within their organizations as well as across organizations and key stakeholders.

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

Figure 3.15 – Recurrent and Common Failure Modes: Dependencies & Duplications

| Failure Modes/Context | Logistical Challenge | Need for Inter & Extra Organizational Coordination | Dependency Duplication |
|------------------------------------|--|---|-----------------------------------|
| Supply Failure Modes | | | |
| Emergency | Relief item stock-outs and excesses Relief item ‘value’ | Inter: Need for overview of community pipeline | Duplication Sharing, Fit, Flow |
| Emergency | Address “orphan” issues such as supply of fuels | Inter: Transportation problems | Duplication |
| Emergency | Arrival of unsolicited goods | Extra: Limit arrival of & manage unsolicited goods | Flow – ensure usability |
| Transport Failure Modes | | | |
| Developing countries | Poor and/or fragmented physical infrastructure | Extra: Problems of accessibility | Sharing |
| Developing countries | Lack of sufficient transport assets | Extra & Inter: Delays & cost increase | Sharing/Dup |
| Landlocked countries | Dependence on bordering countries’ infrastructure | Extra: Delays | Duplication |
| Emergency | Adverse weather conditions: Disabled infrastructure | Extra & Inter: Problems of accessibility | Sharing |
| Emergency | Blocked goods at transit points | Extra: Overcome administrative hurdles | Duplication |
| Natural Disasters | Disabled or destroyed infrastructure | Extra & Inter: Problems of accessibility | Sharing |
| Conflicts | Insecurity | Extra: Interruption of transport & distribution services | Sharing |
| Conflicts & political context | Temporary closure of infrastructure/transit points | Extra: Delays & cost increase | Fit Duplication |
| Facility Failure Modes | | | |
| Emergency | Limited storage facilities | Inter: Problems of storage | Sharing Duplication |
| Emergency | Lack of distribution channels | Extra & Inter: Limited distribution capability | Sharing/Dup |
| Emergency | Limited office network | Inter: Ensure geographical coverage | Sharing |
| Conflicts | Unavailable storage facilities | Extra & Inter: Problems of storage | Fit/Duplication |
| Communication Failure Modes | | | |
| Emergency | Dispersed information | Inter: Need for vast range of information | Duplication |
| HR Failure Modes | | | |
| Competing emergencies | Lack of sufficient number of logisticians | Inter: Need to augment logistics capability | Duplication |

Humanitarian organizations operate in rapidly changing environment. For each disaster they depend on a variable and often inadequate resource set. Since business processes determine the way resources and capabilities are exploited, efficiently and effectively organized business processes assume a particular importance. Given that it is difficult to change the amount or range of resources mobilized in response to a disaster, the redesign of some of the business processes can help increase the efficiency and effectiveness of available resources and capabilities. Sound operational and logistics-specific business processes can help ensure a cost-effective, timely, accurate, flexible and accountable relief operation. They also improve the ability of an organization to stage temporary supply networks and coordinate across its supply chain activities.

Although the literature argues that possession of IT resources does not result in enhanced performance, organizations operating in highly complex environments must deploy efficient and effective information systems to manage information and knowledge (Wade & Hulland, 2004). Humanitarian organizations operate in complex environments and need to access and elaborate external information, manage their supply chains, coordinate their responses, and make decisions in time sensitive environments. An IT infrastructure provides humanitarian organizations with an adequate technical platform for the effective and efficient management of their operations in general and logistics function in particular. A robust and flexible information infrastructure coupled with strong IT technical skills are useful in the management of resource flows internally and with external partners improving orchestration and coordination ability. An information infrastructure helps humanitarian organizations manage knowledge, learn from past experience and improve their decision making process. An adequate IT infrastructure can reduce duplication of efforts by streamlining existing business processes, lower operational and coordination costs, reduce delays in the goods mobilization and distribution process, enable quicker and more accurate decisions and facilitate the monitoring of accountability objectives and reporting requirements.

In conclusion, similar to business, efforts aimed at enhancing the resource and capability profile of a humanitarian organization improves performance. Investments in the logistics function of a humanitarian organization will improve coordination and supply network management.

To overcome the underinvestment in preparedness capability and to improve upon the response function, humanitarian organizations need to go beyond the generic and tied resources offered to them by their traditional donors. They need to tap into specialized and additional resources. The corporate responsibility literature sheds some light on how private actors can contribute to a humanitarian organization's resource and capability enhancement requirements. It is argued that a for-profit organization that has a comparative advantage in an area valued by and relevant to the mandate of a humanitarian organization can address its organizational gaps and weaknesses. For example, by calling upon the resources of business during emergencies, a humanitarian organization can increase the speed and reduce the cost of its supply networks. By tapping into these additional resources, it can improve its operational flexibility and accuracy. CSOs and business can also contribute to the innovation and growth objectives of a humanitarian organization. They can help humanitarian organizations develop the right set of HR skills, improve their business processes, and establish an IT infrastructure.

The literature has identified the benefits and risks of corporate social initiatives which equally apply to business-humanitarian partnerships (Figure 3.16). The motivations that in the first place encourage the two parties to consider a partnership determine the list of expected benefits. In terms of risks, the humanitarian organization is expected to face a larger number and more serious set of risks. This is because while a CSI is just a side program for the corporate partner who continues with its core activity (production/delivery of goods and services), it is a program which intervenes in the core activity of a humanitarian organization. Hence, the identified risks carry a heavier weight for the humanitarian organization.

Firms resort to the governance mechanisms of markets, hierarchy and networks. While price regulates markets and authority regulates hierarchies, social capital theory indicates social capital as one of the main currencies for network transactions. Since network transactions account for the majority of exchanges during a relief operation, understanding the impact of social capital on performance becomes importance.

Figure 3.16 – Potential Benefits & Risks of Business-Humanitarian Partnerships

| | |
|--|--|
| <p>Main benefits for humanitarian organization</p> <ul style="list-style-type: none"> • Access to specialized, additional, complementary resources and capabilities • Advance status of knowledge and practice • Signal new donors | <p>Main benefits for corporate partner</p> <p>Moral Market Place</p> <ul style="list-style-type: none"> • Improve employee motivation and productivity (attraction, retention) • Fulfill the CSR expectation of the market <p>Competitive Advantage:</p> <ul style="list-style-type: none"> • Increase in reputational assets • Enhance brand recognition |
| <p>Main risks faced by humanitarian organizations</p> <ul style="list-style-type: none"> • Divergence in working cultures • Absorptive capacity • Reduced donations from traditional donors • Loss of organizational flexibility • Structural dependency • Tainted partners, Anti-ethical activities • Overwhelming success • Failure: wasted resources | <p>Main risks faced by corporate partner</p> <ul style="list-style-type: none"> • Shortage of credible & promising non-profits • Accused of partnering exclusively for self-serving reasons, PR, image building or tax purposes • Failure: wasted resources • Deteriorating reputation • Divergence in working cultures |

From the network theory perspective, actor ties influence the structural, cognitive and relational dimension of social capital. More specifically, they provide an opportunity for the creation, maintenance and reinforcement of individual and group-level bonding and bridging social capital. Coordination – managing dependencies between tasks and activities implemented by actors – provides a fertile ground for the development and growth of social capital given the level and period of interaction, interdependency and closure. Similarly, lack of coordination that leads to misunderstanding and conflict can contribute to the destruction of social capital. Partnerships between business and non-profit organizations can help build as well as destroy bridging and bonding social capital given their impact on the development of different dimensions of social capital. Therefore, relationship management becomes the most important disaster management capability of a humanitarian organization and its staff.

The literature highlights the potential contribution of HR systems and practices in terms of creating intra, inter and extra-organizational networking opportunities. Such opportunities can lead to the creation of individual and group-level bonding and bridging social capital.

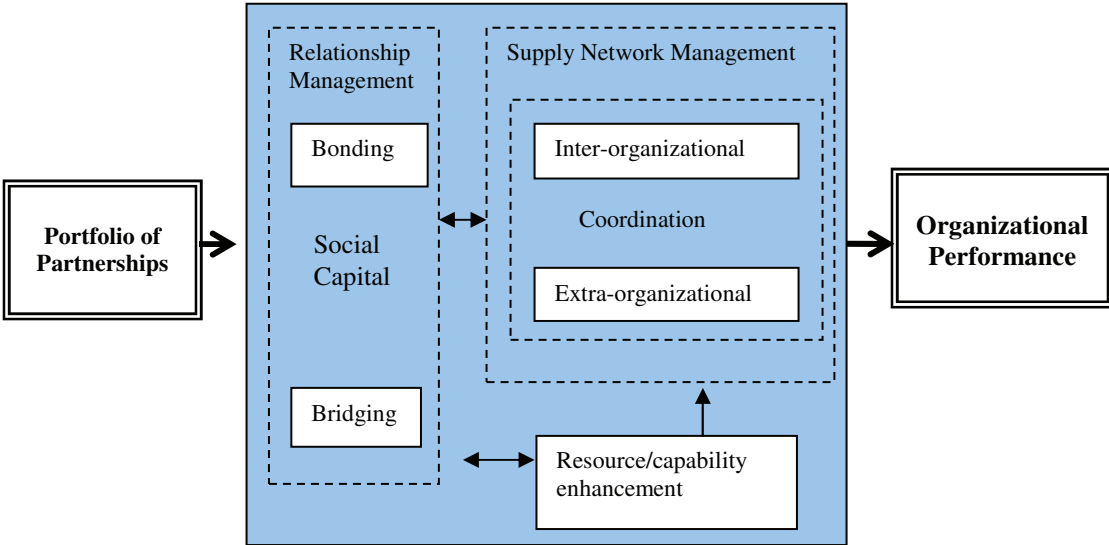
Likewise, HR practices that aim to develop the social skills of individuals and groups further enhance the effective use of existing social capital. Implementation of an integrated IT infrastructure along the supply chain can create new opportunities for the development of social capital between individuals and groups. Finally, we argue that business processes factor in, leverage the prevailing level of, and contribute to the creation of social capital between various individuals or groups.

Social capital theory advances that the amount of resources mobilized from network ties is heavily reliant on the social mechanisms of reciprocity, socialization and motivation (Adler & Kwon, 2002). In terms of the actual level of resources mobilized, social theory advances that it depends on the ability, motivation and opportunity of the donating party (Adler & Kwon, 2002). Typically, however, the donor is expected to receive its return from the collectivity as a whole in the form of status, honor, or approval rather than from the direct recipient (Portes, 1998). Motivation also plays a key role in ensuring coordination. Coordination theory highlights the relevance of motivation, incentives, and emotions in coordination related to human (Malone & Crowston, 1994).

The general public expects donors – governments and their institutions, foundations, corporations, etc. - to respond to disasters. In line with the social capital theory, we argue that the level of resources mobilized by a humanitarian organization from its network of donors depends heavily on at least three factors. These are donor obligations emerging from public expectations and pressure, level of socialization with the donor community, and donor motivation. By engaging in effective relationship management - roping in and intensely socializing with socially-obligated but also motivated, able and well-endowed partners over long periods of time - humanitarian organizations increase their opportunity for the development of bridging social capital and an improved performance.

The literature review has allowed us to understand which disaster management capabilities improve organizational performance and how different partnership and network schemes can contribute to their enhancement (Figure 3.17). It has equally allowed us to reach a number of conclusions regarding the connection between social capital developed through sound relationship management, supply network management, coordination and opportunity for resource and capability enhancement.

Figure 3.17 – Conceptual Framework



The view of organizational performance presented is a socially-driven one. We see disaster response deeply embedded in networks and in the structure of network relations. Thus we suggest that differences between humanitarian organizations, including difference in performance, may represent differences in their ability to create and exploit social capital, that is, their ability to manage relationships.

In conclusion, given the prevalence of networks in humanitarian operations, inter-organizational and extra-organizational interdependencies during disaster response, and need to address resource/capability weaknesses, humanitarian organizations appear in need of increasing amounts of social capital in order to coordinate and gain access to the required resources and capabilities. Based on the conceptual framework presented above, in the next chapter we shall present our research framework with a view to define a number of research questions and advance a number of propositions to be tested by our empirical evidence.

Chapter 4 Research Framework

In this Chapter we present our research framework composed of a number of propositions and research questions to be validated by our empirical research. This research framework is derived from our conceptual framework, our understanding of humanitarian operations and the themes that emerged in the literature review. To set the stage for our framework, we first review the findings of Chapters 2 and 3.

In Chapter 2 we established two concepts: the relationship between three partnership and network arrangements and organizational performance and the need for operational humanitarian organizations to have strong disaster management capabilities in order to ensure the arrival of the right relief items at the right time and place. In terms of disaster response capabilities, in Chapter 3 we established coordination as a subset of supply network management ability. The opportunity to enhance resource and capability was found to be an important factor in disaster preparedness. We also determined that increased levels of disaster preparedness improve coordination and supply network management. Then we established relationship management as an important disaster management capability and social capital as central to our framework. As indicated by the social capital theory, we expect more ties and repeated relationships to reinforce and increase the level of a humanitarian organization's social capital.

As illustrated in Chapter 2, when disaster strikes, a humanitarian organization conducts a needs-assessment exercise with a view to determine the discrepancy between resources and capabilities already in its possession and those required to adequately meet the requirements of the affected people. To bridge the resource/capability gap, which is often significant, it needs to gain access to and internalize resources/capabilities available within or outside its network. This is usually achieved without owning or investing in all the required capital nor committing to long-term employment. As mentioned in section 2.7.1, the supplier network is the only node of the supply network regulated by price and over which a humanitarian organizations can exercise power. Therefore, it is important to

explore what supplier network configuration best meets the requirements of disaster response.

Coordination theory helps us categorize the different dependencies emerging during disaster response. It also allows us to establish a relationship between dependencies resolved and duplications avoided and performance. However, there is still a need to explore which coordination governance structure best meets the unique challenges of disaster response, how humanitarian organizations execute coordination and what coordination mechanisms they use.

The resource based view considers the ability to coordinate an organizational resource that impacts productivity and therefore the performance of an organization. Business-humanitarian partnerships have the potential to operate as effective coordination mechanisms. In structured partnerships, the corporate partner has the means to match the specific needs of the assisted organization. If well-managed, these types of partnerships ensure that services, goods and assets provided meet the prerequisite, accessibility, usability and simultaneity constraints criteria (flow and fit dependency) of the assisted humanitarian organization as defined by the coordination theory. As such, their contribution improves the performance of the assisted organization as the right thing is provided to the right place at the right time.

In Chapter 2, we identify four business-humanitarian partnership possibilities. In Chapter 3 by drawing on the CSR literature, we list the expected benefits and risks associated to business-humanitarian partnerships both for the corporate partner and the humanitarian organization. However, each of the four suggested partnership schemes has a different characteristic. Therefore, there is a need to explore their relative risk-to-benefit profile, verify whether all humanitarian organizations can benefit from them, and identify best practices in business-humanitarian partnerships.

The core proposition of social capital theory is that networks of relationships constitute a valuable resource. Our construct is centered on the concept of social capital. We argue that, at any given time, the invisible resource that once leveraged increases the opportunity and ability of a humanitarian organization to perform better is its social capital. The stock of social capital of a humanitarian organization derives from its portfolio of partnerships, with each relationship contributing to its development and reinforcement. In this respect, there

is a need to explore whether some actor relationships contribute more than others to the development of social capital and if so which ones. Moreover, since both bonding and bridging social capital are relevant to our conceptual model, there is a need to explore their contribution to disaster response and disaster preparedness.

This Chapter is structured as follows. In section 4.1 we develop a proposition related to the structure of the supplier network. In section 4.2 we elaborate on the optimal governance structure for the logistics coordination platform. By drawing upon the network and virtual organizing literature, we argue that virtual organizing is the only organizational structure that can meet the unique challenges of coordination during emergency relief. We then formulate two research questions that help us explore how humanitarian organizations implement such a structure and what are the risks and opportunities facing humanitarian virtual organizations and how they are managed. In section 4.3 we advance a proposition related to two opposite partnership schemes: strategic and brokered partnerships. To expand on the proposition, we develop two research questions to help us explore what type of humanitarian organization can engage in strategic partnerships and what are the best practices for business-humanitarian partnerships. In section 4.4 we advance propositions and research questions which allow us to explore the relationship between social capital, different network actors and performance.

4.1 Supplier Network

For each disaster, to respond effectively and efficiently to the needs of the afflicted populations an operational humanitarian organization has to construct a supply network that includes suppliers of relief items. Relief items consist of a couple of hundred food and NFIs such as medicine, shelter, fuel, sanitation, and telecom unit. The bulk of relief items consist of commodities: standardized and mature products. For these types of products, the supplier base is wide and geographically dispersed and the level of product substitutability is relatively high. Therefore competitive offerings and stock outs at one supplier can result in purchases from alternative sources.

As discussed in section 2.3, operational humanitarian organizations manage a multitude of temporary, spatially-dispersed and highly dynamic emergency supply chains in time-sensitive environments. The effort, investment and time to establish a fully integrated supply chain - which is expected to be substantial and run into years - is always longer than an emergency period. This makes it an inefficient and irrelevant supply chain configuration strategy. In contrast, a broad, loosely coupled supplier network is a valid supply chain configuration regardless of the nature of the disaster: predictable or unpredictable.

Compared to a fully integrated supply chain, a broad supply network driven by product availability (rather than relationships) is more resilient to system-wide shocks and disruptions. A network of multiple and geographically dispersed suppliers renders the supply chain more resilient to supply and transport failure modes for at a number of reasons. For example, supply networks can be easily (re)configured with interchangeable and complementary members to counter unavailable or disabled suppliers. The multi-commodity emergency supply chain can be quickly scaled up, configured and interlocked with members that possess redundant capacities and excel in preparedness and flexibility. The number of nodes and interchangeable components is higher in a network than an integrated supply chain enabling humanitarian organizations to shift sourcing from one country or site to another whenever confronted with supply and transport failure modes.

Given the commoditized nature of relief items, the temporary and dynamic nature of emergency supply chains and the time-sensitiveness of emergency relief, we argue that only a broad supplier network can ensure a speedy, accurate, flexible, and cost-effective response. It follows:

P1: Only a broad supplier network can ensure a speedy, accurate, flexible and cost-effective disaster response.

4.2 Coordination

In Chapter 2 we highlighted the fact that humanitarian are confronted with a continuum of “permanent”, recurrent structural and temporary logistics failure modes. In Chapter 3 by drawing on the secure and resilient supply chain literature, we discussed how business counters failure modes. Similar to business, operational humanitarian organizations plan

for and implement a series of agency-specific mitigation measures. At the organizational level, to mitigate disruptions to their supply operations, these humanitarian organizations prepare contingency plans as well as build redundant capacity and flexibility into their operations.

However, there are a range of logistical challenges commonly encountered by humanitarian organizations that call for inter and extra-organizational coordination. As seen in section 3.5 of Chapter 3, coordination theory helps us identify and categorize the different kinds of inter and extra-organizational dependencies and duplications emerging during disaster response. However, it is also important to understand how humanitarian organizations overcome dependencies and avoid duplications emerging prior or during disaster response.

Q1: How do humanitarian organizations manage dependencies and duplications emerging prior or during disaster response?

In Chapter 2 we argued that humanitarian organizations can either coordinate jointly or outsource the coordination function to a non-operational humanitarian organization, that is, a logistics coordination platform. We then discussed the circumstances in which the coordination function is expected to be outsourced. In Chapter 3 we reviewed the main characteristics of virtual organizing. We concluded that virtual corporations are flat, temporary, quickly deployable and reconfigurable entities that are operationalized through trust among members and extensive use of ICT. They are activated when there is a need to leverage the complementary and different resource, time and place competencies of their members in order to overcome resource shortages and share costs. The unpredictable nature of the majority of disasters calls for quick deployment and constant reconfiguration of staff and resources at the disaster site. Hence, we argue that a virtually organized logistics coordination platform is the only structure that can ensure quick deployment and constant reconfiguration.

The main resource of the humanitarian sector is people and knowledge is their asset. Logisticians involved in disaster logistics are exposed to and gain experience and knowledge about the logistics specificities of developing countries. A logistics

coordination platform with the characteristics of a virtual organization can leverage the wealth of human expertise and knowledge resources residing within the virtual web. This is achieved thanks to the contribution of spatially and temporally dispersed virtual members. As a result, members benefit from the collective expertise as well as tangible and tacit knowledge residing with the virtual web members.

Emergencies are subject not only to the dynamics of knowledge but also time pressure during both the planning and response phases. Planning relies on access to large volumes of information, especially up-to-date logistics-related information. Throughout a crisis, information is distributed unequally between humanitarian organizations. As each humanitarian organization occupies a specific node in the information chain, access to sources of information varies significantly between organizations. More importantly, no single agency has the resources to cover the continuous evolution and flow of a vast category of logistics-related information across geographies and actors (Kaatrud et al., 2003). We argue that only a virtually organized humanitarian coordination platform can adequately perform the information brokerage and depository function. It can provide data analysis, facilitate knowledge building, help overcome knowledge asymmetries and ensure access to knowledge assets that are tacit, not available on the market and costly or difficult to imitate. This is possible because it can i) manage the structure with the HR resources of the virtual web and ii) leverage the information available within its spatially and temporally dispersed offices and virtual members. Access to knowledge and information for the entire humanitarian community and beyond can then be ensured through an accessible website.

Humanitarian operators handle and have to make sense of considerable volumes of disorganized and time sensitive data. Since most actions are time-sensitive, accurate and timely response also depends on the ability to take fast decisions. Decisions within virtual corporations - flat and decentralized structures - are made at the unit level without referrals to higher levels. By eliminating the need for hierarchical approvals, decisions are made at a faster rate. Hence, only a virtually organized humanitarian logistics coordination platform thanks to the use of ICT and its flat structure can facilitate the flow of information in real-time throughout the entire network quickening the pace of decisions at the intra, inter and extra-organizational level.

As described in Chapter 2, to survive disaster victims need a wide variety of low- and high-value, bulk and small Stock Keeping Units (SKUs) food and NFIs relief items. However, most humanitarian organizations cater to the specific and complementary requirements of a needy population. As a result, relief operations depend on the participation of a range of large and small humanitarian organizations. We argue that through a virtually organized logistics coordination platform, humanitarian organizations with small logistics setups and limited logistics capability can stimulate largeness. By tapping into information previously accessible only to bigger organizations, they can make better and faster decisions at no additional cost. Instead of struggling with logistics issues alone, they can rely on the platform's services. Given their limited negotiating power, by joining the platform they can expand their collaborative options and gain access to the resources of other organizations. In essence, only a virtually organized logistics coordination platform allows them to be integrated in the global response effort and operate more effectively and efficiently in time-sensitive emergencies and dynamic environments.

In conclusion, during disaster response, to coordinate response in the best interest of the assisted populations, humanitarian organizations regardless of their size need to gain access and internalize resources available within or outside their network. To resolve dependencies, avoid duplication and create synergies, they need to i) ensure quick deployment, ii) operate a reconfigurable structure, iii) gain access to resources (e.g. staff, information and knowledge, etc.) residing within the community, and iv) be in a position to make quick decisions. It follows that:

P2: Only virtually organized logistics coordination platform will lead to good services.

In order to fully appreciate the implications of the above-mentioned proposition, there is a need to understand how humanitarian organizations operationalize a logistics coordination platform. The virtual organizing literature has identified two structural elements of virtual organizing: virtual web (Goldman et al., 1995; Pires et al., 2001) and virtual corporation (Byrne, J. A., 1993). It has also identified a number of building blocks for the successful

operationalization of a virtual organization and the risks and market opportunities facing virtual organizations. There is a need to explore whether the same structural elements, building blocks, and risks and opportunities identified by the literature are relevant to virtually organized humanitarian logistics coordination platform. We propose to explore the above with the following two questions:

- Q2:** How do humanitarian organizations operationalize and ensure the success of a virtually organized logistics coordination platform?
- Q3:** What are the risks and opportunities facing humanitarian virtual organizations and how they are managed?

4.3 Business-Humanitarian Partnerships

Chapter 3 allowed us to determine the benefits and risks of business-humanitarian partnerships. In Chapter 2, we identified four business-humanitarian partnership possibilities. In this section we argue that each partnership possibility may have a specific benefit-to-risk profile. To explore the eventual differences, there is a need to compare the different partnership schemes. We propose to compare the schemes that are at the two extremes in terms of number of parties involved, intensity and duration of collaboration namely strategic with brokered partnerships (Figure 4.1). This allows us to formulate a proposition and two research questions which are visually represented in Figure 4.2.

At the organizational level, partnership between a corporation and a humanitarian organization may be a first of its kind. Given the differences in modus operandi of non-profit and for-profit organizations, in the short run, differences in cultures and language can become a source of frustration for both parties resulting in implementation delays. This is particularly relevant to strategic partnerships since they aim to address the effectiveness of an organization also in terms of working practices. If not worked out, these types of divergences can prevent the parties from proceeding with their partnership intentions.

Given the fact that strategic partnerships aim to improve the effectiveness of an organization over a certain period of time, the receiving humanitarian organization should have the absorptive capacity in terms of human resources and organizational structure to truly benefit from it.

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

In financial terms, strategic partnerships given their duration and financial contribution can lower the level of donations by traditional donors if these donors view the continuous contribution of the corporate partner as a substitute to their own funding. An eventual replacement of traditional funding with business funding may jeopardize the survival of an organization and increase its dependency on its business partner.

Figure 4.1 – Risks and Benefits of Strategic and Brokered Partnerships

| Main benefits for humanitarian organization | SP | BP | Main benefits for corporate partner | SP | BP |
|---|-----------|-----------|---|-----------|-----------|
| Improving effectiveness <ul style="list-style-type: none"> • Access to specialized, additional, complementary resources and capabilities Advance status of knowledge & practice Signal other donors | H | L | Moral Market Place <ul style="list-style-type: none"> • Improve employee motivation and productivity (attraction, retention) • Fulfill the CSR expectation of the market Competitive Advantage <ul style="list-style-type: none"> • Increase in reputational assets • Enhance brand recognition | H | L |
| Main risks faced by humanitarian organization | SP | BP | Main risks faced by corporate partner | SP | BP |
| <ul style="list-style-type: none"> • Divergence in working cultures • Absorptive capacity • Reduced donations from traditional donors • Loss of organizational flexibility • Structural dependency • Tainted partners, anti-ethical activities • Overwhelming success • Failure | H | L | <ul style="list-style-type: none"> • Divergence in working cultures • Shortage of credible & promising non-profits • Accused of partnering exclusively for self-serving reasons, PR, image building or tax purposes • Failure: wasted resources • Deteriorating reputation | H | L |

Legend: **SP:** Strategic Partnerships **BP:** Brokered Partnerships **H:** High **L:** Low

Because of their duration and the intensity of the relationship, on the operational level strategic partnerships may reduce organizational flexibility and create structural dependency. This occurs if the corporate partner becomes a substitute for pre-existing

commercial or non-commercial ties and relationships or when it becomes time consuming and costly for a humanitarian organization to call upon past suppliers or quickly rebuild such relationships in case of need. The replacement of the corporate partner with other suppliers reduces the number of sourcing options available to the humanitarian organization. Likewise, the activities conducted by the corporate partner may lead to the decision to shelve plans that had as objective the development of such resources and capabilities within the humanitarian organization impacting its innovation and growth prospects. Finally, proactive business partners may even overtake an organization's function weakening its ability to be self-sufficient and to take independent decisions.

The risk of entering into a partnership with a 'tainted' partner engaged in anti-ethical activities is expected to be low for strategic partnerships. This is because these types of partnerships have a gestation period (time that elapses between partner search, negotiation, until formalization of cooperation) during which the humanitarian organization can screen and examine the reputation and activities of the corporate partner. However, given the duration of these types of partnership, the risk of finding oneself engaged with a partner with deteriorating reputation is high.

The overwhelming success of a strategic partnership can have a number of implications. First, the parties may decide to extend their relationship which has financial and HR implications. Success can act as a show case attracting new corporate partners to the humanitarian organization. Success can also encourage replication which implies shifting of effort and investment from one partner to another or distribution of energy and time among many parties. In all cases, the probability of the other risks mentioned above is enhanced. As far as failure is concerned, it is a permanent risk facing both parties.

In terms of benefits, since strategic partnerships can be categorized as Corporate Social Initiatives (CSIs), they are expected to improve the effectiveness of the receiving humanitarian organizations, advance the status of knowledge and practice and signal other donors. As for the corporate partner, they are expected to address the expectation of the moral market place and be a source of competitive advantage.

In terms of risks, since a corporate partner that engages in a strategic partnership has clear CSR objectives, it needs to partner with a promising humanitarian organization. Therefore shortage of credible and promising organization could become a draw back. There is

always the risk that a corporate partner is accused of engaging with a humanitarian organization for self-serving purposes. However, this risk diminishes over time in case of strategic partnership given the long-term commitment. In contrast, given the duration of a strategic partnership, the probability that the reputation of the assisted humanitarian organization deteriorates increases.

Compared to strategic partnerships, benefits resulting from brokered partnerships for both the humanitarian and corporate partner are expected to be more modest. Assistance offered and received through brokered partnerships can suffer from lack of focus should the intermediary organization embrace an all-inclusive mission in terms of wanting to assist humanitarian organizations in a wide range of areas. The parties can also lack control over results and outcomes because while the intermediary organization can facilitate interaction among the parties, it cannot set the learning, implementation, adoption or partnership agendas. In other words, the parties involved have no obligation to implement or provide the suggested improvement, adopt or provide a technical solution, and maintain or enter into a relationship recommended by the intermediary organization. The benefits in terms of signaling other donors is expected to be limited because involvement with corporate partners brokered by an intermediary organization are more likely to signal other corporations to join hands with the intermediary organization rather than the assisted organization. As far as the corporate partner is concerned, given the ad hoc nature of assistance provided, the partnership is unlikely to produce the same benefits or result in the same risks of a full-fledged company initiative.

In conclusion, compared to strategic partnerships, risks resulting from brokered partnerships for both the humanitarian and corporate partner are expected to be limited. This is because of the ad hoc and fragmented nature of assistance delivered through these types of partnerships. The only risk which is may be higher is the possibility of engaging with a ‘tainted’ partner given the short time to vet each potential donor but given the duration of the assistance, the impact on reputations would also be low.

It follows that:

- P3:** For the parties involved, the risks and benefits of strategic partnerships are higher than those of brokered partnerships.

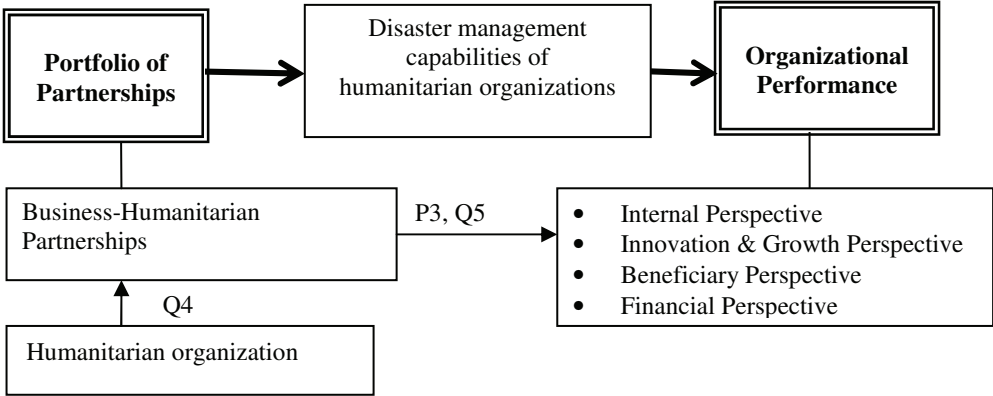
Should the risk-benefit profile of strategic and brokered partnership schemes be different, the other obvious question that comes to mind is whether all or only a specific range of humanitarian organizations can engage and hence benefit from each scheme. Given the expected benefits for the assisted organization of strategic partnerships, it is interesting to explore whether humanitarian organizations need to have certain characteristics to be able to attract and implement a strategic partnership or not.

Q4: What type of humanitarian organizations can engage in strategic partnerships?

To ensure a successful business-humanitarian partnership, the corporate partner and the humanitarian organization may be able to mitigate some of the risks. Therefore, it is important to explore what measures can be taken during the design, launch and implementation phases of the partnership to ensure the highest net benefit.

Q5: What are the best practices that can avert predictable risks and increase benefits of business-humanitarian partnerships?

Figure 4.2 – Research Framework: Business-Humanitarian Partnerships Subsection



4.4 Social Capital

Social capital theory, network theory, and the resource based view have elaborated on the relationships between social capital, network ties and access to resources. Social capital

theory argues that the creation and development of social capital, among other things, depends on a range of relations and ties. Resource based view research emphasizes the importance of network ties in facilitating access to resources and considers social capital as a source of competitive advantage. Viewed as a valuable intangible organizational resource, social capital is considered inimitable as its creation is path dependent and its development socially complex.

As we saw in Chapter 3, the literature argues in favor of a balanced creation and use of bonding and bridging social capital. A combination of bonding and bridging social capital is believed to confer a firm with the right level of flexibility and facilitate access to new ideas, limiting the risk of over-commitment to specific relationships (Adler & Kwon, 2002). The circle of social capital is also believed to be a reinforcing one. Social capital increases the ability of an organization to make connections and develop relations. Connections reduce the time and investment to access resources. Multiple bonding and bridging connections increase the stock of social capital augmenting opportunities for access to a wide range of resource. Social capital is also ‘appropriable’, developed in a context, it can be used in another (Coleman, 1988) and ‘convertible’ from social capital into other kinds of capital (Bourdieu, 1985).

In line with the social capital literature, we argue that the underlying mechanism, the currency generated by the portfolio of networks and partnerships created and sustained by a humanitarian organization is social capital. More specifically, we argue that humanitarian organizations leverage bridging social capital at the individual and group-level to coordinate with key stakeholders as well as mobilize and gain access to resources and capabilities available within their partnership portfolio. They leverage bonding social capital with other humanitarian organizations to ensure inter-organizational coordination.

As argued in Chapter 2, by creating and reinforcing their stock of social capital – relationship management – humanitarian organizations are expected to improve their supply network management ability and increase their opportunity for resource/capability enhancement. As discussed in Chapter 3, the development of social capital is a function of time, interaction, interdependence and closure (Nahapiet & Ghoshal, 1998). With particular focus on disaster response, in section 4.5.1, we use the above definition to

identify the source of social capital. In section 4.5.2, we discuss the potential contribution of bonding and bridging social capital to the performance of a humanitarian organization.

4.4.1 Network Actors and Social Capital

A humanitarian organization maintains a wide range of relationships with its response network partners. It can be engaged in different types of partnerships with business or CSOs. It can also be a member of the humanitarian virtual web and benefit from the services of the logistics coordination platform.

To distinguish between different network ties and their contribution to the development of social capital, we categorize each relationship along Nahapiet & Ghoshal's four criteria: time, interaction, interdependence and closure. Figure 4.3 categorizes relationships along the first two criteria: interaction (strength of bond) and time (duration of relationship), while Figure 4.4 categorizes them along the last two criteria: interdependence and closure.

Given the low intensity and short duration of interaction with one-time suppliers, ad hoc donors, local media and business partners, members of localized and brokered partnerships, relationships, dictated by context, are expected to be short. Interaction with recipient governments, disaster-specific implementing partners, and national or combatant military forces will be typically very intense but limited to the duration of the relief effort. Existing relationship with major international news agencies and those created with brokering institutions are expected to be over a long period and activated on a needs basis.

In stark contrast with the other forces, long-standing donors are the life-line of emergency supply chains. Given their importance, humanitarian organizations are expected to build intense and long-term relationships with them. Similarly, given the importance and multitude of dependencies that arise during disaster response between various humanitarian organizations and a shared mandate, each organization has a history of intense interaction with a range of well-established humanitarian organizations. Relationships with experienced implementing partners with global presence are expected to be long and intense. Similarly, relationship with repeat suppliers, although regulated by the mechanism of price, are long in nature and will be intense during the good ordering and delivery process.

Figure 4.3 – Level of Interaction and Duration of Relationship with Network Actors/ Different Humanitarian Partnership Schemes

| | | | |
|--------------------|------|---|---|
| Interaction | High | <i>Recipient Government</i> <i>Implementing Partners (IPs)</i> <i>Military</i> | <i>Long-standing Donors</i> <i>Humanitarian Organizations</i> <i>Repeat IPs</i> <i>Repeat Suppliers</i> Strategic Partnerships Cross-Cutting Partnerships Logistics Coordination Platform |
| | Low | <i>Local Media</i> <i>Ad hoc suppliers</i> <i>Ad hoc donors</i> Localized & Brokered Partnerships | <i>International Media</i> Brokering Institutions |
| | | Short | Long |
| | | Time | |

As far as partnership schemes are concerned, in strategic and cross-cutting partnerships, the level of interaction is high and the duration of the collaboration is long. Similarly, organizations that decide to contribute and/or benefit from a logistics coordination platform engage in an intense and long-term relationship with the structures and staff of the platform.

As depicted in Figure 4.4, we do not expect a humanitarian organization to achieve low closure with any of its partners when there is high interdependence. The level of interdependence and closure between a humanitarian organization and its one-time donors, suppliers, media, and those entities party to brokered and localized partnerships is expected to be low. To respond in a cost-effective, timely, flexible, and accurate fashion to a disaster, a humanitarian organization has to achieve closure with its long-standing donors, other humanitarian organizations, repeat suppliers, implementing partners, recipient governments, military forces, strategic and cross-cutting partners and the logistics

coordination platform. The objective of an effective and efficient response increases the level of interdependence between a humanitarian organization and its long-standing donors, other humanitarian organizations, repeat suppliers, implementing partners, recipient government(s), strategic partner and logistics coordination platform.

Figure 4.4 – Level of Interdependence and Closure with Network actors/Different Humanitarian Partnership Schemes

| | | | |
|----------------|------|---|--|
| Closure | High | <p><i>Military Forces</i> Cross-Cutting Partnerships</p> | <p><i>Long-standing Donors</i> <i>Humanitarian Organizations</i> <i>Implementing Partners</i> <i>Repeat Suppliers</i> <i>Recipient Government(s)</i> Strategic Partnerships Logistics Coordination Platform</p> |
| | Low | <p><i>Media</i> <i>Ad hoc Donors</i> <i>Ad hoc Suppliers</i> Localized Partnerships Brokered Partnerships</p> | |
| | | Low | High |

Interdependence

Social capital is expected to develop where there is a high level of interaction, long-term relationships, interdependence and closure between two parties. We can conclude that a humanitarian organization is expected to build social capital primarily with those network partners that appear in the top-right quadrants of Figures 4.3 and 4.4 namely, long-standing donors, other humanitarian organizations, implementing partners, repeat suppliers, strategic partners and logistics coordination platform. It follows that:

- P4:** Only intense partnerships, that is, partnerships with long-standing, interactive, interdependent and closely-knitted partners or structures, will increase a humanitarian organization’s stock of social capital.

4.4.2 Contribution of Social Capital to Organizational Performance

In this section we distinguish between the contribution of bonding and bridging social capital to disaster management.

Bonding social capital among humanitarian organizations has the potential to improve organizational performance. More specifically, we argue that it is a necessary condition for inter-organizational coordination in large-scale operations. Bonding social capital increases an organization's ability to manage dependencies and avoid duplications emerging from a range of logistics failure modes. We also argue that bonding social capital developed during the planning phase can be leveraged during the response process and vice-versa. It follows that:

P5: Bonding social capital is a necessary condition for inter-organizational coordination during disasters.

We equally argue that bridging social capital is a necessary condition for humanitarian organizations to tap into specialized resources and capabilities reducing their resource and knowledge holes during disaster response. For example, social capital developed with members of the supply network can increase the volume of in-kind, industry-specific and cash donations at the disposal of a humanitarian organization both during and in-between disasters. Bridging capital built in-between and during disaster response also contributes to successful coordination between operational and non-operational humanitarian organizations and other stakeholders.

Similarly, access to specialized resources and capabilities enhances the resource/capability profile of a humanitarian organization and improves its ability to manage its supply network during disaster response. Bridging social capital developed in-between disasters (e.g. during resource/capability enhancement efforts) is 'convertible' and 'appropriable' during the disaster response phase and vice-versa by both operational and non-operational humanitarian organizations. It follows that:

P6: Bridging social capital is a necessary condition for successful disaster response.

Since we argue that relationship management is a key disaster management capability, it becomes important to explore how social capital is developed. By differentiating between bonding and bridging social capital, the next research questions aim to explore how organizations create opportunities for its creation and reinforcement. Finally, we explore the contribution of bridging social capital to resource/capability enhancement of operational humanitarian organizations.

- Q6:** How is bonding social capital developed among humanitarian organizations?
- Q7:** How is bridging social capital developed between humanitarian organizations and other key stakeholders?
- Q8:** What is the contribution of bridging social capital to resource/capability enhancement of operational humanitarian organizations?

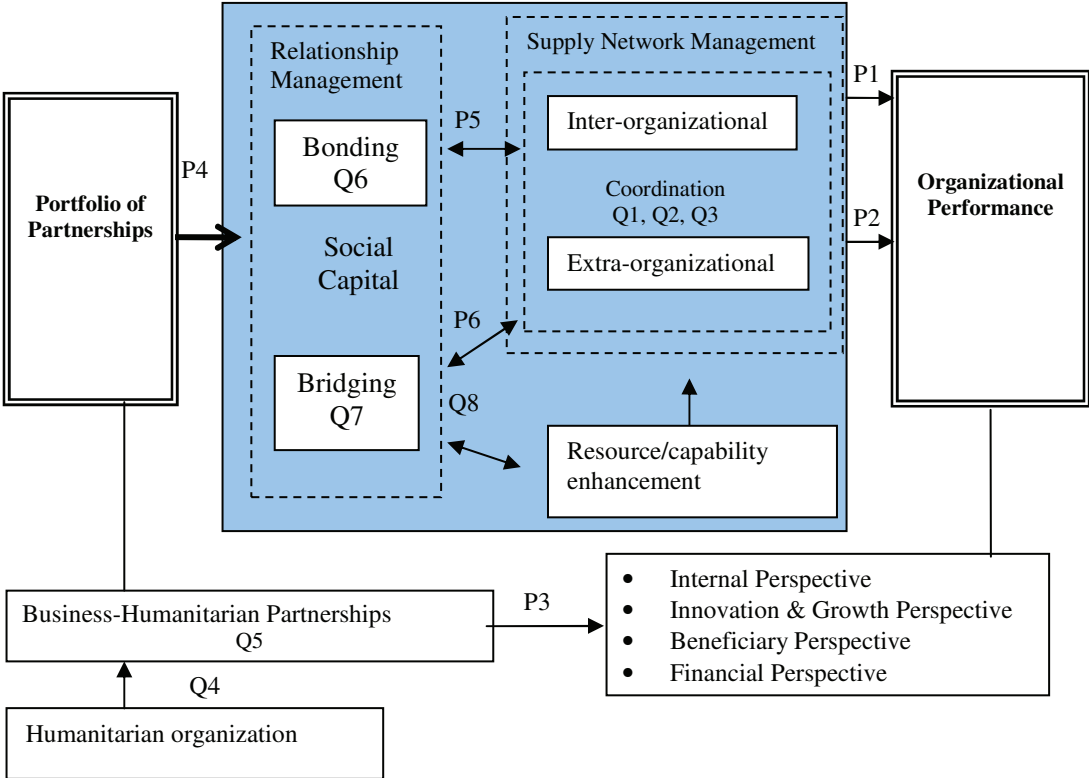
4.5 Summary

In Chapter 3 we developed our conceptual framework which is based on the integration of network, coordination, resource-based view, social capital and corporate social responsibility theories. In this chapter we developed our research framework which consists of a number of research questions and propositions summarized in Figure 4.5 and illustrated in Figure 4.6. We propose to test our propositions and explore our research questions after presenting our empirical study in Chapter 10.

Figure 4.5 – Research Questions and Propositions

| Propositions | Research Questions |
|--|--|
| P1: Only a broad supplier network can ensure a speedy, accurate, flexible and cost-effective disaster response. | Q1: How do humanitarian organizations manage dependencies and duplications emerging prior or during disaster response? |
| P2: Only virtually organized logistics coordination platform will lead to good services. | Q2: How do humanitarian organizations operationalize and ensure the success of a virtually organized logistics coordination platform? |
| P3: For the parties involved, the risks and benefits of strategic partnerships are higher than those of brokered partnerships. | Q3: What are the risks and opportunities facing humanitarian virtual organizations and how are they managed? |
| P4: Only intense partnerships, that is, partnerships with long-standing, interactive, interdependent and closely-knitted partners or structures, will increase a humanitarian organization’s stock of social capital. | Q4: What type of humanitarian organizations can engage in strategic partnerships? |
| P5: Bonding social capital is a necessary condition for inter-organizational coordination during disasters. | Q5: What are the best practices that can help avert predictable risks and increase benefits of business-humanitarian partnerships? |
| P6: Bridging social capital is a necessary condition for successful disaster response. | Q6: How is bonding social capital developed among humanitarian organizations? |
| | Q7: How is bridging social capital developed between humanitarian organizations and other key stakeholders? |
| | Q8: What is the contribution of bridging social capital to resource/capability enhancement of operational humanitarian organizations? |

Figure 4.6 – Research Framework



PART III

EMPIRICAL RESEARCH

Chapter 5 Empirical Research

In Part II of this thesis, we developed our conceptual and research framework. In this chapter we present the methodology and general approach to the empirical inquiry. This research is primarily explorative and explanatory in nature. The accomplishment of the research objective includes the elements of description and explanation. The aim of the empirical research is to validate the constructs and arguments of the conceptual framework developed in Part II and to draw some lessons for humanitarian organizations as well as business.

This chapter is organized as follows. In section 5.1, we present our research philosophy. In section 5.2, we discuss the empirical research methodology explaining why we have chosen a combination of single and multiple case study approach and our case site selection rationale. Section 5.3 concentrates on the research design by describing the applied research methods and validity of the research.

5.1 Research Philosophy

In this section, we discuss three research perspectives - positivist, interpretive and critical - with a view to identify the one(s) that best meets the requirements of our research. Positivist research is “based on the view that the world exhibits objective cause-effect relationships that can be discovered, at least partially, by structured observations” (Walsham, 1993). This approach allows for the logically related hypotheses derived from theory to be empirically tested (Lee, 1991).

Interpretive perspective assumes that our knowledge of the reality derives from “social constructions such as language, consciousness, shared meanings, documents, tools and other artifacts” (Klein & Myers, 1999). This is in contrast with the positivist approach as no objective reality is discovered to be then replicable by others. Through the interpretive approach, the researcher gains an intimate understanding of a specific setting and situation through close connection with diverse actors.

The critical perspective allows the researcher to identify the restrictive and alienating conditions of a status quo. The objective of this research philosophy is to critique a phenomenon in order to identify alternatives that can result in change and improvements.

Given the scope of our research, we focus on the positivist and interpretive views. Positivism lacks connection to empirical reality but generates generalizable concepts. Interpretivism, based on individual subjectivity and understanding of specific contexts, may fall short of the possibility for generalizations and a conceptual framework. Lee (Lee, 1991) suggests that the two perspectives can be combined and be mutually supportive to address the specific requirements of organizational research. He proposes three levels of understanding - subjective, interpretive and positivist – and a series of feedback loops to ensure and reinforce its quality. The process allows for a proposition based on positivist research to be confirmed or disconfirmed through empirical testing.

The aim of our study is to gain an understanding about humanitarian operations during disaster response by focusing on the contribution of a portfolio of partnerships to disaster management capabilities and its impact on performance. To explore the impact of such partnerships on organizational performance and to draw some lessons for these organizations as well as business, we need to enhance our generalizable understanding of the context, drivers, structure and elements of disaster management.

Research in disaster management lacks a comprehensive framework that explains the relationship between actors and the impact of partnerships on disaster management. An interpretive understanding of how, why and when humanitarian organizations seek partnerships can provide useful insights into the contribution of partnerships to disaster management and the impact of context.

In this thesis, we adopt Lee's approach. The interpretivist approach is used in our empirical research. Findings of each case are interpreted in their own context. We use the positivist research philosophy to validate our constructs.

5.2 Empirical Research Methodology

This thesis adopts the qualitative approach for empirical research, more specifically, the case study method. We choose the qualitative method given the exploratory and

explanatory nature of our main research questions. Qualitative methods are recommended for the investigation of complex phenomena as they allow for an open conceptual approach and detailed descriptions (Marshall & Rossman, 1995).

The humanitarian sector is composed of many actors and stakeholders. For each disaster, to mobilize a wide range of food and NFIs, each humanitarian organization constructs and choreographs a series of emergency-specific supply chains. In addition, it enters into a number of coordination and collaboration schemes and leverages relationships with its network of partners. The response capability and performance of each humanitarian organization depends on its capability, those of its long-term and ad-hoc partners and the partnership schemes. The number of variables and their relationships exceed the capabilities of quantitative research. Moreover, most of the relationships evolve and need to be considered in a dynamic setting. Lack of prior research in this field is a further deterrent to quantitative research. As argued below, the case study approach provides a number of clear advantages for the current study.

Figure 5.1 – Main Research Questions

- | | |
|----|---|
| 1. | <i>What factors contribute to the performance of humanitarian organizations during disaster response?</i> |
| 2. | <i>How do humanitarian organizations manage their disaster response activities?</i> |

Yin (Yin, 2003) identifies three criteria for the selection of a research strategy. These are type of research questions, control over behavioral events, and focus on contemporary versus historical events. We have pursued the case study research strategy for the following reasons. As suggested by Yin, the nature of research questions already provides an indication of the most adequate research approach (Figure 5.1). Our main research questions include ‘what’ and ‘how’ questions and our sub-questions are also ‘what’ and ‘how’ questions which are all exploratory in nature. For these types of questions, Yin proposes the case study, experiment or historical approach.

Secondly, Yin suggests that the extent of control a researcher has over actual behavioral events help determines the research strategy. While it is possible to study the behavior, decision-making processes and operations of humanitarian organizations in real-life, that

is, in an empirical setting, it is almost impossible to replicate them through an experiment, a controlled environment. Any experiment would fail to capture the complexity and dynamism present in disaster management. Moreover, it is possible to conduct field research and case studies at a number of humanitarian organizations.

Finally, as Yin mentions, the case study methodology is an appropriate strategy to study contemporary events. Partnerships in the humanitarian sector are a recent phenomenon. The existence of an operational setting as opposed to historic studies implies that the researcher can deploy the case study approach.

5.2.1 Case Study Design

In this thesis, we follow a combination of single and multiple case approaches. Our choice has been dictated by circumstances and time factors.

Yin (Yin, 2003) argues that the multiple case study approach increases the external validity of research since it allows for replication and replication procedures lead to the development of a well-founded theory. Multiple case study design is in line with the positivist philosophy of multiple experiments. If carefully selected, multiple case studies allow for literal (prediction of similar results) and theoretical replication (different results for predictable reasons).

The necessary condition propositions are tested in single cases. The analysis of different organizations and disasters helps us distinguish between different disaster management capabilities, mechanisms, structures and practices in real life settings. We have used own observations, interviews, documents and historic data to validate our propositions hence enabling prediction on the subject.

5.2.2 Selection Criteria

For the selection of the cases, we pursued the purposeful sampling strategy. We selected organizations that could provide information on and share their experience about disaster management. Since we wanted to determine the relationship between partnerships and organizational performance during disaster response, we studied the response of the

organizations to specific disasters. The selected organizations and disasters are representative of the phenomenon under study, capture the heterogeneity in the humanitarian sector, allow for the testing of the research framework and facilitate comparisons (Maxwell, 1996). The size and profile of the organizations interviewed fit with the time, budget and accessibility constraints of the research project. The Fritz Institute, INSEAD and the World Food Programme (WFP) facilitated access to the sites.

The case selection process responded to a set of criteria. First, to capture eventual differences the sample includes UN and non-UN humanitarian organizations as well as operational and non-operational humanitarian organizations. Operational humanitarian organizations are those organizations that manage emergency supply chains while non-operational humanitarian organizations provide a service (e.g. in the area of logistics) to operational humanitarian organizations. Second, to ensure the relevance of our findings in different contexts, the range of disasters include natural and man-made, predictable and unpredictable large-scale disasters. Third, at least one disaster was studied for each operational and non-operational humanitarian organization so as to identify the critical factors that ensure success during disaster response. Fourth, in selecting the sites, prevalence was given to the importance of the logistics function within the organization rather than the organizational structure. Fifth, the selected cases show different types of partnerships. Finally, the perspective of other key stakeholders such as donors, business and CSO has been included.

Our empirical research focused on two *operational* humanitarian organizations, IFRC and WFP, and their disaster management operations and one *non-operational* facility, the UNJLC, and its coordination activities. The selected humanitarian organizations are amongst the largest and most representative as they address the needs of different segments of disaster-hit populations. To have a better understanding of their operations, interviews were also conducted with other humanitarian organizations, the donor community, the logistics company TNT. Desk research was conducted on the CSO focused on humanitarian issues, the Fritz Institute.

5.2.3 Data Collection

There are two distinct strategies to case study analysis and theoretical framework adjustment. The first one is the use of a single case study protocol for all cases and analysis of findings at the end. The second one is the adjustment of the theoretical framework after completion of each study. We followed the first strategy. Empirical data was collected and interviews were conducted in a sequential basis. After their completion, we reflected the findings on the conceptual framework.

The focus of each study was defined at the very outset. In preparation for the fieldwork, the author reviewed and consulted publicly available material such as annual reports, technical papers and websites. The preparatory work led to the formulation of a case study protocol. The protocol included the type of people and departments to be interviewed, an overview of initial conceptual framework and a questionnaire.

Yin (Yin, 2003) stresses the principles of multiple sources of evidence, need for a case study database and establishment of chain of evidence. For each case study, we used a mix of sources – document, publication, archival records, interviews, and direct observations – to gather relevant data and support statements. Semi-structured, in-depth interviews were the main source of data collection. The multiple secondary sources reinforced the data collection process.

The interview protocol was used during the interview sessions with IFRC, UNJLC and WFP case studies. Interviews were conducted by a team that included the author. The data collection and analysis process was driven by the need for completeness, accuracy, significance and consideration of alternative perspectives. The author took detailed notes during each interview. Notes included collection of raw data and initial sense-making. All interviews were recorded and some were transcribed. Throughout the data collection period, the author benefited from ad hoc observations. In one occasion, the author attended an inter-agency meeting. Data from these sources improved the understanding of the dynamic contextual framework.

Preliminary analysis of data occurred at the end of each interview session. To have an overview of the phenomenon under study, diagrams were sketched to map out relationships. The diagrams helped in exploring explanations and arguments for the observed phenomenon. Leads from the data analysis and fieldwork and the researcher's

interpretation of the information obtained were promptly investigated through a series of follow-up questions and phone interviews. Upon examination of new material, reports were updated to include the latest insights. Business case studies were written after each site visit. To generate generalizable insights, we took the positivist angle and moved beyond a specific case situation by looking at the outcome of multiple case studies. The multiple case approach helped us in the identification of patterns in terms of strategies, challenges, opportunities, and decisions as well as the advancement of propositions.

In terms of data management, we created a digital folders archiving system for each case study. A chain of evidence was established by documenting data sources in the case study reports and analysis.

Figure 5.2 provides an overview of the research project in terms of timeframe as well as number and type of people interviews. As one can note, in the course of data collection, over 50 people were interviewed, most of which held managerial positions or were logistics officers (Appendix C).

Figure 5.2 – Scope of Research Project

| Organization | Year of Study | No. of people interviewed | Functions Interviewed |
|---------------------|--|----------------------------------|---|
| IFRC | 2002: Interviews & document review 2007-2008: Desk research | 7 | <ul style="list-style-type: none"> • IFRC Logistics & Operations staff |
| UNJLC | 2002-2005: Interviews & document review | 26 | <ul style="list-style-type: none"> • UNJLC staff • Donors • Other Humanitarian Organizations • External organizations |
| WFP | 2002-2004: Interviews and document review | 19 | <ul style="list-style-type: none"> • WFP logistics & management staff • TNT Moving the World Programme staff |
| Fritz Institute | 2007-2008: Desk research | n.a. | n.a. |

For the IFRC two sets of interviews were held. One set focused on the disaster response function of the IFRC (Gujarat earthquake and Hurricane Mitch) while the emphasis of the second one was on preparedness activities.

As far as the UNJLC is concerned, four sets of site interviews were conducted over a three-year period. Three set of interviews concentrated on the UNJLC coordination activities during disasters (Gujarat earthquake, Mozambique floods, Afghanistan and Iraq crises) while one focused on the institutionalization process of the facility (in-between disasters). It is worth mentioning that the data collection process for the UNJLC case studies was enhanced as key informants were repeatedly interviewed by the same research team over the three year period. As a result, a sound and effective working relationship emerged between the informant organizations and the interviewers as the former became acquainted with the case development process and the adopted research approach.

For WFP, a set of interviews at WFP headquarters and another set at TNT headquarters were held. Interviews at WFP headquarters focused on the disaster response of the organization during the Zaire crisis and its partnership with TNT.

The Fritz Institute case is entirely based on desk research. This was not a deliberate choice but dictated by circumstances. When we started our research project in 2002, the Fritz Institute had just been established. With few activities in place and little indication of how it was going to develop, it did not present itself as a rich case study. However, by 2007 it had a track record. Given the advanced stage of our research, it is only for the benefit of time that we decided upon a desk research.

Figure 5.3 – Overview of Research

| Organization | Disasters | Partnership | Partnership Arrangement | Chapter |
|------------------------|--|--|---|----------------|
| IFRC | Gujarat earthquake Hurricane Mitch | IFRC-Fritz Institute | Supply Network Strategic partnership | 6 |
| UNJLC | Gujarat earthquake Mozambique floods Afghanistan, Iraq | Inter- and extra-organizational coordination | Logistics coordination platform | 7 |
| WFP | Zaire crisis | WFP-TNT | Supply Network Strategic partnership | 8 |
| Fritz Institute | n.a. | Fritz Institute-Humanitarian Organizations | Brokered partnership | 9 |

Figure 5.3 contains an overview of our research and the corresponding chapters. The sequence in presentation reflects the order in which we conducted our interviews and carried out our desk research.

5.3 Research Design

Yin (Yin, 2003) defined research design as consisting of five components: the study question, the unit of analysis, propositions, the logic of linking data to propositions, and the criteria for interpreting findings. The research question has already been presented above. In the next sub-sections we discuss the remaining four components.

5.3.1 Unit of Analysis

The phenomenon under research is performance of humanitarian organizations during disasters. Hence, we have two distinct units of analysis: organizations and disasters. Data is related to different disasters depending on whether the proposition aims to test activities by an operational organization or/and a non-operational organization. More specifically, three disasters - Gujarat earthquake, Hurricane Mitch and Zaire Crisis - relate to two operational organizations: IFRC and WFP. Four disasters - Gujarat earthquake, Mozambique floods and Afghanistan and Iraq crises - relate to the UNJLC, the non-operational organization.

The objects of research in the case study analysis are individual operational and non-operational humanitarian organizations and disasters and the domain is large scale disasters. Information is collected from and about each organization. Our data on disaster response is embedded in our research on each operational humanitarian organization while that on coordination, a subset of disaster response activities, is embedded in our research on the non-operational humanitarian coordination facility.

5.3.2 Propositions and Research Questions

To respond to our main research questions, we formulated a series of questions and propositions. The logic that guided us in the proposition formulation process was based on the need to identify the structures, actors and resources that explain performance during disaster response. The logic that guided us in the question formulation process was based on the need to understand how humanitarian organizations develop resources and operationalize and manage their operations.

5.3.3 Linking Data to Propositions

The validity of suggested links between data and propositions determines the quality of the empirical research and adherence to the stated research objective. In Figures 5.4 and 5.5, we illustrate the link between our data and the proposed propositions and research questions.

Figure 5.4 – Linking Data to Propositions

| Propositions | Unit of Analysis | Data |
|--|-------------------------|---|
| P1: Only a broad supplier network can ensure a speedy, accurate, flexible and cost-effective disaster response. | Disasters | Gujarat, Zaire, Hurricane Mitch |
| P2: Only virtually organized logistics coordination platform will lead to good service. | Disasters | Gujarat, Iraq, Mozambique, Afghanistan, I |
| P3: For the parties involved, the risks and benefits of strategic partnerships are higher than those of brokered partnerships. | Organizations | IFRC, WFP, Fritz Institute |
| P4: Only intense partnerships, that is, partnerships with long-standing, interactive, interdependent and closely-knitted partners or structures, will increase a humanitarian organization’s stock of social capital. | Organizations | IFRC, WFP & UNJLC |
| P5: Bonding social capital is a necessary condition for inter-organizational coordination during disasters. | Disasters | Gujarat, Iraq, Mozambique & Afghanistan |
| P6: Bridging social capital is a necessary condition for successful disaster response. | Disasters | Gujarat, Zaire Afghanistan, Hurricane Mitch, Iraq, Mozambique |

Figure 5.5 – Linking Data to Research Questions

| Research Questions | Unit of Analysis | Data |
|--|------------------|-----------------------------------|
| Q1: How do humanitarian organizations manage dependencies and duplications emerging prior or during disaster response? | Organizations | IFRC, WFP & UNJLC |
| Q2: How do humanitarian organizations operationalize and ensure the success of a virtually organized logistics coordination platform? | Organizations | UNJLC |
| Q3: What are the risks & opportunities facing humanitarian virtual organizations and how are they managed? | Organizations | UNJLC |
| Q4: What type of humanitarian organizations can engage in strategic partnerships? | Organizations | WFP, IFRC & UNJLC |
| Q5: What are the best practices that can help avert predictable risks and increase benefits of business-humanitarian partnerships? | Organizations | WFP |
| Q6: How is bonding social capital developed among humanitarian organizations? | Organizations | UNJLC, WFP, Fritz Institute |
| Q7: How is bridging social capital developed between humanitarian organizations and other key stakeholders? | Organizations | IFRC, UNJLC, WFP, Fritz Institute |
| Q8: What is the contribution of bridging social capital to resource/capability enhancement of operational humanitarian organizations? | Organizations | WFP & IFRC |

Since P1 relates to supply chain management, we have selected disaster data related to the disaster response activities of our two operational humanitarian organizations: IFRC & WFP. Since P2 and P5 relate to the coordination activities, we have selected disaster data related to UNJLC’s coordination activities. For the test of P6, we have selected disaster data related to both our operational and non-operational humanitarian organizations.

5.3.4 Research Methodology for Necessary Condition

The propositions formulated in this thesis test the relation between partnerships and the mediating factors, the mediating factors and organizational performance, between mediating factors, partnership types and organizational performance as well as what types

of organizations can engage in what types of partnership arrangements. Since the research questions are 'what' and 'how' questions and all propositions propose the presence or absence of a phenomenon under certain conditions, the case study approach is identified as the preferred strategy (Johnston et al., 1999; Dul & Hak, 2008). As for the propositions, five out of six express a necessary condition. This implies that in every instance in the defined domain, the proposition has to hold true and that just one instance is enough for the proposition to be rejected. Necessary condition statements are particularly useful to managers as they identify the critical factors that ensure success (Dul et al., 2008).

Different types of hypothesis require different strategies for testing (Dul et al., 2008). As a result, to test necessary condition propositions, we use the case study strategy and follow the seven methodological steps suggested by Dul et al. (Dul et al., 2008) which are: formulate the theoretical statement that will be tested, select an appropriate (single) case, specify the hypothesis for that (single) case, measure the relevant variable(s), test the hypothesis, formulate the test result and formulate the consequences of the test result for the theory. Below we expand on how we intend to apply the seven steps to our research.

We have clearly formulated the range of propositions to be tested (Figure 5.4). The listed propositions consist of discrete dichotomous necessary conditions (as opposed to continuous ones). There are three ways in which we can select our cases: i) a case in which B is present and that the hypothesis predicts that A is present; ii) a case in which A is absent and that the hypothesis predicts that B is absent; finally, iii) any case where the hypothesis predicts that the combination "A absent/B present" does not occur. We have chosen the any case approach. Since we have two units of analysis – disasters and organizations, for propositions 1, 2, 5 and 6 the cases consists of disasters, while for the remaining two propositions, the cases consist of organizations. For each case (disaster or organization), we specify a hypothesis. Thereafter we present scores for the relevant variables for each proposition for each case. Before discussing the implication of results, we present and formulate the test results.

5.4 Summary

In this thesis we adopt a combination of interpretive and positivist research. As disaster management is a complex field, we adopt an interpretive approach. A positivist approach is selected for the joint case study analysis to validate the conceptual framework and the deriving propositions.

We argue that the case study methodology is particularly valuable for this under-researched field as it helps provide an in-depth, contemporary, in context and verifiable description of the humanitarian logistics function and challenges. We adopt a case study design to examine the impact of partnerships on disaster management. Although humanitarian organizations have existed for over a century, studies on their operations are in their infancy. Partnerships within the humanitarian community in themselves are a relatively new phenomenon. Since humanitarian partnerships are a contemporary phenomenon that show their potential in real-life contexts and can hardly be replicated in experiments, the case study design is deemed as an appropriate research methodology. To replicate our logic, we adopt a multiple case study design. Our sampling strategy ensures the selection of different types of partnerships, organizations and disasters. This helps us in enriching our framework with evidence and experience from different situations.

Chapter 6 IFRC

In this chapter, we present and discuss the results of research at the International Federation of Red Cross and Red Crescent Societies (IFRC) conducted in 2002 supplemented by desk research as far as the IFRC-Fritz Institute collaboration is concerned. After an introductory note on the history, structure, tools and processes, and strategic directions of IFRC, section 6.2 describes IFRC's response to two disasters: The Gujarat earthquake and Hurricane Mitch. Section 6.3 describes the IFRC partnership with the Fritz Institute, which was centered on the development of a supply chain management software. Finally, section 6.4 discusses our findings.

6.1 IFRC⁶

History. The International Federation of Red Cross and Red Crescent Societies (IFRC) is one of the world's oldest humanitarian organizations. Founded in 1919, it comprises of a network of 185 National Red Cross and Red Crescent Societies (NSs) - almost one in every country in the world, a Secretariat in Geneva and a network of regional and country offices, delegations and a series of warehouses and logistics centers at the regional level. The NSs act as auxiliaries to the public authorities of their own countries in the humanitarian field. Together, they assist some 233 million beneficiaries each year. The Federation together with the NSs and the International Committee of the Red Cross (ICRC) make up the International Red Cross Movement, one of the largest humanitarian setups.

The IFRC is the choreographer of the Red Cross disaster management effort. It coordinates and mobilizes relief assistance for *international* natural and man-made emergencies

⁶

With permission from the authors Sections 6.1 & 6.2 are a reproduction of the following INSEAD case studies: Samii, R et al. "International Federation of the Red Cross and Red Crescent (IFRC): Choreographer of Disaster Management: The Gujarat Earthquake", INSEAD case study 06/2002-5032 and "IFRC: Preparing for Tomorrow's Disasters", INSEAD case study 06/2002-5039.

assisting an average of 30 million people annually while the ICRC provides assistance in conflict environments.

For the purpose of this discussion, we define recipient NSs as the NSs where the disaster occurs. Twenty to 25 out of the 185 NSs can be considered as donating NSs. The donating NSs typically include the American, Austrian, Belgian, British, Danish, French, Finnish, German, Japanese, Italian, Norwegian, Dutch, Spanish, Swiss and Swedish NSs. For each major disaster, donating NSs channel substantial funds, goods and personnel through IFRC.

Structure. In 2001, the IFRC was restructured (Figure 6.1). The major novelties in the new organizational structure were the creation of a Knowledge Sharing division and a Disaster Management and Coordination division. The latter has two distinct departments - the Emergency Response Preparedness and Logistics and Resource Mobilization departments, and three Operations Managers responsible for coordinating emergencies on global scale.

In the new structure, the Logistics and Resource Mobilization department is composed of the Field Logistics Unit (FLU) and Resource Mobilization Unit (RMU) (Figure 6.2). In 2002, the department was manned by six permanent staff and a fluctuating number of temporary staff on loan from NSs.

The head of the Logistics and Resource Mobilization department of IFRC had joined IFRC after a long career with Médecins Sans Frontières (MSF). With the reorganization of the Federation in 2001, he ensured that logistics was upgraded from a unit to a department (the hierarchical structure of IFRC is as follows: unit, service, department and division) and was provided with more resources to perform its function.

The head of RM had been with the Red Cross Movement for over 22 years: 9 years with the Danish NS and 13 at the Federation. She was in charge of the procurement of a couple of hundred items – from food, shelter, medicine to telecom units - for an average value of 150 million CHF per year, that is, 50% of the value of IFRC appeals. Her unit was responsible for the planning, coordination and reporting of goods mobilized through the NSs. Over the years, she had established a personal and worldwide network of contacts with major NSs and key suppliers (minimum three suppliers per item). In recent years, her

unit had introduced applications developed in-house using standard software tools (spreadsheets and dbases) to manage the unit's activities.

The head of FLU with a background in vehicle management was in charge of overall fleet management, deployment of logistics delegates, logistics Emergency Response Unit (ERU), reception and storage of goods on site, and onward transport to the final point of relief distribution of IFRC.

Tools & Mechanisms. In an effort to improve its disaster management capability, IFRC over the years had developed three main tools to respond to emergencies: DREF, FACT and ERUs.

The oldest mechanism in place was the Disaster Relief Emergency Fund (DREF) which provided seed money to initiate relief activity before the launch of a disaster specific international appeal.

The Field Assessment and Coordination Team (FACT) was deployed for large disasters. Its mandate was to carry out rapid field assessment immediately after a disaster, ensure coordination with dozens of actors, make quick decisions, and activate an appropriate relief operation. FACT members were on standby and deployable within 12-24 hours for up to six weeks anywhere in the world. They were experienced Red Cross/Red Crescent disaster managers, hence generalists, trained in specific areas such as relief, logistics, health, nutrition, public health and epidemiology, water and sanitation, finance, and administration. To build and maintain such a core pool of about 200 experts from which to draw, IFRC organized training sessions. The training sessions aimed at imparting a consistent methodology, building team spirit, and a common pool of expertise. The Disaster Management and Coordination Division was the authority that decided on the composition of the team of six to seven members to be deployed in any given disaster. Prior to the FACT each donating and host country NS sent its own assessment team with obvious cost and coordination implications.

The Emergency Response Units (ERUs) are specialized and self-contained units equipped with latest technology, facilities and people. They address logistics, health, telecommunication and water and sanitation issues and had been introduced more recently. The Logistics and Resource Mobilization department played a central role in the FACT

exercise through the participation of a logistics expert, and the ERU deployment through a Logistics ERU.

In terms of mechanisms the IFRC resorted to appeals, code of conduct and frame agreements. For each disaster, to raise resources the IFRC issues information bulletins and a series of appeals. The information bulletin put on alert status all those NSs sponsors of ERUs. The appeals are a marketing, planning and coordination tool. They help to motivate action from NSs, they allow NSs to approach their respective governments, and they are a transparent coordinating mechanism with other humanitarian organizations.

IFRC has a code of conduct to regulate private sector donations. By setting standards that included ethical and operational issues, the Federation has the right to refuse certain donations. Apart from its own policies, it adheres to guidelines provided by a recipient country. For example, when it comes to drug donations, it adheres to the regulations of the World Health Organization (WHO) and that of the recipient country's Ministry of Health. In general, to limit the arrival of unsolicited goods on the disaster site especially from its ad hoc donors, it seizes every opportunity to voice its preference for cash donations and issues lists of recommended and restricted items. Finally, its commodity tracking system serves to limit and pin down the arrival of unsolicited goods into the pipeline.

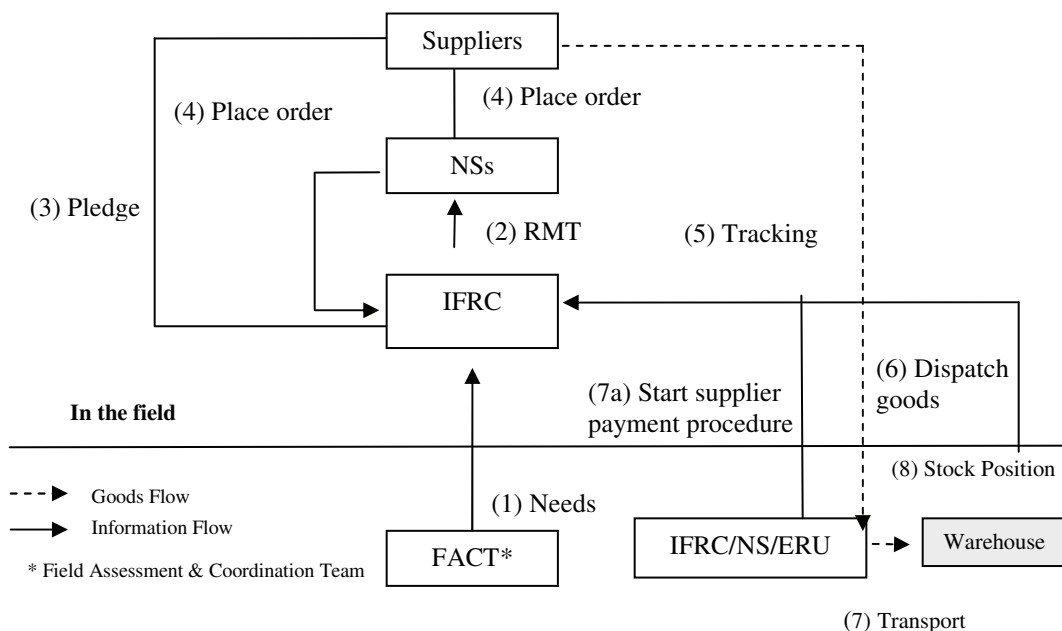
By 2002, IFRC had established frame agreements with suppliers for five key items. These agreements specify the good's price, quality and delivery requirements, and oblige suppliers to stock (at their own premises) a certain level of inventory. These agreements have drastically simplified IFRC's task as well as that of its NSs network.

Processes. Based on a preliminary assessment and the subsequent field assessment carried out by FACT, the RMU prepares a relief mobilization table (RMT). The RMT, which is a list of items with respective amounts, is circulated among NSs via email and then is followed up by targeted phone calls. The NSs ready and willing to procure and ship to destination items mentioned on the RMT confirm their pledges to the RMU. The pledge becomes effective once the RMU assigns a commodity tracking number to it. The commodity tracking system ensures an overview over the movement of goods (from procurement, transport, warehousing to distribution) and helps avoid and pin down the arrival of unsolicited goods. The NSs then informs the RMU on the shipping details (e.g.

arrival date and hour of the consignment). As needs keep changing and pledges keep arriving, the RMT is updated.

In close coordination with the ERU unit, IFRC's Logistics department deploys the various ERUs. The Logistics ERU ideally goes into action before the arrival of the goods at final destination. Based on the mobilization table and local infrastructure conditions, it estimates the need, size, and number of required facilities (tents) as well as an adequate site for their erection. Before clearing the goods through customs, it obtains special agreement (tax exemption for the imported goods) and arranges for the transportation (trucks, fuel, drivers, insurance etc.) of the goods to the warehouses.

Figure 6.3 – IFRC Good Mobilization and First Shipment Process Flow

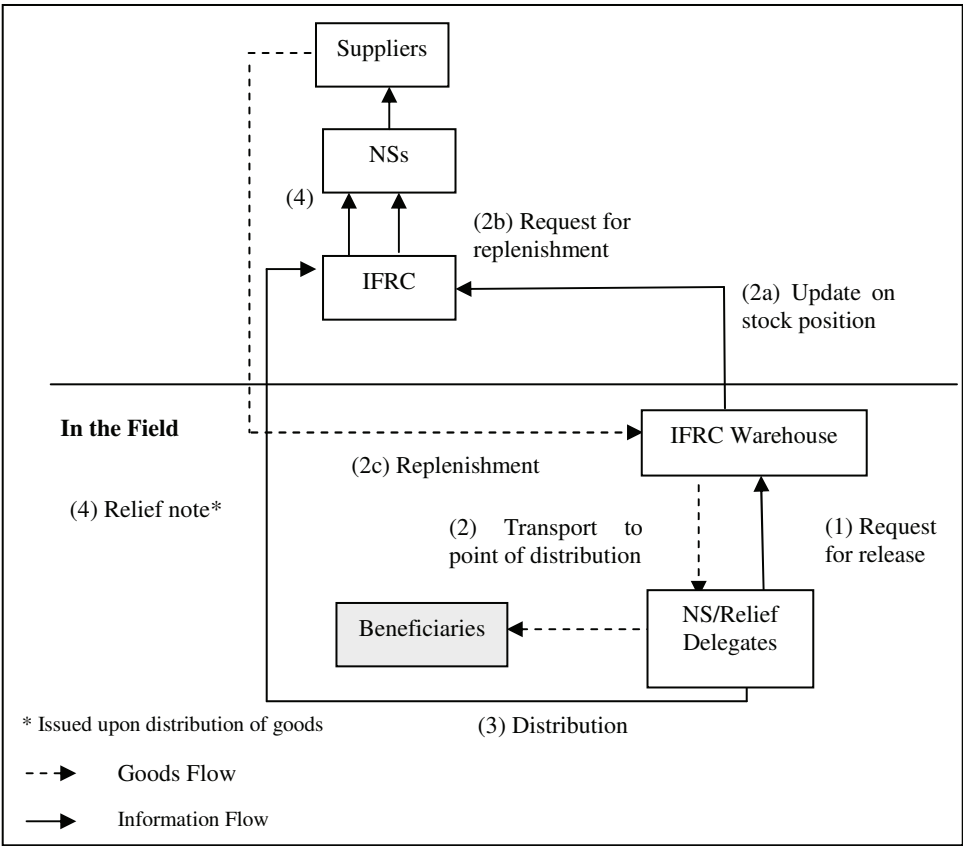


Source: Samii, R. et al., "IFRC: Choreographer of Disaster Management: The Gujarat Earthquake", INSEAD case study 06/2002-5032.

Upon receipt of each consignment, the Logistics ERU issues a goods receipt note to the RMU. The RMU updates its database (on a daily basis), advises the relevant NSs who

proceed with the settlement of their supplier invoices. The Logistics ERU is then entrusted with the storage, stock control, and security of the goods. The FLU receives a copy of the daily stock movement and dispatch list. Upon receipt of a release note from relief delegates, the Logistics ERU arranges for the forwarding of goods to the point of final relief distribution. The logistics systems in place by 2002, although new, were still rudimentary with no interface among them, thus resulting in multiple data entry. Figure 6.3 illustrates IFRC’s good mobilization process while Figure 6.4 its goods distribution and replenishment process.

Figure 6.4 – Goods Distribution Flow and Replenishment Process



Source: Adapted from Samii, R. et al., “IFRC: Choreographer of Disaster Management: The Gujarat Earthquake”, INSEAD case study 06/2002-5032.

Besides assessment reports prepared by FACT delegates to guide field operations, other reports are generated to satisfy the accountability and administrative requirements of the Federation. In theory, debriefing sessions are held with delegates after completion of their field missions. However, this is not always feasible. While there is awareness of the reinforcement role of an effective knowledge management system in building experience, by 2002 no system was in place to capture the experience, knowledge and information shared in reports and during debriefing meetings for future reference. Similar to other humanitarian organizations, IFRC reinvented the wheel and was poor in lessons learnt.

To prevent the arrival of unsolicited relief items, IFRC made sure it involved the donor NSs in the needs assessment phase for example by involving the staff of select NSs in the FACT missions. Although IFRC's ultimate "customers" were the disaster stricken populations, as the saying among the IFRC staff went, "A happy donor today is a good donor tomorrow". What made a donor happy was IFRC's efficiency, transparency and effectiveness and the donor's visibility and accountability with the public at large. In this context, the role of the press in covering a disaster became crucial. The fundraising capabilities of the NSs depend to a large extent on the press coverage and reviews they manage to obtain in the immediate aftermath of a disaster.

To ensure access to and faster distribution of more goods purchased at competitive prices especially for predictable disaster, depending on the willingness of its NS network, IFRC was ready to conduct a number of activities. It would consult concerned NSs to obtain their agreement on the content of basic relief kits (shelter, sanitation, and kitchen sets). It would sign pre-agreements/MoUs based either on a disaster response plan or individual/specific kits. It could then identify and assess the capability of potential suppliers. This would lead to the preparation of a mock relief action plan with a corresponding budget. With this information packaged, it could approach the donor NSs. Once it obtained the agreement of donor NSs, it could pre-contract the kits to the identified suppliers at predetermined and advantageous prices. With this paperwork behind it, during the disaster it could focus exclusively on its relief effort.

Network. To deliver better assistance to disaster stricken populations, IFRC works through the NSs and collaborates with international bodies, non-governmental and inter-

governmental organizations. Among the intergovernmental organizations, the European Union, through ECHO (European Community Humanitarian Office), the organization that typically supports agencies that are on the ground within 72 hours from a disaster, is IFRC's largest single donor. IFRC collaborates with relevant United Nations (UN) agencies such as the UN office for the Coordination of Humanitarian Affairs (OCHA), the UN High Commissioner for Refugees (UNHCR), the World Health Organization (WHO), the World Food Programme (WFP), and the UN Children's Fund (UNICEF) in the field and participates in the establishment of humanitarian standards and procedures. IFRC competes for the same resources as other humanitarian NGOs.

Strategic Directions. IFRC's strategy consisted of the creation of tools and resources and their utilization at the global level. Depending on the size of the disaster, it envisaged different levels of intervention: NSs were to cope with small disasters, medium-sized disasters were to be dealt with at the regional level, and for big disasters. IFRC would call upon its own global network of people and resources. As such, IFRC planned to build preparedness and response capabilities at regional and NS level. To effectively manage disasters, IFRC's preparedness activities were to be built on five pillars: human resources, knowledge management, operations and process management, financial resources, and the community.

In terms of human resources, it intended to run a number of standard training programs and provide on the job training at the local, regional and international level. In terms of knowledge management, efforts were underway to create a Disaster Management Information System (DMIS) with the objective of ensuring that the existing knowledge within the IFRC network of NSs was captured, codified and accessible to staff at large. One of the features of DMIS was identification and creation of links with relevant websites⁷ that held key information regarding the geography, climate, population, food habits, living conditions and customs, infrastructure, duty customs and regulations of a country and its regions. The other effort was to carry out risk assessments and get prepared

⁷ During disaster response, to get a good overview, IFRC uses information available on the UNJLC website for its mapping and planning activities at the central level. This is because it simply does not have the logistics resources to collect and update operational parameters such as cost and availability of fuel, trucks, warehouses, etc.

for predictable disasters. As far as operational and process management was concerned, it intended to strengthen its existing tools and mechanisms and further engage stakeholders in needs-assessment and contingency planning exercises.

IFRC had failed to increase the size of DREF, as it had had no impact in changing the donor mind-set. It had learnt, however, to work around this mind-set that looked for the victims - hence the visual evidence of a disaster – before committing itself to the provision of resources, preferably through goods rather than cash. IFRC’s fund mobilization capability through appeals was influenced by its performance in past disasters. Once it proved it could deliver and be there on the ground, it received a more favorable response to the next appeals.

It also intended to forge strategic alliances with significant “non-Red Cross” organizations to capitalize on these organizations’ country presence and infrastructure, areas of technical expertise, as well as human, knowledge and experience capital. With a strategic alliance in place, under specified conditions, there would be no need to coordinate and negotiate respective contributions and roles in a disaster as a framework would be already in place. The media was considered another potential partner. During the Cuba disaster, CNN acknowledged IFRC when it utilized its satellite to broadcast live. Since ECHO has a policy of providing funding to agencies that are on the disaster site within 72 hours, IFRC received funding from them. The international and national press are also considered as a valuable source of information. They travel on the territory, collect first-hand information on the disaster, and would share it with humanitarian organizations.

6.2 Disasters

In this section, we shall describe the response of IFRC to two disasters: the Gujarat Earthquake and Hurricane Mitch.

6.2.1 Gujarat Earthquake

At around 08:50 local time on Friday 26th January 2001, a series of earthquakes peaking at a massive 7.9 on the Richter scale hit Gujarat. The epicenter of the most destructive quake

in independent India was 20km from the city of Bhuj, one of the least accessible parts of the country. The quake had damaged the state's commercial capital Ahmedabad, less than 100km away from the epicenter.

That morning the information at the disposal of the IFRC from the stricken region was sketchy and anecdotal. Communication with the area was extremely difficult. One of the first pieces of information that reached IFRC was that the receiving infrastructure of the local military airport of Bhuj had been disrupted (tower and air control equipment were destroyed and airstrip required repair) and numerous airport staff were killed or wounded. Later, it became clear that entire sections of Gujarat's fragile network had completely collapsed. The fragmented water pipeline system was seriously damaged leaving entire areas without running water. Power and telecommunication lines were also severely affected.

Given the short response window for natural disasters, within the first 24 hours, IFRC took a number of actions. The accumulated experience of Federation staff was leveraged to estimate the size and gravity of the disaster. The Federation immediately engaged in a dialogue with its network of donor National Societies (NSs). Given the political tensions with Pakistan, it was not obvious that the Indian Government and the local military forces would welcome international assistance and hence open their airspace to accommodate the arrival of commercial/aid aircrafts. The Indian Red Cross entered into negotiations with government officials to secure the participation of the international community in the relief effort. It took almost three days before the Indian government publicly welcomed "acts of solidarity."

To activate the relief supply chain, IFRC put together an information bulletin shared with all NSs. It quickly consulted a number of websites and satellite information to gather information on the region and build an estimate of the size of the affected population. In the meantime, its delegation in Delhi made the necessary arrangements to reach Gujarat. By the afternoon of the same day, a preliminary appeal for CHF 2 million to assist 50,000 beneficiaries was issued, and CHF 200,000 released from the DREF. Over the next days, it prepared a relief operation plan for a 100-120 day period and launched its full appeal of CHF 25.5 million.

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

Within 48 hours, the first FACT members arrived in Bhuj. Approx. 36 hours from the disaster, the IFRC Delhi team and the Indian Red Cross were at the disaster zone followed by the first batch of relief supplies from existing stock. By then, the Logistics and Resource Mobilization department of IFRC had issued its first local procurement order for shelter and blankets.

By Monday, three days after the disaster, IFRC had commitments to the tune of four million CHF, fifteen donating NSs were ready to intervene, international suppliers were mobilized, the Logistics ERU team was on site, and the first batch of relief items were ready to be distributed.

A number of things had worked really well. IFRC was the first humanitarian organization to arrive on the disaster site. This gave it a lead role among the humanitarian agencies and determined our resources and reach.

During the Bangladeshi earthquake some ten years ago, substantial amount of time and energy was spent on the management and disposal of unwanted goods as 95% of goods received were unsolicited. The newly institutionalized tracking system had limited the arrival of unsolicited goods. It had allowed the team to see, at any given time, who was sending what, with what means, where and when keeping the amount of unsolicited goods as low as 5%.

The deployment of the ERUs, six in total, had worked well. Within days of the earthquake, three health-related ERUs, a specialized water and sanitation unit, a telecom unit and a logistics ERU had been deployed. Although the Logistics ERU had entered into action before the arrival of the bulk of goods at the Bhuj military airport, an earlier deployment would have facilitated operations. The Federation's standardization efforts, frame agreements, code of conduct, and a mix of local and international sourcing had helped expedite the mobilization of relief items.

Contrary to "creeping" crises such as drought/famine or health emergencies (e.g. HIV) that remain under-financed and require downscaling, earthquakes and floods readily attracted donor and public attention and money. Therefore, as expected, donor response to the Gujarat earthquake was good. More money was raised than what was actually requested: the full appeal was 25.5 million CHF while 100 million CHF was raised.

However, not everything had worked according to plan. Instead of assessing the disaster, the FACT team was drawn into operational activities from the minute it arrived in Gujarat. They were at the Bhuj military airport receiving the first relief items and the ERUs. They were the decision-makers behind the establishment of the compound that ended up hosting the 135 relief operators. In the first day or two after the arrival of the supplies, they even acted as relief delegates, distributing goods to the needy.

Since the FACT team went quickly into doing instead of assessing, the Federation did not have a full picture of the disaster zone. In fact, for a few days they were in the dark. Road conditions and lack of transportation did not facilitate things. In fact, it was almost a week before the team was able to communicate any reliable information on the extent of the disaster. Similar to other disasters, the media and its operators became an important source of information for everyone.

Given the absence of relief delegates on site, during the first two days, against all procedures, supplies were distributed without any tracking. Then goods started piling up in the warehouses. It took two to three weeks for relief delegates to organize their operations and pull the supplies out of the warehouses.

Requirements in terms of relief times kept on changing. The initial information received by the Federation from the field was that the Indian government did not want any tents. Three days later, it received a request for 10,000 units. Soon afterwards, the government's request shot up to 60,000 units - only to settle on the figure of 35,000. There were a number of reasons for the fluctuating figures. Most of the houses in the region were made of mud. With plastic sheets, damages especially those to the roofs could be temporarily fixed. Social networks were strong and people, who had lost their houses, were taken in by relatives and friends. Finally, people preferred the above-mentioned options to living in tents and hence refused them. In this particular case, IFRC was faced with a constraint, that of availability. Given the shelf life of tents (two years) and the lead-time required for their production, no supplier had the requested amount of 35,000 tents in stock. At the same time, demand for this product had increased overnight as a host of humanitarian organizations simultaneously approached the same global suppliers.

Finally, IFRC at the end of the emergency was confronted with excessive stocks in Bhuj, which it had to deal with. It had mobilized 160 tons of high protein biscuits (BP5),

however, since the government and the local communities responded efficiently to the food requirements of the people, it ended up using only 25 tons of the stock. Therefore, at the end of the emergency period, it had to obtain the agreement of both the donor and the Indian NS to store the remaining stock in India.

In 30 days, IFRC had organized the arrival of 45 charter planes carrying basic shelter material - 255,000 blankets, 34,000 tents, and 120,000 plastic sheets – and other items such as kitchen sets and jerry cans. The military staff at Bhuj airport had fully supported this operation. Despite the fact that they were mourning deceased colleagues, they continued to work under difficult and dangerous conditions to cater to charter planes flown in by different humanitarian organizations from all over the world. During the first 100 days of operation, IFRC had assisted 300,000 people through the active participation of 35 partners. The price tag of this operation, borne by the international community, was 35 million CHF while another 35-40 million CHF was devoted to the recovery and rehabilitation phase.

The Gujarat earthquake was a benchmark for IFRC as it was the first disaster where all the tools, mechanisms and practices developed to manage emergencies had come together. To improve response time, IFRC recognized the need to work on its appeal and standardization process, relationships with NSs, each tool at its disposal, and its overall readiness to respond to disasters.

6.2.2 Hurricane Mitch

Between 22 October and 1 November 1998, Hurricane Mitch, a 180-mph Category 5 storm, the worst to hit the Gulf of Mexico in 200 years, swept through nine Central American countries devastating the economies of Honduras, Nicaragua and Guatemala. The hurricane, dumping as much as six feet of rain, washed out roads, destroyed some 400 bridges in the region, changed the course of rivers and left a three feet layer of mud on flooded airport airfields. 10,000 people were estimated dead while some two million were left homeless. In January 1999, Carlos Flores, president of Honduras stated, “We lost in 72 hours what had taken us more than 50 years to build, bit by bit.”

IFRC was under fire. The donor NSs and the NSs of Central America were dissatisfied with the way it had handled the Hurricane Mitch disaster. Nothing had gone right. It took weeks before IFRC took a lead in coordinating the relief contributions of the donating NSs. IFRC's technical staff and relief delegates arrived late in the region. ERU were deployed at the eleventh hour. Basic supplies such as food, water and shelter took weeks to mobilize and distribute to the population. Twenty-two separate assessment reports were carried out by various NSs and donors. IFRC had failed to play a coordinating role in managing the disaster. It was not prepared to respond to the crisis as not enough technical expertise was readily deployable and no supplies were pre-positioned. This, while bilateral assistance, in particular from the US and Mexican governments as well as the American and Spanish NSs, had visibly delivered. IFRC knew that if it did not develop a system to guarantee transparent and quick responses to disasters, donors would reinforce their own capabilities and provide assistance on a bilateral basis.

Although the Federation was engrossed in a reorganization exercise, a group of experienced staff was appointed to ensure that IFRC was never again caught unprepared. Their work resulted in the creation of a Pan-American Disaster Response Unit (PADRU) - a pilot initiative to be eventually replicated in other regions of the world.

PADRU's central responsibility was to respond to disasters in the region by providing technical expertise and creating capacity in disaster preparedness and response. To effectively manage disasters, PADRU was to initiate work on the five preparedness pillars: human resources, knowledge management, operations and process management, financial resources, and the community.

On the operations and process management side, the initiative's aim was to ensure access to and faster distribution of more goods purchased at competitive prices. For example, before a predictable disaster strikes (e.g. hurricane), there are a number of things IFRC could do. First, it could sit around a table with the concerned NSs to obtain their agreement on the content of basic relief kits (shelter, sanitation, and kitchen sets). Bearing in mind that there is no need for the perfect kit, but a kit that provides clean water, basic and balanced diets and shelter for those initial days after a disaster, it could sign pre-agreements/MoUs based either on a disaster response plan or individual/specific kits. The next step would consist of the identification and capability assessment of potential

suppliers. This would lead to the preparation of a mock relief action plan with a corresponding budget. With this information packaged, it would approach the donor NSs. Once it obtained their agreement, it would pre-contract the kits to the identified suppliers at predetermined and advantageous prices. With this paperwork behind it, in the midst of a disaster it could focus on its relief efforts instead of negotiating and deciding the content of kits with NSs and analyzing competitive bids from various suppliers.

This strategy required a paradigm shift for the NSs. As NSs are independent organizations, not necessarily they follow IFRC's advice. IFRC had the delicate task of convincing NSs, independent organizations auxiliary to their governments, to make commitments by signing off on pre-determined agreements. In other words, disaster preparedness was required in Geneva but also at IFRC's regional and national offices across the continents. The culture of preparedness was to be spread to the NSs with different capacity and capabilities. Through PADRU, IFRC also aimed to go beyond itself and its members by including other humanitarian organizations, active in relief operations, in the preparedness process.

6.3 IFRC-Fritz Institute Partnership

During the January 2001 World Economic Forum, Lynn Fritz, the former chairman and CEO of the logistics company Fritz Companies met the secretary general, the head of disaster management and head of logistics of IFRC (Kopczak & Johnson, 2004). Over the next eight months, Fritz and a selected team discussed whether and how a logistics information system could improve the operations of IFRC. The Fritz team did not limit the needs-assessment exercise to IFRC. After a round of visits to major humanitarian organizations, they discovered a generalized under-investment in IT infrastructure, processes, and tools among major humanitarian organizations. More specifically, they found out that humanitarian organizations use inadequate technology systems, that is, manual and time-consuming processes, to manage their disaster response operations.

In 2002, Fritz founded the Fritz Institute a non-profit civil society organization (CSO) that aims to assist humanitarian organizations in the delivery of humanitarian aid. When it came to the development of a tailor-made logistics software that can address the unique

supply chain requirements of humanitarian organizations, the Fritz team decided to partner with IFRC. From the Institute's perspective, IFRC represented a typical humanitarian organization. In addition, IFRC, given its federated structure, could allow for best practices and tools such as a logistics software to be propagated among its NSs.

The design phase of the Humanitarian Logistics Software (HLS) was officially launched in May 2002. To develop the software, for over a year, a handpicked team of in-house and third-party logistics and software experts worked shoulder-to-shoulder with IFRC staff. However, the process was not problem-free as there were two schools of thought within the IFRC. One group was in favor of an ERP system to be implemented by one of the top five ERP vendors and the other for a custom-made software (Kopczak & Johnson, 2004). The projected cost of the ERP system was \$ 12 million. The head of the logistics department at IFRC lobbied for a "best of breed" solution – SAP for HR, CODA for finance and a specific system for logistics based on the fact no ERP system could cater to IFRC logistics requirements (Kopczak & Johnson, 2004).

Following a thorough review of IFRC's logistics needs, the Fritz Institute customized a web-based, state-of-the-art proprietary logistics software enabling the secretariat and its network of NSs to harness the potential of technology during its emergency relief operations. HLS provides more control and visibility over relief items by tracking donations from mobilization up to the receipt at the disaster site. For the development of the HLS:

"The Fritz Institute has used the latest technologies and partnered with logisticians to build a flexible, tailored origin to destination tracking system, especially designed for the dynamic relief context. It is based on commercial best practices and adapted to humanitarian requirements through extensive research with many leading relief organizations. Currently implemented at the IFRC, the HLS is being made available free of charge to other humanitarian relief organizations. Its modularity allows it to be used as a framework tool which can incorporate current systems that underlie the relief supply chain and fill the functional gaps that may exist."

– Fritz Institute Website

After a user acceptance testing phase, the software was officially turned-on in September 2003 (Kopczak & Johnson, 2004), that is, 18 months after the official launch of the design phase. Built from ground-up, the software designed as a headquartered based system (Fritz Institute Annual Report, 2005), standardizes and automates the relief mobilization process and provides an interface between the different activities and steps of the IFRC logistics chain from the launch of an emergency appeal through procurement, donations, warehousing and distribution. The HLS was funded by the Fritz Institute and was fully implemented in 2004. It is currently used by the IFRC to coordinate its disaster response activities across geographies. At the end of 2006, the software was rolled out in IFRC's regional logistics units in Dubai, Panama and Kuala Lumpur (Fritz Institute Annual Report, 2006).

The software has reportedly impacted IFRC's operations. IFRC has stated that HLS has helped to improve its response time by 30% (Fritz Institute website). Compared to 2004, IFRC has decreased its supply chain set up times from 18 to just 3 days and decreased the cost of delivery of aid per family from \$ 800 to \$ 142 (Fritz Institute, September 2007 press release).

In September 2004, Fritz Institute was named a Tech Laureate by The Technology Museum of Innovation (San Jose, CA) for having developed the HLS. This award given annually to 25 social entrepreneurs who successfully leverage technology to benefit mankind gave visibility both to the Fritz Institute and IFRC.

6.4 Discussion

IFRC is an operational humanitarian organization. As such, in this section, we discuss its sourcing strategies and practices, its supply chain configuration, disaster supply network, how the Federation operationalizes it, and key features of its partnership with the Fritz Institute.

6.4.1 IFRC Sourcing Strategies and Practices

For predictable and emerging disasters, to save as many lives as possible, IFRC aims at process and cost efficiency as high speed and lower cost operations increase the outreach of its relief operations. To reduce costs and enhance responsiveness, IFRC prepares contingency plans and to the extent possible, resorts to pre-positioning options. It defines the content of its disaster response plan and pre-contracts relief kits to select suppliers at pre-determined and advantageous prices. To achieve the above, it establishes a dialogue with the recipient country and collects information on the eventual level of government contribution. Its network of NSs assesses the availability and suitability of local supplies. It leverages the advantages of different sourcing opportunities to achieve speed and cost targets. It pre-contracts key, high volume, low cost items to cost competitive suppliers with fast delivery capabilities. By tailoring its supply chains to the nature of demand, it tries to build on the best sourcing/supplier capabilities on offer.

For unpredictable disasters, IFRC faces an uncertain and variable demand. Uncertainty also prevails on the supply side, as the response of the local and international community to the disaster is unknown. In these cases, to save as many lives as possible, IFRC aims at a flexible and fast supply chain. In so doing, it bases its procurement decisions on minimum quality requirements and speed of delivery as opposed to cost minimization and optimization. It typically sources from the most 'reliable' suppliers to ensure a timely supply of quality products in the desired quantities. To meet the needs of end-beneficiaries, it tries to promptly adjust its supply chain configuration as well as its speed, destinations and volumes to a shifting supply and a changing demand. Rarely does IFRC resort to postponement techniques given the basic needs of the assisted population. Customization occurs mainly in the assembly of the food kits taking into consideration dietary and climatic aspects.

For example during the Gujarat earthquake, IFRC had to revise its contribution in terms of product mix, volume and delivery requirements several times. For instance, in terms of shelter, it had to change its original plan – creation of temporary communities through tent camps - to accommodate local customs and government requests that emphasized the need for temporary repair solutions (plastic sheets to cover destroyed and damaged house roofs). In terms of supply, uncertain of local community response, it mobilized a large tonnage of

high-protein biscuits. However, given the generous response of the local community and authorities, it had to mount a reverse supply chain to deal with excess supply.

Humanitarian organizations can also experience stock-out problems for products that have a long lead-time and a limited supplier base. For example, during the Gujarat earthquake, to provide shelter to the homeless for a couple of days IFRC seem to require 60,000 tents. However, the short response period combined with a temporary surge in demand on the part of a host of humanitarian organizations combined with the relatively long production lead-time, created supply problems.

In conclusion, IFRC aims at excelling in two supply chain strategies. To this end, it is working towards building capabilities and systems that allow for their parallel, simultaneous management alone and in partnership with its disaster response network.

6.4.2 IFRC Supply Chain Configuration

In response to any major crisis, IFRC mobilizes a couple of hundred food and NFIs such as medicine, shelter, fuel, sanitation and telecom units. Given the short response window for natural and unpredictable disasters, IFRC has to mobilize relief times within the shortest delay. Its emergency supply chain is composed of a large number of direct relationships with suppliers and donors. It is temporary as for each disaster a supply chain is constructed and dismantled soon after the emergency phase is over (typically within three months from the day of the disaster). It is also multiple as at any given time IFRC manages as many supply chains as the number of large-scale on-going disasters in the world. For instance, during the Gujarat earthquake, among other disasters, IFRC was involved in the earthquake in El Salvador, a drought in Tajikistan, the aftermath of floods in Bolivia and the Orissa cyclone in India.

IFRC relies on its NS network as well as first-time and repeat suppliers to stage its response. Its supplier base includes a mix of single source and alternative international, regional and local suppliers. IFRC requires its global suppliers to stock at their own premises a certain level of inventory. This condition ensures the rapid mobilization of the

right amount of goods at any given time. Participating NSs also source from these global suppliers. For widely available commodities, IFRC resorts to spot purchases.

Given the characteristics of IFRC's relief items and the high level of product substitutability, it can source from a wide supplier base. Local sourcing reduces transport time and cost and items are more likely to be acceptable and compatible to local cultures, tastes, climates and lifestyles (accuracy). When competitive local procurement is not possible because of supply failure modes (e.g. disabled suppliers, lack of supplier capability or capacity), it sources from the most reliable and trusted foreign supplier.

More specifically, the IFRC adopts a "staggered buying process". It uses international suppliers as a source of both "reactive" and "non-reactive" capacity. Regional and local suppliers typically cover the outstanding balance for "reactive" capacity. Suppliers with redundant and flexible production capacity are selected as a means to respond to a surge in demand for a given relief item. Local suppliers are used to reduce shipping times and ensure local content and features in the product. Its wide and geographically dispersed donor and supplier network as well as supplier interchangeability, substitutability provides it with the required operational flexibility. In conclusion, to be fast, flexible, accurate and cost effective, IFRC manages a broad supply network rather than a fully integrated supply chain.

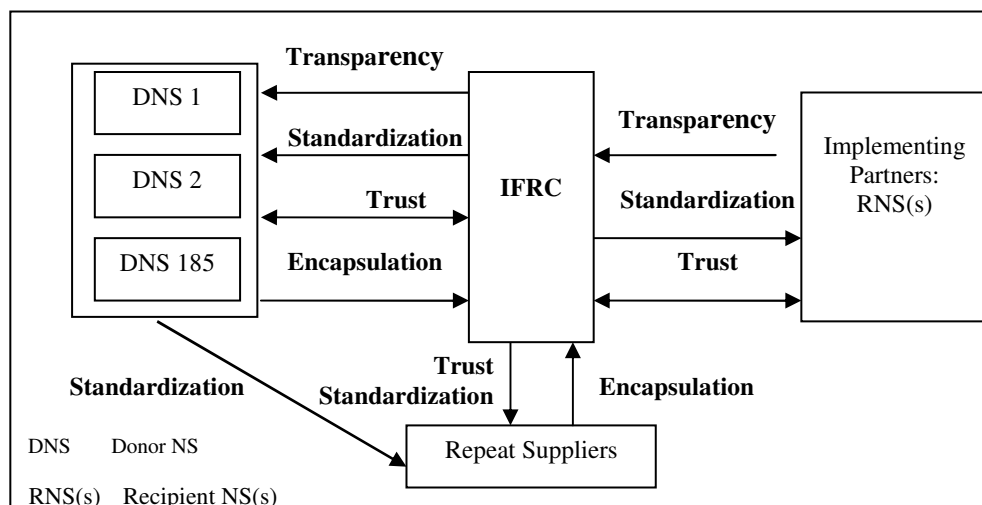
6.4.3 IFRC: Goods Mobilization and Distribution

To perform its role as a disaster response choreographer, IFRC outsources significant portions of its goods procurement and delivery process to the disaster area to the participating (receiving and donating) NSs and its repeat suppliers. For local knowledge and resources, it leverages the assets and office network of the recipient NS. We argue that transparency, standardization, encapsulation and trust are the enablers of the IFRC goods mobilization and distribution effort (Figure 6.5).

To ensure the mobilization and distribution of the right goods at the right time, IFRC maintains a transparent relationship with its network of participating NSs. IFRC shares information on needs, in continuous evolution, with its donating NSs through the formulation and updating of situation reports, appeals and a disaster-specific RMT. The

RMT contains the list and amount of items required, pledged and received. Together with the commodity tracking system, it deters the dispatch of unsolicited goods and highlights goods in shortage or excess. IFRC also acts as a supervisory agent for the donating NSs vis-à-vis suppliers as it advises them of the arrival of each consignment in the field speeding up the settlement of supplier invoices. In the spirit of “a happy donor today is a good donor tomorrow”, at the end of each operation, it performs an accountability function by issuing a detailed account of goods received and distributed to beneficiaries. Similarly, the flow of information between recipient NSs regarding the goods distribution process helps maintain a transparent relationship with IFRC.

Figure 6.5 – IFRC-NS Partnership



To facilitate the goods mobilization process, IFRC has a standard item list and standardized relief kits and framework agreements with a number of global suppliers for key relief items that it shares with its NS network. The standards take into consideration regional requirements and type of emergency. Process standardization (e.g. delivery to final destination), goods standardization (e.g. quality and product specification), and framework agreements with suppliers for key items speed up the sourcing process by the donating NSs and expedite relief operations. Together with code of conduct for private

sector donations, they help contain the arrival of unsuitable goods. Distribution practices and standards also regulate the relationship between IFRC and recipient NSs.

To facilitate the delivery process, IFRC's NSs network and its repeat suppliers operates along the encapsulation concept, notably, the execution of a number of tasks and adherence to agreed operating procedures upon commitment. Aware of the quality standards and packaging specification of each item on the RMT and in accordance to the notified shipping instruction, the donating NS manages entire segments of the supply chain from procurement to transportation to the port of delivery. NSs procure items in accordance to IFRC's product specification requirements. For key items, they call upon suppliers with whom the IFRC has concluded framework agreements. As a result, no further exchange of communication between IFRC and a donating NS is required once the NS commits to the supply of an item. The concept of encapsulation is also valid for when IFRC sources relief items directly from suppliers as regardless of the origin of the goods, IFRC expects the contracted suppliers to deliver supplies to the disaster zone.

The IFRC-NS network is a stable network where trust, result of repeated and continuous relationship, prevails and is nurtured. Indeed, trust is the glue that keeps IFRC and its network of independent NSs together. Once a NS pledges to supply an item, IFRC is off the case until the arrival of the goods to the port of destination. Trust also prevails between IFRC and its repeat suppliers.

6.4.4 IFRC-Fritz Institute Partnership

In this section, we shall concentrate on the IFRC-Fritz Institute partnership which although limited to one area – IT – is classified as a strategic partnership (Figure 6.6).

There was an organizational fit between the flagship initiative of the Fritz Institute – a humanitarian logistics software – and the IT needs of IFRC. The Fritz Institute provided resources towards the development of a software which would i) standardize and help better manage IFRC's supply chain activities during disasters and ii) help it capitalize on the lessons learnt after each disasters. The Fritz Institute initiative bridged the prevailing IT infrastructure gap between IFRC and its NS network.

Figure 6.6 – Fritz Institute

| | | | |
|---------------------|----------|--------------------------------------|-----------------------------|
| Business/CSO | Multiple | Localized Partnerships | Brokered Partnerships |
| | Single | Strategic Partnerships HLS | Cross-Cutting Partnerships: |
| | | Single | Multiple |

Humanitarian Organization

The development of the HLS encountered some difficulties at the beginning since there were two camps at the IFRC: one in favor of an ERP system and another in favor of a lighter, customized software. The opinion of IFRC’s head of logistics and the high cost of an ERP system implementation compared to the offer of the Fritz Institute to fully cover the development cost of a logistics software weighed significantly on IFRC’s final decision.

IFRC was ready to engage in a software development partnership since it had planned and budgeted for the development of a software to meet its administrative and operational requirements. The relevant staff were committed to work closely with the software developers to ensure that their needs were adequately featured in the different functions and outputs of the software. However, the logistics team of IFRC was thinly staffed and there was competition between time to be devoted to disaster response activities and dialogue with software developers.

IFRC, one of the largest humanitarian organizations, was one of the few partners with whom the Fritz Institute could forge a partnership with. Its sheer size and global operations ensured visibility for the Fritz Institute initiative. In addition, the structure of the Red Cross Movement with its federated network of National Societies is unique. This provided the Fritz Institute with a multiplier effect opportunity that only few other humanitarian organizations (e.g. MSF) could offer.

However, failure (or lack of interest over time) in the development of the software would have delayed availability of a logistics software by few years and would have resulted in waste of time, effort and reputation by both the Fritz Institute and IFRC staff.

The HLS is reported to have impacted the cost and timeliness of IFRC relief operations as well as facilitated and supported the Federation’s reporting function. Its database function has the potential to improve the accuracy and flexibility of IFRC relief operations in the future. In addition, the HLS makes performance measurement possible.

Figure 6.7 – Risks and benefits of the IFRC-Fritz Institute Partnership

| Main benefits | IFRC | Main benefits | FI |
|---|--------------------------------------|---|--------------------------|
| Improving effectiveness <ul style="list-style-type: none"> • Access to specialized, additional, complementary resources and capabilities | H | Moral Market Place <ul style="list-style-type: none"> • Improve employee motivation and productivity (attraction, retention) | n.a. |
| Advance status of knowledge & practice | H | <ul style="list-style-type: none"> • Fulfill the CSR expectation of the market | n.a. |
| Signal other donors | L | Competitive Advantage <ul style="list-style-type: none"> • Increase in reputational assets • Enhance brand recognition | H H |
| Main risks faced/addressed | IFRC | Main risks | FI |
| <ul style="list-style-type: none"> • Divergence in working cultures • Absorptive capacity • Reduced donations from traditional donors • Loss of organizational flexibility • Structural dependency • Tainted partners, anti-ethical activities • Overwhelming success • Failure | H H L H H H H H | <ul style="list-style-type: none"> • Divergence in working cultures • Shortage of credible & promising non-profits • Accused of partnering exclusively for self-serving reasons, PR, image building or tax purposes • Failure: wasted resources • Deteriorating reputation | H H n.a. H H |

As summarized in Figure 6.7, the IFRC-Fritz Institute partnership improved the effectiveness of IFRC operations, has the potential to advance the status of practice and to a lesser extent has signaled other donors in terms of worthiness of partnering with the Federation in particular and humanitarian organizations in general. By basing its decision more on the track record of the founder of the Fritz Institute, the owner and manager of a

successful logistics company, rather than the Institute itself, IFRC took a calculated risk when it decided to partner with the Fritz Institute. Since the partnership was limited to the software and IFRC was planning to upgrade it anyway, the partnership did not result in capacity limitations or reduced donations from traditional donors.

There has been no direct mention of working cultures constituting a bottleneck. In this regard, it is worth mentioning that Fritz Institute outsourced the development of the software to a company and monitored its development. The development time was 18 months. This could have probably been shorter had there been prior experience in developing a software for the non-profit sector. Having said that, the interest of the Fritz Institute was aligned with that of IFRC in terms of adhering to the development schedule. However, since IFRC, like other humanitarian organizations, does not have a culture of measuring logistical performance, the real potential of the software has remained unutilized (Davidson, 2006). Davidson foresees the need for an organizational culture change, which involves top management to people across departments, before a humanitarian organization like IFRC starts measuring and comparing its performance for each disaster.

The software does result in structural dependency on the Institute's User Support Services and has locked the Federation in terms of IT choices. This results in loss of organizational flexibility as it is not reasonable to foresee the development of another software anytime in the future. Success of the software paves the way for its dissemination to IFRC's NSs: a cost and effort possibly to be borne by the Federation itself. Failure to maintain the system, ensure the required User Support Services for its continuation and develop future versions is a concrete risk facing IFRC going forward. On the hand, success has shifted the attention of Fritz Institute to the marketing of the software to other organizations (Chapter 9).

The Fritz Institute is a non-profit organization that is involved in a noble cause: assistance to humanitarian organizations. Consequently, its efforts are not viewed with suspicion. Its activities are not aimed at improving the bottom line but increasing funding for the Institute and recognition for its founder, Lynn Fritz.

The Fritz Institute has accumulated substantial benefits from this initiative. It increased its competitive advantage as it has been recognized through the 2004 Tech Museums Awards

as an institution that has successfully leveraged technology to benefit mankind. Given the Institute's objective – creation of a logistics software for the humanitarian sector – IFRC was possibly the best candidate to partner with given its structure and operations. By developing the software with a large humanitarian organization with international, regional and local presence involved in the delivery of wide range of relief items in the four corners of the world, it paved the way for its divulgation among all types of humanitarian organizations; an extra-benefit. As a non-profit organization dedicated to the strengthening of the humanitarian sector, it did not run the risks typically faced by the corporate world. However, the deteriorating reputation of its partner and failure were risks that persisted until the finalization of the product.

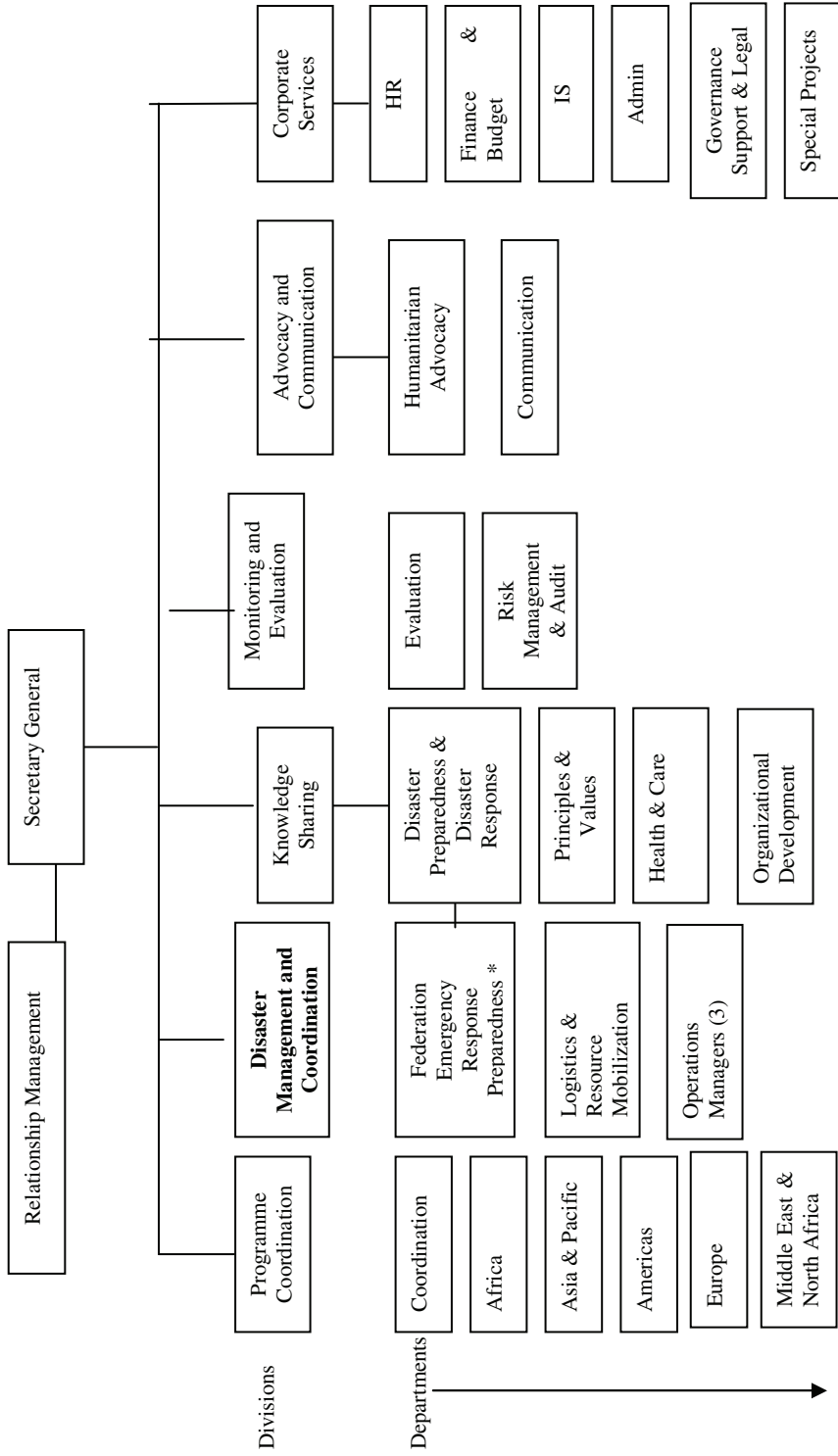
6.5 Summary

This chapter provides background information on IFRC and describes how the Federation manages its emergency supply chain during natural disasters. The description confirms the global, temporary, dynamic and multiple nature of IFRC's emergency supply chains.

In Chapter 2 we argue that for predictable and emerging disasters, humanitarian organizations should aim at process and cost efficiency while for unpredictable disasters, humanitarian organizations should set up and manage fast and flexible supply chains. As discussed in section 6.4.1, to rise to the challenge of timely delivery of relief goods to end-beneficiaries, IFRC differentiates between unpredictable and emerging natural disasters. To respond to predictable crises, it engages in timely contingency planning efforts with its NS, supplier network and recipient governments. To respond to the increasing number of unpredictable disasters, it tries to mount and run fast and flexible supply chains.

In terms of supply chain configuration, given the temporary and dynamic nature of emergencies and the level of product substitutability, broad supply networks render IFRC's emergency relief supply chains more resilient to disruptions. Section 6.4.4 illustrates how trust, standardization, encapsulation and transparency simplify an otherwise complex range of relationships between IFRC and its NS network. In section 6.4.5, we discussed the IFRC-Fritz Institute strategic collaboration on the humanitarian logistics software recognizing its benefits to both parties and noting the averted implementation risks.

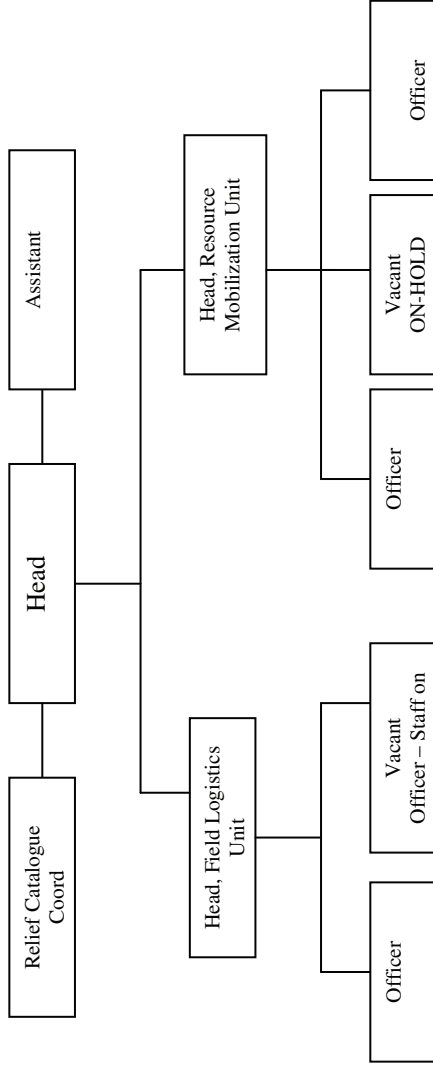
Figure 6.1 - Federation Secretariat Structure - November 2001



* The department included the FACT and ERU units

Samii, R. et al., "International Federation of the Red Cross and Red Crescent (IFRC): Choreographer of Disaster Management: The Gujarat Earthquake", INSEAD case study 06/2002-5032.

Figure 6.2 – Logistics and Resource Mobilization Department
November 2001



Source: Samii, R. et al., "International Federation of the Red Cross and Red Crescent (IFRC); Choreographer of Disaster Management: The Gujarat Earthquake", INSEAD case study 06/2002-5032.

Chapter 7 UNJLC

This chapter presents research on the United Nations Joint Logistics Centre (UNJLC), the logistics coordination platform of humanitarian organizations. Over a period of three years (Figure 7.1), we conducted separate research on the UNJLC. The research focused on three deployments in response to natural and man-made disasters, the genesis of the facility and the institutionalization process.

Figure 7.1 – UNJLC Research

| Research | Year of Study |
|----------------------------------|----------------------|
| The Genesis of UNJLC | 2002 |
| The Afghan Crisis (Part I & II) | 2003 |
| The Institutionalization Process | 2004 |
| The Iraq Crisis | 2005 |

This Chapter is organized as follows. We start the discussion with an overview of the facility. In section 7.2, we review the operations of UNJLC in response to the Mozambique, Afghanistan and Iraq crises. In section 7.3, we review the institutionalization process of the facility. Section 7.4 is dedicated to our findings where we examine the organizational structure and specific design features of the UNJLC. We elaborate on the strategic and operational building blocks necessary for its establishment and success. Finally, we review the risks and opportunities facing the UNJLC.

7.1 History⁸

Coordination is not a new concept to the humanitarian community. Since the mid 1990s, the humanitarian community has recognized the need for a coordination mechanism in multi-sectoral humanitarian emergencies. The Office for the Coordination of Humanitarian Affairs (OCHA) functions as a coordination platform for all emergencies. As described in

⁸ With permission of the authors, sections 7.1, 7.2 & 7.3 reproduce the INSEAD UNJLC case studies listed in the bibliography.

Appendix A, it houses four inter-agency coordination mechanisms: the Consolidated Appeal Process (CAP), the Military and Civil Defense Unit (MCDA), the UN Disaster Assessment Coordination team (UNDAC) and the Humanitarian Information Centre (HIC).

The complexity of more recent humanitarian crises has led to the unbundling of logistics from generic coordination. To address common logistical impediments, the Inter-Agency Standing Committee (IASC) has the option to activate a specialized, temporary, distinct and impartial facility: the UNJLC. The UNJLC is a coordination facility that complements and coordinates the logistics capabilities of cooperating humanitarian agencies during large-scale emergencies. The facility is configured to support two response models: inter-agency logistics coordination only or coordination plus asset management. The purpose and utility of the UNJLC is two-fold: coordination among and augmentation of logistics capabilities of humanitarian organizations as well as coordination between the humanitarian community and key stakeholders.

Figure 7.2 provides an overview of the origin, applications and *modus operandi* of the UNJLC. The UNJLC was a spontaneous response to an overwhelming humanitarian crisis arising from the 1996 outbreak of civil war in Zaire. During that crisis WFP and UNHCR had managed to overcome some of the logistical bottlenecks by mobilizing transport means required to move cargo, refugees and personnel. On the contrary, UNICEF, WHO and the NGOs relied on few, decrepit and dangerous roads and competed for the few transport assets.

WFP and UNHCR pooled and offered their excess air assets in terms of cargo and passenger capacity first to each other. Bearing in mind humanitarian needs, the offer of excess capacity was extended to other agencies. They established a structure that was soon manned by representatives of the main UN Agencies and NGOs. With a view to optimize the use of limited and expensive resources, the structure began to coordinate the logistics planning and operations of the humanitarian community. It processed information on and started to manage the common logistics resources and operations of WFP, UNHCR and UNICEF.

Figure 7.2 – UNJLC in Brief

What is the UNJLC?

The concept of a UN Joint Logistics Centre (UNJLC) was born out of the humanitarian response to the 1996 Easter Zaire crisis, which demanded intensified coordination and pooling of logistics assets among UNHRC, WFP and UNICEF. The concept was applied to subsequent UNJLC interventions in Somalia, the Balkans, East Timor, Mozambique, Bhuj, Afghanistan, Angola, Iraq, Sudan and tsunami hit countries. In March 2002, the UNJLC was institutionalized as a UN humanitarian response mechanism, under the aegis of WFP, by the Inter-Agency Standing Committee Working Group (IASC-WG).

The UNJLC's mission is to complement and coordinate the logistics capabilities and cooperating humanitarian agencies during large-scale emergencies. The UNJLC is not a new agency but a facility which is activated when intensified field-base inter-agency logistics coordination is required. Once mobilized, the UNJLC seeks the widest possible participation among humanitarian logistics actors and facilitates the interface with non-humanitarian entities such as the military.

What is the Logistics Support Function of the UNJLC?

The UNJLC aims to collectively identify and eliminate logistics bottlenecks of common interest to the humanitarian community to avoid wasteful competition among agencies. Related to this, the UNJLC plans, prioritizes and de-conflicts relief movements when available infrastructure capacity is limited. Through this process the UNJLC advises on the most efficient transport modes and performs movement control functions. The UNJLC also frames logistics-related policy issues affecting humanitarian logistics operations.

What Kind of Information is Provided by the UNJLC?

The UNJLC acts as a platform for gathering, collating, analyzing and disseminating information required by agencies to optimize logistics planning and management. This involves two basic information categories: Pipeline/Commodity Tracking, including agency stock positions; and Logistics Support Information, such as humanitarian logistics installations and assets, status of corridors and border crossings, customs and infrastructure assessment. The UNJLC has GIS (Geographical Information System) and mapping capabilities. A variety of dissemination mechanisms are employed, including inter-agency meetings, bulletins and CD-ROMs. A generic website (www.unjlc.org) is maintained, housing general reference information and deployment-specific materials.

When is a UNJLC Demobilized?

UNJLCs are envisaged as a temporary bolster during the response phase of an emergency. As such, no UNJLC is activated without a clearly defined exit strategy. Prior to demobilization, the UNJLC ensures appropriate inter-agency logistics coordination mechanisms are in place. Similarly, the UNJLC aims to improve agency and government logistics management capabilities through selective logistics capacity building activities.

Source: UNJLC Website, "UNJLC Flyer".

Figure 7.3 – The UNJLC Key Activities and Events, 2000-2004

| Activity/Event | 2000 | | 2001 | | 2002 | | 2003 | | | | 2004 | | | |
|-----------------------------------|------|---|------|---|------|---|------|---|---|---|------|---|---|---|
| | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| - IASC endorsement of UNJLC | | | | | | | | | | | | | | |
| - IASC institutionalization | | | | | | | | | | | | | | |
| - Establishment of Core Unit | | | | | | | | | | | | | | |
| - Activation Protocol | | | | | | | | | | | | | | |
| - Fields Operations Manual | | | | | | | | | | | | | | |
| - Training sessions | | | | | | | | | | | | | | |
| - INSEAD UNJLC case studies | | | | | | | | | | | | | | |
| - Visit to donor capitals | | | | | | | | | | | | | | |
| - Inter-agency quarterly meetings | | | | | | | | | | | | | | |
| - Development of common services | | | | | | | | | | | | | | |
| UNJLC Deployments | | | | | | | | | | | | | | |
| - Mozambique Floods | | | | | | | | | | | | | | |
| - Bhuj Earthquake | | | | | | | | | | | | | | |
| - D. R. Congo | | | | | | | | | | | | | | |
| - Afghanistan | | | | | | | | | | | | | | |
| - Côte d'Ivoire | | | | | | | | | | | | | | |
| - Iraq | | | | | | | | | | | | | | |
| - Liberia | | | | | | | | | | | | | | |
| - Sudan | | | | | | | | | | | | | | |
| - Haiti | | | | | | | | | | | | | | |
| Contingency Planning | | | | | | | | | | | | | | |
| - Afghan winterization | | | | | | | | | | | | | | |
| - Iraq crisis | | | | | | | | | | | | | | |
| - Southern Sudan Peace Process | | | | | | | | | | | | | | |
| Independent Reviews | | | | | | | | | | | | | | |
| - Afghanistan operation | | | | | | | | | | | | | | |
| - Iraq operation | | | | | | | | | | | | | | |
| - Liberia operation | | | | | | | | | | | | | | |
| - Core Unit | | | | | | | | | | | | | | |
| - Comprehensive Review | | | | | | | | | | | | | | |

The term UNJLC was coined at the outset of the crisis and has never been revised to capture the evolution of the concept. The “Joint” referred to the pooling of air assets and the “Centre” to the single location at the Entebbe airport.

The development of the UNJLC concept went through a relatively lengthy process and a non-linear sequence of events (Figure 7.3). It was deployed in numerous⁹ large-scale

⁹ Somalia Floods (1998), Balkan crisis (1999), East Timor (1999), Mozambique floods (2000 & 2001), Bhuj earthquake (2001), and Afghanistan (2001).

humanitarian emergencies - from natural disasters to complex emergencies that involve refugees, Internally Displaced People (IDP), peacekeeping operations, and combatant forces - before it was endorsed and institutionalized as a permanent facility of the UN's emergency response structure by the IASC. The mastermind of the concept, David Kaatrud, was the head of the facility from 2000 to 2004. Adrian van der Knaap, member of UNJLC deployments in Afghanistan and Iraq and a WFP staff, took over the leadership role from Kaatrud.

The UNJLC provides a range of value-adding services. With a view to optimize the level of humanitarian inventory, for emerging disasters, the UNJLC takes the lead in contingency planning. It flags and anticipates logistics problems and takes an active role in their resolution. To resolve common and major logistics bottlenecks and avoid wasteful competition it de-bottlenecks and de-conflicts use of logistics assets among agencies and between agencies and relevant stakeholders. It solves logistics bottlenecks such as opening of transport corridors and border crossing points. It de-conflicts the use of common logistics assets such as air space and airfields with military forces. As a focal point on humanitarian issues, the UNJLC liaises, coordinates, and negotiates with relevant stakeholders. For example, to speed up the movement of humanitarian operators and goods, it negotiates the opening of humanitarian corridors. It negotiates landing and navigation fees on behalf of the humanitarian community with relevant authorities and obtains a series of authorizations and facilitation measures. The UNJLC also plans and prioritizes the movement of critical food, NFIs and people (refugees, returnees, humanitarian and media operators, etc.). By combining and providing access to complementary and indivisible physical and human resources and capabilities, the UNJLC helps the community optimize the use of assets. In the event of a mismatch between the transport capacity and cargo, the UNJLC ensures access to excess transport capacity.

As access to adequate and timely information is of great importance for both operating and political humanitarian organizations and donors, the UNJLC facilitates and supports the exchange and flow of logistics-related information between agencies via its website. As agencies typically budget only enough to meet their essential operational logistics requirements, to re-enforce and augment the overall logistics capability and capacity of the

system, the UNJLC performs analytical functions. To improve the overall quality of logistics planning and operations, the UNJLC conducts infrastructure surveys and sectoral technical assessments on issues such as fuels, customs, and transportation. Big and small humanitarian organizations part of the UN, international organization or NGO community contribute and benefit from the UNJLC in line with their means. Since the UNJLC aims to augment operational humanitarian agencies' logistics capacities, it is particularly careful not to undermine agency efforts, including their visibility.

While the UNJLC is configured to take on an asset management role, emphasis is on coordination. An asset management role is assumed as a last resort, and in the event, it is tasked by National Emergency Management Authorities (NEMA) such as during the UNJLC operation for the 2000 Mozambique floods.

7.2 Disasters

In this section, we shall describe the activation and demobilization process as well as the activities of the UNJLC to two natural disasters and two man-made disasters namely, the 2000 Mozambique floods, Gujarat Earthquake, Afghanistan crisis and Iraq crisis.

7.2.1 The 2000 Mozambique Floods

Cyclone Connie hit the southeast coast of Mozambique on 4 February 2000, severely affecting three of the country's provinces. The rapid rise in the water level resulted in widespread flooding of the major river basins. The cyclone continued inland causing substantial damage to four other neighboring southern African countries. The opening of dams upstream (especially in Zimbabwe and Zambia) worsened the situation. The capital's water and electricity supplies were the first to be severely affected. In a matter of hours, road and rail links to the bordering countries of South Africa and Swaziland were cut, railway services between Maputo and Zimbabwe were impeded, airfields were under water, property and thousands of acres of land was destroyed, water purification plants, boreholes, wells were damaged and 100,000 people were homeless or stranded on "islands" of rooftops and trees.

On the government's invitation, OCHA's UNDAC¹⁰ team reached the disaster area on 12 February, a week after the first cyclone had hit Mozambique. The team assisted the government in preparing a consolidated appeal to mobilise funds from the donor community. Among other things, it set up the Cell for Logistics Coordination, hosted by the National Institute for Disaster Management (Instituto Nacional de Gestao de Calamidades, INGC), with the mandate to coordinate assessment and relief activities.

The severe floods were aggravated by a second cyclone, Eline that struck the eastern coast of Mozambique on 21 February and moved inland producing heavy rains and strong winds for three consecutive days. By the end of February, the worst and most extensive floods the country had known for 150 years had affected over 900,000 people, forcing 300,000 people to abandon their homes, washing away 1,600km of roads, and destroying cultivated land and numerous bridges connecting the provinces.¹¹ The threat of water-borne diseases, such as cholera and malaria increased daily from the pools of stagnant water and unsanitary conditions.

By early March, intermittent rainfall continued to affect parts of the country. In addition, a new cyclone, Gloria, was hovering in the Indian Ocean. Up until the end of March, the heavy rains continued to inhibit the distribution of relief items by road, as repaired roads were intermittently put out of use. The country's main highway was opened to traffic on 26 March providing better access to the flood affected areas. The first trucks with supplies from Beira to the Gaza province were dispatched on 29 March. By the end of the month, an estimated 1.2 million people had been affected by the floods. Of those, 463,000 internally displaced people had received assistance from humanitarian organisations and were sheltered and fed in over 120 accommodation and feeding centres set up throughout the affected areas.

On 5 April the last and relatively confined cyclone, Hudah, hit the Mozambique coast with limited displacement of people and loss of crops. By June, the official and revised figures of the disaster indicated that 5 million people had been affected by the flooding, with

¹⁰ UNDAC deployed for "sudden onset of natural disaster", prepared a consolidated appeal on behalf of the Mozambique government and UN humanitarian organizations for donor funding.

¹¹ Source: *Mozambique & Zimbabwe: Flood Rehabilitation, Appeal no. 4/2000, Situation Report no. 2*, International Federation of Red Cross and Red Crescent, 23 February 2000.

544,000 of these being displaced.¹² At the peak of operations out of Beira and Maputo, a total of 57 aircraft of several types belonging to different operators were involved in humanitarian relief activities.

The quick succession of four devastating cyclones had created formidable logistics challenges for the humanitarian community. With airstrips, roads, and bridges under water, rescuing the victims and delivering basic relief items such as food, shelter, and medicine were extremely difficult.

At the time of the disaster, the government of Mozambique only had two helicopters at its disposal, and one of these was grounded for repairs. Within days of the government's first appeal for international assistance, the South African National Defence Force had provided a fleet of 10 aircraft. On 11 February the first South African military rescue helicopters arrived at the disaster site. Between 11 and 19 February, they choreographed the first wave of rescue operations. As the situation stabilized, donors started to scale down their operations. The OCHA's UNDAC mission left the country on 24 February after completing the first consolidated appeal. When the second wave of floods hit Mozambique between 26 and 27 February, no single organization was prepared for its abruptness and magnitude. On 29 February the UNDAC team returned to the country to prepare the second appeal.

Rescue operations resumed and reached their peak right after the second cyclone. Thousands of people, clinging to life in trees or on rooftops had to be rescued and given relief. After the second cyclone hit, professional planning was required to obtain optimal utilisation of the 50 plus aircraft provided by 15 operators¹³ to support the victims. As the magnitude of the emergency was revealed and air activities evolved from straightforward rescue to transporting food and non-food items including shelter, medicine and water, the complexity of the logistics operations was compounded. On the initiative of UNDAC, the Minister of Foreign Affairs requested that the Cell for Logistics Coordination be converted into a UN Joint Logistics Centre (UNJLC) on 3 March 2000. The UNJLC hosted in the INGC building, reported to the Mozambique government and as such became an

¹² Source: *UN Coordination in Mozambique Following the Devastating Floods*, June 2000.

¹³ Among which were government aircraft and helicopters from Belgium, Britain, France, Germany, Malawi, Portugal, South Africa, Spain and the US.

instrument of the government's rescue and relief operations. While DFID temporarily appointed one of its officers to activate the UNJLC, WFP, the mastermind behind the concept back in 1996, was designated as the lead coordinating agency for logistics support and communications. WFP designated an ex-pilot and several-time OCHA consultant as head of the centre.

Without office equipment or communication lines, the UNJLC started planning and coordinating airlift operations on 8 March. After a few days, the US military provided the UNJLC with furniture, maps and office equipment. The UNJLC had the required legitimacy to direct air operations given its national status and presence in the INGC building. In spite of repeated promises, the office lacked basic services such as telephone landlines, fax and email connections throughout its two-month operation. This prevented it from communicating effectively with civil aviation authorities and the humanitarian agencies. UNJLC relied on the WFP Mozambique office in Maputo for administrative support and logistics systems. The latter provided it with mobile phones and transportation. The Centre was slowly manned. WFP assigned an experienced loadmaster to organise the loading of the cargo. To accomplish its mission, the UNJLC approached the military forces and had four foreign military staff seconded to it.

At the onset of the emergency, there was little understanding of the concept and mandate of the UNJLC among the humanitarian community and military actors. The concept gained credibility through the daily updates at the coordination meetings chaired by the Minister of Foreign Affairs which were attended by humanitarian organisations and the media. These meetings became a forum to reiterate that the UNJLC was not a WFP satellite, but an impartial set-up to support the humanitarian community with the commonly available logistics assets. But it still failed to ensure the participation of other humanitarian organizations through secondment of their experienced staff.

In this operation, the UNJLC coordinated only 'regional' airlifts (movement of goods from the region into the disaster areas) and not 'strategic' ones (movement of supplies from other continents into eastern and southern Africa). To ensure the smooth influx and movement of relief items, it dealt with a series of administrative issues. With the support of OCHA, INGC and the Minister of Foreign Affairs, it sought and obtained facilitation

measures from the local authorities such as exemption from landing and navigation fees, immigration procedures, customs clearance, etc.

The way the air operations were managed seemed to favour the most dynamic and better-organized humanitarian agencies. Initially this created some misunderstandings among less prepared, smaller organizations as typically the “stronger” were the ones that managed to conform to the mission schedule by getting their items on the tarmac at the correct shipping time (Figure 7.4).

Figure 7.4 – Air Management: Prioritization, Tasking and Scheduling

The UNJLC introduced a mission request form that had to be completed by humanitarian organizations before 1pm on the day before execution. The schedule was discussed with the operators (mostly military) during a daily meeting at 4pm when the requests were matched with the available assets and tasks appointed to the respective operators and aircraft types. Subsequently, humanitarian organizations were informed by mobile phone and the schedule was finalized by 6pm. This scheduling cycle allowed a maximum of flexibility and took into account newly injected priorities and the backlog from the previous day. On the other hand, users only received flight confirmation after the 4pm meetings. To maximize the use of assets avoiding waste and delays, organizations were informed that a request implied readiness to execute the following day. In the event of late arrival at the airport, users would lose priority and the UNJLC had the prerogative to reassign the space to readily available cargo at the airport.

In prioritizing the cargo and destinations, the UNJLC based itself on the overall humanitarian need-driven guidelines emanating from the different coordination meetings held with INGC, the UN Country Resident Representative, OCHA, and the UN Agencies.

On the operational side, things went very smoothly. The South African Air Force had assumed the role of planning and assigning air missions before the activation of the UNJLC. Upon its activation, the UNJLC, apart from few minor incidents at the airfield level, was accepted by the military as the body in charge of prioritizing, tasking, and scheduling air assets. Its task, although never formalized, was to plan and schedule the use of air assets leaving the actual coordination of the execution largely to the South African Air Force. The international military personnel agreed to be coordinated by civilians and the UNJLC to an unprecedented extent. The UNJLC carefully prepared compulsory daily briefings with all pilots. As a result, almost 10,000 hours, or the equivalent of 15,000 to 20,000 flights were organized without accident.

Airlifts are essential to ensure quick response, but they are also the most expensive means of transport hence calling for proper management. With the argument that humanitarian support flights had priority, UNJLC systematically refused and resisted the pressure to dedicate helicopters for VIP and other visitors' use. On the other hand, to keep the floods on the world's television screens and support the fund raising efforts, the UNJLC coordinated and secured necessary seats for journalists. Up to then, there had been few emergencies that had received as much media attention as the second flooding in the Limpopo Valley. The international television teams already in the country were able to record and broadcast dramatic pictures of the second cyclone and, as such, generated considerable donor support.

In addition to air management, the UNJLC performed a stock tracking function. This was a difficult task given the poor reporting procedures. UNJLC limited itself to the registration of food items, which constituted 75-80% of all transported cargo. Without an effective authority that could manage the movement control (receiving, storing and distribution) of unsolicited food and non-food items provided by private and public donors, the UNJLC undertook the task. To augment the reach of the operations (rescue and relief distribution), a number of NGOs and governments (the Netherlands and the UK) stepped up their support by providing 230 boats. Although not designated as the coordinating body for the use of other assets except air, the UNJLC was asked, on an ad hoc basis, to trace the distribution and ensure the correct utilization of these boats coming into the country.

Although donors continued to fund air operations until mid May 2000, from April with fewer air assets available, helicopter operations were centralized at main pick-up points, now accessible by road from Maputo, closer to the crisis areas. This resulted in better use of resources and hence a better cargo-flying hour ratio. To reduce costs, small boats were put into use to ferry supplies. As road access improved, expensive airlifts were replaced by trucking. By the second week of April with improved weather conditions, displaced people started to return to their homes leaving the accommodation centers. In early May, road routes into affected areas started drying up ready for rehabilitation or another round of repairs. As the emergency relief effort moved into a rehabilitation phase, road access

improved and funding for the UNJLC dried up, the decision to close down the UNJLC was taken by the government.

The combined humanitarian air operation of the disaster was among the largest ever: a total of 10,000 flight hours, transporting almost 30,400 passengers and 11,623 metric tonnes (MT) of food and non-food items. These results were possible thanks to the UNJLC.

On the request of the government, the UNJLC concept was successfully deployed again in the Mozambique 2001 floods. Similar to the 2000 floods, the UNJLC dealt with air asset management and logistics coordination.

7.2.2 Gujarat Earthquake

While the humanitarian community in Mozambique praised the UNJLC operations, the next UNJLC deployment during the Bhuj earthquake, India, was not successful. Initially WFP management was convinced that the Indian Army was capable of managing the response including any logistics coordination issues. As a result, the decision to deploy the UNJLC concept was taken only after the arrival of a WFP Emergency Response Team on the ground. In addition, the UNJLC was activated without sufficient Inter-Agency and governmental consultation. Few people among the UN Agencies, NGOs or local authorities were aware of the UNJLC concept. UNJLC arrived at the disaster site two weeks after the earthquake without knowing what type of assistance was required. Moreover, upon arrival it had no office, communications or information management facilities and was severely limited in terms of the services it could provide.

In the meantime the IFRC had set up a coordination structure and had established a relationship with different authorities. In this disaster the Indian government was particularly keen to manage the rescue and relief operations itself. This is a common scenario for natural disasters since sovereign governments are there to manage their own disasters. The Indian government actually outsourced logistics to a capable national NGO and as a result viewed the UN involvement in logistics as redundant. As the UNJLC was deployed too late to meet its objective, it left the disaster scene less than four weeks after

its arrival with two major lessons learnt: timely activation process and sufficient means once activated were crucial.

7.2.3 Afghanistan Crisis

For the Afghan crisis, the UNJLC was originally deployed for a six-month period. At the end of the period, it was extended for another year. Section 7.2.3.1 covers the first period while section 7.2.3.2 the second and final one.

7.2.3.1 Phase I: First Six Months

Activation, Structure and Mandate

Prior to the attack of Coalition forces, seven million Afghans depended on international aid. Given the region and the complexity of the situation, the post-conflict relief effort was expected to be large. It was also expected to be hindered by significant logistical bottlenecks, given the limited infrastructure in the region. As such, the relief effort would require intensified logistics coordination.

A fortnight after the September 11 events and in view of the emerging Afghan crisis after a consultation process among humanitarian organizations, the UNJLC was deployed to coordinate the UN's humanitarian effort to the Afghan crisis. Without flyaway kits, tools and trained staff, the UNJLC set out to do the job.

The UNJLC operations started out of WFP headquarters in Rome. As all international staff had been evacuated from Afghanistan because of the hostilities in early October 2001, a UNJLC was established in Islamabad, Pakistan. The UNJLC in Rome coordinated strategic¹⁴ logistics planning issues, while the UNJLC in Islamabad concentrated on the regional¹⁵ logistics issues. Given the long-term presence of UN Agencies in the region over the years, it was decided that the UNJLC would be in charge of logistics coordination and not actual management of logistics assets, such as warehousing, trucks or aircraft.

¹⁴ Movement of supplies from world-donors into the crisis region or humanitarian warehouses.

¹⁵ Movement of goods from the crisis region into Afghan region.

The Islamabad office had to be expanded very quickly since it had to deal with more issues than simple airlifts. However, it took one month to staff it. The problem was that the UNJLC is not an organization and consequently it did not have its own budget and administration. In addition, when the operations began, the UNJLC was not even recognized as a formal humanitarian response mechanism. This recognition came only towards the end of March 2002. To jump-start operations, the UNJLC relied on WFP's administrative support and fundraising mechanisms. To secure office space in Islamabad, it piggybacked on the facilities of the Humanitarian Information Centre (HIC) set up by OCHA. Lack of harmonized and emergency administrative procedures among the involved UN Agencies was another source of delay.

To man the office, the UNJLC leveraged WFP's stand-by arrangements with seven partners including the Swiss Government, Canadem, and DFID for possible secondments. This created some confusion among the humanitarian organizations as they believed that the UNJLC was a WFP facility. UNJLC had to reinforce the message that the facility was not a WFP initiative and that it depended on the goodwill of all humanitarian UN Agencies as well as NGOs for UNJLC staffing.

Although the participating UN Agencies recognized the complexity of the emergency and the need for a coordinating platform, most UN organizations in Afghanistan were not aware of the UNJLC concept and had to be convinced of its utility. Logisticians across organizations understood the power of the concept but field staff with no incentive to cooperate were far from enthusiastic.

Compared to the previous UNJLC deployments in which agencies were asked to volunteer staff time to the facility, in the Afghanistan crisis, the UNJLC established dedicated funds to cover the costs of full-time secondments. As they are limitations to the volunteering approach, to be a convincing Inter-Agency facility UNJLC needed to attract qualified logisticians from the different agencies. However the initiative was doomed as long as it results in the detrimental reduction of an agency's logistics capabilities and capacity. For the first time during the Afghan crisis the facility actually financed secondments, hence augmenting the overall humanitarian logistics capability. At the height of operations, the UNJLC offices had attracted 30 seconded staff from WFP, UNICEF, WHO, UNHCR, IOM and OCHA. This was the best achievement of the facility till then.

As it had no cargo of its own to move, the UNJLC established a neutral, regular forum to discuss logistics issues, task scarce resources, and set priorities. It was only after the UNJLC had proved its capability to formulate logistics procedures and provide logistics information, support, and expertise that it gained the respect and credibility of field operators as a useful, honest and neutral broker. Despite the slow ramp-up, it introduced robust systems to support the coordination activities and operations of humanitarian organizations. It quickly proved to be in a position to fill in the gaps, and to facilitate, as well as enhance and increase humanitarian outreach.

Coordination of strategic and regional airlifts was the primary mandate of the UNJLC. It compiled an inventory of available assets (military aircraft and planes chartered by UN Agencies or provided by donors), capacity and agency requirements. Taking into account humanitarian priorities, it assigned assets to agencies or advised on pooling of assets for long-range strategic and regional airlifts within the Afghan theatre. The purpose of the UNJLC was not to interfere with an organization's well-established chartering arrangements. While respecting an individual agency's logistics systems, it sought to coordinate efforts for greater synergies and efficiency. It was common practice for agencies to charter airplanes separately without coordinating with each other. The UNJLC aimed to ensure that excess aircraft capacity was efficiently used. For example, an agency could not justify chartering an entire aircraft for a small load. UNJLC's objective was to match eventual overcapacity with outstanding transport requests. To perform satisfactorily, it required timely and accurate information, and inputs from each agency in terms of their assets, requirements and activities. As a result, it became the repository of information regarding agency strategic airlifts into the region.

UNJLC Islamabad managed a number of satellite UNJLCs set up in the region. The UNJLC offices served as logistics information collection nodes as well as coordinating bodies for local, joint logistics activities. The day-to-day task of these satellite offices was to identify bottlenecks affecting the humanitarian effort as a whole and to assist the collective response to the impediments. By the end of November, UNJLC offices were operating out of Italy (Rome), Pakistan (Islamabad, Quetta and Peshawar), the US (Tampa,

the Coalition headquarters), Iran (Mashad), Tajikistan (Dushanbe), Uzbekistan (Tashkent and Termez) as well as Afghanistan.

In the remaining part of this section, we will illustrate the range of services provided by UNJLC and the context in which they were delivered.

Corridor Logistics and Operational Bottlenecks

International staff were evacuated from Afghanistan soon after the events of September 11. It was not before 14 November, after the fall of Mazar-e-Sherif, the first city attacked by the US-led Coalition, that UN personnel returned to Afghanistan on day trips. Staff evacuation, coupled with the geographical constraints of a landlocked country like Afghanistan, made humanitarian cargo dependent on the bordering countries' transport corridors. The initial set of logistical bottlenecks facing the humanitarian community was thus related to these overland corridors and border crossing points into Afghanistan. The main operational constraint was security as there were daily bombing raids by the US-led Coalition and continued hostilities between the different factions of the Northern Alliance and the Taliban.

A lot of food was trucked into the country by WFP before the beginning of the hostilities. Throughout the bombing campaign, to reach both Northern Alliance and Taliban-controlled cities, WFP trucked in relief items using locally-hired trucks. As a result WFP had a good knowledge of existing routes as well as the logistics situation and constraints in the region. Its network of local staff and transport operators provided an excellent source of up-to-date information, which assisted the UNJLC in identifying principal bottlenecks and analyzing available logistics capacity. Apart from analyzing corridor capacities and concentrating on border crossing points, the UNJLC ensured that agencies would not build up too much stock on any one corridor. At one instant, agencies were unknowingly purchasing tarpaulin and tents in Pakistan. UNJLC was able to encourage them to put more stocks in Iran.

Access to the country was interrupted several times due to the closure of the southern corridor through Quetta, Pakistan, making the two main northern corridors of Turkmenistan and Uzbekistan crucial. The Turkmenabad corridor in Turkmenistan, which had been so important during the last decade's droughts and war, consisted of a desert road. Just 30km before Afghanistan, the tarmac ended and this road became dirt, making

this vital corridor also the most expensive way to truck relief into the country, in light of its vulnerability to weather conditions. With the first rainfalls it became unviable. The second corridor was the Termez corridor in Uzbekistan. This represented a viable alternative to the Turkmenabad corridor as it had a river port, rail connections and a bridge over the river. In addition, the roads on both sides of the border (connected by the Amu Darhya bridge) were asphalted and in good condition. However, after Mazar-e-Sherif and Hairaton were captured by the Taliban in 1998, this corridor was closed down by the Uzbek government. Without clear signals from the Uzbek government about when it would open the river border, humanitarian organizations worked on their contingency plans for eventual northern access via Termez. UNHCR and UNICEF stockpiled food and non-food items in their existing warehouses and increased local staff in Termez and Tashkent, while WHO and UNFPA prepared for small interventions.

Initially UNJLC only had one office in Uzbekistan. The Tashkent office had a lobbying, representation and project management function. Almost overnight the Uzbek authorities found themselves in the midst of intense military activity and were flooded by humanitarian organizations, cargo and journalists. A UNJLC in Termez was needed to provide an interface between local authorities and humanitarian effort on logistics-related issues at key border crossing points.

In late October, the Uzbek President gave assurances that his country would fully support the humanitarian aid effort for Afghanistan and that the UN could make full use of the airport and river port facilities in Termez to store aid cargo and transfer goods into northern Afghanistan. The UNJLC negotiated an agreement with the Uzbek Border and Port Authorities about transporting humanitarian cargo by barge to Afghanistan. It was agreed that only humanitarian cargo clearly marked as such and authorized by the UNJLC was to travel on the barges. In addition, UN staff had to receive the cargo on the Afghan side and had to be responsible for its transportation and distribution to the beneficiaries.

After the fall of Mazar-e-Sherif on 9 November, the Termez river crossing was opened by barge. On 14 November the first UN cargo carrying UNHCR, UNICEF and WFP relief items and international staff crossed the Amu Darhya River. UNJLC, in agreement with

the UN Agencies, established and executed a system for the prioritizing and scheduling barge cargo.

After restoring barge transportation, the UNJLC concentrated its efforts on the bridge crossing. It was important to increase the overall capacity of the Termez crossing point, especially after the fall of Mazar-e-Sherif. The Uzbek and Afghan authorities officially opened the 'Friendship Bridge' between the two countries on 9 December 2001. Two days later, international staff moved back into Afghanistan and set up base in Mazar-e-Sherif. Rail traffic transporting relief goods resumed soon after. In collaboration with OCHA, an agreement was prepared with the Uzbek government stipulating the modalities of humanitarian cargo in transit to Afghanistan and the responsibilities of both signatories: the Uzbek government and the UN. To facilitate the flow of relief items, the UNJLC finalized clearance procedures with the Uzbek customs authority for shipments transiting Termez.

The Uzbek authorities did not know the Oxfams and CAREs of this world. Once the bridge opened, UNJLC helped screen and certify NGOs. It ensured that well-known NGOs got the same treatment and benefits as UN Agencies. As a result, UNJLC became the government's focal point for the transportation of humanitarian cargo into Afghanistan. At the end of the day everyone was happy with UNJLC intervention. Journalists based in Termez had their story. The Uzbek government was seen as cooperating with the UN. The NGOs managed to get their cargo into the country and across into Afghanistan. The UN was pleased with its coordination efforts and results.

Once surface transport resumed between Afghanistan and Uzbekistan, load capacity became higher than humanitarian requirements. The logistics bottleneck had disappeared and with it the need for intensified coordination. After the establishment of an efficient local Inter-Agency logistics coordination structure, the UNJLC had completed its mission in Termez and the satellite office was closed.

De-conflicting with the Military

Contrary to natural disaster-related emergencies, it was vital in the Afghan crisis that the humanitarian community have no visible contact and would not be confused with the combatant military force, the US-led Coalition. While the UN had a policy for dealing with military forces in the event of natural disasters, at the time of the Afghanistan emergency,

it was still elaborating a specific policy for complex conflict environments. UNJLC contributed to the process by working closely with the concerned UN offices. It assisted in the development of workable policies during the response phase for logistics-related activities. On 20 November, UN headquarters approved the guidelines on the use of Military and Civil Defence Assets (MCDA)¹⁶ for humanitarian efforts in Afghanistan and conferred the coordination and ‘deconflicting’ role to the UNJLC.¹⁷ One of the main challenges for humanitarian operations in a military environment is to ‘deconflict’ the activities of the humanitarians and military, who are both trying to make use of limited infrastructure, such as airfields, warehouses and transport corridors.

In December 2001, the ISAF, a UN Security Council-mandated multinational peacekeeping force, was deployed in Kabul with a mission to establish a secure base for the Afghan transitional government. As a result, the UNJLC’s coordinating role between the humanitarian community and the military forces operating in the country (e.g. the Coalition and CJCMOTF) expanded to include this peacekeeping force. As a result, the UNJLC became the focal point for two very different, distinct military entities: the Coalition and the ISAF. Coordination with the Coalition force, the combatant force in control of common services, assets and transportation infrastructure such as airports, offloading cargo equipment and airport warehouses in Afghanistan, was an operational necessity given the need to deconflict asset use. The relationship with the ISAF, a peacekeeping mission relegated only to Kabul and its districts, was different from the Coalition given the fact that they were a UN force.

As a result of the hostilities, the Afghan airspace was closed to humanitarian air operations and was under the de facto control of the Coalition. In December 2001, through intense negotiations with the Coalition forces, the UNJLC opened up the Afghanistan airspace for

¹⁶ The UN has two separate sets of policies to guide its cooperation with the military, that is, the use of Military and Civil Defense Assets (MCDAs) for strategic and in-theatre airlift, Air Traffic Control, aircraft handling equipment, etc. The first set of policies regulates the use of MCDAs in conflict situations. These policies aim to protect the humanitarian “space”. The second set of policies regulates the use of MCDAs during natural disasters as the use of national and international military assets in natural disasters is necessary, far less controversial and often welcomed. As for peacekeeping environments, the UN Security Council is the authority that mandates a multinational peacekeeping force. As such, procedures are in place to regulate the interface with humanitarian operations.

¹⁷ The use of MCDA was envisaged for strategic airlift, in-theatre airlift, Air Traffic Control (ATC), tunnel, road, bridge, and airfield repair, road monitoring, aircraft handling equipment, and snow removal equipment and operations.

humanitarian air operations and assisted in the coordination of air cargo movements. Soon after, it addressed the problem of limited landing spots for humanitarian cargo with the Coalition at the Kabul airport. To establish an understanding and facilitate dialogue between the Coalition and humanitarian agencies, it organized a special briefing session for the Coalition civil affairs personnel to explain how humanitarian organizations operate and are organized. The UNJLC satellite offices carried out liaison duties on logistics issues with the Coalition's civil affairs offices in the provinces, the Coalition Humanitarian Liaison Centers (CHLC). With a view to bridging the gap between the humanitarian community and the Coalition on operational issues, the UNJLC maintained a liaison presence with the Coalition in Tampa, Florida.

To ensure distinction between military and humanitarian action as well as for security purposes, UNJLC agreed that aircraft carrying humanitarian cargo should be painted white. The food airdrop campaign carried out by US Air Force in 'visible' regions of Afghanistan was not coordinated with humanitarian organizations. Through its liaison officer in Tampa, the UNJLC managed to phase out the initiative, making the case that humanitarian aid was moving in sufficient quantities.

Upon receipt of a strategic airlift request into the region from Europe, UNJLC would inform and coordinate with the Coalition headquarters in Tampa. Concerned with the establishment of safe and efficient operations within Afghanistan, especially during the bombing campaign, the UNJLC deconflicted humanitarian flights into Afghanistan with the Coalition. To avoid both accidents and misunderstandings between military and humanitarian use, it prepared standard operating procedures for airport staff. Information on airfield conditions and air safety issues received from Coalition sources was duly shared with the humanitarian agencies.

Following the fall of Kabul in mid November, requests for regional and strategic air transport increased exponentially. Between November 2001 and June 2002, the UNJLC flew 1,609 metric tonnes (MT) of humanitarian cargo (953 MT of non-food items, 464 MT of food items and 192 MT of medical items) into the region for a total of no less than 17 different agencies and organizations. Military airlifts were also arranged to transport communications equipment and vehicles from the WFP-managed UN Humanitarian Response Depot in Brindisi, Italy into Dubai, UAE.

In coordination with the UNJLC representative in Tampa, UNJLC Rome engaged in the difficult and sensitive process of declassifying certain information and data that was useful and relevant to humanitarian logistics planners. The unclassified information helped the UNJLC and other agencies carry out a range of humanitarian logistics planning activities.

As early as January 2002, the Coalition and the ISAF were involved in rehabilitating the civil infrastructure (repairing roads, runways, bridges, schools, clinics, electricity and water systems, etc). As these activities needed to be coordinated with UN Agencies, the UNJLC set up procedures and structures to facilitate military-UN-NGO dialogue and discussions.

The UNJLC was concerned with air security even after the end of the hostilities. It was informed that Mazar-e-Sherif was going to become an uncontrolled airfield with no qualified air traffic control (ATC) staff and virtually no ground handling capability as of 1 April 2002. The US Air Force unit providing ATC and other services at the Mazar-e-Sherif airfield had decided to withdraw, taking all its equipment with it. To ensure the provision of basic equipment and expertise to allow for the continuation of air operations at Mazar-e-Sherif, it approached the ICAO. It was agreed that two US Air Force ATC personnel would remain at Mazar-e-Sherif on a temporary basis to assist with the transition to host nation responsibility. Still, no air traffic controllers remained behind. Moreover as a result of the US withdrawal, the airfield ended up with limited ground handling capability. Only cargo that could be unloaded manually could be airlifted into Mazar-e-Sherif. After further representations and provision of detailed information by UNJLC Tampa, Canada provided a mobile military ATC unit as temporary assistance to the Afghan civil aviation authorities.

Regional Logistics Bottlenecks

As soon as it was safe to do so and after the fall of each major city, humanitarian organizations moved further inland and set up shop. The first UNJLC office in Afghanistan was in Mazar-e-Sherif. After the unexpected fall of the capital, UNJLC Kabul was established followed by UNJLC Hirat. Thanks to its field presence UNJLC immediately started to post basic logistics information, such as local airfield, trucking and warehouse capacity on its website, in an effort to help logistics personnel in each agency better plan

their operations. On 27 March the last UNJLC office in Afghanistan, UNJLC Kandahar, was established. This satellite office assisted the humanitarian organizations and interim government and was a go-between for the CHLCs and UN Agencies in transport, logistics and rehabilitation-related activities.

By February 2002 the trucking situation in Hirat had deteriorated. The city's truck companies were unionized and their representative body had a monopoly position in the market. To secure access to truck capacity humanitarian agencies had bid up the price of transport. A cartel had been formed and prices for the transportation of cargo, which had more than tripled over the last six months, had sharply raised operational costs of humanitarian organizations. With the help of a transport expert seconded by DFID, the UNJLC engaged in a technical study on the Afghan transport sector with particular focus on the trucking industry and key inputs, such as fuel. Based on the data resulting from this study, UNJLC Hirat arranged a meeting between representatives of different agencies and the director of the Department of Transport to discuss the rationalization and reduction of transport prices. According to official data, more trucks were available on the Hirat market than needed, making increased prices unjustifiable. To resolve the issue, the UNJLC presented a transport price proposal intended for use by all agencies. The proposal envisaged a price grid similar to what was, at that time, employed in Mazar-e-Sherif and the northern region. UNJLC managed to break the cartel and put an end to tariff hikes by threatening to bring in a UN trucking fleet and publishing transport rates on its website. The transporters agreed to review their rates downwards, aligning them to the pre-conflict 2001 rates. The intervention saved the humanitarian community millions of dollars.

The warehouse situation in some Afghan cities was a recurring concern as demand often exceeded available storage capacity. For example in April 2002, although most of the stored items in Hirat were to be distributed, the UNJLC signaled the need for additional storage tents, forewarning agencies planning to stock items in the city of the lack of storage capacity. To address this type of bottleneck, the UNJLC undertook a series of activities. It often brokered exchange agreements between agencies in need of and those with storage facilities. It coordinated sharing of storage space. It also liaised with the Coalition and government authorities to speed up the transfer of warehouses to those humanitarian organizations in need and committed to their rehabilitation.

To coordinate the movement of critical non-food items throughout the region, the UNJLC set up a cargo planning and prioritization system. This processed agency cargo requests and prepared load plans for the WFP's fleet of regional aircraft. Between November 2001 and June 2002, the UNJLC tasked and coordinated flights into the Afghan region on behalf of 28 entities. A total of 2,772 MT of humanitarian cargo - 2,343 MT non-food items, 143 MT of food items, and 285 MT of medical items - was transported.

The UNJLC also provided key logistics support to UNICEF's Back-To-School Campaign delivering and distributing stationary items and books. It met extensively with UNICEF's logistics planning team to plan the operation. The campaign heavily relied upon UNJLC for the arrangement of airlifts and in-country warehousing.

As humanitarian agencies re-entered and penetrated Afghanistan, the country's fragile infrastructure of primary and secondary roads emerged as the chief bottleneck. As soon as the security situation improved, with a potentially positive impact on food and non-food items distribution, humanitarian effort was faced with the arrival of the first snowfalls and the deterioration of road conditions. In early February, for example, avalanches on the road between Mazar-e-Sherif and Kabul temporarily blocked the corridor between Kabul and the northern part of the country. The UNJLC continually posted information on road accessibility and snow clearing activities on its website.

In early March 2002 the UNJLC called a meeting between the representatives of the major UN Agencies. The purpose of that meeting was to develop a strategy to implement needed road rehabilitation projects without further delay. Road conditions had further deteriorated as a result of heavy military, humanitarian and commercial traffic coupled with heavy rains and snowfalls. It was agreed that UNJLC would embark on infrastructure survey projects, and the findings of these would enable the humanitarian community to approach donors for the most urgent repair interventions.

Between March and April 2002 the UNJLC completed the infrastructure assessment on Afghan road conditions and traffic capacity. This survey helped identify, quantify and priorities repairs necessary to ensure sustainable traffic of humanitarian cargo. UNJLC Hirat, Mazar-e-Sherif and Kabul compiled the logistics inputs of humanitarian agencies and created a road repair database. UNJLC Mazar-e-Sherif set up a database to match

major infrastructure asset improvement projects in the northern region with donor funding. UNJLC Hirat finalized the database by indicating the stage of the projects (planned, ongoing and completed) and arranged for its distribution to the involved UN Agencies and NGOs. Subsequently the UNJLC organized meetings with donors and military forces interested in rehabilitation works (hospitals, schools, roads, etc.) and facilitated interaction between agencies and donors.

Infrastructure and administrative bottlenecks were not the only impediments to humanitarian relief efforts. For example, trucking out of Pakistan (Peshawar and Quetta) stopped several times due to insecurity and the reluctance of drivers to travel into Afghanistan. Security concerns were not only related to military and warlord activities but also to the existence of landmines and unexploded ordinance. UNJLC was involved in the de-mining operations in the western Region by facilitating the airlift of explosives and essential de-mining equipment to Hirat.

Aware of the UNHCR's plans to facilitate the spontaneous return of refugees from Iran and Pakistan as well as internally displaced people to their places of origin, UNJLC recommended and prioritized the rehabilitation of infrastructure facilities that called for immediate and rapid interventions. Given the security issues and road blockades, the UNJLC was also involved in organizing protected truck convoys for refugee movement.

On 25 March 2002, just before the end of the UNJLC's first mandate, a powerful earthquake, measuring 6.0 on the Richter scale, hit the northern district of Nahrin in the Baghlan Province. UNJLC Mazar-e-Sherif was immediately requested to coordinate logistics activities of the Coalition, local authorities, UN Agencies and NGOs. Relief operations which started immediately were significantly hampered by mined roads. The UNJLC was involved in the response to the second earthquake that hit Nahrin District a fortnight later. With an epicentre 150km north of Kabul and a magnitude of 5.8 on the Richter scale, the earthquake completely destroyed previously damaged villages and infrastructure.

Information Brokerage Platform

Throughout the Afghan crisis requests for information and data analysis by the humanitarian logistics planners was enormous. One of the UNJLC's *raison d'être* was to convey appropriate information to support humanitarian logistics planners. As early as

October 2001, the UNJLC had developed a website (www.unjlc.org) dedicated to the Afghan crisis. It contained information on strategic and regional airlift schedules, operational procedures, and capacities as well as indicative costs of air charters, road and rail transport from Europe to the region. With time, the website became more and more comprehensive. The systematic feedback received from the visitors to the site was one of the main elements influencing its development and content. As a consolidated information platform, the site ended up forewarning and forearming the humanitarian community with invaluable information scattered amongst various agencies as well as UNJLC's primary sources. To ensure wider usage, the website information was conveyed to users without connectivity through CD ROMs.

The UNJLC website provided information on bottlenecks for humanitarian activities. For instance, in December, prompted by shortages experienced in Tajikistan and Uzbekistan it started to cover information on trucking fuel. The mass purchase of fuel by military authorities had restricted its availability to the point that refueling was almost impossible in Dushanbe. The UNJLC website included a section dedicated to current and expected trucking fuel prices and supply, depot capability, status of pump stations, and any agency activity.

The UNJLC worked on Afghanistan airspace issues of common concern. With the withdrawal of the Taliban and the rehabilitation and clearance of the airfields from mines, the number of regional airlift destinations within Afghanistan increased. It posted information on the status and usability of these airfields by humanitarian aircraft. It also provided information on UNHAS passenger and commercial airline schedules.

The UNJLC website provided the contact details of the logistics personnel of the various agencies and contained information regarding the status of agency as well as donor activity. Over time, it became a reliable source of updated information on the Afghan economy, exchange rate, fuel prices, size, price and availability of trucks in the region, transport rates, price of daily labor, and cargo information (duties, clearing prices, and procedures in various neighboring countries). It included corridor infrastructure (airfield, road, port, rail, barge, bridge bottlenecks, conditions, and capacity and status) and in-country information (regional stock position of food and selected non-food items).

Regarding warehousing, it compiled and posted a list of warehouse and storage facilities (capacity, need for repair) including planned ones per location.

In partnership with the US government, the UNJLC website carried extensive weather forecasts, status reports as well as information on the impact of adverse weather on humanitarian activity. In the UNJLC weekly bulletin, agencies were advised on the impact of heavy rain, snow, avalanches and drought on the viability of roads, bridges and rivers. For example, when in early December 2001, the water level of the Nizhni Pyanj River at the Tajikistan border dropped, restricting the use of barges with 90cm draft, the UNJLC bulletin raised the issue and recommended the use of barges with a maximum draft of 50cm. Eventually to improve the river crossing, the German government provided funds for the purchase of small self-propelled barges with minimum draft that were capable of carrying two trucks. They also funded port facilities upgrades and ferry repair.

The UNJLC went beyond the simple provision of information. It was often a member of assessment teams such as the one dealing with the fuel storage facilities in Hairaton, Afghanistan. It supported agency activity by identifying needs and helping to prepare funding proposals for donor consideration. Its nodal position allowed it to flag and anticipate problems. It often went a step further by proposing solutions or getting directly involved in resolving them. It entered into negotiations with local customs, rail and port authorities to tackle issues related to customs clearance procedures, visa requirements, and transit of humanitarian cargo and personnel from the bordering countries of Pakistan, Iran, Tajikistan, Kyrgyzstan, and Turkmenistan into Afghanistan. The UNJLC was often involved in drafting and brokering tariff and fee agreements with port and railway authorities as well as transport companies.

End of Phase I

In March 2002, UNJLC decided to demobilize its regional satellite offices in Central Asia and to reinforce its presence in Afghanistan. The UNJLC concept had just been institutionalized by the IASC. The UNJLC free services had been equally appreciated by UN Agencies and NGOs, small and large. In addition, the UN Humanitarian Coordinator had just requested UNJLC to stay another year to continue addressing the humanitarian situation through another winter.

The humanitarian community considered the Afghanistan experience a true success as well as a quantum leap in logistics information management and coordination. The website in particular, started almost haphazardly, had grown organically in the field, unraveling its full potential.

7.2.3.2 Phase II: Next 18 months

By the end of its six-month mandate UNJLC had accomplished its goals. It had supported humanitarian logistics planners in their efforts throughout the 2001/2002 Afghan winter and addressed cross-border and in-theatre logistics bottlenecks. However, four months after the fall of the Taliban regime, the scale of the humanitarian crisis remained significant and the need for another year of operations was clear. The UNJLC, which had never been deployed for longer than six-months, was asked on an extraordinary basis to continue its operations for one more year. The much reduced team (from 27 to 12 staff) prepared for the challenges of the forthcoming Afghan winter in what would later be known as “Phase II” of the UNJLC Afghanistan operation.

Continuation of Services

During the second phase, the UNJLC continued to assist the humanitarian community in responding to the Afghanistan emergency.¹⁸ Given the importance of regional transit points for the flow of goods into Afghanistan, the UNJLC continued to monitor and gauge capacity of key logistics nodes in neighboring countries. After the 2001/2002 winter, the bottlenecks had shifted. Emphasis was less on the border corridors and much more on the internal infrastructure such as secondary roads, mountain passes, interior airfields, etc. and UNJLC followed suit.

To meet continued demand for information by the humanitarian community, the UNJLC maintained an updated website on a range of issues including road conditions, assessment and repair initiatives, fuel, security, Coalition and ISAF activity, air services, weather

¹⁸ In late March 2002, to assist the Afghan interim government, the UN Security Council established and funded the United Nations Assistance Mission for Afghanistan (UNAMA) for one year. The UNJLC became part of one of UNAMA’s two pillars: the one dealing with humanitarian reconstruction and rehabilitation.

conditions, and warehousing. It continued to lead infrastructure projects and initiatives and remained engaged in situation assessments providing recommendations. UN agencies continued to receive logistics services such as cargo handling at various airfields and transportation arrangements within the country. For example, UNJLC assisted FAO in the transportation arrangements for their forthcoming seed distribution (1,100 MT) program in the Western Area. However, although it never stopped tackling administrative and operational hurdles on behalf of the humanitarian community, the distinctive feature of our Phase II operation was its increasing involvement in the country's most strategic initiatives. UNJLC got involved in three activities: winterization and two nation building initiatives: the Loya Jirga and currency exchange.

Winterization Activities

The merciless Afghan winter and the level of complexity of the on-going humanitarian relief effort were the reasons for the one-year extension of the UNJLC. Typically, from November onwards large parts of the country were cut off from the outside world. To avoid a return to full-scale air operations and ensure maximum use of surface transportation before the winter season, as early as June 2002 UNJLC focused the attention of the humanitarian community on the upcoming winter through a winterization strategy workshop. The aim was to instill a more organized approach than that taken in the winter of 2001/2002 after the end of the war for which agencies had had little time to prepare.

At the Kabul winterization workshop held in mid-July 2002, a common operational strategy for the 2002/2003 winter was discussed. The workshop, attended by over 25 participants from the major UN agencies (WFP, UNHCR, UNICEF, WHO, UNAMA etc), donors (USAID) and NGOs, helped identify priority needs and key interventions to be carried out by the main humanitarian actors. During the two-day workshop UNJLC identified those external and internal corridors and routes vital for the humanitarian effort, discussed their future use and potential bottlenecks/blockages. It was a difficult exercise as almost nobody from the previous winter was still in the country and in many cases there had been no overlap between people moving out and coming in. What was worst was the fact that since the 2001/2002 winter intervention had been an emergency, there was almost no reporting or transfer of experience at the organizational level. With little institutional

memory to capitalize on, the participants relied on personal experience to outline their strategy.

To ensure adequate delivery of aid during the winter season, a three-pronged strategy was developed involving pre-positioning of aid, ensuring corridor accessibility and developing contingency airlift capacity. Pre-positioning of aid – strategic placement of food or non-food items (NFIs) accessible to recipients for distribution throughout the winter months - was the most cost-effective option. This strategy was to be carried out in conjunction with minor road interventions to ensure access to pre-positioning sites before the onset of winter. For pre-positioning to be effective it was necessary to identify adequate storage facilities for the relief items in critical locations. Where pre-positioning was not viable due to population movement, road accessibility for aid convoys was to be ensured through interventions on critical routes before and during the winter season. Due to inherently high costs, airlift operations were to be used only as a life-saving measure in exceptional circumstances. In the interest of cost containment a combined strategy encompassing elements of the first two strategies was adopted.

By early October, the UNAMA-led Winterization Operational Task Force composed of representatives of the UN agencies and government officials had prepared a National Action Plan for the winter. The combined effects of winter - physical isolation, lack of access to basic social services, high food insecurity, shelter needs and poverty - were expected to affect large segments of the population. As such, the overarching concerns of the winter preparedness program addressed by the Plan were: food security, population movements, urban preparedness, accessibility and the nomad population.

The stock planning exercise of the humanitarian agencies had to take into account the needs and constraints of the various regions. Pre-positioning was selected for all regions except the Central Highlands where data on the projected number and location of beneficiaries was unreliable. In addition, physical constraints were also factored in. For example, the road network in the North-East of the country was not only complex but also extremely difficult to clear and 'unstable'. The risk of avalanches and snow slides are high as most routes run adjacent to mountains. The main issue in Kabul and provinces was shelter given the return of over one million returnees. In the Central Highlands people

lacked access to basic supplies during the harsh winter months. It was estimated that in total about 2.6 million people would be “at risk” due to food and shelter deficits. They fell into three broad categories: those in the rural areas cut off due to snow or other seasonal physical obstacles (approx. 1.3 million people) and in need of food; returnees and internally displaced without means or moving into vulnerable areas (over 270,000 people); and specific urban groups who lived outdoors or in dilapidated public buildings (700,000 people) or with inadequate shelter and in need of food (360,000 people).

Alongside the humanitarian agencies, UNJLC was involved in the overall planning, pre-positioning of goods, preparation of winter stocks inventory, and status reports on road projects and road conditions. It also fulfilled its information brokerage function by posting all winterization information on the UNJLC website.

To raise awareness of logistics-related winterization issues among the donor community a donor conference, attended by more than a dozen organizations, was organized in Kabul in early August. To realize the option of pre-positioned food and NFIs UNJLC had to ensure timely donor support in terms of funding and provision of commodities. This and similar efforts helped in securing donor commitment. However, it still took a long time before the first installments for some of the planned activities were received.

The UNJLC winterization initiative enjoyed the full support of government authorities, notably the Ministry for Rural Rehabilitation and Development (MRRD) to which President Karzai appointed Minister Haneef Atmar who was to report to him directly on the planning and progress of the campaign. At the provincial level, the UNJLC took the time to meet with the local authorities to explain the latest winterization and road rehabilitation efforts underway across the country.

Both the US-led Coalition and the Multinational Force, ISAF, participated in the development of collaborative winterization plans with the UN agencies and government authorities. They provided practical assistance to complement the UN and government-planned activities. For example, The Coalition provided weather forecasts and satellite imaging of critical areas while the ISAF assisted the UNJLC efforts by providing handling services for humanitarian cargo.

The access component of the winterization action plan included three important elements: rehabilitation of key roads, rehabilitation of key airstrips, and road and airstrip snow

clearance. To ensure the viability of roads, the UNJLC organized inter-agency missions to critical areas to review and confirm road conditions, identify locations for base camps and workshops, confirm snow clearing plans, and identify any shortfalls of current plans. UNJLC Kabul co-chaired the weekly Road Task Force meetings focused primarily on winter road access. The UNJLC satellite offices identified high priority interventions (e.g. priority snow clearing stretches) that were of key significance for economic and humanitarian reasons. The satellite offices also acted as focal points for the receipt of snow clearing and main base camp operations proposals. To support operations, UNJLC Hirat translated Russian military maps of those routes requiring snow clearance while UNJLC Kabul developed a detailed Operations Guide for snow clearing activities as well as base camp management. At times UNJLC assisted in the purchase of relevant equipment (e.g. snow removal) and spare parts, including selection, inspection and monitoring activities.

As early as September 2002 the UNJLC identified airstrips within the Western Area that would require snow clearance during the winter period. As for road clearance, it catalogued mechanical assets and identified machinery to be utilized for major passes. In respect of mechanical operators, it identified their availability within the private and public sector and identified gaps to be addressed through training. A key element was the use of a range of humanitarian actors to implement the intervention program. This included engaging a significant number of NGOs. In the event of an NGO proposal remaining unfunded, the UNJLC together with UNOPS and MRRD collaborated on the snow clearance activities.

UNJLC was forced to review its snow clearance methodology that implied wide usage of snow removal equipment as a result of delayed donor funding and inflated NGO proposals. In mid-November it was decided to proceed with a community-based cash-for-work program involving labor-based contracts (3,000 laborers) and minimal equipment. Snow clearing equipment was to be used only in those areas where passes were not suitable for manual labor. The new methodology expedited the contracting and procurement process. Low skilled laborers were provided with basic outfits. Its impact on the local communities was two-fold: it provided an infusion of cash to rural areas and maintained access. The

program gave the local population that bit of hope necessary to make them stay in their villages instead of migrating to the cities. Moreover, by remaining in their villages they could properly prepare for the next agricultural season.

The shift to labor-intensive snow clearing resulted in the immediate participation of local authorities (MRRD), hence facilitating the hand-over of subsequent winter preparedness activities. The program resulted in a simple sustainable system easily replicable by the authorities in subsequent years. All snow clearance items were to become property of the MRRD and contracting local manual labor at two dollars a day was a system that the Ministry could replicate after the departure of humanitarian organizations. The UNJLC assisted in the formalization of the system using the data from interested NGOs' and the snow clearing teams' reporting system. A database on the volume of traffic, centimeters of snowfall and labor required to be maintained and used in subsequent years was created.

Thanks to the preparatory work, the operation of the humanitarian community was effective and efficient as long lead times and reliance on fragile corridors and mountain passes prone to blockage with the first winter snows were systematically avoided. Forward planning enabled the humanitarian community to provide assistance to some 3.4 million beneficiaries, well beyond the estimated 2.6 million vulnerable people at risk.

Nation Building Activities

During the second phase of operations, the UNJLC shifted significantly from its core activities. In addition to supporting capacity-building efforts and coordinating the country's road rehabilitation projects it was drawn into two major non-humanitarian projects which contributed to nation-building in Afghanistan. UNJLC exposed itself to a serious mission creep. Government and institutions had 'disappeared' and there was an acute need to fill the logistics vacuum. By responding to these gaps, in certain aspects UNJLC began to suffer from its success since after a while everything became a logistics problem.

However, UNJLC made deliberate and conscious decisions. Before engaging in any new activity it assessed the potential benefits and risks of political and economic failure for humanitarian logistics operations. Concerning activities related to nation-building it was felt that a successfully elected and empowered government could lead to a peaceful and secure environment for humanitarian operations. Furthermore, the speedy introduction of a

new currency was viewed as providing the requisite stable financial environment for cost-efficient humanitarian logistics operations. Consequently, UNJLC decided to provide substantial support to the country's transition process (including the disarmament process started in July with the collection and storage of weapons by local factions in Mazar-e-Sherif and UNAMA's essential nation-building efforts).

The Loya Jirga Process. On 5 December 2001 an agreement was reached in Bonn, Germany between the US, the UN and the Afghan tribal factions on the political future of the nation. The interim government that came into effect on 22 December 2001 had the responsibility, within the next six months, to establish an Emergency *Loya Jirga*, or Grand Tribal Council (Figure 7.5). This emergency council, composed of representatives of the diverse Afghan ethnic groups, had a mandate to prepare the country for a Constitutional *Loya Jirga* within two years. The UN agencies, under the auspices and leadership of UNAMA, were to assist the government in the process.

Figure 7.5 – The Loya Jirga Process

The first step to convening the Emergency *Loya Jirga* was the selection of some 1,050 representatives from the country's 381 districts. The process began with the first series of local meetings around the country during which elders and respected members of the community selected those who would represent them at the regional level in the next series of meetings. Each district selected at least one member and additional members from the larger districts were chosen according to population estimates. A further 450 non-elected delegates from a variety of backgrounds were appointed by the Commission responsible for the coordination of the *Loya Jirga* process. 160 seats, i.e., 11% of total seats, were allotted to women. In the second step, each of the district councils elected those who would participate in the *Loya Jirga* using a secret ballot. The third and final phase consisted of the appointment of the country's head of state, the key cabinet ministers of the transitional government, and members of the Supreme Court by the 1,500 delegates chosen by the districts and the Commission. The new government hence elected would serve until parliamentary elections in 2004.

As the *Loya Jirga* approached and logistics bottlenecks began to emerge, the UNJLC was asked by donors to assist. The UNJLC supported the three steps of the *Loya Jirga* process culminating in the main gathering in Kabul in June 2002. It provided both air and general logistics assistance through UNJLC Kabul, it seconded three technical staff to the Loya Jirga Aviation Support Operations Centre (ASOC) managed by UNOPS and planned the

delivery of hardware such as tents and furniture to the regional election centers. During the second phase initiated in mid-May, it loaded and dispatched 500 tents, donated by UNICEF, from Kabul to the major towns around Afghanistan. In addition the UNJLC was involved in the selection and security of the election and gathering sites. In Hirat, it helped UNAMA in the organization of the election centers (infrastructure and election observers). The second round of elections in the regions' districts involved on-site logistics support (e.g. at the Olympic Stadium complex of Mazar-e-Sherif) and the movement of over 3,000 delegates and successful candidates. One of UNJLC's main contributions to the process was the ferrying of VIPs, key personnel and candidates around the country and to the capital Kabul," confirmed Toyota. It seconded three technical staff to the ASOC to assist UNAMA in the planning and movement of observers and *Loya Jirga* staff/cargo at regional and district levels using the six helicopters and four aircraft chartered by UNAMA. Upon completion of Step 2 of the elections, 1,153 *Loya Jirga* candidates were flown into Kabul from all over the country for the six-day *Loya Jirga* Grand Council of 11 June 2002. In just two days, a total of 55 missions were organized moving candidates from Jalalabad, Kandahar, Mazar-e-Sherif, Puli Alam, Bamyan, Hirat, Ghazni and Kunduz to Kabul. To enable the movement of candidates from the airport to the *Loya Jirga* site, UNJLC Kabul facilitated the hiring of transportation for UNAMA.

From the logistics perspective, the last step of the *Loya Jirga* process began on 18 June with the announcement of President Hamid Karzai's full cabinet. Once the elections were over UNJLC did everything again in reverse. Between 19 and 20 June, the UNJLC organized the return of the 1,500 delegates from Kabul to the provinces, demobilized the main *Loya Jirga* as well as the area offices and ensured the recovery of equipment. In preparation for this last stage it reviewed the inventory of equipment distributed and defined procedures for the collection procedure. In addition, as per ISAF recommendations, it ensured the donation of the *Loya Jirga* furniture to schools.

Currency Exchange Exercise. Over the last 30 years the old afghani had lost 99.9% of its value. About 60% of the notes circulating in 2002 had been printed in the past six years. Some warlords had illicitly printed notes as a mean to finance their operations while others had created their own currency. In early 2002, two planeloads of new notes, equal to one

thousand old notes were delivered to the Central Afghanistan Bank to replace the multiple (3+) currencies in circulation.

In September 2002 President Karzai announced the introduction of a new Afghan currency. The new currency aimed to break away from dollarization and ensure and encourage the usage of local currency in domestic transactions. As stated by President Karzai, the symbolic and economic value of the redenomination were of great importance to the country's national and political unity. However, the changeover to the new currency had to be implemented within a two month period.

The government faced a multitude of challenges and operational constraints in the currency exchange exercise (Figure 7.6). First and foremost it had to persuade the Afghan population to trade 1,000 afghanis for a 1 unit note of an untested, new currency. The redenomination exercise involved high collection and distribution costs (approximately US\$5-6 million). Notes had to be transported by air and road across the country including remote, insecure and high altitude areas during autumn and winter when access was made difficult by rain and snow. This represented a huge logistical challenge for the authorities given the country's war-shattered infrastructure and limited transportation means.¹⁹ The verification and destruction of the old money, a necessity to avoid its re-circulation, constituted another source of concern.

The UNJLC was heavily involved in the planning and execution of the currency exchange process. It assisted the Da Afghanistan Bank (DAB) with the receipt of related cargo (currency and equipment) at various airports. It also seconded UNJLC staff to the Central Bank and supplied a Logistics Coordinator to the Currency Exchange Task Force. In Hirat, by late October, more than hundred billion old afghanis were destroyed and replaced by the new currency. By the end of that month at least one Exchange Point (EP) was established in each province. By mid-December the currency exchange operation entered its final stage: the new afghan currency was made available from 47 designated EPs and 500 exchange windows served by a minimum of 12 persons. The EPs were equipped with a safe storage area (vault facility), note counting machines, invalidation equipment, tellers,

¹⁹ The Central Bank disposed only of two trucks, frequently out of use.

and banknote handling equipment. The operation was completed on schedule on 2 January 2003 when the old bank notes ceased to be legal tender.

Figure 7.6 – Currency Conversion Program: 7/10/2002 – 2/01/2003: Facts & Figures

- Human, Financial and Operational Resources
- US\$ 26 m budget (US\$ 9m in donations)
 - 2,500 Afghan bank personnel involved
 - 500 Afghan security personnel involved
 - 25 international experts involved
 - 180 UN/NGO observers involved
 - 7 DAB Area Coordination Centres
 - 47 Exchange Windows
 - 200 Money traders
 - Assistance provided by UN/UNAMA, World Bank, International Monetary Fund, Denmark, Germany, Sweden, UK and US
- Implementation
- 800 million new banknotes (1 new afghani corresponded to 1000 old afghanis) of different denominations printed by companies in Germany and Sweden with similar security features as the Euro and shipped to Kabul
 - 4,000 MT of old bank notes collected, destroyed equal to 18 trillion old afghanis (approx. US\$ 450m), 98% of circulating afghanis
 - 16 billion new afghanis issued (approx. US\$ 750m)
 - Public information and awareness campaign
- Timeframe
- Three months of active planning and preparation
 - 2.5 months of implementation
 - 1.5 months for termination/closure
- Exchange rate (January 2003)
- 1US\$=47 afghanis



Source: Samii, R. & L. N. Van Wassenhove (2003c), “Logistics Moving the Seeds of a Brighter Future (UNJLC’s Second Year in Afghanistan)”, INSEAD case study 09/2003-5135.

Although the actual verification task was carried out by some 180 UN/NGOs observer volunteers, the UNJLC ended up doing the bulk of the work. It was involved in the whole chain from receipt and air transport of the new currency, the deployment of the equipment and the initiation of the EPs, air transport of the observers/inspectors, to recording and

destruction of the notes. Over and over again it picked up responsibilities that did not ‘fit’ neatly into any box.

Infrastructure Rehabilitation

The rehabilitation of the road infrastructure provided the necessary growth conditions for the agricultural economy and thereby contributed to improving local food security. UNJLC’s work on the assessment of the country’s road network to identify priority rehabilitation projects began as early as March 2002 and continued through the summer in preparation for winter. To ensure continuity in relief operations, the UNJLC kept a vigilant eye on priority routes, vigorously pursued the implementation of key interventions and helped coordinate the road rehabilitation process. At a subsequent stage it coordinated the survey and execution of most secondary road works. It also helped set up and chaired some of the regional Road Task Forces composed of donors, government authorities (MPW, MRRD, Military), and the UN.

By July 2002, many local and international NGOs had filed their road reconstruction proposals with the UNJLC offices. To meet donor requirements, the UNJLC assisted some NGOs with the restructuring of their project proposals and performed the critical prioritization function. The UNJLC then actively lobbied the donor community to fund repair work on critical routes. Its efforts and solicited advice aimed to avoid duplication of funding on the same road sectors and to ensure the coverage of important stretches before the winter.

To facilitate the effective implementation of priority road rehabilitation projects, the UNJLC entered into a partnership with UNOPS, for example, collaborating to create and distribute CD-Roms of the UNOPS ‘Technical Manual for the Rehabilitation of Feeder Roads Using Labor-Based Methods’ in English and Dari amongst the humanitarian community.

Capacity Building

To maximize the sustainability of its interventions, the UNJLC integrated and trained local government personnel in its activities. In addition to weaving capacity building aspects into its daily operations, the UNJLC conducted and facilitated a number of training sessions. From mid-November to mid-December 2002, a series of six three-day River

Engineering workshops were conducted for some 150 local engineers from government and NGOs in the capital and three other cities. Following the success of these sessions, the UNJLC facilitated similar courses in provincial capitals by the workshops' trained and certified engineers to their peers. Under the auspices of the UNJLC, SHA developed the River Engineering Manual which was then translated into Dari and Pushtun.

In response to an increasing number of car accidents and to reinforce safe driving habits, the UNJLC coordinated a series of training sessions in Hirat and Kabul for UN drivers. This inter-agency effort included security and first-aid components as well as general training on driving rules, 4X4 handling, road trip procedures, essential mechanics and maintenance.

The UNJLC also participated in training sessions organized for humanitarian operators on issues such as warehousing management and customs procedures. It delivered the module on international passenger/vehicle/cargo crossing procedures in the Termez-Hairaton Border Crossing Training courses organized by other UN agencies and emphasized the importance of better paper workflow on delivery schedules

The UNJLC Phase Out

The decision to close down the UNJLC on 31 March 2003 was reaffirmed to the Afghan authorities in November 2002. The UNJLC was due to close down at the end of the second winter, hence much later than originally envisaged. The proposed date was viewed as much too early by the authorities who lobbied actively for its extension. UNJLC primarily a response facility was mindful of not remaining activated much beyond the emergency phase.

To ensure continuity in the implementation of residual UNJLC activities, responsibilities had to be transferred to a suitable national or international entity. By March 2003 its counterpart ministries did not yet have the appropriate structure or staff in place to handle the activities. It had been hard for them to identify and attract qualified people to cover key positions. To avoid leaving a hole behind it, many activities were transferred to UNAMA until final handover could be eventually effected to relevant government entities.

7.2.4 Iraq Crisis

By late 2002, while the political arm of the UN was working to prevent war, the humanitarian community was assessing the likely humanitarian consequences of the conflict, possible logistics bottlenecks, and its response plan. A draft UN report entitled *Likely Humanitarian Scenarios*, dated 10 December 2002 on the potential effect of a war against Iraq and its aftermath estimated, amongst other things, that as many as 500,000 Iraqis could require medical treatment as a result of fighting and problems in the aftermath of war; that crude oil production could be halted; that a million refugees or internally displaced persons could be created, and that some three million Iraqis could face hunger. In preparation for the Iraq emergency, a UNJLC planning officer traveled to countries potentially involved and affected by the crisis to sensitize and brief UN agency country teams on the UNJLC.

At the time the best indicator of the possible consequences of the conflict was Iraq's 1990-1991 invasion of Kuwait. That conflict had resulted in the torching of 700 of the emirate's oil wells by retreating Iraqi forces and the sabotage of the country's refineries and power stations. It took nine months to entirely extinguish the oilfield conflagration with the help of seawater from the Arabian Gulf; more significantly, it took several years to rehabilitate the refineries to a stage where they could respond to Kuwait's own domestic needs.

It was therefore reasonable to assume that, in the event of Coalition forces prevailing over the Iraqi military, the regime would be prepared to sabotage its own oil infrastructure – partly as a defensive measure against Coalition military operations and partly to complicate the post-war task of the victors. Compared to Kuwait, Iraq's oilfield infrastructure extended over a much larger area and was concentrated at opposite ends of the country. It was also isolated from the vast supplies of water needed to fight oilfield fires, opening the way to more effective and wide-spread sabotage. To respond to this threat, much of the Coalition's military planning focused on securing the oilfields and responding quickly to oilfield fires.

Even in a less extreme scenario, it was well known that Iraq's refineries – as with most of its infrastructure – had suffered greatly from years of sanctions, lack of investment and spare parts, even before 1990. Indeed, two of its three major refineries were old and

dilapidated; the third more modern refinery, north of Baghdad, had suffered from lack of spare parts and proper maintenance. While the UN's Oil-For-Food Program²⁰ had helped alleviate the situation, the persisting technical problems were expected to be compounded by the effects of the conflict.

It was logical for the humanitarian planners to assume that indigenous Iraqi fuel would not be available for their operations or to the population. Furthermore, reliance on Coalition forces for fuel supplies was doubtful, even undesirable, if only to maintain humanitarian distance from the combatants. It was clear that the humanitarian community had to arrange its own fuel from outside Iraq if it were to sustain the logistics of its post-conflict operations inside Iraq.

With conflict between the US-led Coalition and Iraq looming in early 2003, the UNJLC started to prepare for the emergency. While it conducted its normal activities, for the first time it activated a specialized team within its Iraq operation to address the serious logistics problem of fuels. Fuels had historically been an 'orphan' issue: it affected everyone but no one was directly responsible for it. Individual actors could always make their own arrangements but a combined approach, cutting across all agencies, ensured economies of scale, consistency of supply, and logistical flexibility. Therefore, UNJLC started planning for any interruption in Iraq's domestic supply chain – from the production of crude oil, transportation by pipeline to refineries and the operations of the refineries themselves, to storage capacity and local distribution – that could jeopardize the UN's operations in Iraq. One of the first tasks facing the UNJLC was the engagement of the fuel team members. UNJLC made a conscious decision to recruit experts from the industry. Thereafter, it was to leverage the UN Oil-For-Food Program. UNJLC expected delivery schedules under the Oil-For-Food Program to be disrupted by the conflict. Given the importance of items purchased under this program for Iraq's post-conflict recovery, it wanted to avert the risk of delayed delivery of vital items available and already paid for by Iraqi oil exports

²⁰ In the context of economic sanctions, the Oil-For-Food Programme was the program administered by the UN's Office of the Iraq Programme (OIP) under which Iraqi oil exports revenues were used to purchase foodstuffs and medicines for the population, as well as spare parts and services to help maintain the country's oil sector, water and sanitation infrastructure, and electricity network.

Through a staff co-located in the New York-based UN Office of the Iraq Program (OIP)²¹ which was responsible for the administration of the Oil-For-Food Program it aimed to ensure timely delivery.

The Fuel Team's initial task was to formalize the concept of joint fuel supplies with the agencies. In order to achieve economies of scale and negotiating power in purchasing, transport, storage and distribution, it was important to highlight the merits of common sourcing. UNJLC had to convey this message to the agencies, get their support, and then identify an implementing partner. The requirements of the humanitarian community also had to be established. To do that, UNJLC sat down with each agency to determine what type of and how many vehicles they planned to use, and for how long. Then it was important to establish the type of fuels required to power office, accommodation and communications generators. After establishing where and when they needed each fuel type and in what quantities, it had to identify potential sources of fuel. This interaction had an unexpected benefit: agencies realized the importance of fuels to their operations and were alerted to the possibility of not being able to call on indigenous fuel supplies.

It soon became clear that Iraq's main oil-producing neighbors, Saudi Arabia and Kuwait, could not be assumed to meet the country's supply requirements. Export of refined products is generally established through long-term contracts; the vast needs of the Coalition had already put unprecedented pressure on these supplies. Kuwait, the closest source, still recovering from a 2000 refinery accident, was importing fuels for its own use. Jordan, another neighboring country, depended on crude oil feedstock supplies from Iraq for the running of its refineries. Other nearby sources of supply – Syria, Turkey, Bahrain, and the UAE – each had their own drawbacks. Eventually, under the initial scenario of the UN importing its own fuel for humanitarian operations, given UNJLC's non-status as an agency, it was envisaged that the UN Office for Project Services (UNOPS) would be the fuel purchasing and supply agent for the community.

²¹ OIP was responsible for many aspects of the UN's engagement with Iraq, including compensation and reparations for those affected by Iraq's 1990-91 invasion and occupation of Kuwait. The Oil-for-Food Programme (referred to in Iraq as the "Memorandum of Understanding") was a major part of OIP's activities.

Within days of conflict erupting in March 2003, it became clear that the much-feared oilfield conflagration would not occur. Less than 10 wellheads in the south were set alight, but they were quickly extinguished by Kuwaiti oil firefighters and international contractors. The crude production, which had been interrupted during the conflict, resumed together with the refineries, with the exclusion of several gas plants.

When the humanitarian community returned to Iraq in early May, it did not find a dearth of fuel but a surplus, particularly of diesel as the Iraqi regime had stockpiled vast quantities in anticipation of an extended conflict. The first impression was that while UNJLC had helped agencies consider fuels as a vital part of their logistical requirements, the need to implement the contingency planning was less pressing. At that time few could fully appreciate the critical contribution that the Oil-For-Food contracts²² on restoring Iraq's oil refining capacity and its fuel distribution ability in the post-conflict period.

One of the first things UNJLC noticed visiting downstream installations in the south was that the technology utilized in the refining process was obsolete, a generation or more behind that of the industry. Productivity was low also because of the impact of sanctions on maintenance. In many ways, it was a miracle that some of the plants were still operational.

The supply of LPG, the main fuel used for cooking, was most indicative of the shortcomings of the industry. Limited storage capacity in terms of the special pressurized tanks required to hold large quantities had prevented significant stockpiling. Sanctions, lack of maintenance, and substantial looting in the immediate aftermath of the conflict had put the South Gas Plant, the country's largest source of LPG production, out of action.

Restoring Iraqi Oil Production Capacity

To restore Iraqi oil production to pre-war levels, the US Army Corps of Engineers deployed Task Force Restore Iraqi Oil (RIO). Given their limited direct expertise in the oil and fuels domain, they engaged major international oilfield contractors. UNJLC's informal collaboration with RIO in terms of exchange of information and data analysis started early on and it was to assist it in better achieving respective mandates.

²² Items included huge back-up generators for refineries; consulting services for refinery rehabilitation; LPG bottles for domestic use, whereby an increased number of gas bottles in circulation would be able to replace the old or damaged stock and increase the efficiency of distribution; and additives for increasing the octane rating of the leaded gasoline used in Iraq. Oil-For-Food contracts destined for the oil sector, numbering in excess of 1,000, constituted perhaps the largest part of the program in financial terms.

Inspection of facilities at the Basra refinery had highlighted the dire need for specific equipment, supplies and spare parts. With little knowledge of the contracts already concluded under the Oil-For-Food Program, RIO was considering their purchase. This is where UNJLC could add value. Working closely with the Iraqi Ministry of Oil and the UNJLC satellite office in New York, UNJLC scoured lists of Oil-For-Food contracts²³ for items that could be of use to the refineries. Then it prioritized needs and worked towards expediting their delivery into Iraq.

By mid-May, six shipments ready to move into Iraq had been identified. This was a crucial test for UNJLC. The successful delivery of these items legitimized the facility within the UN as a structure capable of expediting other contracts in the pipeline.

The first shipment arrived in Jordan in June. With the assistance of UNJLC field offices in Amman and Baghdad, military escorts were arranged to ensure the safe delivery of the products to Baghdad's Daura refinery. Upon consignment of the supply, UNJLC realized its job was far from completed. With the disruption to the national power grid, the refinery remained underperforming. UNJLC New York was once again instrumental in spotting a large generator, held by UNDP in Jordan under another Oil-For-Food contract, and facilitating its delivery to Daura. Only then, the refinery was able to produce much-needed fuels, relieving the humanitarian situation and reducing the need for expensive fuel imports.

RIO was quick to recognize the value of the link between UNJLC's ability in locating items in the Oil-For-Food contracts and industry needs. To further expedite the process and help prioritize needs, RIO offered its support and assistance to the UN Humanitarian Coordinator.

²³ The administration of the Oil-For-Food Programme in the aftermath of the conflict was quite complex. Before the conflict, the contracts were generally dealt with by the respective Iraqi ministries as part of the Iraq government. After the conflict, there was no Iraqi government, and, in effect, no counterparties for the suppliers to deal with. As such, various UN agencies 'adopted' contracts in their areas of responsibility, dealt with the suppliers to move the subjects of the contracts into Iraq in the delayed circumstances, and ensured that the suppliers were paid. For example, the World Health Organization 'adopted' contracts in the health sector; the United Nations Development Programme (UNDP), already active with power projects in the north of Iraq, took responsibility for contracts affecting the power generation and distribution sector, and so on. In the case of the oil sector, there was no obvious UN agency with a clear responsibility in that area. Contracts in this sector and several other similarly affected areas became known as 'orphan' contracts, as no agency had 'adopted' them. Oil sector contracts accounted for a very substantial part of outstanding contracts.

The relationship between RIO and UNJLC was that of an odd couple. On the one hand there was RIO, the huge and well-financed arm of the Coalition with personnel the length and breadth of Iraq, the support of some of the world's biggest and best oilfield contractors, access to vast amounts of information, and almost complete control over the Iraqi oil industry, tasked with restoring crude output of one of the world's largest oil producers to pre-war levels. On the other hand, there was UNJLC, a small, specialist unit of the United Nations with a handful of analytical staff trying to make sense and act upon information on hand.

Early Warning

It was during a meeting in the last week of May 2003 with a RIO senior civilian on the details of the Oil-For-Food Program that UNJLC raised the issue of the availability of kerosene for heating. In the 50°C heat of summer, no one had given much thought to the issue of winterization as summer kerosene consumption being one-ninth of that of the winter had not created any pressure on supply. Alerted to the problem, RIO enjoyed a lead time that allowed it to build stockpiles from domestic sources as well as arrange for its import in vast quantities.

UNJLC drew his conclusions after studying the crude oil production and refinery figures provided by RIO. LPG supplies would be insufficient for the population. Only imports could meet humanitarian needs for cooking fuel, and RIO was the only possible implementing organization.

UNJLC advice was also prompt in the case of diesel supplies. Looking at RIO reports in late June and early July, UNJLC noticed no mention of diesel among the refinery production data. While the populace was drawing diesel from the pre-war stockpiles it was unclear whether production matched consumption, or whether diesel production would recover before the depletion of the stockpiles. RIO was alerted and the issue was raised with Iraq's State Oil Marketing Organization in Baghdad. Shortly after, RIO started tracking the availability of diesel. By doing so, it became clear that local supply could not match demand. With no choice but to import, necessary arrangements were put in place.

Building and Leveraging Relationships

Upon entry into Iraq in May 2003, UNJLC had established satellite offices in Baghdad, Basra, Hilla and later Erbil. This field presence eased the collection of information from

various sources and facilitated interaction with relevant Iraqi institutions including the Ministry of Oil in Baghdad, its major operating companies and the Southern Oil Company. Relationships with the local authorities in Basra were seldom easy. There were occasions during UNJLC's weekly refinery meeting with relevant parties where the Director General of the Southern Oil Company would publicly criticize the UN for not doing enough to help the Iraqi people. The perception that the UN had unlimited resources and could solve all the problems shrouded efforts, including the implementation of Oil-For-Food contracts. During informal evening meetings UNJLC would try to iron out the differences and get a better insight of the ever-dynamic situation. The UNJLC – a flexible and small setup – was in the position to do that.

An Iraqi staff member on the UNJLC team was another asset. By knowing the culture and his way around the city and the industry, he would go with his colleagues and speak to the relevant parties in their own language, in their own way, and achieve results beyond the reach of a non-Iraqi.

With an increase in economic activity and the deterioration of the security situation, long queues started to appear at petrol stations all over the country. Some agencies had arranged to refuel at special pumps reserved for government vehicles. Concerns for security rose when one UN vehicle was shot at on a petrol station forecourt, presumably by a disgruntled member of the public who assumed that it was queue-jumping. Frustrated and infuriated members of the public, anxious about jobs and security and agitated in the summer heat, became an additional source of security concerns. The Iraqi UNJLC staff member thanks to his relationship with the Ministry and its operating entities was able to arrange a discreet solution: refuel for UN vehicles at Ministry fuel stations, behind walls or near the refinery. In another occasion, UNJLC was instrumental in securing an independent fuel supply for UN premises, ensuring continuity in the UN's operations in the Basra region.

The team's earlier work on fuel contingency plans for UN agencies proved valuable not at the point of initial entry into Iraq as expected, but later. Limited domestic supplies, unforeseen surges in public demand, and a deteriorating security situation had demonstrated the importance of independent fuel supplies for the UN.

Information

Once again, UNJLC was an unparalleled source of logistics-related information for an audience that encompassed the humanitarian community, donors, and the population. One of its outputs was a weekly bulletin on the country's fuel situation. As its output was accessible to the public, it had to be cautious not to divulge information that could be utilized by saboteurs.

As it was inappropriate to repeat the Ministry's or RIO's information verbatim, UNJLC established its own unique and eclectic range of information resources for its fuel bulletins. These included observations on the streets of Baghdad, Basra and Erbil. At the micro level it spoke to Iraqi housewives lining up for LPG cylinders, gauged how long people waited to refuel their cars, and tracked black market prices. At the macro level it tracked national production and imports, all to verify how supply matched, or was expected to meet, demand. It added value by providing analysis, not just information.

The analytical work of the Fuel Team helped to reinforce the assumption that kerosene production in the summer would be insufficient to build the necessary stockpiles and that imports would be necessary for the winter. It also demonstrated that LPG supply would be a major issue, as later proved by the Basra riots in August 2003. By analyzing the information on hand, UNJLC also concluded that there was probably a lot more smuggling of oil products out of Iraq than had generally been assumed and was able to confirm this with on-the-ground visits to smuggling ports in the south.

Perhaps the importance of information in mobilizing solutions was demonstrated most clearly when *the New York Times*, *Washington Post* and several influential British newspapers picked up on issues raised in UNJLC fuel bulletins at a time when the US Congress was considering an appropriations bill for Iraq.

The fuel bulletins filled an information vacuum at a time when good information was scarce, and people listened. With the freedom to act, think and be flexible, UNJLC was able to add enormous value. UNJLC did not have the resources to do things itself, but it was able to provide good advice to people who could make a difference as the bulletins ended up on the desks of key senior figures, including the Coalition Provisional Authority's (CPA) Administrator Paul Bremer.

Bremer found the information provided by the UNJLC bulletins credible and written from a different perspective than that of his own organization. Several members of the UNJLC team were invited to his office to explain how the information was collated and analyzed and to provide additional insight. During its meeting UNJLC explained that much of the analysis was based on information produced by the Coalition, but summarized and combined with other sources. It also seized the opportunity to highlight the humanitarian perspective of fuels to the most senior Coalition authorities. In late August 2003, the UNJLC was invited to represent the humanitarian community at a fuels and power conference convened by the Coalition at the headquarters of the US Central Command in Tampa, Florida, attended by senior Iraqi officials and key figures in the reconstruction effort. On that occasion, among other things, UNJLC had the opportunity to verify how its fuel bulletins had influenced key decision makers.

Following the bombing of UN headquarters at the Canal Hotel in Baghdad on 19 August 2003, UNJLC was obliged to withdraw from Iraq along with much of the rest of the humanitarian community. It continued its fuels reporting until November, but without staff on the ground this became increasingly difficult. Phase I of UNJLC's operations in Iraq ended formally in February 2004.

Experience gained in Iraq in the fuels area found immediate application in new crises such as Liberia and Sudan. In preparation for these crises, a strategic, cross-cutting approach to analysis was taken, embracing the needs of the entire humanitarian community as opposed to individual actors. Given the importance of fuels supply for all parties, it demanded an institutionalized approach. To institutionalize the fuels function within the UNJLC, there was a need for strategic relationships with OPEC member states, major international oil companies, specialist commercial fuel organizations, and donors.

7.3 The Institutionalization Process

In this section, we review and describe the institutionalization process, the modus operandi and the typical services of the UNJLC.

The UNJLC concept evolved and is still evolving thanks to the contribution of its architect, caretaker and lead operators. The contribution of the UNJLC architect, David Kaatrud,

Chief of Logistics at WFP from 2000 to 2004 and the Director, Coordination and Response Division at OCHA since September 2006, was fundamental in the successful development of the concept.

At the inception of the concept back in 1996, Kaatrud, operating out of Uganda, was the Regional Director of WFP for the Great Lakes region. Far from having a well-developed vision of the concept, he discovered the potentials of the concept through its application in a range of subsequent emergencies. During those ad hoc activations, he identified niche areas where the UNJLC concept could be successfully applied and proposed new combinations of resources. After being promoted to the Head of Logistics of WFP in 2000, Kaatrud started to work on the consolidation of the concept out of WFP's headquarters in Rome. As ideas crystallized, he strengthened the organizational structure of the UNJLC, better defined its mandate and the division of roles between the different managerial functions. His perseverance, charisma and strong leadership were instrumental in the institutionalization of the concept by IASC.

Contrary to the other inter-agency coordination mechanisms that are housed in OCHA, given the UNJLC's operational nature, in March 2001, the IASC endorsed the concept under the aegis of WFP. Donors believe that the UNJLC should always be hosted by an operational UN agency. Given WFP's leadership in logistics, they found it natural for WFP to host the UNJLC and for the UNJLC to build on WFP know-how and resources. In March 2002, after the successful deployment of the UNJLC in the Afghan crisis, the facility was recognized by IASC as a permanent part of the UN's humanitarian response structure under WFP custodianship. In October of that year, the UNJLC Core Unit was established at WFP headquarters in Rome, Italy, and by November, IASC endorsed the UNJLC Activation Protocol.

In its custodian role, WFP is responsible for mobilizing the requisite resources for each UNJLC deployment through dedicated projects raised through the OCHA-led Consolidated Appeal Process. The Core Unit, hosted by WFP, calls upon its support services (administrative, financial, communications, IT, etc.) and leverages its standby agreements and partnerships with other organizations. While WFP is more a contributor than a beneficiary of the UNJLC's services, it still benefits directly from the UNJLC's 'collective bargaining' operations such as those with relevant authorities and service

providers and activities that aimed at improving the overall operational environment (road repairs, snow removal, warehouse space, etc.). There is also a significant indirect benefit to WFP, as long as the UNJLC provided services to smaller agencies that in the past relied on WFP support and advice. As summarized in Figure 7.7, the Core Unit provides a number of services. It ensures continuity in-between emergencies, examines emerging crises, designs UNJLC interventions, deploys UNJLCs, and markets and builds an understanding about the UNJLC concept with key stakeholders and external actors. The Core Unit takes the lead in inter-agency contingency planning, acts as a crisis barometer, and builds the human and system infrastructure required for quick deployments.

Figure 7.7 – The Services & Activities of the UNJLC Core Unit

| Activities | Description/Examples |
|-----------------|---|
| Conceptual Arm | <ul style="list-style-type: none"> • Coordinate inter-agency contingency planning • Monitor, crisis barometer • Establish norms, standards and procedures • Build logistics capability • Create operational and information support systems • Provide forum for discussing general logistics issues • Develop a communication strategy and mount an information campaign • Lead global logistics coordination initiatives |
| Operational Arm | <ul style="list-style-type: none"> • Ready to react to emergencies • Design and prepare UNJLC deployments • Train logisticians |

Source: INSEAD case study: Samii, R. & L. N. Van Wassenhove, “UNJLC: An Operational and Conceptual Inter-Agency Logistics Platform” (05/2004-5213).

Agencies and donors had different perceptions of the WFP-UNJLC custodian-customer relationship. While some considered the UNJLC the baby of WFP, others sensed the tensions between the two, viewing it more as its step-child. The fact that the WFP Chief of Logistics was also the Head of UNJLC eased tension. Agencies and donors concurred that he had managed the agency relationships in a very tactful manner by keeping WFP ashore and not entering in competition with any agency. The UNJLC had maintained its autonomy and neutrality without privileging any agency in its operations. While a rotating custodianship of the UNJLC among the agencies was a desired evolution by some, there

was recognition that no agency was ready to run with the concept, at least in the foreseeable future.

The Activation and Demobilization Process

Up until the endorsement of the Activation Protocol by IASC in late 2002, UNJLCs were set up in an *ad hoc* fashion. The Protocol envisages a rapid inter-agency consultative process orchestrated by OCHA. Today, this core group, accessible at short notice, decides on the activation of the UNJLC within 24 to 48 hours from the disaster. The purpose of the consultation is to take into account the complexity of the emergency; determine the need for, duration and scale of a UNJLC; as well as its entry and exit strategies. The consultation team assesses the scale of existing humanitarian operations in the affected area, the number of agencies and actors potentially involved in the response (military, combatant and peacekeeping forces, etc.), and UNJLC's eventual deployment requirements in terms of assets, financial and human resources. It then evaluates the existence of major logistics failure modes and eventual need for Military and Civil Defense Assets (MCDAs) before deciding on the activation of the UNJLC. Based on these discussions, the UNJLC makes its own recommendation on the need for a UNJLC. A full-blown UNJLC is not always required. For example, where there are good local capabilities and perhaps only one bottleneck, the UNJLC could take on an advisory role. When the emergency involved the intervention of two main agencies, coordination could be internalized. When the issue is largely uni-sectoral, e.g., food, one lead agency could assume the coordination role. To better manage expectations, however, the UNJLC intended to articulate the pre-conditions for a UNJLC. Once the decision to activate the UNJLC is made, the IASC delegates the coordination of humanitarian logistics to the structure. From that point onwards, the UNJLC becomes responsible for the optimal use of scarce logistics resources as well as the provision of flexible and innovative logistics solutions.

Agencies concurred with the activation approach pursued by the UNJLC. The UNJLC is to intervene and preserve its strength where it could make a difference, i.e., in big acute emergencies, where there are real logistics challenges. Donors supported selective deployments and the provision of a wide range of options from advisory services to surgical interventions (e.g., Haiti) to full-blown deployments.

The UNJLC distinguishes between natural and complex disasters. Given the short response time for natural disasters, to meet agency expectations it has to be prepared to react swiftly with credibility and at an appropriate scale, or extend its support otherwise. Depending on the scale of a natural disaster, to ensure professional logistics assessment and support to the humanitarian community, it envisages the attachment of logistician(s) to OCHA's UNDAC.

Agencies expect the UNJLC to be involved in the preparedness phase of imminent crises when they are planning their operations and pre-positioning goods. In this early phase, there is a need to analyze, coordinate and complement agency commodity pipelines and asset requirements to ensure a responsive and cost-effective supply chain. Agencies believe that a combined perspective enables them to run optimal stock positions avoiding idle capacity and ensuring high turnaround of goods. The UNJLC's involvement in the contingency planning helps it better address client needs and prepare for its own deployment in terms of building an information platform, identifying potential bottlenecks and staffing.

While the Activation Protocol set the process and criteria for the UNJLC deployments, improvements on the exit strategy were under way. To avoid an interruption in services, there is a need for a set of milestones and indicators (humanitarian, political, financial, etc.) to guide the timing of the demobilization of a UNJLC deployment. Despite the fact that the UNJLC has to adapt to events and needs as they unfold, it realizes the importance of an appropriate hand-over period, identification of a suitable counterpart institution and investment in capacity building right from the beginning. A well-designed intervention with a workable exit strategy is of paramount importance. Agencies emphasize the need for a planned and communicated exit strategy in order to avoid surprises for users. It is important for all to know when the UNJLC is closing shop and which authority is taking over the provision of services still in demand.

Stakeholder Engagement

The UNJLC concept, having appeared spontaneously among field logisticians in the context of the eastern Zaire crisis, was far from a top-down initiative emanating from any agency headquarters. In its initial days, while it enjoyed certain credibility among

logisticians, it faced organizational resistance. Indeed, not many were prepared to realize and admit to the need for cooperation on logistics issues. Individual agencies, with their own mandate, tasks and priorities set about accomplishing them single-mindedly. In the past, even though people from different humanitarian agencies and NGOs lived and acted together during an emergency, they held bilateral negotiations with authorities and service providers. They didn't take the time to sit together and work issues out; on the contrary, they were proud to have negotiated the best deal. Today, the UNJLC was there to ensure coordination, resolve common bottlenecks, minimize duplication of efforts and eliminate wasteful competition and blackmail by service operators.

To have organizational buy-in, the head of the UNJLC, David Kaatrud, tried to dispel any possible misperceptions about the ambitions of WFP to overtake the logistics operations of the individual agencies. He carefully defined the interfaces with WFP, highlighting the UNJLC's inter-agency nature and coordination function. He took every opportunity at inter-agency gatherings to talk about the UNJLC and its approach, inviting the participants to get involved and second staff to the UNJLC Core Unit as well as its deployments. To instill a culture of cooperation, ensure an ongoing dialogue between the logistics personnel of the respective agencies, identify commonalities, and provide for a forum to discuss global logistics issues at a technical level, he insisted on quarterly inter-agency UNJLC meetings. The UNJLC was careful to assume a low profile. The nature of relief business demands visibility. For it to be sustainable, the UNJLC's low profile approach had to be balanced with adequate recognition from key stakeholders that the facility was a provider of value-added services. While the UNJLC got visibility with operational partners through its activities and website, it had no claims for media attention that went to each agency.

The nature and magnitude of recent emergencies were such that agencies often met on the ground and faced the same logistics problems. Understanding among agency logisticians improved, given their shared jargon. Key people leading the field operations identified common grounds for inter-agency cooperation and pursued them vigorously. Although agencies still competed for resources, there was a new mind-set, more trust among them.

The UNJLC provided an adequate response to donor quest for coordination. UNJLC eliminated parallel systems and pipelines and showed donors how it could save money. By

sharing facilities and assets and using each other's excess capacity, agencies proved that they are not competing on the market for the same goods, raising costs.

Contrary to other inter-agency coordination facilities such as UNDAC, which have received their mandate by the UN Secretary General, to ensure inter-agency acceptance, the head of UNJLC understood the need for the facility to be endorsed by the IASC.

The UNJLC needed the buy-in of two very different sets of clients. At one end, there are agencies with logistics capacity and sufficient financing for their activities. These are the ones that do not necessarily see the need to share resources in order to economize. At the other end, there are those humanitarian organizations within the UN and NGO constellation that have limited logistics resources and competency.

By contributing with information, staff and assets to UNJLC deployments, agencies help enhance the effectiveness of humanitarian logistics operations during emergencies. The benefits of UNJLC for those agencies with smaller logistics setups are numerous. For example, to ensure timely response to health-related issues, WHO assumes a coordination role with NGOs and health ministries worldwide. As a small mover of high value goods during emergencies, it tries to anticipate needs and preposition kits. To develop its brand and credibility as coordinators in the field of health, it needs to be seen on the emergency scene with its kits. However, it had limited logistics resources (e.g. only two logisticians in 2003). Through the UNJLC it could be operational in the field. Instead of continuously struggling with logistics issues single-handedly, it called upon UNJLC services. For smaller agencies, the UNJLC had been a predictable product and had proven its value in action. For example in Iraq, it had supported the operations of other agencies, always attended to their requests.

Collaboration between agency logisticians and the advent of the UNJLC had helped strengthen the profile of logistics in the respective organizations. For example WHO medical experts in the field were often forced to consult the UNJLC for logistics-related information. WHO's involvement in complex emergencies had made many understand the importance of the UNJLC in areas such as clearing bottlenecks and coordinating with the military.

Apart from relevant UN agencies and the Red Cross Movement, another group that had benefited from the UNJLC services was the NGO community. NGOs regularly participated in UNJLC Task Force and logistics coordination meetings in the field. They are invited to UNJLC training events and, at the headquarters level, are part of the IASC consultative mechanism. Efficient coordination mechanisms between the NGO community, a typically large and diverse group, and the UNJLC deployments, typically small setups, however, did present some challenges.

The need for an adequately resourced Core Unit with a conceptual and operational arm is well recognized. Core capability is required in between emergencies as well as at the outset. Critical people need to be available at the Core Unit to ensure continuity, examine emerging crises, drive operations and be immediately deployed on the ground. Only Core Unit level staff would have the required skill mix to be operational and effective on the ground as of day one: knowledge of the UN system and humanitarian world, coupled with technical and country experience. To staff the various UNJLC cells, it is then necessary to build and call upon a strong roster of logisticians and short-term secondments.

The UNJLC recognizes different levels of agency participation to the facility from full-time secondments, participation in logistics coordination and Task Force meetings at the field level to provision of logistics information. To create awareness around and train the logistician constellation on the concept paving the road to secondments, the UNJLC engages in systematic training sessions, hosted by different agencies, for humanitarian and donor organization logisticians.

For example, the wide agency representation – UN, donors, the Red Cross Movement and NGOs – in the training session, held in Dubai in December 2003, was a clear sign of the growing understanding of the importance of logistics, the need for coordination, and the credibility of the UNJLC to address these issues. Appreciation went beyond the UNJLC-related issues. While donor agency logisticians value these sessions as a means to get an insight into the UN system and unearth concrete collaboration opportunities, agencies with weaker logistics setups recognize the UNJLC's role in enhancing internal logistics capability.

Although UNJLC expect limited secondments to the facility from the NGO community because of their limited capacity, and none from the Red Cross Movement because of their

mandate and their need for an arm's length relationship with the UN, their understanding of the concept and cooperation was fundamental. By the end of 2003, a total of about 100 people representing 30 UN agencies and NGOs, as well as 10 donor organizations, had attended the four one-week UNJLC training sessions.

The UNJLC could pride itself on a good record of secondments: up to nine agencies and standby partners (WFP, WHO, UNICEF, UNHCR, IOM, DFID, GTZ, SHA, and Canadem) had already seconded to the UNJLC. The level of the UNJLC secondments is the facility's acid test, a demonstration of its relevance to the humanitarian community as no agency is so well provided with staff to afford secondments. For most agencies, secondments are a means to ensure a greater and more proactive involvement in the development of the concept. However were agencies to fall short in providing the required human resources, it is WFP/UNJLC's responsibility to bridge the gap.

Although in order to cover the inter-agency aspect of the UNJLC it is essential to secure agency secondments, the quality of seconded staff is equally important. To be credible, it is crucial to have experienced staff in the right positions at the right time. The UNJLC requires trained and experienced staff with managerial as well as field experience that can act independently. With the right team, it can achieve more and faster. With no time to train staff at the outset of an emergency, the UNJLC worked toward a standby roster of top agency staff.

While donors in general tend to be reluctant to fund intangible activities such as preparedness and coordination, operational donors that deal with logistics were among the first to see the merits of the UNJLC concept. For a long time, DFID had felt that the UN humanitarian agencies needed to improve and professionalize the way they went about their operations in complex emergencies. After observing how agencies tended to develop capabilities in parallel and duplication to each other, DFID saw a need for a logistics coordination platform that could provide a collective response to logistics bottlenecks. So when the Chief of Logistics of WFP presented the UNJLC concept to them, they did not hesitate to support it.

Another critical donor that was among the first to extend its support to the UNJLC was USAID. USAID believed that logistics presents itself as a natural field to coordinate. As

such, it has provided funding to the UNJLC Core Unit as well as to the Afghan, Iraq, and Liberia operations. USAID commended the dynamic and able leadership of the Head of UNJLC and the quality and competence of the UNJLC team. According to them, the UNJLC has shown its capability to deliver and add value to humanitarian operations, regardless of the operational contexts. Its track record in logistics coordination ensured their continuous support. To make sure the UNJLC remains credible and not under resourced to provide the services it is expected to deliver, DFID also continued its support. With a view to broadening its donor base, the UNJLC tries to create awareness and increase donor understanding of the UNJLC concept. By inviting donors to the UNJLC training sessions and through informal and formal presentations in relevant donor capitals, it continuously underscores the importance of logistics and need for coordination in emergency contexts.

Learning by Doing

With few precedents in the UN system and little guidance on how to establish an inter-agency facility within an existing operational agency, the UNJLC learnt by doing. In 2001 it worked hard on setting out the procedures. Today it has a UNJLC Field Operations Manual that provides a set of guidelines and defines an operational and flexible framework for the UNJLC deployment. Above all, the UNJLC views each deployment as an opportunity to draw some lessons, folding them into the next intervention. For example, the less successful response to the Bhuj 2001 earthquake highlighted major strategic and preparedness issues. They ranged from the need to have a rapid activation process to ensure fast deployment to the importance of adequate standby deployment capacity (flyaway kits) and funds. To be taken seriously, the UNJLC has to arrive quickly with coordination capability. Timely analysis and design of the intervention, consultation with relevant local authorities, as well as quick deployment are crucial.

As an inter-agency mechanism, the UNJLC relies heavily on agency secondments for its staffing. Before the Afghanistan crisis, agencies were asked to volunteer staff on a part-time basis. For the Afghan operation, a dedicated fund for secondments was set up. The cost-recovery mechanism put into place allowed for full secondments, augmenting overall human resources.

Secondment procedures, however, far from being harmonized across agencies, tended to be heavy and ill-defined. Delays in recruitment and remuneration were common. This, together with the lack of a proper feedback system to the mother organization on the performance and experience of the seconded staff, made the offer less palatable. The UNJLC had to resolve these administrative issues – from selection of staff, to their induction and after sales services to the seconding agency – before it could expect a higher inter-agency participation and the development of a solid roster. UNJLC was surprised to learn that there were no standard UN secondment procedures and related documentation. It had to come up with its own pro forma secondment agreements with each major agency. To address delays in invoicing and payments, it had dedicated HR staff working on the system.

Another lesson taken to heart from the Afghan deployment was the importance of prior communication and marketing of the UNJLC concept and services to field offices of concerned agencies. Usually, there is no time to inform and agree upon things at the outset of an emergency. Hence, in preparation for the Iraq emergency, a UNJLC planning officer sensitized and briefed UN agency country teams on the UNJLC. Informing and creating the right expectations was crucial to ensure cooperation on the operational level, once humanitarian operations initiate. Agencies also recognize their own responsibility. They also assist in promoting and marketing the UNJLC concept within their organizations.

The UNJLC services, such as logistics assessments, by virtue of building on WFP logistics expertise, at the beginning tended to be WFP-oriented. WFP often moves huge tonnage of limited product types (e.g., grain), while most of the other agencies deal with a wide and diverse set of goods, some in small volumes. Goods such as medicines require a more complex supply chain (e.g., cold storage) and different receiving capability at destination. As an inter-agency facility, the UNJLC had become responsive to the needs of its constituencies. To be able to address stakeholder concerns, the UNJLC logistics skills were widened. This was realized with the support of the concerned agencies. As it was not sufficient to address only WFP's logistics requirements, UNJLC established a relationship between food and NFIs, and between bulk and containerized shipments. To provide meaningful information to the agencies, the UNJLC started to work on a supply tracking

system, which would draw upon data from the individual agencies to provide a composite picture of relief flows in a given emergency.

To get an independent opinion on the UNJLC's performance and identify lessons and best practices, the UNJLC deployments were reviewed by a team of external consultants. "Given the importance of the recent deployments – Afghanistan, Iraq and Liberia – it was important for both its own learning as well as the institutionalization process to get objective feedback on user requirement from all relevant stakeholders. It is important to constantly evaluate and identify the key needs of the UNJLC users for the concept to remain demand-driven and relevant.

Deeper and Wider Call for Common Services

Donors are keen to see agencies achieve their respective mandates in a collaborative as opposed to a competitive environment. They press for common services, sharing of resources in a number of areas. Apart from logistics (transportation, warehousing, procurement, and aviation) that can be rationalized and shared within the UN, donors see potential in other key services including information, security, civil military coordination, air services, and telecommunication.

In 2003, the concept of common services was high on IASC's agenda that together with the agencies had to work on its definition, allocation, activation modalities, and reporting structure. As the facilitator in logistics issues of common concern and the most successful common service provider, the UNJLC assumed an active role in the debate and the process. To allow for greater flexibility in emergency response, and while aiming to augment the collective logistics capacity, the UNJLC views humanitarian relief in a modular as opposed to an integrated system whereby, within defined agency mandates, each agency maintains its own logistics capabilities. Bearing this in mind, the UNJLC work on common services aimed to look at generic but traditionally unaddressed logistics issues such as customs and fuel. With a view to identifying areas that can benefit from a coordinated approach such as reserve depots, it also looked at assets and resources with a global application.

7.4 Discussion

In this section, we discuss the different aspects of the UNJLC, the non-operational humanitarian organization. We shall start by discussing the different structural components of the UNJLC structure. We then discuss how the services of the UNJLC contribute to the mitigation of failure modes and the performance of those humanitarian organizations using them. In section 7.4.3, we highlight the contribution of the UNJLC structure to its performance. To understand what ensures a successful facility, we identify the UNJLC's strategic and operational building blocks. Finally we discuss the risks and opportunities facing the UNJLC and those humanitarian organizations calling upon its services.

7.4.1 The Structure of the UNJLC

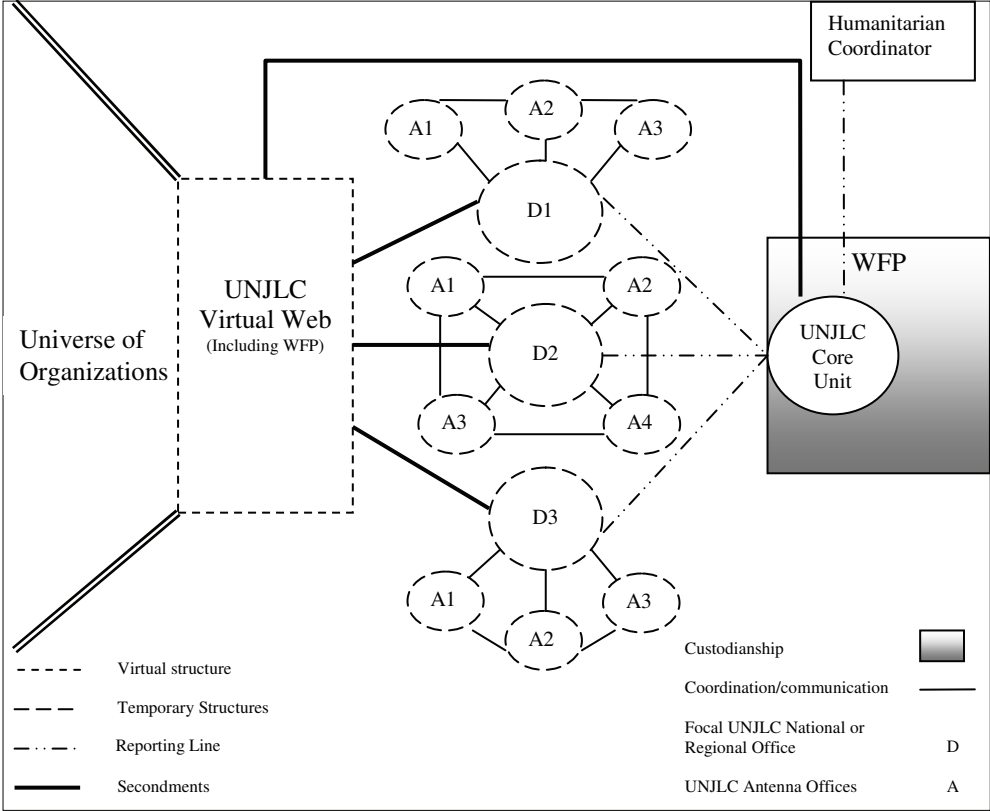
The UNJLC structure includes a virtual web, a permanent Core Unit, UNJLC deployments, and UNJLC antenna offices (Figure 7.8).

Contrary to the IFRC-NS network, which is a closed, internal one, the UNJLC virtual web is an open, open-ended, and a relatively stable network. Its members are organizations represented in the IASC, donor countries and their development institutions, CSOs, and private sector companies. The participation of some organizations within the NGO community, donor development institutions, CSOs and private sector to the UNJLC deployments is a result of their on-going cooperation relationship with WFP (see also Chapter 8).

As depicted in Figure 7.8, contrary to the other inter-agency coordination mechanisms housed in OCHA, given the operational nature of the UNJLC, the facility is hosted by WFP, the UN's largest logistics actor, at its headquarters in Rome, Italy. The rationale of placing the UNJLC under the custodianship of WFP is well anchored in technical reasons. WFP known for its leadership in logistics was the obvious host as it allows the UNJLC to draw upon the organization's extensive logistics resource and expertise. With the largest and the most performing logistics setup, it has experience in managing other inter-agency services (See Chapter 8). Up until the establishment of the UNJLC, it regularly assisted UN agencies providers of small volumes of high value goods such as medicine in their

logistics operations. It also had prior experience in forging partnerships with other organizations in the area of logistics. WFP occupies an information-rich position within the humanitarian community in terms of knowledge about the availability and potential configuration of inter-agency resources.

Figure 7.8 – The UNJLC Structure



The Core Unit is staffed with a critical mass of experts seconded from humanitarian organizations. To address and overcome potential incompatibilities among humanitarian organizations, the UNJLC Core Unit has developed an operations manual and conducts training sessions. To create and sustain partnerships at the virtual web level, it organizes networking sessions and encourages the secondment of experts with knowledge of the UN system and humanitarian world to its Core Unit. The central position occupied by the

UNJLC Core Unit within the virtual organization allows it to drive the facility's agenda and to enforce decisions regarding the life cycle of UNJLC deployments.

Deployments activated on a needs-basis depend on a virtual web for their resources. For each UNJLC deployment, a focal UNJLC coordination office is established. Although it reports directly to the Head of the UNJLC Core Unit, the structure is integrated back into the UN's country response coordination structure and the humanitarian coordinator.

In order to cater to the needs of its constituency, the UNJLC puts logistics support as close to the crisis as possible through the opening and closing down temporary antenna offices, each headed by a lead operator and manned with seconded staff. While logistics issues continue to be dealt with at the focal and Core Unit level, the UNJLC antenna offices help agency logisticians in their planning and implementation efforts. For example, during the Afghanistan crisis the UNJLC antenna office in Hirat broke the local truck cartel. To address the sharp rise in trucking prices from and to the city, it conducted a technical study on the Afghan transport sector and negotiated a transport price grid on behalf of the humanitarian community. The initiative helped the humanitarian community save on its operational cost increasing its outreach.

Designed as a dynamic and flexible facility that can anticipate, respond and adapt to emerging needs, the UNJLC antenna offices address the specifics of each emergency at key logistics nodes. With the removal of logistics bottlenecks, the need for intensified coordination disappears. After establishing a local logistics coordination structure, the UNJLC dismantles the concerned antenna office. For example, during the Afghanistan crisis, the UNJLC first set up a series of antenna offices in neighboring countries. As bottlenecks shifted from transport corridors to in-country, offices in the bordering countries were closed. After the fall of each major Afghan city, the UNJLC established new antenna offices within the country.

As an emergency response facility, the UNJLC is deactivated soon after the emergency phase. To ensure a successful handover, the UNJLC tries to ensure transfer of services still in demand to viable logistics coordination structures. To maximize the sustainability of its interventions and the transfer of responsibilities to national entities, the UNJLC tries, within its means, to train and integrate local government personnel in its activities.

The UNJLC results in intra, inter and extra-organizational linkages. An example of intra-organizational linkage created by UNJLC field offices during an emergency is provided by the activities of the two UNJLC offices in Uzbekistan during the Afghanistan crisis. The UNJLC office in the capital city of Uzbekistan, Tashkent, had a lobbying, representation and project management function while the UNJLC office in the border city of Termez in Uzbekistan was there to address emerging logistics bottlenecks. Together, they restored barge, rail and road transportation at the Termez crossing point and stipulated the modalities of humanitarian cargo in transit to Afghanistan. The UNJLC Termez resulted in inter and extra-organizational linkages. By coordinating and facilitating the activities of different humanitarian organizations through out the emergency, it created an intense relationship with the humanitarian community, which is an inter-organizational linkage. When it became the government's focal point for the transportation of humanitarian cargo into Afghanistan, it assisted the authorities in their cooperation and coordination effort with the humanitarian community, an extra-organizational linkage.

Another example of extra-organizational linkages is provided by the fuel cell activated during the 2003 Iraq crisis. During the emergency, the services of the UNJLC fuel cell became of particular relevance to the US Army Corps of Engineers' Task Force, Restore Iraqi Oil (RIO). RIO leveraged the UNJLC fuel cell's experience, expertise, knowledge and analytical capability to meet its goal: restore the Iraqi fuel industry (see also section 7.4.5.2).

A much valued service of the UNJLC is in the area of information. Information generated by the UNJLC is not only utilized by humanitarian staff but also by information management specialists, desk officers and contingency planners of operational donors. For example, during the Afghan and Iraq crises, there were times that the only source of logistics-related information for donors, such as USAID and DFID, was the UNJLC. In the context of the Iraq emergency, when DFID received a government request on the fuel situation in Iraq, instead of putting someone on a desk research job and make him/her work around the clock, all it did was consult the UNJLC website downloading the fuel bulletins.

7.4.2 UNJLC Services

The UNJLC acts as an inter- and extra-organizational logistics coordination platform. Throughout an emergency it organizes regular meetings with the humanitarian community and key stakeholders to discuss and take strategic and operational decisions. As summarized in Figure 7.9, the UNJLC provides a range of services to mitigate the impact of failure modes that result in dependencies and duplications during disaster response. The following paragraphs provide examples of UNJLC contribution in alleviating the impact of potential failure modes.

Figure 7.9 – UNJLC Mitigation Services and Activities

| Activities | Description/Examples |
|--|--|
| Address supply failure modes | <ul style="list-style-type: none"> • Joint Contingency Planning • Monitor agency inventory buildups • Address orphan issues such as fuels |
| Identification and clearing of transport failure modes | <ul style="list-style-type: none"> • Joint Contingency Planning • Negotiate customs tariff and exemptions • Streamline customs procedures • Open up air and surface corridors • Augment transport capacity at border crossing points • Negotiate landing rights • Ensure best use of assets and avoid wastage • Ensure Civil-Military coordination |
| Identification and clearing of facility failure modes | <ul style="list-style-type: none"> • Joint Contingency Planning • Negotiate, coordinate, prioritize, de-conflict the use of storage facilities with the military, donors and other agencies • Monitor storage capacity • Build a network of offices • Identify and negotiate access to distribution network |
| Addressing communication & information related failure modes | <ul style="list-style-type: none"> • Conduct technical assessments/surveys • Provide mapping and GIS services • Manage a logistics information platform |
| Addressing HR failure mode | <ul style="list-style-type: none"> • Augment logistics capacity • Provide technical advice • Streamline immigration procedures for humanitarian staff • Capacity building: train national counterpart institutions |

Source: Adapted from INSEAD case study: Samii, R. & L. N. Van Wassenhove, "UNJLC: An Operational and Conceptual Inter-Agency Logistics Platform" (05/2004-5213).

Supply Failure Modes. For emerging emergencies, the UNJLC organizes joint contingency planning sessions. The contingency planning exercise allows the humanitarian community to share their knowledge and information as well as their respective agency-specific contingency plans with each other. The exercise helps to better quantify needs, identify important external and internal corridors and routes, highlight potential bottlenecks and need for infrastructure interventions, optimize the level of humanitarian inventory, and draw-up a pre-positioning strategy.

For emerging disasters, such as the 2003 Iraq crisis, with a view to optimize the level of humanitarian inventory along corridors and ensure a rapid response, the UNJLC took the lead in contingency planning. For example, to avoid a return to the more costly air operations during the Afghan crisis, the UNJLC played a pivotal role in the design and implementation of the Afghanistan 2002-2003 winterization strategy which ensured maximum use of surface transportation and the pre-positioning of goods before the winter season.

Parallel humanitarian supply chains may end up competing against a limited number of items or result in excess inventory. During a crisis, in order to avoid supply failure modes related to stock-outs or excess inventory, to the extent possible, The UNJLC collects information on agency inventories and ensures its dissemination among relevant parties.

Since the 2003 Iraq crisis, the UNJLC has started to address the “orphan” issue of fuels sourcing. As the availability of fuels affects humanitarian operations, a combined as opposed to individual approach to its sourcing is deemed appropriate. The UNJLC addresses the need of the entire humanitarian community with a view to avoid wasteful competition, achieve economies of scale and consistency of supply.

Transport Failure Modes. Lack of transport assets is a common and recurrent concern for humanitarian operators. Often local authorities own limited transport assets and the likelihood that humanitarian organizations dispose of transport assets close to the emergency area is also slim. Indeed, they manage or own limited transport assets given the implied upfront investment, the prohibitive cost of moving fleets from one disaster scene to another and the unpredictability regarding the timing and location of the next disaster.

In natural disasters, lack of sufficient number of helicopters is a recurrent issue. Examples include the 2000 and 2001 Mozambique floods and the 2005 Pakistan earthquake. In the

case of the Mozambique floods, UNJLC assumed an asset management role and as such ensured the optimal use of transport assets among humanitarian agencies. When UNJLC does not have an asset management function, it liaises with the concerned military forces.

To overcome the lack of transport assets, usually larger and financially stronger organizations build up and mobilize them. As was the case during the 1996 Zaire crisis, without interfering with an organization's logistics systems and arrangements, the UNJLC ensured the use of excess transport capacity available in the system for the movement of relief items mobilized by smaller, less-prepared or financially endowed organizations. By combining and providing access to complementary and indivisible physical capacity, the UNJLC, after prioritizing the movement of goods and people, matches eventual aircraft overcapacity with outstanding transport requests, optimizing the use of assets. This service is of particular relevance to those small organizations that, for example, need to combine their resources with those of other organizations - relief items with relief items or relief items with transport capacity - in order to achieve their mandate.

To ensure access to neighboring country physical infrastructure, the UNJLC negotiates the use of border assets with relevant authorities. For example, during the Afghanistan crisis when the country's airspace was temporarily closed to humanitarian air operations, the UNJLC negotiated a humanitarian air corridor and pursued negotiations with combatant forces and local authorities on the use of key infrastructure such as airfields and landing spots. In terms of airlifts, it de-conflicted humanitarian operations from military operations.

During the Afghanistan crisis demand for transport capacity and services outstripped supply. To avoid wasteful competition between agencies and in order to keep operational costs under control, apart from restoring overall transportation capacity through negotiations with port and railway authorities, the UNJLC helped break the transport cartel by negotiating a common and reduced transport tariffs for humanitarian traffic.

To ensure the smooth influx and movement of relief items, humanitarian organizations, regardless of size and focus, have to overcome a range of administrative hurdles (customs, immigration, etc.). For example, during the Afghan crisis, on behalf of the humanitarian

community, the UNJLC negotiated with the port and customs authorities of Uzbekistan and Pakistan.

To ensure the speedy and efficient implementation of infrastructure rehabilitation clearance projects on seriously affected, mined or deteriorated transport infrastructure projects, the UNJLC conducts infrastructure surveys and assessments. This is with a view to identify, budget and prioritize key interventions and present it to donors for funding. For example during the Afghanistan crisis, after identifying priority rehabilitation projects, it approached donors for funding. To avoid duplication of funding on the same project and ensure timely execution of critical ones, it matched projects with expressed donor interests. When execution started, it monitored the status of the projects with a view to keep logistics planners duly informed of the progress. To manage the process, it organized coordination meetings with donors, government authorities, relevant humanitarian organizations and implementing partners.

Facility Failure Modes. To overcome the shortage of storage, UNJLC negotiates the use of public warehousing facilities for humanitarian agencies. During the Afghanistan crisis, it brokered storage sharing arrangements between agencies, and de-conflicted the use of warehouse facilities with combatant forces. During response operations, it also forewarns agencies of lack of warehousing capacity across geographies.

For country-wide emergency operations, to best serve the humanitarian community and the afflicted population, the UNJLC quickly builds up its physical network of offices in the country. It also assists implementing partners in the building up of a distribution network - schools, mosques, churches, etc. - through negotiations with the relevant authorities.

Communication Failure Modes. To be able to move cargo, humanitarian logisticians require a range of logistics-related information. During the planning phase, they require a series of country specific information such as those related to the geography, climate, population, food habits, living conditions of the population. Demographic-related information needs to be combined with a range of operational and logistics related information such as those related to the infrastructure, duty customs and regulations of the concerned region.

Logisticians seeking information on the status, availability, rates of logistics assets; corridor and in-country infrastructure; regional stock positions; weather forecasts and

contact details of agency logistics personnel regularly can consult the UNJLC website. The UNJLC information brokerage function replaces a series of agency-specific, stand-alone, competing and time-consuming information compilation and analysis initiatives.

For large-scale emergencies, the UNJLC has become an unparalleled source of logistics-related information for small and big organizations. It levels out the availability of information between organizations and accelerates its flow. To ensure that interruption in logistics-related infrastructure is duly factored in response plans, UNJLC provides, on continuous basis, up-to-date information on the status and accessibility of transport infrastructure. This enables logisticians to quickly develop and modify their plans and ensure timely delivery while minimizing planning costs. It also brings an element of cohesive planning as organizations worked off the same core data. For example, during the Iraq 2003 crisis, the UNJLC was the only source of logistics-related information for as wide an audience as the logistics planners of the humanitarian community, donors, occupying forces and the population.

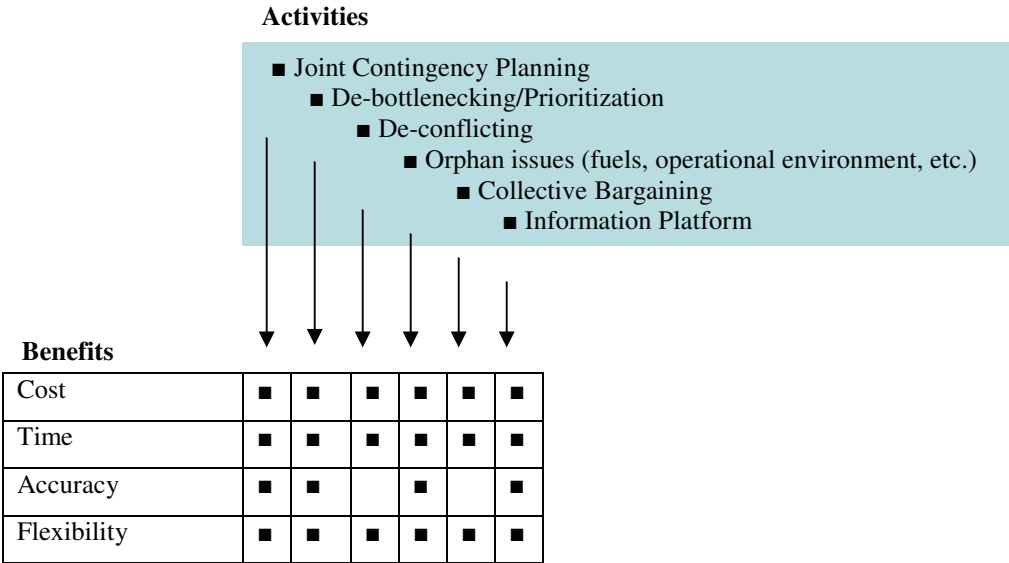
To avoid any operational bottleneck upon arrival, the UNJLC provides information on viable routes, receiving capability at final destination, cargo specifications and provides suggestions on the most adequate transportation modes. For instance, during the Afghanistan crisis as long as humanitarian cargo moved through regional transit points, UNJLC provided information on their status and capacity. As soon as humanitarian activities shifted from the use of corridors to that of internal infrastructure, UNJLC information and analysis started to cover interior airfields and road networks.

To improve the overall quality of logistics planning and operations and to overcome communication failure modes, the UNJLC conducts infrastructure surveys and sectoral technical assessments and flags temporary constraints. For example, during the Liberia crisis, the UNJLC aimed to improve the overall quality of logistics planning through mapping services and a series of sectoral technical assessments for fuel, customs, air, ports and roads. Information on transportation and fuel costs and infrastructure surveys are very useful for organizations that stay beyond the critical stages of an emergency.

HR Failure Modes. Bearing in mind that humanitarian organizations typically respond to a number of geographically competing disasters, their logistics HR are often stretched

widely and thinly across geographies. Lean logistics departments, multiple and concurrent humanitarian response operations and important logistics requirements during large scale emergencies, result in an insufficient number of qualified logisticians dedicated to each emergencies. To overcome the HR failure mode, the UNJLC by providing logistics services augments the humanitarian community’s overall logistics capability and capacity. By mitigating the effects of failure modes, the UNJLC provides a range of value-adding services (Figure 7.10) that have the potential to impact the performance of the participating humanitarian organizations in terms of cost, timeliness, accuracy and flexibility.

Figure 7.10 – UNJLC Activities and Benefits



For example, by leading the joint-contingency planning exercise and subsequent coordination meetings during disaster response, the UNJLC can ensure a cost-effective, timely, accurate and flexible response. At the outset of a disaster, a number of competing and complementary logistics scenarios emerge with respect to channels, distances, vehicles, routes, suppliers, etc. Decision making within and among the responding humanitarian organization can be time consuming as it takes place in a complex network that includes the affected country, its neighbors as well as the headquarters of the involved organizations. The UNJLC, by providing for an inter-agency discussion and decision-

making forum, speeds up the decision-making process and avoids decisional paralysis. It also helps avoid conflicting decisions that may lead to the deterioration or creation of logistics bottlenecks.

Similarly, humanitarian organizations need to respond to rapidly changing or unexpected scenarios in a fast manner. As time is of essence during emergency relief, “time compressing” initiatives along the supply chain are welcomed. The information brokerage function of the UNJLC, along with its de-bottlenecking, de-conflicting and collective bargaining efforts, are among the “time compressing” contributions of the facility.

Information provided by the UNJLC helps avoid duplication of efforts and releases resources otherwise tied in information gathering activities. It enables logisticians to quickly develop their plans and ensure timely delivery. Information integration counters the bullwhip effect, supply distortion such as excessive item or stock buildups along certain corridors. For example, during the Afghanistan crisis, by monitoring stock buildups and the status of storage capacity, the UNJLC Hirat managed to avoid creation of a new bottleneck. It forewarned agencies planning to stock items in the city of the lack of storage capacity. The UNJLC creates knowledge at a lower cost and more speedily. It also optimizes its use and renders it a global public good by making it available to the entire humanitarian community and beyond through its website. The flow of information and knowledge and the creation and application of knowledge facilitated by the UNJLC allow individual organizations as well as the structure itself to act swiftly.

The UNJLC de-bottlenecking, de-conflicting and collective bargaining efforts replace a series of agency-specific, stand-alone, competing and time-consuming negotiations and information compilation and analysis initiatives. For example, UNJLC’s assistance in opening up of the Uzbek border or the Afghanistan airspace, closed at the outset of hostilities, for all humanitarian air and border operations avoided parallel and time-consuming negotiations, confusion and delays.

7.4.3 Contribution of the UNJLC to Relief Operations

This section discusses how the structure of the UNJLC is key to a fast, cost-effective, flexible and accurate response on the part of the humanitarian community.

Decision to activate the UNJLC occurs between 24 to 48 hours from an emergency. The rapid deployment of the focal UNJLC and the series of antenna offices in function of need ensure quick office network ramp-up and coverage.

The UNJLC operates along the following management concept: centralized direction provided by the Core Unit and decentralized decision-making at the regional and antenna level. More specifically, the Core Unit is responsible for the design of the UNJLC interventions and extends its support to the lead operator of each UNJLC deployment. However, for each UNJLC deployment, the lead operators manage local operations and provide overall guidance to staff in-charge of day-to-day decisions. It follows that the UNJLC regional and antenna offices are not constrained by rigid rules or prescribed actions. On the contrary, they rely on the creativity of their respective teams to address challenges and respond to new opportunities as they arise. More specifically, to ensure timely reaction, operational decisions are taken at the unit level. Problem flagging and solving is effectively incorporated in the daily decision-making and operating process of the UNJLC focal and antenna offices. Logistical tasks between various organizations is coordinated through use of cross-functional teams, limited programming of tasks and informal and frequent meetings between logisticians. It follows that the flat and decentralized structure of the UNJLC facilitates quick decision-making.

In terms of action, when the UNJLC antenna or focal office identifies a logistics bottleneck, it proceeds with negotiations with the relevant entity. A case in point is during the Afghan crisis when the UNJLC Hirat office, without referral to higher levels, addressed the unexpected lack of storage facility by brokering exchange agreements between agencies and liaising with Coalition and government authorities for the speedy transfer of storage capacity for humanitarian use.

One of the key services provided by the UNJLC is information. UNJLC is able to perform the information broker function effectively because of its structure: a series of UNJLC antenna and specialized cells. These antenna offices established strategically across a territory are close to a wide range of information sources and as such act, among other

things, as information collection nodes. The UNJLC fills the information vacuum at no cost for the user at a time when good information is scarce.

More specifically, the UNJLC office network assists humanitarian organizations address the surge in information demand. It helps overcome information disparity among agencies during the contingency planning and emergency response phases. For instance, during the Afghanistan crisis, to design and implement a response strategy for the forthcoming winter, humanitarian organizations required a range of data including an estimate of the target population, their distribution on the territory and status of access routes. The UNJLC office network collated the required information from a wide range of sources and ensured its divulgation among the concerned parties.

As knowledge and experience is spread amongst humanitarian organizations, the UNJLC leverages the wealth of human expertise and knowledge resources available in the virtual network. The UNJLC taps into knowledge available at headquarter and regional levels of humanitarian organizations and combines it with local knowledge and expertise of the field operators, UNJLC antenna offices and other stakeholders. Through the UNJLC, the humanitarian community can overcome knowledge asymmetries and gain access to knowledge assets that are tacit, not available on the market and costly or difficult to imitate.

An example is the UNJLC fuels cell set up during the Iraq crisis. This small unit was built on the skills, initiative and flexibility of its specialists, each with their own unique contribution, whether it be logistics, language, technical fuels knowledge, or writing and analytical ability, and the talent of getting on with people under difficult circumstances. Basically, UNJLC had planned for one scenario in terms of fuel provision and when a totally different role emerged it was able to adjust in a timely fashion and perform effectively. The UNJLC fuels cell manned with experts drew conclusions and produced information bulletins on the status of fuels availability by using a combination of publicly available information, own observations and knowledge, and field visits.

The UNJLC recognizes the different level of agency contribution. Members of the UNJLC virtual web enjoy the same rights and relationships are characterized by various degrees of dependence. The participation mechanism and philosophy of the UNJLC is such that, all

organizations, regardless of their size and level of contribution are full-fledged partners and can benefit from its services. It follows that through the UNJLC, agencies with small logistics setups and limited logistics capability can stimulate largeness by augmenting their logistics capacity and capability both during the planning and emergency response phase. By tapping into information previously accessible only to bigger organizations, they can make more accurate and faster decisions at no additional cost. Instead of struggling with logistics issues alone, they can rely on the UNJLC advice. Given their limited negotiating power, by joining the UNJLC they can operate more cost-effectively and flexibly in time-sensitive emergencies. For example, they can benefit from negotiations led by the UNJLC in terms of de-bottlenecking and de-conflicting the use of critical logistics assets.

The UNJLC structure and the linkages it creates are of particular value to emergency relief environments for three reasons. Firstly, they ensure speedy response by a temporary augmentation of resources (office facilities, assets, information) and capabilities (HR) at key geographical points. Second, they enable quick decision-making and coordinated action. Finally, they allow for the rapid adaptation of services to the changing and unexpected needs of the environment and clients.

7.4.4 The UNJLC Building Blocks

As discussed in section 3.2.1.2 of Chapter 3, the strategic alliance literature proposes a combination of factors as antecedents to a successful partnership. The virtual organization literature identifies a number of drivers as essential for the successful transition of firms from a stable network to a virtual web. A review of the operations of UNJLC in the disasters covered in section 7.2 and its institutionalization process allows us to identify the building blocks which have ensured the successful operationalization of the UNJLC. In the following two sub-sections, we discuss the contribution of a number of factors categorized as strategic or operational to the success of the UNJLC as a virtually organized inter-agency facility

7.4.4.1 Strategic Building Blocks

Trust. Since UNJLC's inception, its architect and the Core Unit engaged in trust building activities. During the institutionalization process, the numerous socialization opportunities created by UNJLC deployments (secondments, coordination efforts, etc.) as well as the UNJLC Core Unit in its caretaker function (UNJLC training sessions and coordination meetings) allowed for the nurturing of personal relationships and development of trust. To ensure stakeholder buy-in, the UNJLC managed to dispel any doubts about the logistics ambitions of the UNJLC. To further consolidate trust, it invited organizations to get actively involved in setting the direction and agenda of the UNJLC through secondments to the UNJLC Core Unit and its deployments.

Direction. The UNJLC is held together by the shared vision and values of those organizations committed to emergency relief that recognize the need for intensified logistics coordination during large-scale emergencies. The facility is configured to support two response models: inter-agency logistics coordination only or coordination plus asset management.

Communication. Communication is as important to the UNJLC as it is to any other organization. The UNJLC was quick in realizing the importance of prior communication and marketing for its success. However, it was slow in implementing a communication campaign and as a result suffered during its initial deployments.

The UNJLC communication campaigns address a select audience. They aim to raise awareness around the concept with key stakeholders, instill the feeling of ownership among web members and raise financing for UNJLC operations. They are not meant to gain visibility with the general public as that may overshadow the fund raising outreach of operational agencies.

Before any UNJLC deployment, to create the right expectations and ensure cooperation at the operational level, the UNJLC staff sensitize and inform relevant parties on the UNJLC concept by visiting countries potentially involved and affected by the crisis. To avoid misunderstandings and ensure cooperation right from the outset, the UNJLC takes time to consult with and brief local and neighbouring country authorities, NGOs as well as the representatives of UN agencies on the concept and mandate of the UNJLC.

For example, prior to the Iraq crisis, the UNJLC toured the Middle East to apprise relevant parties - donors, local authorities, field and headquarter staff of the UN system in general and the humanitarian agencies in particular - on the UNJLC concept. Concurrently, each participating organization is responsible for enhancing the understanding of the UNJLC concept within its own organization and network of contacts.

It is worth mentioning that unlike emerging disasters, for natural disasters the UNJLC may not have the time to advise relevant parties on the UNJLC concept. As such, it may fail to create the right expectations. This can compromise the desired level of cooperation at the field level at least during the early phases.

To create awareness around and train the logistician constellation on the concept paving the road to secondments, the UNJLC engages in systematic training sessions for humanitarian and donor logisticians.

To ensure a smooth withdrawal, the UNJLC is expected to communicate its exit strategy and timing to its clients advising them of the authority or structure that will continue providing services still in demand. The UNJLC has not always been successful in implementing - planning and communicating - a smooth withdrawal. For example during the Afghanistan crisis, it stayed beyond the emergency phase and faced some difficulties in ending its presence (see section 7.2.3.2). In addition, given the lack of an appropriate national structure able to take over services provided by the UNJLC, it had to discontinue some of the services still in demand.

Leadership. To ensure the relevance of the facility to the humanitarian community, a dynamic leadership was essential in developing the facility's mission; defining its culture, procedures and processes; marketing the concept among organizations committed to emergency relief; remaining connected and receptive to the challenges and opportunities facing the concept; and formalizing the lessons learnt exercise through independent UNJLC reviews.

At the outset, to overcome agency skepticisms and achieve his vision, the Head of the UNJLC, David Kaatrud used his social contracting skills and social capital - obligation, trust, gratitude, liking and friendships. He concurrently institutionalized the UNJLC concept through IASC and ensured the participation and buy-in of key humanitarian organizations.

With no cargo of its own to move, Kaatrud highlighted the neutral nature of the UNJLC. He emphasized the capability of the UNJLC to task scarce resources, set priorities and coordinate operations in full acknowledgment and respect of individual agency logistics structures and systems. To market and ensure adherence to the concept, he created socializing and networking opportunities in form of formal and informal meetings and training sessions. By using his social capital and a series of tactics like institutionalizing the UNJLC through the IASC, he legitimized a concept that went beyond the boundaries of WFP and entailed the involvement of a diverse set of stakeholders.

To broaden UNJLC's donor base, he invited donor representatives to the UNJLC training sessions and made informal and formal presentations in relevant donor capitals. He leveraged his social capital with donor institutions and humanitarian organizations to mobilize human, financial and physical resources. He saw the contribution that quarterly inter-agency UNJLC meetings could make in terms of instilling a culture of cooperation, promoting trust, ensuring an ongoing dialogue between the logistics personnel of the respective agencies.

To build the necessary confidence in the concept and prove its validity, he assumed a decisional role in the activation and design process of UNJLC deployments. He led the most challenging deployments including the Afghanistan and 2003 Iraq crisis. He inspired his logistician colleagues to identify the value added of UNJLC deployment in emergency response. He continuously sought for and responded to new niche sectors where the UNJLC could play a role, overcome a capability gap. This was with a view to augment the effectiveness of the whole response apparatus. For example, prompted by the UN Humanitarian Coordinator in Iraq, he responded to the need for a combined approach to the sourcing of fuels during large-scale crises.

For close to two years, on top of his responsibilities as Head of Logistics of WFP, Kaatrud acted as the architect, caretaker as well as the lead operator of the UNJLC. He started to distance himself from the concept only after its institutionalization by the IASC, handing over the role of the caretaker to the Head of the Core Unit. Indeed, as the concept matured and developed, the managerial roles became more delineated and were performed by people with different talents, expertise and skill sets. The new Head of the Core Unit

continued to nurture, strengthen and expand the UNJLC virtual web. He worked towards the “internalization” of the concept by all the virtual web members. He also took the lead in the design and formation of UNJLC operations and addressed areas for improvement.

The dynamic and able leadership of UNJLC’s architect ensured the institutionalization of the UNJLC concept in a complex, multi-actor industry. Good leadership has contributed in building the credibility and reputation of the facility among donors, governments, military forces, humanitarian and development organizations. Leadership has been equally important in UNJLC deployments at both the focal and antenna level.

Organizational Identification. At its inception, the UNJLC concept did not have a definable, distinguishable physical location or legal status. In order to be recognized as a distinct facility, a UNJLC logo was adopted. At the operational level, the UNJLC logo supported the identification of member organizations and their employees with the concept. At the conceptual level, it helped the market associate the UNJLC services and products with the facility. Currently, the Core Unit as well as each deployment use the logo. As the UNJLC builds its reputation, the logo helps it maintain its profile as provider of niche services.

Aware of the importance of agency visibility for fund raising purposes, the UNJLC assumes a low profile. It does not apply its own logo on the relief items of the assisted organizations. This helps smaller organizations to develop their brand and credibility with donors, media, concerned governments and other relevant parties. As an inter-agency mechanism, the UNJLC Core Unit and deployments rely heavily on long and short-term secondments. Secondments are the second vehicle through which organizations reinforce their feeling of ownership and identification with the facility as well as ensure their proactive involvement in the development of the concept.

The UNJLC culture is determined by the interaction of three interrelated organizational cultures all of which in continuous evolution. The cultures of each contributing organization, the Core Unit and each UNJLC deployment influence that of the UNJLC. The organizational culture of each UNJLC deployments is closely interrelated to that of the Core Unit, previous deployments and the staffing profile of each structure.

7.4.4.2 Operational Aspects

Finance. In its custodian role, WFP is responsible for the mobilization of the requisite resources for each UNJLC deployment. The Core Unit leverages the standby agreements and partnerships of WFP with other organizations in order to mobilize external assets, services and personnel. For example, if agencies fall short in providing the required human resources, it is WFP/UNJLC's responsibility to bridge the gap. The UNJLC addresses the shortage of expertise by recruiting external consultants or leveraging the WFP stand-by arrangements with a range of institutions.

To raise funding, the UNJLC has been fighting an uphill battle. Donors are generally reluctant to fund intangible activities such as preparedness and coordination. The UNJLC had to promote the concept and built its credibility with operational donors that finance logistics activities. It paid regular visits to donors and briefed them on the progress and activities of the UNJLC. To improve their understanding of the UNJLC, it invited them to the UNJLC training sessions.

Agile Workforce. For the UNJLC to operate, the availability of a readily deployable pool of emergency professionals is essential. To ensure the availability of sufficient technical expertise at the outset of a disaster, the UNJLC has worked on three fronts. Firstly, the UNJLC Core Unit staff constitute a reserve capability. Secondly, the UNJLC conducts training sessions for agency logisticians with a view to develop a solid roster of logisticians enhancing its deployment capability and capacity. Lastly, realizing the limitation of asking web members to volunteer staff on a part-time basis, the UNJLC has a cost-recovery mechanism to fund full secondments augmenting overall human resources available. Given the fluctuating mix of skills needed for each deployment, the UNJLC leverages WFP standby agreements with a number of organizations part of the virtual web: donor agencies, NGOs as well as the private sector. It also tries to ensure the cooperation of other organizations with complementary skills.

The quality and competence of the UNJLC teams is crucial for its success. The UNJLC deployments build on the skills, initiative and flexibility of a small team of specialists, each with their own unique contribution. People seconded to the UNJLC need not only excel in their areas of expertise but also have other skills. These include the ability to sense

shifts and process new information quickly, self-manage and take decisions in real time without referring back to management. In terms of inter-personal relationships, they have to communicate effectively, interact within and across teams in a continuously evolving manner. They also have to work and get along with people from different cultures under difficult circumstances. Given the importance of domestic collaboration and input throughout relief operations, they also have to have the capability to quickly build relationships with key national players.

Given the temporary and dynamic nature of UNJLC deployments, staff seconded to the focal or antenna offices is mobile and often exposed to team changes. As such, it needs to have the emotional skill of giving up human relationships and a given working environment and culture and to become quickly operational in a new one.

The transition from organization to the UNJLC does raise adaptation problems for seconded staff. They have to rise to the challenge of adapting to different cultures. Without the physical vicinity and support of their families, co-workers and superiors, they have to remain motivated and focused in extreme conditions: isolation, insecure and difficult living conditions. They have to be able to prioritize their responsibilities and remain connected to shifting and evolving objectives. To monitor on the well-being of the staff and ensure adequate “awareness” of the activities of the different units, during a deployment, the UNJLC organizes regular one-day debriefing meetings.

Business Processes. In 2001, the UNJLC started to develop a Field Operations Manual. The Manual is a living document, continuously enriched by lessons learnt from each deployment. It provides a set of guidelines and defines an operational and flexible framework for UNJLC deployments. For it to be effective, a growing number of inter-agency agreements and training sessions back it up.

For example, to react swiftly, the Activation Protocol and the availability of flyaway kits support the UNJLC activations. In terms of secondments, given the lack of standard short-term secondment procedures and related documentation in the UN, the UNJLC formulated its own *pro forma* secondment agreements with each major agency. However, it needs to do more. For example, to ensure a higher inter-agency participation and to speed up the recruitment and remuneration process, seconding agencies have asked the UNJLC to address issues related to after-secondment services. That is, they have asked the UNJLC to

provide them with a feedback on the performance and experience of the seconded staff. To ensure quality secondments, the UNJLC needs to address issues related to staff selection and induction.

Support Infrastructure. The contribution of ICT was not fundamental at the genesis of the UNJLC concept as the word “Centre” used during the Eastern Zaire crisis suggests. However, today, coordination and cooperation between geographically dispersed teams and the UNJLC antenna structure would be unimaginable without the use of modern ICT. To ensure coordination and timely exchange of information and knowledge, the UNJLC has assumed the information broker function. It has established a specific, cost-effective mechanism - the UNJLC website - to encourage inter-organizational exchanges.

More specifically, the UNJLC consolidates invaluable information scattered amongst various agencies as well as use its own sources. After collecting, analyzing and processing information, the UNJLC issues a series of generic and thematic information bulletins accessible to the public at large on its website at no cost. The systematic feedback that it receives from site visitors helps it further develop the content of the website and ensure the quality and relevance of the information posted.

The UNJLC Core Unit performs the function with the technical support of WFP. Indeed, WFP, the UNJLC’s host institution has invested most in the relationship and success of the UNJLC concept by providing the support infrastructure and systems. With the in-kind support of WFP in terms of finance, administration, communication and IT services, the UNJLC has built its support infrastructure.

Service Design. The boundaries of the UNJLC concept in terms of mission and vision have evolved and have been responsive to emerging opportunities and challenges. As the potentials of the concept unraveled deployment after deployment, so did its application. Today, the UNJLC provides a wide range of options from advisory services such as assessment of existing inter-agency logistics coordination mechanisms for on-going emergency operations to surgical interventions and full-blown deployments.

Initially, the UNJLC services such as logistics assessments by virtue of building on WFP logistics expertise tended to be WFP-oriented. WFP often moves huge tonnage of limited product types such as grain while other agencies deal with a wide and diverse set of food

and Non-Food Items (NFIs), some in small volumes. Goods such as medicines require a more complex supply chain (e.g., cold storage) and different receiving capability at destination, a perspective that UNJLC assessments had to cover. To address the more complex logistics requirements of those agencies moving small volumes of a wide and diverse set of food and NFIs, the UNJLC Core Unit welcomed the secondment of an expert from UNHCR.

More recently, the UNJLC tries to ensure that its services and solutions are not oriented toward the needs of larger humanitarian organizations but that they are in line with the inter-agency nature of the facility. As such, the Core Unit and the deployment are typically staffed with a multi-organizational team of experts seconded by the UNJLC virtual web members. To address the concerns of its constituencies and to remain relevant to users, the UNJLC logistics skill set aims to support the logistics activities of a wide range of agencies. Indeed, the UNJLC remains valid as long as its services meet the diverse needs of its users.

The UNJLC assumed its information broker function in 2001. In the context of the Afghanistan crisis, it developed its first emergency-specific website. Since then, for each emergency, the UNJLC creates a new folder on its website (www.unjlc.org) to host information on a wide range of crisis specific logistics-related information.

The UNJLC outgrew its initial emergency response mandate when it started to lead the preparedness and joint contingency planning effort of the humanitarian community for complex and emerging crises. Its involvement in contingency planning started during its second term in Afghanistan as a means to respond to the needs of the population during the winter season. It showed its full potential in response to the 2003 Iraq crisis. The contingency planning efforts help the humanitarian community better address the needs of the assisted population and allow the UNJLC better prepare for its own deployment.

More recently, in the context of complex emergencies, the UNJLC started to address “orphan” logistics issues not covered by any agency mandate at a technical level. For example, within its 2003 Iraq operation, the UNJLC activated a specialized cell to address the logistics “orphan issue” of fuels. As the availability of fuels affects humanitarian operations and the population, the UNJLC fuel cell ensures a combined as opposed to individual approach to its sourcing. In the 2003 Iraq and subsequent crises where a fuels

cell was activated, the needs of the entire humanitarian community were addressed with a view to achieve economies of scale, consistency of supply and logistical flexibility. Moreover, by addressing supply related orphan issues such as fuels, the UNJLC mitigates against logistics failure modes.

To keep the facility on track - demand driven as well as relevant and responsive to user requirements - the UNJLC seeks independent and objective feedback on its services and performance from relevant stakeholders. It also tries to anticipate and quickly detect, analyze and understand changes. The facility has evolved in response to new demands, learnt from each deployment and was receptive to the concept's potentials.

Since the UNJLC does not interfere with the logistics operations of any organization, its logistics services contribute in a modular way to the logistics activities of the assisted organizations; assets and expertise are interlocked seamlessly in their respective systems. It is important to mention that because the UNJLC is aware of the importance of agency visibility for fund raising purposes, it assumes a low profile. It does not apply its own logo on the relief items of the assisted organizations. This helps smaller organizations to develop their brand and credibility with donors, media, concerned governments and other relevant parties.

7.4.5 Risks and Opportunities Facing the UNJLC

This section elaborates on the operational risks and market opportunities facing the UNJLC. After a general discussion, section 7.4.5.1 discusses the contribution of extra-organizational linkages created by the UNJLC in the political and economic recovery of Afghanistan. Section 7.4.5.2 illustrates the potentially adverse effects of the UNJLC extra-organizational linkages on the humanitarian space by discussing the impact of the unexpected collaboration with the Coalition's Restore Iraqi Oil (RIO) during the 2003 Iraq conflict.

From the organizational perspective, the UNJLC has to carefully manage its relationship with WFP, the host institution of the UNJLC Core Unit. While a rotating custodianship of the UNJLC Core Unit could have been a solution to the management and control-related

issues, it was not been pursued given the lack of supplementary and appropriate capabilities at the other humanitarian agencies. Notwithstanding its dependence on WFP financial, technical and administrative support, the UNJLC has endeavoured to ensure the neutrality and autonomy of the facility. It has also avoided competing with the logistics operations of those humanitarian organizations it serves.

An increased reliance on UNJLC services such as logistics-related information by the humanitarian organizations and local authorities is a real threat. An undue dependency can translate in the need for the UNJLC to be deployed across the board, that is, in all emergencies, rather than selectively in large-scale emergencies where there is a concrete need for intensified coordination. To avoid indiscriminate deployment and with a view to help guard the operational independence of humanitarian organizations, the UNJLC does not replace the logistics operations of any organization as they continue to manage their own logistics activities. Moreover, it helps them in strengthening their logistics capabilities.

To limit fixed cost and loss of efficiency caused by dispersed workplaces, the UNJLC often opts for the co-location solution. For example, existing UN or host country institution infrastructure house the focal UNJLC and its antenna offices.

To avoid across-the-board activation, the UNJLC resists deployment in circumstances whereby the facility does have a comparative advantage but its involvement is not essential. For example, it argues for coordination to be internalized when an emergency involves the intervention of two main agencies. Likewise, when a relief operation is largely uni-sectoral, for instance food, it recommends the lead agency to assume the coordination role. During the Cote d'Ivoire crisis, for instance, where there were good local capabilities and only one bottleneck, the facility took on an advisory role. By ensuring the activation of the UNJLC only in big acute emergencies with significant logistics challenges, coordination for coordination sake is avoided (Kaatrud et al., 2003).

As an emergency response facility, the UNJLC deployment network is demobilized with the initiation of rehabilitation activities. To ensure a successful handover, services still in demand are transferred to viable logistics coordination structures. In some circumstances, to maximize the sustainability of its interventions and ensure the transfer of responsibilities

and functions to national entities, the UNJLC engages in the training of local government personnel.

UNJLC is subject to mission creep if, after achieving its primary objective, it is not dismantled. For example, past the emergency phase, the scale of the humanitarian needs in Afghanistan remained significant. The Afghan community, subject to too many disruptions, longed for continuity and resisted the dismantling of valued facilities such as the UNJLC. To respond to the needs of the prolonged emergency, the UNJLC, recognized for its logistics expertise, continued its activities for another year. The presence of the UNJLC in Afghanistan beyond the normal six months weakened its ability to remain focused on its humanitarian mandate. By responding effectively to structural logistics gaps and supporting key government functions, it began to suffer from its own success.

The UNJLC responded effectively in this highly politicized crisis. During this period, it moved away from its core mandate. In the absence of a properly functioning government structure, UNJLC engaged in capacity building activities in some areas such as snow removal, road repairs and river engineering. But most importantly it assisted the interim government in two major non-humanitarian projects as well as coordinating the country's road rehabilitation effort. As it got involved in the country's most strategic nation-building initiatives from the logistics perspective, an internal debate on its boundaries and mandate initiated. This nimble and adaptable mechanism showed that it was prone to mission creep to the point that the UNJLC architect, caretaker and lead operators discussed the dangers of a mission creep to future UNJLC operations among themselves and with key stakeholders.

In the context of humanitarian relief operations, market opportunities are referred to as "orphan issues". The UNJLC has had the opportunity to address "orphan" logistics issues not covered by any agency mandate at a technical level. For example, within its 2003 Iraq operation, the UNJLC activated a specialized cell to address the logistics "orphan issue" of fuels, which otherwise would have remained unaddressed.

In large-scale emergencies the availability of fuels affects humanitarian operations as well as the afflicted population. To gear up with the challenge of a combined as opposed to

individual approach to its sourcing by the humanitarian community repeatedly, the UNJLC has taken steps towards the institutionalization of the cell within the UNJLC structure.

Some UNJLC services may be relevant not only to its members but other stakeholders. Relevance of the services may go well beyond the emergency period which may call for their transfer to viable *ex-novo* structures.

7.4.5.1 The UNJLC in Afghanistan

During its Afghan deployment, the UNJLC continued to change and adapt to new operational obstacles as they arose. As logistics problems shifted inside the country, so did UNJLC activities. It also anticipated major bottlenecks, as highlighted by the winterization strategy.

After the fall of the Taliban regime in early 2002, to pave the way for a democratically elected government and economic stability, the *interim* government of Afghanistan with foreign assistance engaged in two nation building activities: the *Loya Jirga* and the currency exchange exercise. The first initiative was to lead to the election of the new Afghan government. The second one aimed to collect and destroy 4,000 MT of old Afghan banknotes and distribute 800 million new Afghan banknotes. The currency exchange exercise was crucial to the stabilization of the country as it would assist Afghanistan to break away from the prevailing dollarized economy, build consumer confidence and pave the way for political unity.

These two initiatives required considerable on-site logistics planning and execution capabilities. As government and institutions had “disappeared”, the only structure that could provide some support in this direction was the UNJLC. After carefully weighing the political and economic benefits of each proposed activity in terms of peaceful, secure and stable environment for humanitarian logistics operations, it decided to extend its support to these two non-humanitarian activities.

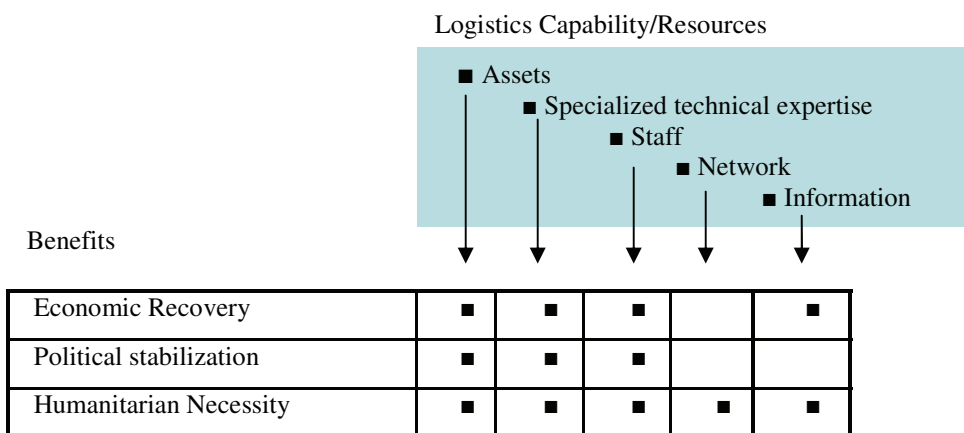
The country’s war-shattered infrastructure and limited transportation assets posed huge logistical challenges. As for the currency exchange exercise, the UNJLC assisted the Central Bank of Afghanistan in the management of three distinct supply chains: the recovery and destruction of the old Afghan notes, receipt and distribution of new Afghan

notes and transport of observers and inspectors. The involvement of the UNJLC allowed for the changeover exercise to be completed within the established period of two months.

As far as the three-stage *Loya Jirga* election process is concerned, it provided air, surface and general logistics assistance by planning and flying around candidates, delegates and personnel across the country. It delivered cargo such as tents and furniture to election centers. It got involved in the selection, organization and on-site logistics support of the election and gathering sites. Once the elections were over, it organized the return of the participants, demobilized the election infrastructure and recovered or redistributed the equipment.

During the Afghanistan crisis, the UNJLC’s coordinating role expanded to encompass the donor community. To help the development of a common UN strategy for the vital rehabilitation of Afghanistan’s road network, the UNJLC conducted a number of infrastructure survey projects. After assessing Afghan road conditions and traffic capacity, it helped the humanitarian community in submitting proposals for donor and Coalition funding. By organizing rehabilitation seminars, it facilitated interaction between the parties and helped prioritize and speed up repair interventions.

Figure 7.11 – Logistics and Nation Building



The UNJLC carried out these activities in the absence of another entity with the required logistics capabilities. It went beyond its mission, that is, support to humanitarian activities

during emergencies, risking a mission creep. By getting involved in non-humanitarian development activities of an economic and political nature, it almost infringed the humanitarian space. At the same time, it highlighted the existence of market opportunities in the area of logistics services past the emergency period and during the recovery phase. Figure 7.11 illustrates how logistics capability and resources apart from addressing a humanitarian crisis can assist in the economic recovery and political stabilization of a country.

7.4.5.2 The UNJLC in Iraq

The experience of the UNJLC during the 2003 Iraq crisis highlights the importance of logistics-related information in the political and economic stabilization of a country. During this crisis, for the first time a fuels cell was deployed within the UNJLC structure. The fuels cell was a nimble, neutral and informal setup staffed with few experienced emergency logistics operators and fuel specialists with regional and country knowledge. One of the key services provided by the cell was information on the availability and consumption of fuels in Iraq. In order to compile this information, the cell used a wide spectrum of information sources and interacted with a set of diverse actors. The UNJLC fuels cell team was able to address and predict the otherwise unexpected variations on the national fuels market. This thanks to its local knowledge and experience as well as consolidated ability in identifying logistics bottlenecks, preparing response plans for fluid situations and executing pre-positioning initiatives.

Although set up to address the particular needs of the humanitarian community and the population, the services of the UNJLC fuels cell became of value, resulted in a extra-organizational linkages with the US Army Corps of Engineers' Task Force, RIO. RIO was a well staffed and resourced structure with a mandate to restore Iraq's crude output, oil refining capacity and fuel distribution ability to pre-conflict status. However, given its limited experience in addressing emergency situations in difficult settings and the inability to move freely on the territory, it leveraged the UNJLC fuels cell's experience, expertise, knowledge and analytical capability to meet its goal. More specifically, it considered the information produced and provided by the cell as an input in its decision making process.

During the Iraq crisis, the UNJLC's collaboration with RIO was an unexpected development. Once again, in the absence of any other development program or entity, the UNJLC went beyond its immediate mandate by assisting the *interim* authorities on a key issue affecting the political and economic stabilization of a country. By collaborating with an *interim* authority, it put under the limelight the importance of maintaining the humanitarian space in terms of neutrality.

7.5 Summary

This chapter provides background information on the UNJLC by describing its history, services, and structure through a number of deployments.

The description confirms the contribution and usefulness of a logistics coordination platform in mitigating common and disaster-specific logistic failure modes that result in dependencies and duplications during disaster response. It highlights how a coordination platform can contribute to cost, time, accuracy and flexibility profile of a humanitarian organization's disaster response operation.

The UNJLC example provides some indication regarding the advantages and disadvantages of nesting the permanent structure, the secretariat of the virtual web, within the setup of a virtual web member. It provides some suggestions in terms of the profile of the most eligible organization especially in view of the latter's expected infrastructure support role.

A structural strength of the UNJLC is the possibility of quickly activating and demobilizing a series of temporary and interlinked offices during the project cycle. The function of these antenna offices is to support the activities of the humanitarian community as well as those who interact with it. Their advantage is that they result in a series of intra, inter and extra-organizational linkages. This chapter describes how the UNJLC as a virtual organization that activates a series of temporary, dynamic and flat focal and antenna structures staffed with seconded staff ensures a more effective and efficient response on the part of the humanitarian community during emergency response.

This chapter also explores the contribution of a range of strategic and operational factors to the successful operationalization and survival of the UNJLC in particular and the virtual organization in general.

Finally, this chapter discusses the risks and opportunities facing the UNJLC. Although the facility has refined its mandate and operations by identifying gaps and providing useful services to the humanitarian community, it has resisted pressure from its members to engage in a wider mandate such as the review and harmonization of the humanitarian organizations' supply chains. It has tried to keep its ambitions within its operational capabilities in order to remain a credible, reliable and manageable structure. However, in few occasions it got involved in non-humanitarian operations by assisting *interim* governments. Although the involvement of the UNJLC with *interim* forces during the Afghan and Iraq crises did not fireback or result in any adverse consequences for the facility, it has alerted the UNJLC to the potential drawbacks of such collaborations.

Chapter 8 WFP

In this chapter, we present and discuss the results of our research at the World Food Program (WFP), the UN's frontline humanitarian agency that addresses global hunger and food imbalances worldwide. The interviews were conducted from 2002 to 2004.

The chapter is organized as follows. After an introductory note on the history, tools and activities of WFP, section 8.2 describes WFP's response during a number of large scale disasters. In December 2002, WFP entered into a formal partnership with TNT²⁴ coined "Moving the World". The partnership sealed through the signature of a MoU between the CEOs of TNT and WFP committed TNT to a five-year partnership and a yearly contribution of €5 million in services and cash. Section 8.3 describes the partnership from its inception to first year of implementation. Finally, section 8.4 discusses our findings in terms of disaster response at WFP and the benefits and risks of the WFP-TNT partnership.

8.1 WFP

World Food Programme (WFP) set up in 1963 is one of the largest providers of food to victims of natural and made-made disasters. In 2003, the organization moved 6.5 million metric tons of food by land, air and sea. On any given day of the year, it had 40 ships on the high seas, 20 planes in the air, and 5,000 trucks on the ground along with other transport means. It spent an average of €500 million yearly only on transport services. From an operational perspective, it operated effectively as it brought food to more than 100 million people in more than 80 countries each year with only 7% overheads.

Since 1995, WFP runs a specialized unit – the Augmented Logistics Intervention team for Emergencies (ALITE) – that provides a range of rapid emergency services to WFP field operations, augmenting resources available at the field level. The unit prepares logistics

²⁴ TNT is the €12 billion Dutch mail, express and logistics multinational provider that from 2002 until April 2005 operated under the brand of TPG. Throughout this thesis, for ease of reference, we refer to the company as TNT. In 2002, TNT employed 161,000 people in 62 countries and served over 200 countries and territories by delivering global mail, express and logistics solutions through its Royal TNT Post, TNT Express and TNT Logistics divisions.

capacity assessments, deploys rapid response equipment, forges standby agreements, and provides guidance on civil-military cooperation. Its standby agreements with an increasing number of relevant governmental entities, NGOs and private sector donors complement WFP's resources increasing its response capacity. WFP often establishes its own infrastructure – offices, warehouses and equipment for the management of its supply chain – in the field. In terms of response equipment, WFP mobilizes its own ICT support unit, the Fast Information Technology and Telecommunications Emergency Support team (FITTEST). WFP has a consolidated competence in logistics which is well recognized by the humanitarian community, donors and NGOs alike. Food, a constant need of afflicted populations, implies that WFP is present and mounts a significant operation in response to most emergencies. Compared to other humanitarian organizations, WFP usually has a significant in-country operational presence prior to the onset of an emergency. Given the fact that food makes up three-quarters or more of the relief traffic in most emergencies, over the years the organization has built substantial logistics capabilities. While most humanitarian agencies had their own logistics setup, WFP's was the largest: 153 logisticians, of which 30 in Rome. In addition, WFP manages various inter-agency services. It runs the Humanitarian Relief Depot (UNHRD) in Brindisi, Italy not only for itself but also OCHA, WHO, World Vision and certain Italian NGOs. It manages various United Nations Humanitarian Air Services (UNHAS). Before the UNJLC, organizations providers of small volumes of high value goods (i.e., medicine, seeds) such as WHO and FAO relied on WFP logistics advice and services.

8.2 Disaster Response²⁵

In this section, we shall describe the role of WFP within the humanitarian community in the context of the 1996 Zaire, the 1999 Balkan and the 1999 East Timor crises.

In 1996, the humanitarian community was faced by an overwhelming humanitarian crisis arising from the outbreak of civil war in Zaire, when over a million Rwandan refugees

²⁵ With permission from the authors this section reproduces without direct reference from the following INSEAD case study: Samii, R. & L. N. Van Wassenhove, "UNJLC: The Genesis of a Humanitarian Relief Coordination Platform", INSEAD case study 04/2003-5093.

suddenly returned to their places of origin or moved deeper into the country. In early December 1996, the UN Multi-National Peacekeeping Force (UNMNF) arrived in Entebbe, Uganda. As an extension of its lead role in air logistics in this crisis, WFP, together with UNHCR and OCHA established an informal set-up at the Entebbe airport as a liaison point on logistics matters between the operational UN Agencies and the UNMNF. To facilitate operations, OCHA attached an expert on civil-military coordination to this body. As the involvement of the UNMNF in the region proved shorter than expected, the ad hoc set-up evolved into a coordination body dealing with a variety of humanitarian logistics planning and operational issues in the Great Lakes region. Staffed with representatives of the main UN Agencies and NGOs, it began to process information on and manage common logistics resources and operations for the three main UN operational Agencies – WFP, UNHCR and UNICEF – involved in the region.

The massive movement and outflow of people in just a few days called for the immediate repositioning and re-routing of humanitarian goods by humanitarian organizations. To maximize the likelihood of food reaching people on the move, WFP considered all possible routes and entry points into the region. The identified routes had to be able to accommodate the move of high-volume food items. It was a tremendous challenge as the large mass of humanity to be assisted was moving in a remote area with little overland access. With few roads and no idea where people were, nor where they were heading, WFP had to plan its operations.

Given the lack of infrastructure, WFP decided that the quickest way to reach the needy was through air deliveries to airfields near concentrations of the refugee populations. Within a short period the WFP team organized the arrival of a few large aircraft. It immediately started to fly food into the region ‘borrowing’ from its stocks available in the area for other operations. Within five days WFP trucks were delivering food flown in from stocks in neighboring countries. At the same time, WFP engaged in the time consuming alternative of transporting food items overland to remote areas using surface transportation (rivers and roads). To ensure the delivery of relief supplies to the refugees moving across Zaire, satellite offices were established at key logistics nodes.

It was not long before WFP realized that only they and UNHCR had the necessary transport means to reach the refugees. The other UN Agencies such as UNICEF, WHO and

a number of NGOs (e.g. Oxfam, MSF, and World Vision) were having logistical problems. While other humanitarian organizations had to rely on the few, decrepit and dangerous roads and compete for the few local truck drivers, WFP and UNHCR, with their large and smaller aircraft, were moving cargo, refugees and their personnel around the region. It was there and then that WFP and UNHCR decided to pool and offer our excess air assets – cargo and passenger capacity – to each other. After obtaining donor acceptance, WFP and UNHCR aircraft used their excess return air capacity to move, respectively, refugees and food items in and out of the region.

By mid-April 1997, WFP and UNHCR had reached an agreement. As the repatriation of refugees from Kisangani to Goma (Zaire) and later on to Rwanda took priority, WFP agreed to offer its air capacity to UNHCR by carrying refugees on its chartered aircraft (cargo in-refugee out arrangement). As a result during a seven-week period, over 40,000 refugees were repatriated from Kisangani to Rwanda. Later on, when the requirements for cargo shipments to Kisangani increased, UNHCR aircraft (brought on line for refugee transportation) were used to transport WFP cargo.

Asset sharing went beyond WFP and UNHCR. In order to survive, the refugees needed food (provided by WFP), medicine and medical care (e.g., to contain the outbreak of epidemic diseases), shelter, kitchen kits, clothing, etc. These were items typically furnished by other humanitarian organizations. Given the mismatch between capacity and cargo, intensified coordination was necessary, so that logistics assets could be pooled and transportation of different food and non-food items be prioritized.

In 1998, WFP, UNICEF and UNHCR, through the WFP Nairobi regional office, pooled resources and coordinated their air and surface response to the Somalia floods, a small-scale emergency on the Kenya-Somalia border area.

In the spring of 1999 the Balkan crisis broke out, causing mass movement of refugees from Kosovo to Albania and Macedonia. The scale of this crisis took the international community by surprise but very soon a massive relief effort was underway with a large number of humanitarian actors flooding the region with supplies in an often uncoordinated manner. Throughout the crisis, a WFP staff seconded to a cell installed in the UNHCR premises in Geneva, coordinated ‘strategic’ air assets with NATO forces that controlled the region’s airspace.

WFP's air operation and logistics performance during the Balkan crisis had been excellent. When the East Timor crisis erupted at the end of 1999, there was interest to leverage these capabilities, not only to respond to the food aspect of the crisis, but also to the needs of other agencies and NGOs. WFP prepared a proposal — well funded by the donors — for the provision of a wide-range, comprehensive common logistics service that included passenger and cargo air services and sea movements from Darwin, Australia as well as in-country air, trucking, coastal shipping and warehouse operations. Once WFP built up this infrastructure and assets, it started prioritizing and scheduling the humanitarian traffic. To review plans and cargo movements, WFP organized weekly meetings for the logistics operators of the different agencies. To guide the operations and provide feedback to logistics planning, WFP offices at key logistics nodes collected and provided relevant information to humanitarian actors. WFP provided these services to some 40 humanitarian organizations for a three-month period. Although it was a small operation in terms of tonnage and population assisted, it was a particular one as the transport infrastructure of the island was completely burnt or removed.

8.3 Business-Humanitarian Partnerships

By 2007, more than 80 governments contributed to WFP operations. In 2006, private sector donors accounted for 2% of the organization's budget (WFP, 2007). The major private sector donors were: Citigroup, DSM (a Netherland-base global life sciences corporation), the Dutch Postcode Lottery, TNT, Unilever, Vodafone Group Foundation/UN Foundation, and Yum! Brands. WFP counts also on a number of Corporate Supporters among which Boston Consulting Group, Credit Suisse, SAP, and Spencer Stuart. In the next section, we will present our research on the WFP-TNT 'Moving the World' Partnership. Based on information available on WFP website, in section 8.3.2, we briefly present Citigroup's spearheaded initiative: The Emergency Network.

8.3.1 WFP-TNT ‘Moving the World’ Partnership²⁶

In 2002, Bakker, the CEO of TNT, laid the first stones of what was later on coined as “Moving the World” initiative. As a global player in the business of logistics, he felt that TNT had the moral obligation to help alleviate the suffering of people. To realize his vision - social and industry leadership - a team was put together to design and implement TNT’s first global corporate social responsibility program.

Traditionally, TNT had sponsored local, unrelated and relatively small-scale social initiatives worldwide. For its new initiative, it wanted to undertake a program in line with its global presence so as to facilitate a unified worldwide campaign. Only a long-term global alliance with one partner would ensure such global impact as well as help the company appreciate the particular needs and add value to the operations of the assisted organization.

To achieve a new level of staff enthusiasm, TNT had to come up with an initiative that had the potential to engage all of its 161,000 employees in the 62 countries of operation. To attract the attention and approval of its customers and financial markets, the initiative had to produce social impact. In terms of area of focus, social and humanitarian related issues were identified as more compatible with the company business line, brand image and objectives.

TNT assessed that through a partnership with a humanitarian organization it could build a more engaging relationship with its employees worldwide, create stronger bonds with its customers and suppliers, and enhance its reputation globally. In the long run, its association with humanitarian organizations in emerging markets, largely unattended by the company, could facilitate future entry strategies. Finally, the partnership could make a social difference as it aimed to leverage the company’s comparative advantage in logistics. After defining its strategy, TNT conducted desk research on the main humanitarian organizations’ reputation, value system, neutrality and track record. It then evaluated them

²⁶ With permission from the authors this section quotes or reproduces without direct reference from the following INSEAD case studies: Tomasini, R. M. & L. N. Van Wassenhove, “The TNT-WFP Partnership: Looking for a Partner” (06/2004-5187) and Samii, R. & L. N. Van Wassenhove, “The TNT-WFP Partnership: Learning How to Dance” (06/2004-5194).

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

against four criteria: organizational fit, interest and attitude, organizational effectiveness and geographic scope.

Organizational fit was the most important criterion. As TNT intended to bring its logistics knowledge and capability, logistics had to occupy a central role in the selected organization. The mandate of the assisted organization had to be inspiring and its vision compelling; something that the TNT family and customers could be proud of. To ensure the highest return on dollars expended, TNT looked for organizational effectiveness and low overhead costs. Lastly, to achieve global impact, the selected partner had to have global presence and operations.

TNT identified five finalists. After several interactions, two of the finalists withdrew. After completing a more detailed survey, TNT narrowed down the list to the two organizations with the most prominent logistics operations. The process ended with a face-to-face meeting between the TNT CEO Bakker and James Morris, the Executive Director of WFP, during which the commitment of the WFP management to the partnership with TNT was positively assessed.

WFP was a credible and capable UN agency with which TNT was able to share its comparative advantage, i.e., pool of logistics knowledge, resources, employees and network of relations. WFP's mandate – the fight against global hunger – was a noble cause to be associated with. The cause had the potential to bring cohesiveness among the 161,000 employees and allow for the direct application of job skills. In addition, WFP was considered a perfect fit as it ran its operations efficiently and was the humanitarian organization with the largest logistics operations in terms of scope and size. Last but certainly not least, its Executive Director, James Morris, could understand the potential value of a partnership with TNT in the area of logistics and was committed to its successful implementation.

To convince its Board and ensure the validity of its new CSR vision, TNT assured the early involvement of relevant staff. It built a case around the requirements of the marketplace, industry peer pressure and its comparative advantage in logistics. It leveraged the Netherlands' long history of active and generous humanitarian and development support, which translated into expectations from TNT in its home country. It pointed to studies that demonstrated the extent to which global financial markets reward those

companies engaged in successful CSR initiatives. At the industry level, it provided information on its competitors' CSR programs.

To bring content to the partnership, TNT asked WFP to organize a mission for key TNT and WFP staff to the field. The group was taken to Tanzania where WFP's activities include relief assistance to refugees and development activities for Tanzanian poor. WFP was asked to organize the visit without any special treatment for the TNT team. The visit lasted three days, and TNT and WFP brainstormed throughout on the possible content of their cooperation. They came up with five initiatives. The School feeding support and the private sector fundraising were ranked among the first initiatives identified by the two parties. The next two initiatives - emergency response (ER) and the joint logistics supply chain (JLSC) - were put on the agenda as a means to leverage TNT logistics and transportation expertise. WFP's top management felt that their organization's reporting and budgeting practices and systems required improvement. Hence a fifth initiative on transparency and accountability was laid out to address the administrative needs of the organization.

Back at their respective headquarters, the two organizations hammered out the details of the partnership in terms of budget, objectives, and plans. On September 2, 2002, during the Johannesburg Summit on Sustainable Development, Morris and Bakker, in the presence of UN Secretary-General Kofi Annan, signed a letter of intent that set out the broad objectives of their five-year partnership. The joint logistics supply chain initiative, of particular interest to Bakker, was intended to address the logistics needs of the UN humanitarian community at large. This vision, put forward by Bakker and Morris to the Secretary-General, received full support.

On December 19, 2002 the WFP-TNT partnership was officially launched with the signing of the Memorandum of Understanding that committed TNT to a yearly contribution of € 5 million in services and cash for the next five years. Soon after, the partnership was referred to as the "Moving the World" partnership.

The Five Initiatives

Private Sector Fundraising. When TNT approached WFP, its Private Sector Fundraising department was yet to be established. First contact was made in January 2002, and soon after some initial meetings, WFP was asked to prepare a business case to convince TNT that they would be their best partner. At that time WFP had no clear vision or strategy for its corporate fundraising activities; but it was ‘hungry’ for private sector funding. Moreover, it was not sure how to position itself with regards to potential private sector donors. Although WFP is the biggest humanitarian organization, it is also amongst the least known among the private sector. It felt that its low brand awareness was a real negative, and that TNT might find it less appealing as a corporate partner. What WFP had underestimated was the attractiveness of its logistics capability and its role among the humanitarian community to TNT. As WFP prepared for the presentation, it was able to re-focus on this strength through feedback from TNT.

WFP is funded almost 100% through voluntary donations from governments. On average, it receives about 90% of its funding from just ten governments, with the US accounting for half. The growing challenges of increased emergencies meant the organization needed increased support, while becoming less dependent on so few donors. Corporate contributions had been marginal and mainly in-kind in response to emergencies. Morris was determined to change the situation and broaden WFP’s donor base. His target was to raise USD 100m in private sector funding in five years.

One of the first projects developed under the Private Sector Fundraising initiative was a needs-based approach to corporation fundraising. For research and analysis, TNT brought in a second major corporate partner, the Boston Consulting Group (BCG). For three months, from March to May 2003, four BCG consultants worked together with WFP and TNT staff on corporate fundraising studies for WFP. Meanwhile, a team from TNT Post in the Netherlands analyzed the consumer fundraising potential for WFP. It soon became clear that WFP would not go ahead with consumer fundraising in the Netherlands and Italy, as initially suggested. WFP was not yet ready for such activity and the implied up-front investment.

However, the findings of the corporate fundraising study highlighted the increasing interest of corporations to donate services and assets to humanitarian organizations as opposed to cash. Since WFP could not consider corporations as strong sources for cash, it had to go a

step further in identifying which corporations could best help WFP achieve its mandate, objectives and how. With the help of BCG, WFP developed questionnaires to identify operational and administrative needs. The survey, conducted in the field offices and HQ, highlighted seven main categories of need, which were first matched with specific industries and then to a list of potential companies to be targeted. The results also brought up the issue of control and usefulness. WFP realized that just because a corporation was willing to offer its services to it for free, it was not obliged to accept since it should be the other way around. WFP should first identify its need and then bring in a partner with the specific skills and expertise to help it out. This approach also served to eliminate unnecessary competition between different corporations.

From September 2003 onward, WFP started to approach a number of corporations. It also intended to leverage TNT and BCG CEO-level contacts in order to mobilize a dozen good corporate partners in fields relevant to its needs.

With the addition of BCG as a second partner to WFP, the idea of a CEO Council developed. This Council was to provide a forum where WFP's future corporate partners would exchange ideas on how to best contribute in strategic and complementary ways to WFP.

Transparency & Accountability Initiative. Put on the partnership agenda by WFP management, the transparency and accountability initiative initially aimed only at better and sharper financial reporting. To add more content to the initiative, in July 2002, a meeting was arranged between WFP and TNT. The discussion led to the identification of five areas of potential collaboration: internal audit, HR, e-procurement, results-based budgeting, and project closure exercises. One of the tasks under this initiative, however, remained the establishment of the reporting structure for the partnership. After having reached an agreement with TNT, WFP had to ensure its buy-in from and its transfer to staff across the five initiatives.

The sub-projects that were identified had different fates. The focus of the audit project shifted from TNT being directly involved in the auditing exercise to training and development of risk assessment models. While the e-procurement project was completely abandoned for reasons associated with WFP's internal restructuring process, the HR sub-project became almost an initiative in its own right. Apart from providing HR support to

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

the partnership, the department, together with TNT, identified three areas for joint collaboration and experience sharing. These included recruitment, performance management systems, and career development. In 2003 WFP looked at TNT's graduate recruitment program, visited their management assessment center and got an insight into their management development courses. TNT also offered WFP a number of seats on their management courses run by the Rotterdam School of Management. In addition a number of recurring instead of one-off projects was lined up for 2004. The idea of creating a TNT/WFP website to enable employees to share information and experiences as well as to network with one another was also discussed. For specific and specialized HR expertise, however, WFP intended to look beyond TNT, whose core competence remained logistics. Twelve months into the partnership, the two sub-initiatives that had created a lot of excitement and had produced tangible deliverables were the results-based budgeting and project closure exercises. The zero-based budgeting exercise started as early as January 2003. For a couple of months, TNT trained WFP headquarters and regional office staff in the new tools and techniques. All this was accomplished in time for the October 2003 Board meeting when WFP presented its budget in its new format. "WFP greatly appreciated TNT's assistance in developing its thinking and helping it catch up on the new ideas and concepts of reporting and budgeting. As a result of the exercise, the private sector fundraising unit could link and put a value on each element of our private sector fundraising biennial strategy. As for the project closure exercise, for two months two TNT Italy staff with SAP expertise and financial backgrounds joined WFP headquarters in Rome. The project achieved great results as WFP managed to close some 75 projects more quickly, enabling the organization to propose alternative uses for the unspent balances. While the transparency and accountability initiative was less ambitious in comparison to the others, it had produced quick, encouraging and much needed change. Help came to the areas in which WFP had to get its act together in any case. With the partnership it was able to achieve more, better and faster. TNT was the catalyst; they were there on the job working with WFP.

School Feeding Support. The School Feeding Support initiative, close to Peter Bakker's heart, aimed to engage TNT staff across geographies and lines of business. It was the only initiative which envisaged a direct and indirect cash contribution to WFP. The indirect

mechanism was linked to donations mobilized by TNT employees through cause-related fundraising activities which would in turn be matched up to a threshold of € 500,000 by the corporation. Central to TNT's internal communication campaign, the initiative through the 161,000 TNT employees in 62 countries aimed to feed an equal number of children per year.

The second component of the School Feeding Support initiative was the volunteer program that aimed to create internal TNT "storytellers" to motivate internal fundraising activities while assisting school feeding operations in the field.

Volunteer programs were initiated in four relatively 'safe' countries in Africa, Asia, and Latin America (Cambodia, Nicaragua, Tanzania, and The Gambia) where WFP had on-going school feeding programs. Following a week of intensive briefings organized by WFP on program activities, security issues and country briefings, two groups of eight TNT employees (2 per country) were deployed for their assignments. At the end of their stay, the volunteers returned to Rome for a debriefing and reintegration session.

Each of the pilot teams worked with WFP country staff to complete needs assessment surveys that helped evaluate the types of small-scale complementary activities TNT staff were capable of providing. The balance was between finding practical and worthwhile activities that motivated the volunteers without overburdening the WFP field office or asking them to depart from their core operations.

The three-month volunteer experience proved to be a life-changing event for most of the TNT volunteers with direct impact on the corporate internal fundraising schemes. The volunteers are the driving force behind their business units' fundraising efforts for WFP's school feeding program. Their field experience gave them credibility with their colleagues, motivated them to share their experiences and helped promote the Moving the World campaign.

WFP had started to measure the benefits of the initiative and explore ways to improve coordination and communication. Given the satisfactory results of this first year of activity it was already looking forward to extending the initiative to at least one more country and other corporations and donor institutions.

Logistics-Related Initiatives. Interestingly enough, the most challenging point in the process was to figure out where TNT could help with its logistics capability. Initially TNT

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

did not fully grasp the scope of WFP's logistics activities, given the differences in context as well as the type of material handled. While WFP dealt primarily with bulk quantities of food, a perishable commodity, TNT's logistics was geared to move smaller, non-food parcel items. It was not clear how they were to help as a partner in the organization's emergency planning, preparedness and response efforts.

The partners were less advanced in the two logistics initiatives than envisaged also as a result of the Iraq emergency. The Iraq emergency was WFP's biggest humanitarian operation ever, involving 25% of its international staff.

The partnership was a first for both WFP and TNT: WFP had never worked with the private sector and TNT had never engaged with a humanitarian organization. While the love was there, the partners had to learn to live with each other. Differences were particularly felt in terms of working rhythms and decision making processes. At WFP decisions could have political dimensions, in sharp contrast with the private sector driven by business rationale. The level of manager accountability was very different between the two organizations, leading to decisional delays. Another barrier was the language. TNT has a clear business language, while WFP's is full of UN and humanitarian specific jargon with its own set of acronyms. This led to unnecessary misunderstandings.

Clearly there were a number of major differences between the partners' operational context and markets. WFP is logistically active in areas and countries like Iraq, war-torn and insecure, in which TNT is unlikely to operate. While the commercial sector is cost-focused, WFP's operational settings are typically very different and difficult. To get supplies to the most remote areas we may have to resort to a range of imaginative and unconventional delivery systems such as air dropping. WFP's logistics is shaped by a mixture of expediency and cost-effectiveness. It is obliged to deliver life-saving food in an urgent manner at any cost. After the initial emergency phase and in its more routine operations, however, it strives to be as cost effective as possible, as each dollar saved in overheads and transport is in effect a dollar more for food for the beneficiaries.

Compared to WFP, TNT was impatient to push forward with the logistics initiatives. This ran the risk of rushing into projects that may not have necessarily been a priority for WFP. For example introducing an unmanageable set of Key Performance Indicators (KPIs) in Mozambique or translating everything into financial terms did not necessarily solve or

address WFP's day-to-day problems. WFP's business is about saving lives, while TNT's culture rotates around financial reporting and profit. An effort had to be made by both parties to see how TNT, by bringing its expertise, could help WFP save more lives.

Twelve months into the partnership TNT and WFP shared the view that any undue dependency - budgetary or otherwise - on TNT should be avoided and that they should identify and undertake activities with distinct deliverables. During the first year the partners also realized that there was potential overlap between the two logistics initiatives. It was important to carefully review the proposed activities to ensure their attribution to the most appropriate initiative. To assist in the day-to-day management of these two initiatives and ensure proper level of interaction with TNT, WFP employed two dedicated staff.

Joint Logistics Supply Chain (JLSC). At the time of the partnership, WFP's inter-agency logistics role was in evolution. In mid-2000, Bakker had taken his vision of WFP becoming the sole logistics service provider to the humanitarian community to a high level meeting with the UN Secretary-General and WFP's Executive Director. Meanwhile, WFP logisticians and the humanitarian logistics community at large had been looking at their logistics activities since the mid-1990s. Given the range of activities which 'logistics' encompassed in the UN, there was no consensus that full integration was necessarily more cost-effective than improved co-ordination between the agencies. In their enthusiasm and private sector mind-set, TNT wanted quick decisions and results on this initiative without fully appreciating the political sensitivities at play among donor countries, recipient governments and humanitarian agencies. In addition, the humanitarian logistics community in itself quite was diverse, ranging from UN agencies such as WFP to the Red Cross Movement and international and national NGOs. WFP's view was that its internal logistics capabilities required significant upgrading to properly execute its own mandate before assuming additional inter-agency responsibilities. WFP took a pragmatic approach. It started to improve upon select WFP logistics activities such as aviation and reserve stock management, building the option for the organization to assume greater inter-agency logistics responsibilities in these very areas in the future. Concurrently, through the initiative, it aimed at improved inter-agency co-ordination in critical areas such as fleet management.

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

As fleet management and warehousing were aspects of inter-agency logistics that were conceptually accessible to TNT, WFP's logistics department gave TNT several presentations on its operations in the context of developing countries.²⁷ During the first joint meeting, WFP got the impression that TNT was less than enthusiastic about fleet management, making it a closed topic. There was an initial view that fleet management was more of a back office type of support and hence not as visible as the more flashy airlift support. However, through continual discussion, TNT realized the significant impact their expertise could bring in terms of cost-savings by introducing greater efficiencies.

As far as its fleets are concerned, WFP did not always know what the total consolidated cost of its fleets was. Although it understand their importance, KPIs are just not so relevant when you need expensive solutions to get the food to beneficiaries. However, if WFP vehicles as well as those of all humanitarian organizations ran more effectively during emergencies then the community would have multiplied its outreach and speed of delivery. One of the first projects under this initiative was the adaptation and simplification of the fleet management software to the requirements of developing countries. WFP spent time preparing and briefing the first TNT expert assigned to the project in Sierra Leone. Despite the long-term perspective of the partnership, TNT seconded staff on a short-term basis. Given the long term nature of assistance sought this high turnover raised a number of issues. Every new person implied that experience and understanding had been lost and that she/he needed to be brought up to speed to our working environment, which is quite different from that of business in the developed world in terms of access to modern technology and systems. The problem of continuity had to be addressed to ensure that value was created and retained by calling upon TNT resources compared to one-off consulting services. A TNT staff cross training solution was adapted to ensure knowledge sharing between the incoming and outgoing TNT personnel.

In October 2003, TNT assisted in the organization and facilitation of the Fleet Forum driven by WFP, World Vision and IFRC for some 26 humanitarian UN organizations and NGOs. It was a breakthrough event. Until recently all agencies had been concerned about

²⁷ Each humanitarian agency had its own independent strategy for fleet and warehouse management. The separate and agency-specific warehouses and different types and makes of vehicles across and within given geographies had increased the level of complexity as well as the cost of maintenance at the agency as well as aggregate level.

their level of visibility. More recently, people working for the sector respected each others capabilities and country knowledge making cooperation much easier. TNT's role went beyond the event itself. By consolidating the data and information exchanged during the forum, it was to help put inter-agency ideas (such as the possibility of joint purchase of vehicles) into motion.

The second project with inter-agency application was a TNT study on in-house vehicle maintenance versus outsourcing (commercial sector). TNT was to bring its experience in materials, spare parts, and tyre management to help agencies decide, given the country context (quality and cost of services provided by the market) and the number of vehicles involved, on the optimal business decision. To gain the necessary experience and understand the differences between the ways WFP ran its operations compared to the commercial sector, a TNT expert was fielded to Pakistan, a country in which WFP ran its in-house facility.

On the warehousing side, TNT involvement was sought in the remodeling of the humanitarian warehouse operated by WFP in Brindisi, Italy. Members of TNT's Italian business unit provided advice on optimal layout and saw these modifications through. The project produced practical quick wins. Improvement to the Brindisi warehouse was something WFP had to do in any case with external help. TNT's involvement brought in necessary resources in addition to a neutral, external view. With this project WFP created significant and lasting benefits from the cost point of view as well as from efficiency perspectives. It took several more interactions before TNT's logistics capability in the area of inventory tracking was taken on board by WFP in view of its increasing role as the logistics arm of UN humanitarian organizations for the movement of Food and Non-Food Items (NFIs).

To allow for the identification of other sub-initiatives, WFP tried to help TNT connect to the United Nations Joint Logistics Centre (UNJLC) concept. In the course of 2003, TNT supported the development of the UN Humanitarian Response Network (UNHRN) concept. UNHRN, an initiative initially driven by UNJLC, aimed towards developing a global, common and coherent emergency response strategy, within which various humanitarian agencies could set their own agenda.

Apart from providing technical assistance and modernizing the way WFP ran its fleets or managed its warehouses, TNT involvement brought leverage with other departments in the house. It also forced WFP to ask hard questions about its approach and operations from the technical as well as the administrative standpoint. It was felt that if managed with tact, an external force like TNT could help shake the organization and prepare it for broader and more sensitive issues. Given the slow pace of change in a large complex organization like WFP, a long-term partnership was believed to be more effective than a consultant to bring about change as apart from providing an objective diagnostic as a partner is usually there to help in the implementation of the solution.

The partnership had been rich in terms of lessons learnt. Compared to the beginning, WFP had become more precise in terms of articulating its goal, work plans and the type of expertise and skills it required to tackle its challenges. The experience was valuable for future partnerships as WFP not only had a clearer understanding of its needs, but was also more prepared to verify whether the potential partner could adequately address them.

The WFP logistics team concurred: after spending numerous months understanding each others' requirements, the partnership was to produce substantial benefits during the following year as both parties were to push forward with a number of initiatives of significant impact.

Emergency Response (ER). Swift delivery of Food and NFIs to emergency sites was a constant challenge and strain on WFP resources. Through the second logistics initiative, WFP intended to leverage TNT's express and logistics capability and know-how to enhance its operational effectiveness. After few months of interaction, together with TNT WFP managed to narrow down areas in which WFP could benefit from TNT services, assets and expertise in order to achieve its mandate: the fight against hunger.

The aviation training program was amongst the first. WFP had plans to professionalize its air operations. When TNT offered to train and certify its international cadre of air transport and movement officers in 2003, WFP was enthused. First TNT conducted four five-day assessment trainings for 27 WFP air operators. Out of those, 11 candidates from WFP air operations in Afghanistan, Somalia, Sudan and Angola were selected to attend a full eleven-week course organized at TNT's air hub in Liege, Belgium. Three of the candidates graduated as Ramp Officers, while the remaining eight completed the full training and

obtained the recognized FAA (Federal Aviation Administration) Flight Dispatcher License. The benefit of a pool of professional and internationally certified air operators was considerable for WFP also in view of the prohibitive cost of such training. Nonetheless it led to some dependency and risk as it provided the operators with more job mobility and opportunities in the commercial sector.

The second project involved TNT's Express division and addressed the requirement to move small parcels of equipment to support WFP's ICT activities during an emergency response, particularly in under-funded operations. Through an agreement with TNT, WFP ensured worldwide express delivery out of its FITTEST based in Dubai of critical ICT equipment to emergency locations.

While WFP was efficient in moving food to a disaster area, due to certain budgetary rigidities, it was less equipped for rapidly transporting NFIs to support response teams deployed in the field and address logistics bottlenecks. The \$500,000 emergency response fund established under this initiative allowed WFP to call upon TNT services during an emergency and offset expenditure incurred for the delivery of important NFIs at short notice. The account was used during the three major crises addressed by WFP in 2003: Southern Africa, Iraq and Liberia. In Monrovia, Liberia, the port's forklift trucks were stripped and its fuel bladders looted preventing humanitarian agencies, including WFP, from off loading their cargo. The TNT freight services delivered forklift truck tyres and fuel bladders, items that enabled WFP to get its show on the road within four days. In normal circumstances WFP used the commercial sector through a tender process. In emergency cases, however, it was extremely valuable to have an account like the TNT one that can come in quickly. To facilitate the use of the TNT services by WFP's regional offices at the outset of emergencies, in December 2003 TNT finalized an emergency response catalogue listing internal assets and logistics capability throughout the world that could be mobilized quickly and efficiently in support of WFP's logistics emergency preparedness and response requirements.

The fourth project aimed to provide logistics assistance to WFP's massive Southern Africa operations addressing the severe food shortage affecting 13 million people. To kick-off its collaboration WFP outsourced a functional area, its non-food supply chain from South Africa to Zimbabwe to TNT. The assistance consisted in the storage, handling,

LEVERAGING PARTNERSHPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

transportation, clearance and delivery of high value small volume telecommunication and security related equipment from South Africa to 12 WFP implementing partners within different localities in Zimbabwe.

WFP's Johannesburg Regional Office was utterly impressed by the way TNT had managed the NFI supply chain in Zimbabwe. WFP's regional interest in achieving a similar level of efficiency in its operations led to TNT's involvement in a comprehensive Business Process Review (BPR) of WFP's supply and demand chain in southern Africa. TNT applied project management skills to analyze WFP's regional structure, business processes, MIS and planning procedures with a view to suggest improvements that would enhance and standardize operations. The BPR examined interfaces between the various functions from procurement, logistics, HR to finance. It also verified how the Regional office in Johannesburg coordinated activities among the six southern African countries involved in the WFP Regional Emergency Operation. As a result of this initiative, WFP managed to unify its data warehousing system by building the necessary interfaces between three different programs. WFP was then in a better position to monitor, track, and move its stocks and understand their quantitative as well as monetary implications. Other outputs included the emergency response performance indicators applicable across WFP field offices defined by program managers together with the logistics staff. This effort initiated and rolled out at a grass-root level, was expected to contribute significantly to WFP's efforts to improve performance measurement through its result-based management initiative.

WFP was enthusiastic about the future of the initiative which it believed would only thrive in the coming years. The likelihood of the emergency fund to be doubled for 2004 was high and so was the possibility of extending and replicating the BPR exercise in other WFP regional offices. Those parts of WFP operation touched by the TNT partnership had experienced a unique and most valuable learning opportunity: a direct in-sight on how a first-class company runs its business.

Implementation

When WFP presented the TNT partnership to its Board, the attitude was somewhere between healthy skepticism and downright disbelief about why TNT wanted to work with WFP. The same type of feelings and doubts prevailed among WFP staff. Traditionally those marrying a humanitarian cause viewed their decision as a life choice. As such, not all WFP staff were prepared to appreciate the involvement of a profit-making entity in their work. As the initiatives evolved, however, WFP was moved by the devotion of TNT employees, and their doubts about TNT's genuine intentions dissipated. TNT employees put on jobs had delivered and WFP had benefited from their expertise. In addition there had been a lot of emotional investment from TNT's side in the partnership. The number and variety of cause-related actions undertaken by TNT employees to raise money for WFP's school feeding program provided ample evidence.

There was a noticeable difference between staff awareness and involvement at WFP and TNT. The TNT partnership was not as widely promoted within WFP and its many field offices, although this was changing rapidly. After all, TNT was only meant to be one of ten or so WFP corporate partners. Contrary to Bakker who engaged all of his employees worldwide, at WFP only relevant staff were involved.

This was a detailed partnership and WFP grossly underestimated how much it was going to take to make it work. TNT had allocated a number of full time people to the partnership where WFP staff had to deal with the partnership on top of their normal work. Once WFP took stock of the reality, it could not immediately align its resources to those of TNT as it had not budgeted for them. While the two new hires joining the logistics initiatives took a big strain off of the logistics group, lack of resources persisted for the school feeding support initiative, as hundreds of TNT employees were lined up to go to the field and expectations were high. WFP saw the same type of constraint and pressure at TNT at the business unit level, where no dedicated resources had been allocated to the partnership.

After twelve months, the partnership showed great scope for gain over the five year period. However, given the depth and scope of the partnership, WFP was forced to make substantial upfront investment in terms of staff from its own budget. WFP started to carry out cost exercises for each of the initiatives, taking into consideration hours/people/costs from headquarters and from field perspectives. An important cultural change for WFP staff

that had never before reported on the use of their time, the results of the exercises were to impact and shape WFP's future partnerships.

Future Corporate Partnerships

WFP weighed out the pros and cons of corporate partnerships. By any measure WFP did a pretty good job. It brought food to 100 million people each year with only 7% overheads. The truth of the matter was that companies like TNT could take it to another level. The seeds for the partnership to grow have been planted. The future was to tell everyone more about its longevity and ramifications as well as TNT's capability to motivate its 161,000 employees to feed 161,000 children year after year, with or without Bakker's personal involvement. What was sure was that the partnership's second year budget meant to expand the TNT volunteer activities from the school feeding initiative to the two logistics initiatives, creating more opportunities for TNT staff involvement in an increasing number of technical assistance activities.

Going forward, it appeared unlikely that WFP could get involved to such an extent with another corporation. This was WFP's first partnership. It was anxious to learn and to make it work. However, it could not possibly replicate this effort with each corporation. True there may not be another dozen organizations that could give it the drive, commitment, involvement and inspiration that TNT's CEO Peter Bakker has. But corporations had to be quick in partnering with WFP, given its limited absorption capacity and the diminishing opportunity for finding new projects as time elapsed.

Without doubt private sector partnerships had short and long term consequences on WFP's financial resources, performance and staff morale. WFP was discovering them as it went along.

8.3.2 WFP Emergency Network

In January 2007, Citibank and WFP announced their intention to develop the WFP Emergency Network, that is, a mechanism through which interested private sector companies can respond with cash, services and in-kind donations in advance of major

emergencies. The Emergency Network, which enables companies to deliver pre-planned contributions, is expected to augment WFP's disaster response ahead of time.

8.4 Discussion

WFP is an operational humanitarian organization. In this section, we first discuss disaster response at WFP and then implementation risks and operational benefits of the WFP-TNT partnership.

8.4.1 Disaster Response at WFP

To counter supply failure modes, between the launch of an appeal and receipt of donations, WFP draws upon its emergency reserve accounts. It arranges for the movement of relief supplies and specialized equipment from its regional and national warehouses to the disaster site. To augment its response capability, WFP calls upon resources available in its network of private sector partners and standby donors.

To come to terms with sudden and unpredictable disasters, the evolving logistics challenges and the specificity of each operation and country, WFP formulates flexible plans that can accommodate frequent and numerous last minute changes. Where possible, it builds redundant capacity into its operations. For predictable disasters, WFP engages in scenario and contingency planning. For example, WFP has contingency plans in place to address severe droughts in Africa.

With no limitation on which suppliers it can use, WFP envisages the use of different transportation routes, modes, and logistics service provider over a very short period. When an access route to a region is temporarily interrupted or insufficient, given the importance of timeliness, its cargo uses the next alternative transport mode or route available. To ensure the widest possible distribution, it leverages various distribution networks (schools, mosques, churches, etc.) regardless of the cost involved.

In terms of transport mode, to reach remote areas and IDPs, WFP calls upon as many logistics providers as required to ensure that the combined transportation portfolio meets its capacity requirements. Transport modes include trucks, motorcycles, boats, and

helicopters as well as unconventional modes such as donkeys, elephants and airdrops. For example, to respond to the 1996 Zaire crisis, WFP used air transport before the more sustainable but time-consuming alternatives of surface transportation could be used. In WFP operations, trucking often replaces airlifts after the initial emergency phase. Ocean transportation is used to move significant quantities of cargo (e.g. food) at low cost.

To get operational as quickly as possible, WFP often establishes the centre of its operations either at the disaster site or at the closest location with the most adequate facilities. When transportation is unreliable, it store goods close to the point of consumption. For example, during the first days of the Liberia crisis, WFP worked out of a ship off the coast near the capital city. During the 1996 Zaire crisis, to avert the massive movement of people towards centralized and few food depots, WFP set up decentralized distribution points.

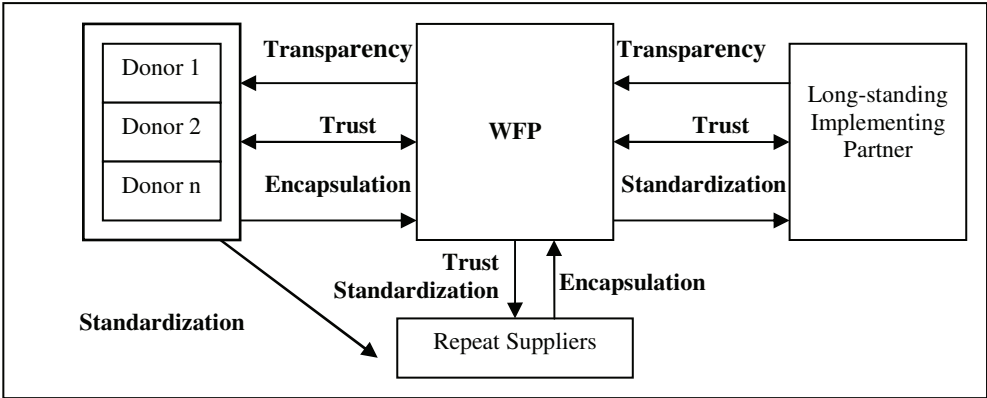
At the outbreak of a crisis, to augment their presence, WFP relocates its headquarters and regional staff close or at the disaster site. For example, in response to the Afghan and Iraq 2003 crisis, WFP first evacuated its staff relocating them, along with a good number of its headquarters and regional staff, to a regional office. Later, the majority of mobilized staff was moved into the emergency theatre. Apart from relocating, to augment its HR presence, WFP calls upon its network of partners. To cover outstanding needs, WFP hires “reactive” capacity, that is, experts and consultants and use standby assessment teams.

To prepare initial appeals and a response plan, WFP uses a wide range of sources. To build estimates on human loss, the scale and scope of the damage, and number and duration of people requiring relief assistance, publicly available information is combined with expert knowledge and experience. To counter eventual communication failure modes, WFP mobilizes its standby ICT equipment from its regional warehouses.

Similar to other humanitarian organizations, WFP depends on a network to stage its response. The WFP disaster response network includes the media, private and public donors, implementing partners, recipient and bordering governments, military, and suppliers. Like other humanitarian organizations, WFP expects donors, suppliers and implementing partners to adhere to its product specifications, delivery and distribution requirements. As illustrated in Figure 8.1, trust, transparency, standardization and encapsulation regulate its relationships with long-standing donors. Trust, transparency and

standardization regulate its relationships with long-standing implementing partners while trust, standardization and encapsulation regulate its relationship with repeat suppliers.

Figure 8.1 – Enablers of the WFP- Donor/Implementing Partner/Repeat Suppliers Partnership



8.4.2 WFP Partnerships

In this section we discuss the WFP-TNT partnership in detail and very briefly categorize the Citibank spearheaded initiative: WFP Emergency Network.

8.4.2.1 WFP-TNT Partnership

In this section, we analyze the process that led to the WFP-TNT partnership, its content, how the two parties managed the partnership, the difficulties they encountered and the actual or expected benefits for each of them.

In general terms, TNT faced some challenges in terms of identifying a credible and promising humanitarian organization to partner with. Out of the five finalists, two dropped out and only one emerged as the obvious choice.

To bring content to the partnership and help TNT appreciate the nature of WFP’s daily operations, the two partners got together immediately after the signing of the MoU. Joint discussions led to a detailed and complex partnership composed of five initiatives which resulted in a strategic partnership with one cross-cutting initiative (Figure 8.2). Two out of the five initiatives leveraged directly TNT’s core competencies in logistics. The JLSC was

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

a cross-cutting initiative as specific TNT logistics resources were leveraged in the interest of the humanitarian community at-large. The ER initiative was a one-to-one initiative which aimed to enhance only WFP’s disaster response and disaster preparedness capabilities. One initiative leveraged TNT’s emotional capital (School Feeding) while the fourth leveraged its hands on experience (Transparency and Accountability). The fifth initiative – private sector fund raising - while initiated by TNT was soon handed over to another private sector partner for further development. Each of the initiatives were driven by concrete objectives as far as TNT is concerned and resulted in concrete benefits to WFP (Figure 8.3).

Figure 8.2 – WFP-TNT Partnership

| | | |
|---------------------|--|---|
| Multiple | Localized Partnership | Brokered Partnership |
| Business/CSO | Strategic Partnership Private Sector Funding School Feeding Support Transparency & Accountability ER | Cross-Cutting Partnerships JLSC |
| Single | Single | Multiple |
| | Humanitarian Organization | |

Shortly after defining the scope of the partnership, the partners defined each initiative’s quantitative and qualitative deliverables and developed its monitoring and evaluation processes. This step was to ensure that the performance and impact of the partnership was continuously measured.

At the time of the partnership, TNT was consolidating its operations grouped under two brands and three divisions. By supporting WFP’s noble mission - the “fight against hunger”, TNT aimed to build competitive advantage by increasing employee motivation and productivity, stimulating cohesiveness among its worldwide employees, and attracting and retaining talents.

Figure 8.3 – Drivers and Benefits of the WFP-TNT Partnership

| Initiatives | Drivers for TNT | Benefits to WFP |
|-------------------------------|--|---|
| Private Sector Fundraising | n.a. | <ul style="list-style-type: none"> • Signal other donors/broaden and diversify donor base • TNT in-kind contribution |
| School Feeding Support | <ul style="list-style-type: none"> • Moral Marketplace: Staff, financial markets, & consumers • Achieve Social Agenda • Establish Unified Global Image | <ul style="list-style-type: none"> • Signal other donors/broaden and diversify donor base • TNT cash and in-kind contribution |
| Transparency & Accountability | <ul style="list-style-type: none"> • Moral Marketplace: Staff morale | <ul style="list-style-type: none"> • Improve performance • Advance state of knowledge & practice |
| JLSC | <ul style="list-style-type: none"> • Competitive Advantage: Brand reputation & image building • Moral Marketplace: Staff morale • Comparative Advantage | <ul style="list-style-type: none"> • Advance state of knowledge & practice • Improve operational effectiveness • Signal other donors |
| ER | <ul style="list-style-type: none"> • Competitive Advantage: Brand building, Open up new markets • Moral Marketplace: Staff morale • Comparative Advantage | <ul style="list-style-type: none"> • Improve disaster response and disaster preparedness • Advance state of knowledge & practice • Signal other donors |

The overall effort had a positive effect on employee motivation. TNT employees were proud of their organization and the partnership helped TNT attract new talents (Figure 8.4). The partnership has had an impact on the moral marketplace – the company was ranked first in the Dow Jones Sustainability Index in 2007. TNT reports on its partnership with WFP in its annual reports. As a result of its efforts with WFP, TNT is recognized for its contribution to the humanitarian cause among its peers, the humanitarian community, academia, governments and media and is often invited to talk about its partnership experience with WFP in different fora. In conclusion, the partnership has enhanced the group’s brand reputation and image and has resulted in positive media exposure.

Figure 8.4 – The WFP-TNT Partnership: Excerpt from *The Economist*

Helping others to help yourself

When catastrophic floods hit Bangladesh last November, TNT's emergency-response team was ready. The logistics giant, with headquarters in Amsterdam, has 50 people on standby to intervene anywhere in the world at 48 hours' notice. This is part of a five-year-old partnership with the World Food Programme (WFP), the UN's agency that fights hunger. The team has attended to some two dozen emergencies, including the Asian tsunami in 2004. "We're just faster," says Ludo Oelrich, the director of TNT's "Moving the World" programme.

Emergency help is not TNT's only offering. Volunteers do stints around the world on secondment to WFP and staff are encouraged to raise money for the programme (they generated euro2.5m last year). There is knowledge transfer, too: TNT recently improved the school-food supply chain in Liberia, increasing WFP's efficiency by 15-20%, and plans to do the same in Congo.

Balm for the soul

Why does TNT do these things? "People feel this is a company that does more than take care of the bottom line," says Mr. Oelrich. "It's providing a soul to TNT." In a 2006 staff survey, 68% said the pro-bono activities made them prouder to work at the company. It also helps with recruitment: three out of four graduates who apply for jobs mention the WFP connection. Last year the company came top in the Dow Jones Sustainability Index.

TNT's experience illustrates several trends in corporate philanthropy. First, collaboration is in, especially with NGOs. Companies try to pick partners with some relevance to their business. For TNT, the food programme is a good fit because hunger is in part a logistical problem. Standard Chartered, a bank, is working with the Bangladesh Rural Advancement Committee on microfinance and with other NGOs on a campaign to help 10m blind people.

Source: "Feel Good Factor", *The Economist*, 1/19/2008

As presented in Appendix A, WFP is largely dependent on voluntary donations from some 10 governments with the US government providing the lion's share. The growing challenges of increased emergencies and food aid had encouraged WFP to look into the opportunity of increasing and broadening its resource base by calling upon the human, financial and physical resources of the private sector. Given the low brand awareness of WFP among the general public, at the time of the WFP-TNT partnership corporate contributions had been marginal and mainly in-kind in response to emergencies. WFP,

however, had as objective that of raising 10 percent of its total resources - cash and in-kind contributions - from the private sector by 2007.

The private sector fundraising initiative was to help WFP develop a vision and strategy for its corporate fundraising activities. During the first year of the partnership, TNT assisted WFP in a corporate fundraising study which highlighted the interest of corporations in donating services and assets to humanitarian organizations as opposed to cash. By virtue of entering in a partnership with WFP, TNT had sent a signal to other donors.

To avoid undue resource/expertise dependency on TNT, the partners worked towards the identification of other potential corporate partners for WFP. During the first year, TNT brought a new corporate partner, Boston Consulting Group, to WFP. The idea of a business advisory council - a global network of corporate leaders that would provide WFP a forum to discuss issues with global leaders, seek their advice, and learn from their expertise and insights without any obligation in terms of implementation - was also launched.

After the first year, to ensure that partnerships with the private sector would not impact its traditional donor base and the humanitarian space, in 2004 WFP put forward a policy decision paper to its Board. The private donor fundraising policy paper approved by the WFP Board ensured that private contributions would not be viewed as a substitute for Member State funding. The paper defined the interface between the organization and private donors. It authorized WFP to proactively seek and accept contributions from those private donors whose products, services, core competencies and expertise were a strategic fit with its needs. The policy paper authorized WFP to publicly acknowledge the contribution of private donors. It also committed the organization to protect its space, reputation and brand image by:

- i) Using the framework for private donor cooperation established by the UN Global Compact for guidance;

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

- ii) “Applying stringent selection criteria and undertake a rigorous screening process before accepting contributions”²⁸;
- iii) Selecting potential private partners with care and after having conducted a due diligence that, among other things, assesses their commitment and capabilities;
- iv) Taking proper measures and ensuring that no private sector partner benefits commercially from its relationship with the organization;
- v) Avoiding granting exclusivity, preferential treatment to any private sector partner;
- vi) “Maintaining a ‘firewall’ between its private fundraising and procurement processes” (WFP, 2004) to ensure the decisional and managerial independence of the latter;
- vii) Demanding private donors to adhere to its code of conduct which calls for self-disclosure of information related to the exclusionary criteria; and
- viii) Regulating the use of WFP emblem and intellectual property.

To avoid a large number of partnerships, WFP set about determining the optimal number of partners it could and would like to partner with.

The School Feeding Program initiative helped expand WFP’s school feeding fund raising outreach. TNT’s involvement in WFP’s School Feeding Program aimed to feed on a yearly basis as many children as TNT employees worldwide. It was the only initiative that envisaged TNT’s direct and indirect cash contribution. The indirect mechanism was linked to donations mobilized by TNT employees through cause-related fundraising activities which would in turn be matched up to a threshold by TNT. The program also envisaged the participation of TNT staff in selected countries as volunteers. This was expected to improve employee productivity and morale. TNT’s partnership with WFP was also expected to improve the companies’ competitive advantage as well as enhance its position on the moral marketplace. The information available indicates that it has achieved these

²⁸ WFP can accept contributions only from private donors that respect human rights, apply responsible labour practices, have a record of socially responsible behaviour, and a positive public and/or product or service image (WFP, 2004).

objectives and that the company has even received recognition from the government of the Netherlands for its efforts.

As a result of the private sector fundraising and school feeding initiatives, WFP managed to diversify its donor base by attracting new private and corporate donations. More specifically, it helped it increase the volume of in-kind, industry-specific and cash donations and prompting new corporate partnerships.

Similar to the private sector fundraising, the transparency and accountability initiative did not leverage a TNT core competency. Nonetheless, the initiative contributed to the transfer of administrative and accounting practices ensuring efficient utilization of WFP financial resources. It improved the status of practice and knowledge and resulted in changes in areas that WFP had planned improvements in. TNT added value as WFP was able to achieve more of its administrative objectives, better and faster.

The JLSC and ER initiatives leveraged TNT logistics, express and transportation expertise. Through the JLSC, TNT was to address the common needs of the humanitarian community in the area of logistics. TNT expertise was leveraged in fleet management and warehousing; activities with an inter-agency application that could result in major cost-savings and greater efficiencies. In terms of warehousing, WFP had planned improvements to the humanitarian warehouse it operated in Brindisi, Italy. TNT's neutral diagnostic and technical assistance were sought in the remodeling and modernization of the warehouse. This resulted in long lasting benefits to the humanitarian community.

In contrast, the ER initiative was designed to address the specific needs of WFP during and between emergencies. Through this initiative, TNT assisted WFP in a series of emergencies by utilizing its physical resources (e.g., airplanes, trucks, warehouses), human capital (e.g., experienced and knowledgeable managers and staff), and organizational capability (e.g., tracking and routing systems). Sub-projects under this initiative included the Emergency Response Fund for the delivery of Non-Food Items (NFIs), transport of critical ICT equipment from WFP's Dubai office to emergency locations, and an aviation training and certification program for WFP's international cadre of air transport and movement officers.

WFP could leverage TNT resources also during emergencies in which commercial markets broke down or were non-existent (e.g. Liberia). This increased the speed and efficiency of

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

WFP relief operations. In response to the 2004 tsunami, TNT supplemented WFP's efforts by assisting in the transportation of food and NFIs to four countries in the region. In Indonesia, Sri Lanka, Thailand and India, TNT set up emergency coordination rooms, established food supply lines, provided transport management, temporary storage capacity and airport ramp handling services. By end April 2005, the in-kind support of TNT in terms of staff time and assets amounted to €2.3m (TNT, 2005). The cash contribution of TNT employees to the emergency topped €1m (TNT, 2005).

TNT provided logistics assistance to WFP's massive southern Africa operations by taking over its non-food supply chain from South Africa to Zimbabwe. To help WFP replicate this type of operation, TNT reviewed WFP's supply and demand chain processes and assisted in improving its monitoring, tracking and costing procedures.

The actual implementation of the WFP-TNT partnership was not problem-free. At the launch of the partnership, disbelief and skepticism regarding the motivations of TNT prevailed among the WFP board members and staff. A minority even viewed an increasing involvement of the private sector in humanitarian activities as a potential threat to "humanitarian space". These sentiments were dispelled once the partnership started to produce change and the WFP staff witnessed the devotion of TNT employees to the "fight against hunger".

The WFP-TNT partnership was a detailed one and WFP had grossly underestimated the time and effort required to make it work. While TNT had allocated a number of full-time people to the partnership at the headquarters level, WFP had not. As a result, WFP staff had to deal with the partnership activities on top of their existing workload. This created additional stress for WFP staff and limited their absorptive capacity. Given the depth and scope of the partnership, WFP was forced to align its resources to those of TNT. However, this took time. Finally, WFP took on board two new hires to work on the logistics related initiatives some nine months after the launch of the partnership. At the organizational level, discussions between the partners were overly prolonged given WFP's temporary absorptive capacity limitations caused by its large-scale involvement in the 2003 Iraq emergency. Despite all efforts, lack of resources persisted for the school feeding support initiative. The same type of constraint and pressure were recorded at TNT at the business unit level, where no dedicated resources had been allocated to the partnership.

At the organizational level, partnership with the private sector and a humanitarian organization, respectively, was a first for WFP and TNT. Discussions were dampened early on because of differences in working practices, rhythms, cultures and language. For example, given the political dimension of the WFP's work, decisions are not only driven by business rationale. Different levels of managerial accountability at WFP led to delays in the decision making processes. This was a source of frustration for the TNT partnership team accustomed to achieving targets against tight deadline. The language barrier, rooted in differences in jargons commonly used by each of the partners, led to additional misinterpretations and misunderstanding.

Moreover, it took several months before WFP and TNT could narrow down areas within the two logistics related initiatives in which WFP could benefit from TNT's logistics services, assets and expertise. It took time for WFP to articulate its needs and for TNT to fully appreciate the nature and scope of WFP's logistics activities: movement of bulk and perishable commodities into underdeveloped often insecure economies, most of which during emergencies.

At the early stages of the partnership and before fully appreciating the nature of WFP's logistics work - a mixture of expediency and cost-effectiveness - TNT tried to introduce WFP to techniques and best practices widely applied in business. In response, WFP demonstrated reluctance in pursuing projects that were not a priority or would not necessarily address its day-to-day problems. TNT was initially less interested in providing its support to back-office type operations such as fleet management and more interested to get involved in visible activities such as airlifts. It was through continual discussions that TNT saw how assistance in back-office type activities could make a difference to the organization's operating budget.

In conclusion, WFP benefited from its partnership with TNT in a significant way in terms of increase in resources, visibility, networking opportunities and performance. In terms of resources, TNT provided WFP with cash as well specialized logistics assets and expertise. It helped WFP increase its visibility among the corporate world and public opinion in general. As a result, people outside traditional WFP circles had the opportunity to engage intellectually and emotionally in the "fight against hunger". It extended its fundraising opportunities and corporate contacts. At the organizational level, it strengthened WFP's

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

human capacity and sharpened its skills. Finally, it helped WFP improve its operational efficiency and response time during disaster response.

TNT also benefited from the partnership. By partnering with an organization with a strong logistics function, it was able to apply its distinctive strength. As such, it created both economic and social value. While fulfilling its social obligations and raising the motivation of its employees, it was able to prove the resilience and soundness of its operations to the market by delivering goods in extreme environments in a timely fashion: potential for extra-benefits. As such, it can exploit its achievements (enhanced brand recognition and reputational assets) in its marketing efforts as well as identify new markets into which expand.

Figure 8.5 – Risks and benefits of the WFP-TNT Partnership

| Main benefits for WFP | | Main benefits for TNT | |
|---|--|---|-------------------------------|
| Improving effectiveness <ul style="list-style-type: none"> • Access to specialized, additional, complementary resources and capabilities Advance status of knowledge & practice (organization-specific) Signal other donors | H H H | Moral Market Place <ul style="list-style-type: none"> • Improve employee motivation and productivity (attraction, retention) • Fulfill the CSR expectation of the market Competitive Advantage <ul style="list-style-type: none"> • Increase in reputational assets • Enhance brand recognition | H H H H |
| Main risks faced/addressed by WFP | | Main risks faced by TNT | |
| <ul style="list-style-type: none"> • Divergence in working cultures • Absorptive capacity • Reduced donations from traditional donors • Loss of organizational flexibility • Structural dependency • Tainted partners, anti-ethical activities • Overwhelming success • Failure | H H H H H H H H | <ul style="list-style-type: none"> • Divergence in working cultures • Shortage of credible & promising non-profits • Accused of partnering exclusively for self-serving reasons, PR, image building or tax purposes • Failure: wasted resources • Deteriorating reputation | H H H H H |

While the partnership produced significant benefits for the two parties, it was embedded with risks. As a top-down initiative, the success of the partnership, its continuation and funding depended heavily on the interest and commitment of the TNT CEO. A change in CEO could have affected the faith of the program. In terms of assistance extended, some initiatives could have resulted in structural dependency and any disengagement could have compromised operational continuity. Divergence in working cultures if not recognized and addressed early-on could have resulted in abandonment. As far as WFP was concerned, the partnership viewed with suspicion could have also resulted in employee alienation and reduction in donor funding. Since strategic partnerships are time and labor intensive as well as costly, had WFP been unable to make the required investment, the partnership was setup to fail. Finally, throughout the life of a long-term partnership, both parties are exposed to an underlying risk: deteriorating reputation of their partner.

Over a five year period, it is estimated that TNT and WFP invested respectively € 37 million and 7.6 million in this partnership. While exposed to considerable risks, the WFP-TNT partnership has yielded considerable benefits to both parties (Figure 8.5). Given its success, five years after its launch, the two parties agreed to extend their relationship as long as it remains beneficial to both parties.

8.4.2.2 WFP Emergency Network

As illustrated in Figure 8.6, the Citibank proposed Emergency Network can be classified as a localized partnership given the fact that it involves one humanitarian organization, WFP, and a group of private sector companies. The companies part of the network are expected to have different time horizons. Although all those part of the network are expected to commit in advance, some may turn out to be regular and long-standing donors while others may not be.

Figure 8.6 – WFP Emergency Network

| | | | |
|----------------------------------|----------|---|----------------------------|
| Business/CSO | Multiple | Localized Partnership WFP Emergency Network | Brokered Partnership |
| | Single | Strategic Partnership | Cross-Cutting Partnerships |
| | | Single | Multiple |
| Humanitarian Organization | | | |

8.5 Summary

In this chapter we discuss and present the results of our research at WFP. Our description allows us to make some observations on how WFP responds to disasters how the WFP-TNT was implemented and with what results. As far as the WFP-TNT partnership is concerned, it shows that business partnerships, once they avert a number of issues/risks, have the ability to contribute to the strategic, organizational and operational objectives of humanitarian organizations enhancing their disaster management capability as well as improve the image of the corporate partner with key stakeholders (employees, customers, financial market, etc.).

Chapter 9 Fritz Institute

In this chapter, we present the results of our desk research on the Fritz Institute. After an introductory note on the history and processes of the Institute, we describe its activities. In section 9.2, we elaborate on the role and contribution of the Fritz Institute as a broker between humanitarian organizations and business, academia, donors and foundations.

9.1 Fritz Institute

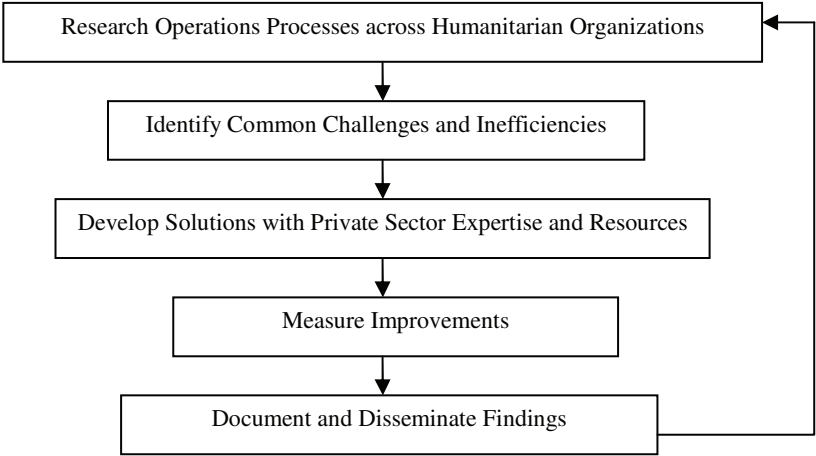
The Fritz Institute was founded in 2002 by Lynn Fritz, former chairman and CEO of Fritz Companies, a San-Francisco-based logistics company and a Fortune 1000 global logistics corporation that was sold to UPS in 1999. It is a non-profit civil society organization (CSO) that aims to assist humanitarian organizations in the delivery of humanitarian aid. Its mission is to strengthen “the infrastructure of humanitarian relief organizations by mobilizing logistics and technology expertise and resources from the corporate and academic institutions” (Fritz Institute website). To “make aid effective” (ECCH, 2003), it identifies common challenges and inefficiencies and then leverages best practices, technology and resources of the private sector and academia to develop tools and support activities that can improve the humanitarian relief process. The process pursued by the Institute is illustrated in Figure 9.1.

To achieve its mission, by end 2006, the Fritz Institute had established a multi-disciplinary and wide network of partner organizations. Such network included 48 NGOs, UN organizations and members of the Red Cross Movement; 2 government agencies; 24 corporations; 17 academic institutions and 3 foundations for a total of 96 partners (Fritz Institute 2006 Annual Report).

Initiatives. As summarized in Figure 9.2, by end 2006, the Fritz Institute ran seven initiatives. The first four initiatives are in the areas of logistics and supply chain, technology, humanitarian preparedness and impact, and capacity building. The fifth initiative - Corporations for Humanity - aims to broker collaboration between the private

sector and humanitarian organizations. The sixth initiative is the sponsoring of research in the area of humanitarian operations. The last and latest initiative embraced by the Fritz Institute is the assessment of the level of disaster preparedness of the San Francisco Bay Area in case of catastrophic disaster.

Figure 9.1 – The Fritz Institute Process



Source: Fritz Institute 2005 Annual Report

More specifically, the **logistics and supply chain program** aims to a) transfer resources and best practices from the corporate world and academia to humanitarian logistics and b) provide training on the humanitarian logistics. This is achieved through organization of conferences, creation of formal certification and standardized training programs for humanitarian logistics, and establishment of communities of practice.

To understand the needs of humanitarian organizations, the Fritz Institute right from its inception organized an annual humanitarian logistics conference. In 2005, the conference evolved into a full-fledged humanitarian logistics association and the Fritz Institute was designated as its coordinator. In 2006, the Fritz Institute launched the humanitarian logistics certification program. Funded by USAID, the first level of training attracted interest from 200 people from more than 50 organizations in 10 countries (Fritz Institute Annual Report, 2006).

Figure 9.2 – Fritz Institute Initiatives

| Initiative | Objective | Benefit to HOs |
|---|--|--|
| 1. Logistics and Supply Chain | | |
| <ul style="list-style-type: none"> Humanitarian Logistics Association | To ensure faster and more effective relief delivery: <ul style="list-style-type: none"> Bring recognition and resources to humanitarian logistics Improve logistics best practices Professionalize the logistics function | Advance state of knowledge & practice |
| <ul style="list-style-type: none"> Certification in Humanitarian Logistics | | Improve performance |
| <ul style="list-style-type: none"> Crossroads Conferences | | Advance state of knowledge & practice |
| 2. Technology | | |
| Humanitarian logistics Software (HLS) & HELIOS | Develop technology solutions that address the unique needs of humanitarian supply chains | Advance state of knowledge & practice Improve performance |
| 3. Preparedness and Impact | | |
| Humanitarian Impact Conferences and Surveys | Measure the impact of disaster preparedness and institutionalize good system and structural practices to evaluate disaster response | Advance state of knowledge & practice |
| 4. Capacity Building | | |
| Capacity Networks Initiative | Develop world-class capacity among African NSs to address the growing humanitarian need in Africa. Sponsor the accreditation process | Improve performance |
| 5. Private-Public Partnerships | | |
| Corporations for Humanity | Leverage private-sector resources, technology and expertise for improvement in the delivery of aid | Advance state of knowledge & practice Improve performance |
| 6. Research Centre | | |
| Lecture series, Case studies, Publications, Surveys | The research centre provides inputs towards the implementation of the supply chain, technology, capacity building and preparedness and impact programs | Advance state of knowledge & practice |
| 7. Preparedness Initiative | | |
| Preparedness Initiative Bay Area Disaster | Assess the preparedness level of the San Francisco Bay Area in case of catastrophic disaster | Advance state of knowledge & practice |

The **technology initiative** aims to ensure application of the state-of-the-art technology towards the management of humanitarian supply chains. To improve the operational

effectiveness and responsiveness of humanitarian organizations and bridge the IT gap, the Fritz Institute, in collaboration with IFRC, developed a customized Humanitarian Logistics Software (HLS) (see Chapter 6, section 6.3). A web-based system, the HLS aims to standardize and automate the relief mobilization process.

After having developed its flagship product, the HLS, to cater to the needs of local and field-based small and medium-sized NGOs, the Fritz Institute developed a lighter, more user-friendly and cost-effective version of the software named HELIOS. Similar to HLS, the HELIOS helps organizations manage their emergency supply chains from mobilization to reporting as well as coordinate their operations with other humanitarian organizations in a standardized and automated fashion. HELIOS allows even the smallest organization to quickly ramp-up. The software is made available free of charge to any interested humanitarian organization. Free access to the software has the potential to ensure coordination of pipelines of supplies, information and financing from donation to delivery among many humanitarian organizations (Fritz Institute website).

World Vision International (WVI), the largest NGO in the world, was the first organization to adopt HELIOS. Oxfam GB, the UK arm of the international humanitarian organization, after a comprehensive review of its technology needs, also chose to pilot the HELIOS in some of its operations. More significantly, it started to explore whether its implementing partners, that is, local aid organizations that do the ‘last-mile delivery’, can benefit from the software. According to the Fritz Institute, the Los Angeles-based International Medical Corps (IMC), an NGO that has been responding to man-made and natural disasters all over the world for 25 years, was the latest NGO to embrace HELIOS (Fritz Institute website).

While the HLS was fully funded by the Fritz Institute, the HELIOS received financial and technical support from a number of corporations.²⁹ To ensure the continuous development of the software and its accessibility over time to as many humanitarian organizations as possible, the Fritz Institute has set up a formal HELIOS User Group. The Fritz Institute acts as the Secretariat of the User Group while Intel Corporation serves as its technical advisor. The User Group which includes WVI, Oxfam and IMC aims to provide technical guidance on the functionality, adoption and sustainability of the software.

²⁹ Abbott Labs, Applied Materials, Hewlett Packard, Intel Corporation, Microsoft Corporation, Levi Strauss and Co., and KPMG International.

Together with its partners, the Institute tries to measure, assess, and communicate the **impact of humanitarian aid** on beneficiaries to donors, governments and the public. This is achieved through the establishment of a multi-disciplinary team, that has as objective that of “establishing common definitions and standards for the measurement and communication of impact, b) create a culture of measurement within the humanitarian organizations, c) create coherent communications to the public about the need for and impact of humanitarian organizations” (Fritz Institute Annual Report, 2004). By end 2006, impact investigations and surveys of aid effectiveness had covered some 6,000 tsunami beneficiaries (Fritz Institute Annual Report, 2006). To define and measure humanitarian impact in a systematic way, the Fritz Institute sponsors quantitative studies and organizes conferences with donors, policy makers, private sector, media and beneficiary communities.

In terms of **capacity building**, the Institute aims to build sustainable capacity within local NGOs and increase their absorptive capacity as recipient of aid by augmenting their efficiency and effectiveness as front-line implementing partners. By leveraging the resources, technology and expertise available in “networks” of support, the Fritz Institute aims to improve performance with a view to certify as many local organizations as “Effective Humanitarian Organizations”.

The Capacity Network Initiative has been launched for African Red Cross and Red Crescent Societies (NSs). The Initiative measures each NSs’ capacity with respect to world-class standards in three areas: governance, accountability and transparency; program effectiveness; and organizational sustainability. To be accredited as an “Effective Humanitarian Organization”, the participating NSs are subject to third-party audits. Also for this initiative, the Fritz Institute serves as the Secretariat and mobilizes funding to cover the costs related to such audits. By the end of 2006, the initiative included 18 African NSs.

To engage private sector participation in humanitarian operations, the Fritz Institute has launched a private-public initiative: The **Corporations for Humanity**. This initiative offers corporations a mechanism through which they can channel their financial, human and technological support to humanitarian organizations. More specifically, private sector

companies part of this initiative engage their core competencies to address the back-office challenges of humanitarian organizations as identified by the Fritz Institute. 12 Fortune 1000 firms constitute the founding members of this initiative. By end 2006, 16 corporations had contributed to Fritz Institute managed projects through their expertise, time and resources.

To support the above-mentioned activities, the Fritz Institute sponsors **research**, surveys, publications and academic events on the topic of disaster management.

The latest initiative embraced by the Fritz Institute is the assessment of the level of **disaster preparedness** of the San Francisco Bay Area in case of catastrophic disaster. Again, the Institute serves as the secretariat of this initiative and leads the development of preparedness standards as well as community resilience and vulnerability studies on the subject.

9.2 Discussion

The Fritz Institute occupies an important position within the humanitarian community given its contribution to the understanding of issues relevant to disaster management. Its financial, intellectual, technical and networking inputs and resources continue to advance the status of knowledge and practice in the humanitarian community in general and strengthen the logistics function of humanitarian organizations. In the following paragraphs we discuss more in detail the role and contribution of the San Francisco-based Fritz Institute to the humanitarian cause.

In terms of partnership schemes, the Fritz Institute assumes different positions (Figure 9.3). Its main function is that of a broker between humanitarian organizations on one side and the private sector, academia, foundations, and government agencies on the other side. As such it functions as a secretariat for 6 out of its 7 broad initiatives. However, its partnership with IFRC can be categorized as a strategic partnership while its engagement with a number of humanitarian organizations as far as its second software, HELIOS, is concerned can be considered as a cross-cutting one.

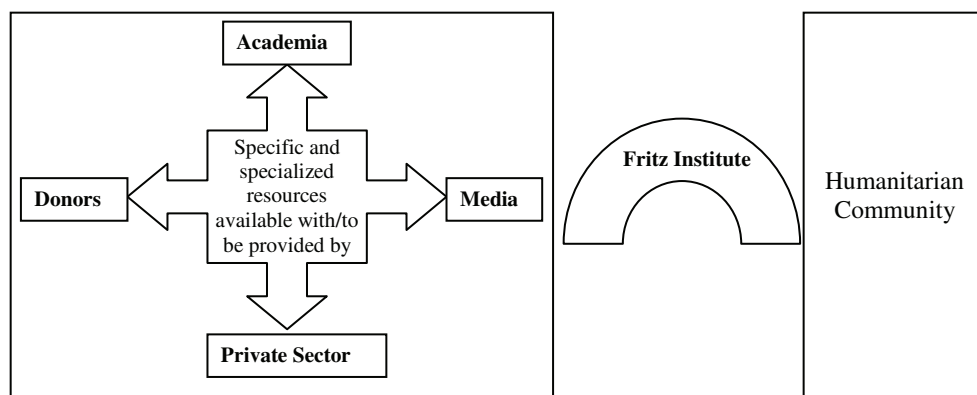
Figure 9.3 – Fritz Institute Partnership Roles

| | | | |
|---------------------|----------|--------------------------------------|--|
| Business/CSO | Multiple | Localized Partnerships | Brokered Partnerships Initiatives |
| | Single | Strategic Partnerships HLS | Cross-Cutting Partnerships: HELIOS |
| | | Single | Multiple |

Humanitarian Organization

In its broker function, the Fritz Institute helps overcome the limited interaction between the humanitarian community, industry leaders, and academia (Figure 9.4). By organizing conferences and meetings on a regular and consistent basis, it creates networking opportunities for its partner organizations. Its thematic events help facilitate the exchange of experience and ideas on issues related to supply chain management (SCM) between humanitarian and commercial logisticians.

Figure 9.4 – Fritz Institute: Identifying Needs and Bridging the Gaps



The Fritz Institute bridges the prevailing knowledge gap by sponsoring the development of teaching material in a largely un-researched field: disaster management. By sponsoring

surveys and publications, it assists in raising awareness around the importance of relief logistics within and among humanitarian organizations as well as the donor and business community. On the other hand, its certification program builds human capacity and ensures standardized logistics training to interested humanitarian agency staff.

Through its Corporations for Humanity initiative, the Institute channels voluntary corporate contributions to humanitarian organizations. At the organizational level, to help identify gaps, bottlenecks and redundancies in the supply chains of a specific humanitarian organization, on a short-term and ad hoc basis, it brings logistics veterans from the private sector to work closely with and suggest supply chain solutions to the select humanitarian organization (Thomas, 2003).

By bringing business and academics in the field of SCM closer to the humanitarian world, the Fritz Institute has contributed in an unparalleled way to the establishment and nurturing of a unique and multi-faceted virtual web of logisticians. Through its networking activities, it has managed to draw the attention of a wide range of players to the challenges of humanitarian logistics and the crucial and central role of logisticians in emergency relief operations. To leverage the resources available in the corporate world, it has built a roster of committed firms ready to intervene during disasters.

In its broker function, the Fritz Institute creates brief networking opportunities over time for those organizations part of its network. The level of interdependence and closure between humanitarian organizations, the Institute and other parties part of the network is low. To develop HLS, for over 18 months, given the high level of interdependence, the Fritz Institute interacted and achieved closure with IFRC. This initiative, born as a one-to-one partnership, highlighted the advantages of tailor-made IT solutions in the management of humanitarian supply chains. The partnership with IFRC helped the Institute engage other humanitarian organizations in the development of a 'generic', widely applicable humanitarian logistics software usable by smaller organizations at the field level. For the development of HELIOS, the Fritz Institute needs to achieve closure and interact with those humanitarian organizations that have shown interest in its product over a relatively long period of time. Figures 9.5 and 9.6 help us visualize the level of interaction, time, closure and interdependence required for each Fritz Institute initiative.

Figure 9.5 – Level of Interaction and Duration of Relationship of Different Fritz Institute Partnerships

| | | | |
|--------------------|------|-------|--|
| Interaction | High | | IFRC-Fritz Institute Partnership HELIOS |
| | Low | | Initiatives |
| | | Short | Long |

Time

Figure 9.6 – Level of Interdependence and Closure of Different Fritz Institute Partnerships

| | | | |
|----------------|------|--------------------|---|
| Closure | High | HELIOS | IFRC-Fritz Institute Partnership |
| | Low | Initiatives | |
| | | Low | High |

Interdependence

As summarized in Figure 9.7, from the humanitarian organization’s point of view, the overall assistance provided by the Fritz Institute advances the status of knowledge and practice among the humanitarian community. While the Institute’s research outputs contribute in a meaningful way to the understanding of humanitarian operations and disaster management in general, they fall short in advancing knowledge and practice at the organizational level since findings and recommendations may not be generalizable. Fritz Institute activities also signal to other donors that there are vast opportunities to assist humanitarian organizations in better achieving their mission. Participation in Fritz Institute events provides an opportunity to a participating humanitarian organization to attract other donors. However, since the same opportunity is provided to other participating organizations, there is no clear signaling but open competition on a market.

Figure 9.7 – Risks and benefits of the Fritz Institute Brokered Partnerships

| Main benefits | HOs | Main benefits | Private Sector Partner | FI |
|---|--|--|---------------------------------------|---|
| Improving effectiveness <ul style="list-style-type: none"> • Access to specialized, additional, complementary resources and capabilities Advance status of knowledge & practice (general) Signal other donors | L L L | Moral Market Place <ul style="list-style-type: none"> • Improve employee motivation and productivity (attraction, retention) • Fulfill the CSR expectation of the market Competitive Advantage <ul style="list-style-type: none"> • Increase in reputational assets • Enhance brand recognition Extra-benefits | L L L L L | n.a. n.a. H H H |
| Main risks | HOs | Main risks | | |
| <ul style="list-style-type: none"> • Divergence in working cultures • Absorptive capacity • Reduced donations from traditional donors • Loss of organizational flexibility • Structural dependency • Tainted partners, anti-ethical activities • Overwhelming success • Failure | L L L L L L | <ul style="list-style-type: none"> • Divergence in working cultures • Shortage of credible & promising non-profits • Accused of partnering exclusively for self-serving reasons, PR, image building or tax purposes • Failure: wasted resources • Deteriorating reputation | L L L L L | L L n.a. L L |

The one-off assistance provided by the Fritz Institute through the private sector is limited in time and therefore unable to build disaster management capabilities or contribute to any structural change. It can only address specific areas with immediate benefits for the assisted humanitarian organizations (results on low-hanging fruits). In general, given their ad hoc nature and short duration, the sustainability of improvements at the assisted organization is questionable.

Given the short duration of each partnership brokered by the Fritz Institute, the limited effort required by the private sector partner and the receiving humanitarian organization, and the limited impact, the corporate partner and the humanitarian organization do not face any major risks. For example, assistance is not expected to be delayed because of divergence in working cultures between the parties or limited absorptive capacity of the humanitarian organization. Ad hoc assistance is not expected to impact the donor base of the assisted organization in terms of decreasing, increasing or diversifying donations. It is not expected to result in structural dependency or loss of organizational flexibility. Concurrently, failure and success are expected to be short-lived and the impact of partnering with tainted partners, given the short duration and possibility to interrupt the relationship, is limited.

As far as the private sector partner is concerned, by channeling its one-off assistance through the Fritz Institute, impact on its employees, the market place and reputational gains is diluted. Concurrently, channeling assistance through a third party limits all types of implementation, financial, emotional and reputational risks. Since the relationship between benefits and risks is not disproportionate, as long as there is some benefit, the effort is justified.

As a non-profit organization dedicated to the advancement of the humanitarian community, the Fritz Institute does not need to appeal to the moral market place. Since its activities are in line with its mission, they are viewed as genuine. After five years, the Fritz Institute has succeeded to make itself a point of reference (first certification model, first accreditation model, first humanitarian software, development of preparedness standards, etc.) for humanitarian organizations and companies willing to contribute with their company-specific resources to disaster management. Recognition can be measured by its ability to raise funding and in-kind assistance. Initially, the Institute invested its own resources in the cause it set out to support. However, it accumulated effort since its establishment has produced an extra-benefit: access to external funding. Four years down the road, to feed its many programs and initiatives, it has managed to mobilize assistance and funding from both the private sector and donor institutions such as USAID to the tune of USD 2.6 m representing 90% of its total expenditures (Fritz Institute 2006 Annual

Report). Although by brokering assistance between humanitarian organizations and private sector partners and academia, the Fritz Institute has enhanced its reputation and brand recognition, each initiative launched increases the possibility of failure.

Since our study of the Fritz Institute is mainly desk research, we have no evidence of the type of difficulties the structure encounters in managing a set of fluid and needs-driven programs and relationships with 90-odd partners. However, by acting as an apex institution and by assuming the ‘secretariat’ function, its role is relegated to that of an architect, catalyst and matchmaker.

The business model pursued by the Fritz Institute, especially the brokerage function does have its limitations. From the managerial point of view, the management of the initiatives is particularly challenging because of their informal, voluntary and multi-disciplinary nature. The sheer number of partners, differences in partner agendas, organizational cultures as well as lack of a power/authority centre and structure make it particularly complex. Fritz Institute as a facilitator cannot centralize decisions as it is not vested with the necessary power and authority. While the Institute creates new learning opportunities for its partners, it cannot set learning, implementation, adoption or partnership agenda. It has no control over expected or desired results and outcomes as it cannot allocate corporate resources as it deems appropriate. In other words, the parties involved have no obligation to implement or provide the suggested improvement, adopt or provide a technical solution, maintain or enter into a relationship recommended by the originator.

9.3 Summary

This chapter provides background information on the Fritz Institute and its activities. The description confirms the importance of CSOs in advancing the status of knowledge and practice of humanitarian organizations with a view to improve their performance. It also helps us differentiate between different partnership schemes in terms of benefits and risks for the Institute, concerned humanitarian organizations and private sector partners.

Chapter 10 Case Analysis

In this chapter we discuss the findings of our research related to humanitarian organizations and their disaster response activities. We refer to the research framework developed in Chapter 4 with a view to demonstrate how the empirical data relates to our propositions and research questions (Figure 10.1). To test the necessary condition propositions, as indicated in Chapter 5, we follow the 7-step methodology proposed by Dul et al. (Dul et al., 2008).

Figure 10.1 – Propositions and Research Questions

| Propositions | Data |
|--|---|
| P1: Only a broad supplier network can ensure a speedy, accurate, flexible and cost-effective disaster response. | Gujarat, Zaire, Hurricane Mitch |
| P2: Only virtually organized logistics coordination platform will lead to good services. | Gujarat, Mozambique, Afghanistan, Iraq |
| P3: For the parties involved, the risks and benefits of strategic partnerships are higher than those of brokered partnerships. | IFRC, WFP, Fritz Institute |
| P4: Only intense partnerships, that is, partnerships with long-standing, interactive, interdependent and closely-knitted partners or structures, will increase a humanitarian organization’s stock of social capital. | IFRC, WFP & UNJLC |
| P5: Bonding social capital is a necessary condition for inter-organizational coordination during disasters | Gujarat, Iraq, Mozambique & Afghanistan |
| P6: Bridging social capital is a necessary condition for successful disaster response. | Gujarat, Zaire Afghanistan, Hurricane Mitch, Iraq, Mozambique |
| Research Questions | Data |
| Q1: How do humanitarian organizations manage dependencies and duplications emerging prior or during disaster response? | IFRC, WFP & UNJLC |
| Q2: How do humanitarian organizations operationalize and ensure the success of a virtually organized logistics coordination platform? | UNJLC |
| Q3: What are the risks and opportunities facing humanitarian virtual organizations and how they are managed? | UNJLC |

| Research Questions | Data |
|--|------------------------------------|
| Q4: What type of humanitarian organizations can engage in strategic partnerships? | WFP, IFRC & UNJLC |
| Q5: What are the best practices that can help avert predictable risks and increase benefits of business-humanitarian partnerships? | WFP |
| Q6: How is bonding social capital developed among humanitarian organizations? | UNJLC, WFP & Fritz Institute |
| Q7: How is bridging social capital developed between humanitarian organizations and other key stakeholders? | IFRC, UNJLC, WFP & Fritz Institute |
| Q8: What is the contribution of bridging social capital to resource/capability enhancement of operational humanitarian organizations? | WFP & IFRC |

10.1 Supplier Network

In this section our aim is to validate the necessary condition proposition that relates broad supplier network to disaster response ability as stated below. For this proposition, we can only consider disaster data related to operational humanitarian organizations.

P1: Only a broad supplier network can ensure a speedy, accurate, flexible and cost-effective disaster response.

The literature indicates networks as the most apt organizational structure when an organization is unable to cope independently with i) the complexity and risks of a rapidly changing environment and ii) the skill and resource demands imposed on it in global markets. The literature also argues in favor of broad as opposed to integrated supply network for organizations that manage temporary supply chains and operate in dynamic environments. In this respect, broad supply networks are defined as those networks where switching is nor difficult or costly and where there is no restriction in terms of number of supply chain members.

Humanitarian organizations operate in complex and rapidly changing environments. To respond to the needs of the afflicted populations they depend on the resources of numerous parties. Consequently, they depend on a collaborative and complex network to stage their response. To tap into the resources of their networks, they maintain a high number of

linear, forward and backward, spatio-temporal interactions and relationships with a number of actors. They engage in a series of activities and take into due consideration a number of interdependencies among different entities. During the planning and implementation phase, they take into account identified and emerging supply and transport failure modes.

For predictable and emerging disasters, to save as many lives as possible, humanitarian organizations aim at high speed and cost-efficient operations. For unpredictable disasters, humanitarian organizations face an uncertain and variable demand and supply. To save as many lives as possible, they aim for fast and flexible operations.

It follows that speed is the most important success factor in disaster response. Since disaster response is driven by the need for timeliness, flexibility – the ability to respond to uncertainty and volatile demand and supply, is the second important element. Concurrently, accuracy – the ability to meet the quantitative and qualitative objectives of disaster response – is important for a successful response. Cost-effectiveness ensures that assistance is extended to as many people as possible and that assistance is not interrupted due to financial constraints. In terms of supplier network, we consider it to be broad if the concerned organization does not restrict itself to few repeat suppliers but calls upon a larger number of repeat and ad hoc suppliers.

In terms of goods mobilized, the bulk of items in a humanitarian organization's supply chain are commodity products. Hence switching is not difficult or costly and the number of suppliers able to provide the goods in demand is wide. Like other international humanitarian organizations, IFRC and WFP manage multiple temporary supply chains in dynamic environments across geographies. While some humanitarian organizations like IFRC provide a wide range of relief products, others like WFP, whose core business is food and grain is its dominant product, concentrate on one or few relief items.

To verify the validity of our proposition, we select a number of cases. Since the unit of analysis for this proposition is disasters, our cases relate to supply network management activities of two operational humanitarian organizations – IFRC and WFP, during three unpredictable disasters: the Gujarat earthquake, Hurricane Mitch and Zaire Crisis. The hypothesis for each case is that during disaster response, a speedy, accurate, flexible and cost-effective response cannot occur without a broad supplier network.

Typically, humanitarian organizations do not measure their response against predetermined quantitative targets. However, most of the time, they report on the outcome of their response. As such it is possible to have some indication of performance a posteriori. For example, speed can be measured in terms of number of days before response is mobilized and relief items delivered to the disaster site. Accuracy can be measured by taking into account shortages as well as the difference between goods mobilized and goods remaining at the end of the disaster. Flexibility can be measured by the frequency and speed in which alternative solutions are identified and implemented. Cost-effectiveness per se cannot be measured since only announcements in terms of the cost of an operation are made.

During the Gujarat earthquake, IFRC sourced relief items from a combination of local, regional and international suppliers. Decisions were based on how quickly (speed) a given supplier could deliver products in line with the IFRC’s product specifications (accuracy). Since IFRC’s procurement decisions had to accommodate frequent changes over a short period of time, it called upon as many suppliers as required to stage its response effort (flexibility). Interchangeable and complementary supply chain members ensured a speedy, accurate and possibly cost-effective response.

Figure 10.2 – Assistance Mobilized by IFRC: Gujarat Earthquake, 2001

| Date | Goods Mobilized |
|---------------------------|--|
| 26 January | Earthquake |
| 27 January | Indian Red Cross supplies arrive |
| 29 January | Arrival of Telecom and Water & Sanitation ERUs |
| 30 January | Arrival of Hospital ERUs Arrival of international relief suppliers |
| 31 January | Arrival of other ERUs and international relief supplies |
| By 26 February | 45 Charter planes had carried basic shelter material (255,000 blankets, 34,000 tents & 120,000 plastic sheets) and other items such as kitchen sets and jerry cans |
| During the first 100 days | 300,0000 people assisted through the active participation of 35 partners (including repeat suppliers) and ad hoc local and international suppliers |
| End of operation | Excess stock: 135 tons of high protein biscuits |

As summarized in Figure 10.2, within 24 hours from the disasters, the first batch of relief supplies provided by the Indian Red Cross arrived. The first batch of goods mobilized by IFRC arrived three days after the earthquake. In terms of flexibility, IFRC called upon as

many suppliers as possible to mobilize the requested 35,000 tents. In terms of accuracy, relief items mobilized met the required quality specifications. While excess stock was reported (e.g. high protein biscuits), there is no indication of major shortages. IFRC's full appeal amounted to CHF 25.6 million but the cost of the operation amounted to CHF 35 million, CHF 10 million higher. Despite a substantial difference between the appeal and effective expenditure, IFRC considered its response to the Gujarat earthquake as a success and a benchmark for future operations.

At the time of Hurricane Mitch, IFRC had no pre-positioned supplies to kick-off its relief operation. Moreover, it failed to mobilize the necessary resources from its network of NSs, donors and suppliers. It did not call upon a broad network to ensure a swift and flexible response. As a result, it was criticized for its poor performance.

In response to the Zaire 1996 crisis, WFP used a combination of international, regional and local resources to ensure a swift, flexible and accurate response. Over a very short period of time, it used different transportation routes, modes and logistics service providers (flexibility). Within few days, it repositioned and re-routed its food supplies to meet the requirement of the crisis (flexibility and accuracy). Given the lack of sufficient infrastructure, its plan envisaged air deliveries to airfields near the refugees. Within days, it chartered few large aircraft. It flew food into the region from stocks in neighboring countries. Within five days, trucks were delivering food flown from regional stocks. Concurrently, it initiated the movement of food items overland. Without limiting itself to any given number of suppliers, WFP easily changed its logistics plans and switched to new routes, modes and providers (flexibility). By using alternative routes, modes and suppliers, its response became more accurate and reached the refugees on the move (timeliness). Had it used the most economic mode of transport - surface transport, the population at risk would have suffered. Air deliveries, while not cost-effective per se, substituted by overland transport over time ensured expediency and lower operational costs. WFP viewed its response to the crisis as successful.

Figure 10.3 – Results of Tests Related to Proposition 1

| Case | Broad network | Good Response | | | | Test result |
|-----------------|---------------|---------------|-----|-----|-------------|--------------|
| | | S | A | F | C | |
| Gujarat | Yes | Yes | Yes | Yes | No evidence | Not rejected |
| Hurricane Mitch | No | No | No | No | No evidence | Not rejected |
| Zaire | Yes | Yes | Yes | Yes | No evidence | Not rejected |

Legend: **S:** Speed **A:** Accuracy **F:** Flexibility, **C:** Cost-effective

We have tested our proposition in three cases. The Figure above summarizes the outcome of our test cases. To respond well to the changing and unpredictable needs of a disaster, we have observed that in order to mobilize and transport relief items, IFRC and WFP construct broad and loose emergency supply network. Since the cases concern unpredictable disasters, our test results may not be automatically extendable to predictable disasters. While cost-effectiveness can be an important target for predictable disasters, it does not appear to be a key consideration and an important indication of a good response during unpredictable disasters. In view of above, we reformulate and refine our proposition to reflect our test results as follows:

P1: Only a broad supplier network can ensure a speedy, accurate, and flexible response to unpredictable disasters.

The commoditized nature of most relief items makes a broad supply network possible. The unpredictable nature of most disasters coupled with the temporary, dynamic and spatially-dispersed nature of emergency supply chains make broad supply networks the only option for humanitarian organizations. Only a broad and loosely coupled supply network, driven by product/service availability, allow emergency supply chains to respond to many unpredictable disasters at a given time in a timely, flexible and accurate fashion. As such, it is recommended that operational humanitarian organizations build systems and procedures that support sourcing from a broad supplier network.

10.2 Coordination

As seen in Chapter 3, coordination theory provides a framework for the study of interdependencies between different activities and actors. The theory identifies three types

of dependencies - fit, flow and sharing - and for each type of dependency and possibility of duplication it identifies a series of coordination mechanisms. In this section, we explore how humanitarian organizations manage their interdependencies.

Q1: How do humanitarian organizations manage dependencies and duplications emerging prior or during disaster response?

The unit of analysis for this research question is organizations. As such, we use three cases – IFRC, WFP and UNJLC – to explore it. To manage dependencies and duplications, the IFRC and WFP cases indicate that, first and foremost, operational humanitarian organizations engage in a series of pre-emptive agency-specific measures. The UNJLC case indicates that to address recurrent, common and disaster-specific dependencies and duplications, operational humanitarian organizations take collective action by calling upon the services of a non-operational organization in form of a logistics coordination platform. Section 10.2.1 provides examples of WFP and IFRC agency-specific measures. Section 10.2.2 enumerates the coordination mechanisms used by UNJLC to address inter-organizational and extra-organizational fit, flow and sharing dependencies and duplications.

10.2.1 Agency-Specific Measures

To pre-empt dependencies and duplications and respond to failure modes, operational humanitarian organizations plan for and implement a series of agency-specific mitigation measures (Figure 10.4). For example, to counter supply failure modes and immediate dependency on donors, between the launch of an appeal and receipt of donations, IFRC and WFP draw upon their emergency reserve accounts to start the procurement process. They arrange for the movement of relief kits and specialized equipment available in their contingency warehouses to the disaster site. To augment their response capabilities, IFRC activates its NSs' stand-by resources while WFP calls upon resources available in its network of private sector partners and standby donors. To avoid arrival of unsuitable and

unsolicited goods, a source of supply chain disruption, IFRC has guidelines and seizes every opportunity to voice its preference for cash rather than in-kind donations.

Humanitarian logisticians often have little or no advance notice of when and from/to where they have to move and store what type of material and in what quantities. To come to terms with unpredictable disasters, the evolving logistics challenges and the specificity of each operation and country, IFRC and WFP formulate flexible plans that can accommodate frequent and numerous last minute changes. Where possible, they build redundant capacity into their operations.

Figure 10.4 – Agency Specific Mitigation Measures

| Failure Mode | Mitigation Measures |
|-----------------------|---|
| Supply | <ul style="list-style-type: none"> • Contingency planning • Redundant capacity <ul style="list-style-type: none"> • Funds, inventory, suppliers, equipment, staff • Flexible operations <ul style="list-style-type: none"> • Supplier substitutability • Mix of international, regional, national suppliers • Guidelines for donations |
| Transportation | <ul style="list-style-type: none"> • Transportation mode substitutability • Alternative transportation routes • Logistics provider exchangeability • Change in destination, receiving port |
| Facilities | <ul style="list-style-type: none"> • Regional warehouses • Warehouses at logistics nodes • Establishment of temporary operational sites • Alternative and combined distribution networks |
| HR | <ul style="list-style-type: none"> • Standby capacity • Agile workforce |
| Communication | <ul style="list-style-type: none"> • Standby ICT capacity • Use of wide range of information sources |

For predictable disasters, humanitarian organizations engage in scenario and contingency planning. For example, IFRC has contingency plans in place to address the needs of the Caribbean during the hurricane season while WFP has similar plans to address severe droughts in Africa.

Similar to business, IFRC and WFP envisage the use of different transportation routes, modes, and logistics service provider over a very short period. When an access route to a

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

region is temporarily interrupted or insufficient, humanitarian cargo uses the next alternative transport mode or route available. To ensure the widest possible distribution, they leverage various distribution networks (schools, mosques, churches, etc.).

In terms of transport mode, to reach remote areas and IDPs, IFRC and WFP call upon a diversified and combined transportation portfolio. This includes trucks, motorcycles, boats, and helicopters as well as unconventional modes such as donkeys, elephants and airdrops. For example, IFRC airlifted assistance during the initial phases of the Mozambique floods. To respond to the 1996 Zaire crisis, WFP used air transport before the more sustainable but time-consuming alternatives of surface transportation could be used. In WFP operations, trucking often replaces airlifts after the initial emergency phase. Ocean transportation is used to move significant quantities of cargo (e.g. food) at low cost.

To get operational as quickly as possible, IFRC and WFP often establish the centre of their operations either at the disaster site or at the closest location with the most adequate facilities. When transportation is unreliable, they store goods close to the point of consumption. For example, during the Gujarat earthquake, IFRC established its centre of operation at the disaster site. During the 1996 Zaire crisis, to avert the massive movement of people towards centralized and few food depots, WFP set up decentralized distribution points. During the first days of the Liberia crisis, WFP worked out of a ship off the coast near the capital city (WFP website).

At the outbreak of a crisis, to augment their presence, IFRC and WFP relocate their headquarters and regional staff close or at the disaster site. For example, in response to the Afghan and Iraq 2003 crisis, WFP first evacuated its staff relocating them, along with a good number of its headquarters and regional staff, to a regional office. Later, the majority of mobilized staff was moved into the emergency theatre. Apart from relocating, to augment their HR presence, WFP calls upon its network of partners while IFRC fields its Field Assessment and Coordination Team (FACT) team. To cover outstanding needs, WFP hires “reactive” capacity, that is, experts and consultants and use standby assessment teams.

To prepare their initial appeals and a response plan, WFP and IFRC use a wide range of sources. To build estimates on human loss, the scale and scope of the damage, and number and duration of people requiring relief assistance, publicly available information is

combined with expert knowledge and experience. For example, IFRC consults a range of websites to obtain historical or factual information on the region's geography, climate, demographics, food habits, living conditions and customs, infrastructure, duty customs and regulations of the disaster area. Its relief delegates collect anecdotal information from the local media, population, authorities and NGOs. To counter eventual communication failure modes, IFRC mobilizes its telecom ERU while WFP mobilizes its standby ICT equipment from its regional warehouses.

In conclusion, operational humanitarian organizations resort to a number of agency-specific measures to pre-empt dependencies and duplications caused by failure modes that can emerge during disaster response.

10.2.2 Coordination Mechanisms

As discussed in Chapters 2, 3 and 4, to stage its response, a humanitarian organization needs to coordinate its activities with other humanitarian organizations and key stakeholders with a view to manage fit, flow and sharing resource dependencies. As time is of essence during emergency response, a humanitarian organization also needs to avoid parallel efforts, duplications along the supply chain by combining its efforts and activities with other humanitarian organizations. In the next two sub-sections, we illustrate the range of coordination mechanisms available to address inter-organizational and extra-organizational dependencies and duplications.

10.2.2.1 Inter-Organizational Coordination Mechanisms

As seen in Chapter 7, since the late 1990s, the humanitarian community resorts to a logistics coordination platform to coordinate its logistics activities. As such, in this section, we draw upon both the UNJLC case and agency-specific measures to enumerate the inter-agency coordination mechanisms that allow humanitarian organizations to overcome dependencies and avoid duplications. We also discuss the contribution of these coordination mechanisms to organizational performance (Figure 10.5).

ORGANIZING LOGISTICS PARTNERSHPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

As seen during the Afghan crisis and the Iraq crisis, the humanitarian community resorts to joint contingency planning through the UNJLC to overcome sharing dependencies and avoid duplications. Joint contingency planning helps reduce lead times and avoid reliance on expensive transport options (e.g. airlifting) or last-minute sourcing. It helps in the development of alternative plans and ensures the mobilization of the right range of relief items. During joint contingency planning sessions, implementation strategies such as pre-positioning - strategic placement of food or NFIs throughout a country/area accessible for distribution to recipients - act as key coordination mechanisms.

Figure 10.5 – Inter-Organizational Coordination Mechanisms

| Dependency/ Duplication | Coordination Mechanism | Contribution to Performance |
|------------------------------------|-------------------------------|--|
| Duplication Sharing | Joint contingency planning | Reduce response time Reduce operational costs Ensures accuracy |
| Sharing | Prioritization | More accurate and timely response |
| Sharing | De-bottlenecking | Flexibility |
| Duplication | Common logistics capability | Limit operational cost Improve response time Flexibility More accurate response |
| Duplication | Common information platform | Reduce operational costs Improve response time Flexibility More accurate response |

Relief items differ in terms of their urgency (water), life saving contribution (medicine), volumes required (food), complementary (kitchen kits) or simple (clothing) function, continuous (food) or one-of-a-time (vaccines) usage, degree of substitutability, and need for specialized input (medical personnel for medicines and medical care). The different value and characteristics of relief items together with the mismatch between available transport and handling capacity and the volume of cargo moving into a region call for the prioritization of relief item movements into the disaster theatre. As seen during the Zaire 1996 crisis and the Mozambique floods, the humanitarian community needs not only to prioritize the movement of food and NFIs but also people (refugees, returnees, humanitarian and media operators, etc.). Prioritization – movement of food, NFIs and

people in accordance with humanitarian priorities – helps overcome a sharing dependency. Prioritization results in a more accurate response, improved response time and lower operational costs as indivisible asset capacity is assigned to supplies and people rather than used exclusively by the ‘owning’ humanitarian organization.

As seen during the Afghan crisis, request for logistics assets (storage, transport, distribution, etc.) often exceeds availability. For example, storage facilities are a necessity whenever cargo changes from one mode of transport to another and before distribution to final beneficiaries. Humanitarian organizations typically have access to government-owned or own/rent/set-up warehousing facilities at key logistics nodes. However, this is often insufficient. To optimize the use of indivisible assets such as warehouses or transport vehicles and overcome capacity constraints, there is a need to broker exchange and sharing agreements between humanitarian organizations with excess capacity and those with limited capacity. Debottlenecking, i.e., overcoming a temporary mismatch between asset capacity requirements and availability among humanitarian organizations, addresses a sharing dependency enhancing the level of flexibility in disaster response.

As observed during the Afghan and Iraq crises, to cover countrywide emergencies, the humanitarian community has to quickly build up its physical network of offices in the country. Bearing in mind that a humanitarian organization typically responds to a number of geographically competing disasters, logistics HR are often stretched widely and thinly across geographies. Sharing of a common HR and office network or tapping into the resources of other humanitarian organizations avoids the establishment of parallel office network. Use of common services enhances operational flexibility, reduces operational costs, and improves response time and the degree of accurateness in terms of geographies covered.

Throughout any crisis, access to logistics-relevant information is the biggest challenge. While at the outset of a crisis information is largely unavailable, throughout an operation, information is scattered across geographies, various stakeholders and humanitarian operators. Each humanitarian organization occupies a specific node in the information chain. Due to long-term presence, prior or on-going activities, some organizations are better informed than others on key logistical parameters of a region or country. Their network of local staff and transport operators is an unparalleled source of up-to-date

logistics-related information. Lack of timely, reliable, and comprehensive information can delay response and add to the overall cost of the operation. A common information platform helps avoid duplication of efforts and helps reduce operational costs, improve response time, flexibility and ensure a more accurate response.

We have identified two other sources of duplication – inventory management and procurement - currently not addressed by the humanitarian community that would contribute to performance (Figure 10.6). Should humanitarian organizations pursue the inventory optimization strategy and conduct joint procurement activities, their operations could be more cost-effective and accurate.

Figure 10.6 – Additional Inter-Organizational Coordination Mechanisms

| Dependency/ Duplication | Coordination Mechanism | Contribution to Performance |
|------------------------------------|-------------------------------|---|
| Duplication | Inventory optimization | More accurate response More cost-effective |
| Duplication | Joint procurement activities | More cost-effective |

More specifically, building inventory at border crossing is a rational response to emerging crises. By optimizing the level of relief inventory at any one corridor, humanitarian organizations address a source of duplication. Inventory optimization at the humanitarian community level ensures an improved geographical distribution of inventory buildups, avoids facility failure modes associated to excessive stockpiling and wasteful duplications lowering operational costs and ensuring a more accurate response.

Similarly, each humanitarian organization manages its own supply chain as most relief items are organization-specific and related to the mandate and focus (e.g. healthcare or food) of the concerned organization. Consequently, for each disaster, parallel supply chains may end up competing with each other against a limited number of items. For example, as observed during the Gujarat, Iraq and Afghan crises, they typically compete for transport assets, fuels, tents, etc. Coordinated or centralized procurement activities avoid duplication and improve the cost profile of the operation as wasteful competition is avoided.

In conclusion, humanitarian organizations by calling upon various inter-agency coordination mechanisms managed by a coordination platform can address emerging dependencies and avoid duplications. By so doing, they can improve upon their internal goals of cost-effectiveness, timeliness, accuracy and flexibility.

10.2.2.2 Extra-Organizational Coordination Mechanisms

In order to address dependencies and avoid duplications emerging during disaster response, the humanitarian community needs to coordinate segments of its supply chain activities with donors, local authorities, military forces and service providers. As discussed in Chapters 6, 7 and 8, our research shows that humanitarian organizations engage in agency-specific measures and resort to a logistics coordination platform to ensure extra-organizational coordination. In this section, we enumerate the different coordination mechanisms and describe their impact on organizational performance (Figure 10.7).

Figure 10.7 – Extra-Organizational Coordination Mechanisms

| Actor | Dependency | Coordination Mechanism | Contribution to Performance |
|-------------------------------|-------------------------|---|---|
| Donors | Sharing Flow | Standardization Partnerships <ul style="list-style-type: none"> • Standby agreements • Pre-positioned goods • Communication Coordinated funding strategy | Improve accuracy of response Reduce operational costs Improve response time Confer flexibility |
| Governments | Sharing Fit Duplication | Common negotiations De-conflicting De-bottlenecking | Improve response time Improve accuracy of response Enhance flexibility |
| Military | Fit | De-conflicting | Improve response time Enhance flexibility |
| Service Providers & Suppliers | Duplication Sharing | Collective bargaining | Reduce operational costs Improve response time Ensure accuracy |

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

The arrival of unsolicited, excessive and unsuitable goods disrupts the flow of relief operations. They exacerbate existing bottlenecks in the supply chain and delay the delivery of goods to the populations. They are a waste of time as limited and valuable human resources have to be redirected to their management. They add to the cost of the operation as they have to be unloaded, catalogued, and possibly returned or destroyed. To address the sharing and flow dependencies related to the arrival of donor donations, humanitarian organizations can resort to a number of coordination mechanisms. For example, to limit the arrival of unsolicited goods, the humanitarian community sets standards. To improve upon the predictability of donor contribution, it enters into a partnership relationship and improves the quality of communication. Pre-positioned goods and standby agreements with donors improve the accuracy of donor contribution conferring a higher degree of flexibility to humanitarian operations.

As noted during the Afghan crisis, to ensure continuation of relief operations, the humanitarian community may need to implement infrastructure rehabilitation/clearance projects on seriously affected, mined or deteriorated transport infrastructure. To avoid duplication of funding on the same projects and ensure adequate funding for critical ones, the humanitarian community can resort to a coordinated funding strategy vis-à-vis donors.

As observed during the Iraq and Afghan crises, during response operations, humanitarian organizations need to use the infrastructure and services of both recipient and neighbouring countries and avoid duplicating government relief efforts. To address sharing and fit dependencies and avoid duplications, the humanitarian community can resort to three distinct coordination mechanisms: common negotiations, de-conflicting and de-bottlenecking. Negotiations help address administrative hurdles and ensure that government and international community response plans complement rather than overlap each other. De-conflicting ensures the use of the assets by the humanitarian community along side the government. De-bottlenecking ensures the use of additional assets by the community.

For example, as the IFRC initiative after Hurricane Mitch shows, during the contingency and scenario planning phase, the humanitarian community, where possible, can present and discuss its plans with local authorities allowing for timely feedback, early preparation and more accurate response. During the response phase, it can present its response plan to the

recipient government. To ensure the smooth influx and movement of relief items across borders, it can engage in negotiations with relevant authorities. As the activities of the UNJLC during the Afghan crisis indicate, to de-bottleneck transport constraints, it can negotiate the use of inactive or non-commercial infrastructure such as airports and ports for humanitarian purposes. Similarly, to restore and increase storage and distribution capacity available to humanitarian organizations, it can negotiate with relevant local authorities. To ensure use of government controlled logistics assets, it can engage in de-conflicting activities.

Humanitarian organizations operating in military environments need to coordinate their response activities with military forces. De-conflicting of activities ensures the use of military controlled facilities and airspace by the humanitarian community. By addressing this fit dependency, humanitarian organizations have the possibility to improve upon response time and increasing the number of options available to them.

As observed during the Afghan and Iraq crises, humanitarian organizations can avoid parallel negotiations with local service providers and suppliers by engaging in common negotiations. Centralized negotiations ensure control over operational costs and limit the possibility of temporary stock-outs and delays.

In conclusion, humanitarian organizations, directly or indirectly, by resorting to various coordination mechanisms with various actors can address emerging dependencies and avoid duplications. By so doing, they improve upon their internal goals of cost-effectiveness, timeliness, accuracy and flexibility.

10.3 Virtually Organized Logistics Coordination Platform (VOLCP)

Since the late 1990s, the humanitarian community resorts to a non-operational humanitarian organization to deal with coordination issues arising during disaster response. In this section we analyze how humanitarian organizations operationalize and ensure the success of this structure, what are the risks and opportunities facing this structure and what is its preferred governance structure and why. To this end, we refer to the deployments of the UNJLC in both natural and complex disasters.

- Q2:** How do humanitarian organizations operationalize and ensure the success of a virtually organized logistics coordination platform?
- Q3:** What are the risks and opportunities facing humanitarian virtual organizations and how are they managed?
- P2:** Only virtually organized logistics coordination platform will lead to good performance.

10.3.1 Operationalization and Success of Virtually Organized Logistics Coordination Platform

In Chapter 3 by referring to the literature, we define the main features of virtual organizing. In Chapter 7 we argue that the UNJLC has the characteristics of a virtual organization. In this section, to respond to the following research question we draw on the UNJLC case, which allows us to discuss the structural components of a virtually organized logistics coordination platform as well as its building blocks.

- Q2:** How do humanitarian organizations operationalize and ensure the success of a virtually organized logistics coordination platform?

10.3.1.1 Structural Elements of Virtually Organized Logistics Coordination Platform (VOLCP)

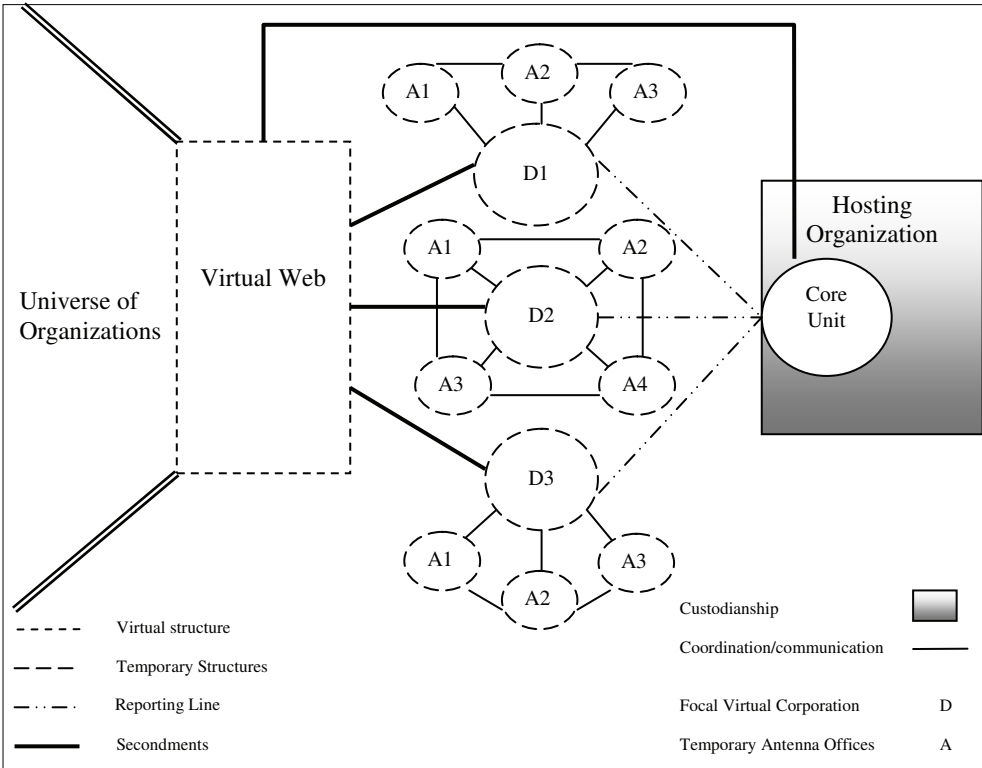
The virtual organizing literature has identified two structural elements of virtual organizing: virtual web and virtual corporation. The UNJLC case shows that during large scale emergencies, the virtually organized logistics coordination platform has two additional elements: a core unit and a series of antenna offices (Figure 10.8). In the next paragraphs we shall illustrate the relevance and contribution of each component to the operationalization and success of the platform.

The humanitarian virtual web, an open-ended but relatively stable structure, is necessary to attract and include humanitarian organizations, donors, CSOs, and private sector

companies. The repeated need for virtual corporations makes the virtual web a permanent feature of the humanitarian logistics coordination platform. Similarly, the existence of the virtual web calls for the establishment of a virtual web secretariat. Indeed, the operationalization of the virtual web best occurs through a permanent structure.

In this respect, the core unit is the permanent structure. It is the platform through which virtual web members carry out their forecasting, planning and preparedness activities. The core unit ensures continuity in-between emergencies and quick deployment of virtual corporations. Its function is to level-out potential incompatibilities among humanitarian organizations by educating and nurturing the web members. It acts as the caretaker of the facility. To be effective, it needs to be hosted by a financially and technically strong and credible organization recognized for its leadership in logistics and knowledgeable about the availability and potential configuration of inter-agency resources.

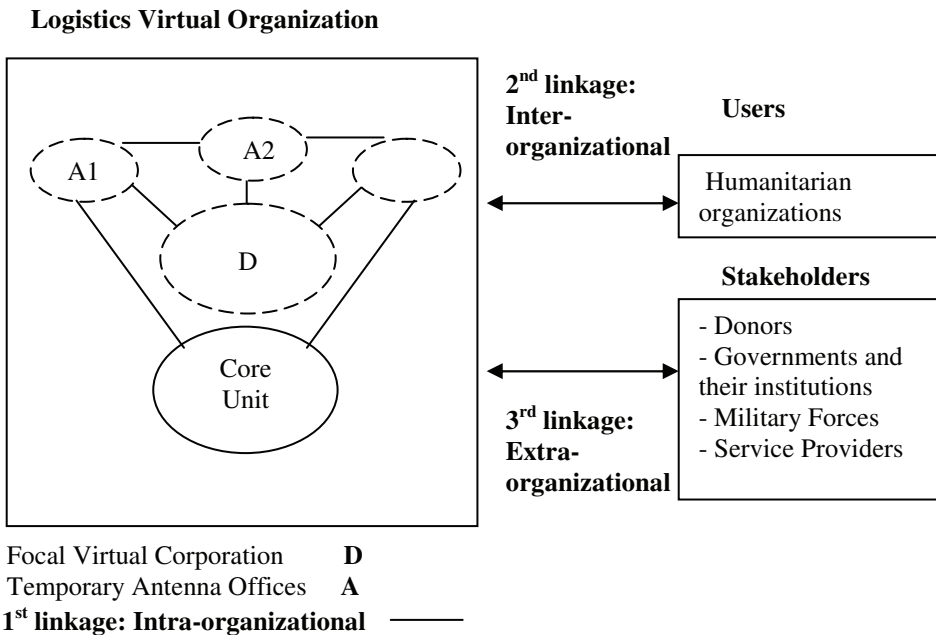
Figure 10.8 – The Structure of the Virtually Organized Logistics Coordination Platform



For each large-scale disaster, a focal virtual corporation is established. Depending on the logistical challenges, the focal virtual corporation in coordination with the core unit evaluates the necessity to scale up and down its territorial coverage achieving flexibility and accuracy. Territorial coverage is achieved by the opening and closing of temporary antenna offices. The setting up and dismantling of antenna offices during an emergency ensures support to the focal virtual corporation and increases the value-adding contribution of the structure.

Antenna offices augment the resources at the disposal of the participants. As they can be activated on a needs basis and close to the target market, they add another layer of flexibility to humanitarian operations. In addition, they can be considered as valid mitigation measures against HR, facility and communication failure modes.

Figure 10.9 – Intra, Inter & Extra-Organizational Linkages of Virtual Organizations



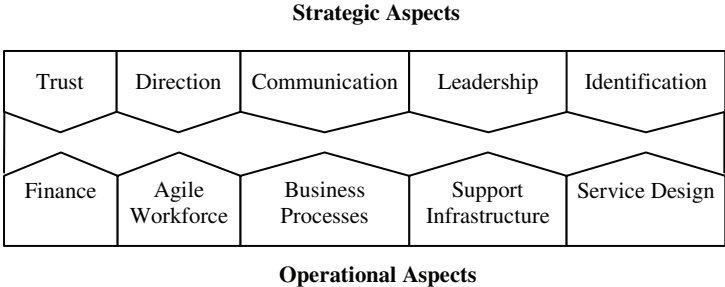
The network of core unit, focal virtual corporation and antenna offices results in intra, inter and extra-organizational linkages (Figure 10.9). The intra-organizational linkages result in

faster and more accurate flow of information and improved decision making between the core unit and field offices (focal and antenna). The second set of linkages consists of exchange of information and resources between the virtual organization and the humanitarian community as well as a conduit for coordinated decisions among humanitarian organizations. The third linkage consists of those between the humanitarian community and those that interact with it whether government agencies, military forces or donors. These links act as a coordination mechanism per se and can influence the speed, accuracy and cost profile of collaboration.

10.3.1.2 Building Blocks of a Virtually Organized Logistics Coordination Platform (VOLCP)

As seen in Chapter 3, the network and virtual organization literature propose a combination of factors as antecedents or drivers of inter-firm alliances and transition from stable network to a virtual web. The UNJLC case confirms the importance of two types of building blocks - strategic and operational - in the initiation, nurturing and continuation of the humanitarian virtual web, the core unit, the UNJLC deployments and antenna offices (Figure 10.10). More specifically, five strategic and five operational building blocks have been identified necessary for the operationalization and success of humanitarian virtual organizations. In the following paragraphs we explain the contribution of each to a successful operationalization.

Figure 10.10 – Strategic & Operational Building Blocks



Strategic Aspects

Trust. Trust is essential, an integrating ingredient for any collaborative initiative including that between humanitarian organizations and a coordination facility. It substitutes for formal agreements. It enables a humanitarian virtual corporation to cope with time pressures in complex and uncertain disasters. It facilitates information sharing between members and helps the structure retain its operational agility.

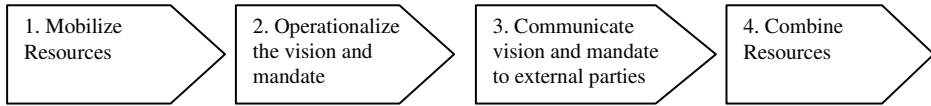
Direction. To be effective, a logistics coordination platform requires a clear vision and set of values. The vision and values have to be communicated to and embraced by the virtual web members.

Communication. The need for adequate communication is high for a humanitarian logistics coordination platform since the concept and structure of virtual organization may be a novelty for many humanitarian organizations. Dynamic and temporary non-organizations may result alien and distant to headquarter and country office level staff. As a result, collaboration with the activated focal and the series of antenna offices may either be resisted or slow. The mandate of the facility may not be readily accepted by those directly affected by it especially if the new structure implies foregoing control and power over functions previously carried out only by the virtual web members. Unfamiliarity, lack of acceptance and the wrong set of expectations can indeed undermine the potentials of the facility.

To ensure awareness and ownership of the concept as well as create the right expectation and level of cooperation, the Core Unit needs to engage in communication and marketing campaigns with key stakeholders.

Leadership. Leadership is key to the operationalization of any virtual corporation (Figure 10.11) and the deployment of a logistics coordination platform. The caretaker has to assist in the mobilization of the physical and human capabilities previously developed and committed. The lead operator has to operationalize the vision of the virtual corporation and ensure the sharing of responsibilities among relevant partners. He has to communicate the vision and mandate of the virtual corporation to the external environment. Finally, there is a need to combine people, assets and activities that are not under the direct control of the virtual corporation, but whose performance is critical to success.

Figure 10.11 – Operationalization of Virtual Corporations



In terms of profile and capabilities, the caretaker and lead operators of the humanitarian logistics coordination platform need to keep abreast with the challenges of a fast changing environment and be fast decision makers. They have to have extensive knowledge of and experience in developing countries. They have to be able to quickly establish good working relationships with the humanitarian network, that is, a wide range of stakeholders from donors, government institutions to controlling authorities. They need to be experienced team-builders to inspire and bring together team members that may lack any prior joint working experience. They need to manage and motivate staff seconded to their structures that are not clearly and squarely under their direct authority. In the absence of hierarchical control, authority and control is exercised laterally and substituted to a certain extent by shared values and missions.

Organizational Identification. In order to unify cross-functional teams composed of staff seconded by a number of organizations, the humanitarian logistics coordination platform needs to rise to the challenge of building its own identity. A distinct identity formalized through a logo can help the identification and bonding process. Active participation to the structure through secondments and regular intra-organizational meetings among dispersed virtual organization staff can strengthen organizational identification.

Operational Aspects

Finance. To become operational, the virtual web and the deriving virtual corporations require a budget and administrative and finance support services. The core unit of the humanitarian logistics coordination platform should be responsible for the mobilization of financial, human and in-kind resources. Effectiveness of the platform depends on the level and quality of secondments and funding.

In this respect, we argue that the platform is effective and can add value to an operation only if its virtual web members understand and rapidly respond to its unexpected and at times important resource requirements.

Agile Workforce. As illustrated in Chapter 2, humanitarian organizations responding to an emergency operate in non-routine, hard to anticipate environments. This opens a discussion on what characteristics and qualifications staff seconded to the emergency operations in general and the logistics coordination platform in particular should have.

Staff seconded to the platform need to sense and respond to an emergency without access to critical information on the magnitude of the disaster, international response or the acceptability of international assistance. To move food and supplies to disaster areas, they need to be flexible, creative and quick thinkers. To get around logistics failure modes and bottlenecks, they need to identify every possible routing option and be ready to switch and change their logistics plans at short notice. They need to have the capabilities to anticipate, communicate, plan and collaborate effectively as well as improvise through innovative and creative solutions in order to meet unexpected problems as they arise.

Experts seconded to the humanitarian logistics coordination platform have to be organized in teams. Teams collaborate across space, time, and organizational boundaries using a supporting IT system. Each team member has its own area of specialization and contributes to the objectives of the focal or antenna office with his/her specific skills. As milestones are accomplished or modified, members are disengaged, adapt their contribution based on new information and feedback, or assume growing responsibilities. Apart from learning and adapting quickly to the changes in environment, they need to be ready for quick deployments in new environments. Indeed, in the course of a response operation, they may be relocated, possibly even several times - from their headquarters, to regional offices and several antenna offices and back - to new environments. Given the temporary and dynamic nature of deployments, staff seconded to the regional or antenna offices needs to be mobile and self-motivated. Exposed to team changes, it needs to have the emotional skill of giving up human relationships and a given working environment and culture and to become rapidly and effectively operational in a new collaboration environments.

In conclusion, the success of a humanitarian logistics coordination platform depends on a responsive, collaborative, empowered, skillful, flexible, mobile, devoted, self-motivated and connected workforce.

Business Processes. Reference business processes are important for the formation of the humanitarian logistics coordination platform and integration of new members. As such, an exhaustive operations manual covering processes relevant to the virtual web and each deployment is required. For example, the existence of a rapid activation process that ensures the mobilization of staff, equipment and funds among the virtual web members is of outmost importance as lack of personnel and funds results in late deployment and slow ramp-up. Absence of a set of inter-agency agreements and systems and an activation and exit protocol can compromise the achievement of identified mission.

Support Infrastructure. A humanitarian logistics coordination platform becomes operational thanks to extensive deployment of ICT. The Core Unit performs the information brokerage function either directly by relying on the support of its host institution or by outsourcing it to the member with the best IT capability.

Service Design. To deliver value, the humanitarian logistics coordination platform needs to be responsive to the diverse needs of its constituency. In this regard, the mission, vision and services of the humanitarian logistics coordination platform may need to evolve in order to remain in line with diverse needs as well as emerging opportunities and challenges.

10.3.2 Virtually Organized Logistics Coordination Platform and Performance

In this section our aim is to verify the validity of the necessary condition proposition that relates the governance structure of the logistics coordination platform to its performance as stated below.

| |
|---|
| <p>P2: Only a virtually organized logistics coordination platform will lead to good service.</p> |
|---|

The virtual organization literature describes the structural traits of this governance mechanism. Virtual organizations are typically geographically dispersed flat and decentralized structures that are activated by their members to exploit a specific opportunity, achieve a specific project-related (often time-bound) objective. They are swiftly activated, reconfigured and demobilized on a needs-basis. Their structure facilitates

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

fast decision making and decision execution. Depending on their objective, they can enable horizontal and vertical integration of the value chain in terms of integration of resources and sharing of risks and costs. More specifically, they are meant to ensure a better and higher use of the members’ resources; provide access to new abilities, markets and information at lower cost; and reduce time to market (Bremer et al., 2000).

A humanitarian logistics coordination platform is typically entrusted with the task of solving dependencies and avoiding duplications among humanitarian organizations as well as between humanitarian organizations and other stakeholders. We argue that virtual organizing is the only structure that can ensure a good logistics coordination service to the humanitarian community. Our argument is based on two factors summarized in Figure 10.12. First, to ensure a good service, there is a need for the logistics coordination platform to be swiftly deployed, easily reconfigured and promptly demobilized in an accurate and cost-effective manner. Second, good service hinges on a distinct and neutral entity with specific and time-bound objectives activated by its members in the position to leverage and combine in a speedy, flexible, accurate and cost-effective fashion the tangible and intangible resources (including time and space competencies and information and knowledge) available within the network.

Figure 10.12 – Virtually Organized Logistics Coordination Platform & Good Service

| Virtually Organized Logistics Coordination Platform | Good Service |
|---|---|
| Structure | |
| <ul style="list-style-type: none"> • Deployment: as a result of a consultation process, activation between 24 to 48 hrs from a large-scale emergency • Temporary and adjustable office network activated and adapted in function of need • Flat and decentralized structure: facilitates quick decision making and direct negotiations | Good response: Speedy, flexible, accurate and cost-effective response |
| Resource Coordination and Combination Function | |
| <ul style="list-style-type: none"> • Provides access to tangible & intangible resources available in the network to humanitarian organizations regardless of their size and level of contribution | Access to resources: Speedy, flexible, accurate and cost-effective access to resources |

To verify the validity of our proposition, we select a number of cases. Since the proposition relates to the governance structure of a logistics coordination platform and its services during disaster response, our case relates to the humanitarian logistics coordination platform: the UNJLC. More specifically we consider UNJLC deployments in two unpredictable and two predictable disasters: Gujarat earthquake and Mozambique floods, and Afghanistan and Iraq crises respectively. The hypothesis for each case is that during disaster response, a logistics coordination platform cannot provide good services if it is not virtually organized.

As the Zaire 1996 crisis demonstrates, prior to the UNJLC, there was no mechanism through which the humanitarian community could be quickly represented at the disaster site, leverage and gain access to each others resources, overcome information and knowledge asymmetries, etc. As such, resource asymmetries and waste persisted increasing costs, delaying response, foregoing a higher level of flexibility and accuracy.

During the Mozambique crisis, the UNJLC was deployed by the humanitarian community four days after the second cyclone (speedy response). It had a clear, albeit, limited mandate: asset management. On a daily basis, it prioritized the movement of humanitarian cargo and destinations (speedy and accurate response). It scheduled regional airlifts based on the guidelines emanating from different coordination meetings (accuracy and flexibility of response) and with a view to maximize the use of air assets at the disposal of the humanitarian community avoiding waste and delays (flexible, accurate and cost-effectiveness use of resources).

Since decisions were centralized with the UNJLC and made on the daily basis, no time was lost. As a result, humanitarian organizations, regardless of their size and structure (e.g. UN agency, national or international NGOs), gained access to air assets, moved their cargo and benefitted from the services of the UNJLC. The humanitarian community viewed the UNJLC's asset management efforts and stock tracking function a success. The combined air operation of the disaster was among the largest ever: a total of 10,000 flights hours, transporting almost 30,400 passengers, and 11,623 metric tonnes of food and non-food items over less than two months.

Although the UNJLC concept existed at the time of the Gujarat earthquake, it was not virtually organized. In response to this disaster, the UNJLC was activated late and without

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

consultation with the humanitarian community. As a result, it was not recognized as a legitimate logistics coordination facility by the community. Consequently, it could not coordinate nor provide access to the assets available within the community. In addition, contrary to future deployment where the community shared the risks and costs of the facility, during this disaster, members did not contribute to its staffing and required response facilities. Without a clear mandate and no resources, the facility which did not have the key characteristics of a virtual organization, was soon demobilized.

In view of the emerging Afghan crisis, the UNJLC was deployed a fortnight after the September 11 events, that is, prior to the October 2001 hostilities (speedy response). Operations started out of WFP headquarters in Rome. By end November, UNJLC offices were operating out of Rome, Pakistan (Islamabad, Quetta and Peshawar), the US (Tampa, the Coalition headquarters), Iran (Mashad), Tajikistan (Dushanbe), Uzbekistan (Tashkent and Termez) as well as Afghanistan (Mazar-e-Sherif, Kabul and Hirat) constituting a flexible and accurate response.

The satellite offices took decisions independently ensuring a good response. Their day-to-day task was to identify and resolve bottlenecks affecting the humanitarian effort in their area of immediate responsibility through direct negotiations with relevant parties. UNJLC Islamabad and Rome ensured that excess aircraft capacity was efficiently used (access to resources). The network of offices addressed emerging local bottlenecks and disseminated relevant logistics-related information among agencies contributing to their decision making. By providing value-adding services through various coordination mechanisms (e.g. information brokerage function, de-conflicting, de-bottlenecking, collective bargaining, etc.), each satellite office and the whole network of UNJLC offices ensured speedy, flexible, accurate and cost-effective response, decisions, and access to resources. The UNJLC deployment was viewed as a huge success by the humanitarian and donor communities.

Similar to the Afghan crisis, the UNJLC's swift activation – few months before the US-led attack - and office configuration (Fuel cell, New York, Rome, Amman, Bagdad, Basra, Hilla, and Erbil) during the Iraq crisis ensured an adequate and rapid response to dynamic environments. The spatially and temporally dispersed virtual office network and members ensured a broad, extensive and cost-effective coverage. Its flat and decentralized structure

allowed for fast decision making and execution (speedy response). Its information brokerage function and resource coordination function, especially with respect to the availability of fuels, was valued by humanitarian organizations. The UNJLC deployment in response to this disaster was commended. The Figure below summarizes the outcome of our cases where good service is measured in terms of good response and access to tangible and intangible resources available in the community.

Figure 10.13 – Results of our Tests Related to Proposition 2

| Case | Virtually Organized Logistics Platform | Good Service | Test Result |
|-------------|--|--------------|--------------|
| Gujarat | No | No | Not rejected |
| Mozambique | Yes | Yes | Not rejected |
| Afghanistan | Yes | Yes | Not rejected |
| Iraq | Yes | Yes | Not rejected |

In the case of the Mozambique floods and the Afghan and Iraq crises, The UNJLC, as a virtually organized structure, was able to leverage resources available in the network in a timely and cost-effective fashion. In terms of information, its quick deployment and constant reconfiguration together with the contribution of spatially dispersed offices and virtual members ensured that the structure could perform its information brokerage and depository function. The use of ICT and its flat structure facilitated the flow of information in real-time throughout the entire network quickening the pace of decisions and coordination among team members. Since UNJLC services are extended indiscriminately to small and big organizations alike, it enabled smaller organizations such as WHO and the NGO community to stimulate largeness as resources (e.g. information, logistics assets, etc.) previously accessible to larger organizations were made available to them at no additional cost.

In conclusion, prior to the UNJLC and during deployments that did not have the critical characteristics of virtual organizing, humanitarian organizations could not stage a response that addressed dependencies and avoided duplications. UNJLC’s structure enables it to provide a number of services and engage in functions that allow it and its members to respond faster, cost-effectively, accurately and flexibly to the needs of the disaster.

In view of above, it is recommended that UNJLCs are activated swiftly and that they are adequately resourced so as to improve the performance of small and large humanitarian organizations alike.

10.3.3 Risks & Opportunities Facing the Humanitarian Virtual Organizations

By drawing on the literature, in Chapter 3 we review the risks and opportunities facing (commercial) virtual organizations. By combining the observations of the literature with our own based on the UNJLC case, in this section we respond to the following question:

| |
|--|
| <p>Q3: What are the risks and opportunities facing humanitarian virtual organizations and how are they managed?</p> |
|--|

As the framework proposed in section 10.3.2 suggests, success of the humanitarian logistics coordination platform depends on a number of building blocks. However, as the literature indicates, some aspects of virtual organizing are by themselves a source of risk and opportunity. In the following paragraphs, we shall explore the relevance of these risks and opportunities to the humanitarian logistics coordination platform and its response function.

The network literature argues that firms with excellent networking capability and a strong resource base in terms of amount and quality are best positioned to take the lead in the creation and management of networks. In the case of UNJLC, the choice of WFP as the host institution is a sound one given the organization's a) strong logistics expertise, b) commitment to provide infrastructural support which ensures immediate operability and c) experience in taking the lead in the provision of other common inter-agency services.

However, in general, the physical collocation of the various components of the structure – core unit and virtual corporations – has managerial and power implications. Although this has not been the case for WFP, the nesting of the core unit in one of the virtual web member's premises may result in undue interference and influence by the host organization on the decisions and operations of the core unit as well as those of focal and antenna

virtual corporations. The perceived or effective interference and dominant position of the host institution in the decision-making process and shaping of the facility can be countered either by spelling out the custodian-customer and support relationship and in terms of roles and responsibilities or through the establishment of a neutral and autonomous facility.

As the alliance/networks literature suggests, an increased reliance on virtual organization can lead to dependence and loss of control over key resources, competencies and decisions. We argue that a relationship continuum between members and the logistics coordination platform may lead to increasing levels of dependency. As far as the UNJLC is concerned, the facility aimed to strengthen as oppose to substitute for an organization's logistics function. However, NGOs and those humanitarian organizations with limited logistics capability are particularly exposed to increased levels of dependency on its services.

Humanitarian virtual organizations can also be activated in inappropriate circumstances and settings. In this regard, to remain a credible, reliable and manageable structure, the UNJLC resisted across-the-board activation (e.g. advisory role in the Cote d'Ivoire crisis) and tried to keep its ambitions within its operational capabilities. It refined its mandate and operations by identifying gaps and providing relevant and useful services to the humanitarian community. It resisted pressure from its members to engage in a wider mandate such as the review and harmonization of the humanitarian organizations' supply chains. By adhering to the strategic and operational mission of the virtual organization, as was the case in UNJLC, the architect and caretaker of a humanitarian virtual organization can neutralize pressure from different quarters and ensure its selective activation.

Focal virtual corporations are expected to be dismantled upon achievement of the set goals. However, this may not always occur. For example, stakeholder pressure and resistance may delay the closure of a virtual corporation. This may occur when closure is viewed as a drastic decision that disrupts and deprives the served community of continuity as was the case in UNJLC's deployment during the Afghan crisis. Prolonged activations may result in mission creep. That occurs when after achieving its primary objective, the focal virtual corporation is not dismantled but asked to address new objectives that are clearly beyond its mandate but require the deployment of its resources. Establishment and communication of an exit strategy timed according to humanitarian milestones can help avoid prolonged interventions.

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

Dispersed workplaces – core unit, focal offices and network of antennas – do increase administrative costs and may result in loss of cost efficiencies. We argue that there are ways and means to reduce such costs. UNJLC has often opted for the co-location solution: hosting of the core unit, focal and antenna offices by an existing structure of a virtual web member.

Dispersed teams may also result in lack of direction and motivation and weaken the loyalty of individuals to the team and the organization. UNJLC staff deployed in response to the Afghan crisis suffered from isolation and lack of regular contact with their colleagues. During the second phase of the Afghan crisis and the Iraq operations, UNJLC organized a number of meetings among the geographically dispersed teams to ensure exchange of experience and discussion on future activities. Indeed, regular meetings can prevent goal displacement and address motivational problems as individuals are regularly reminded of the importance of their role and contribution to the overall objective.

Another important risk facing virtual organizations is related to the relevance of the services they provide. The UNJLC was very aware of this risk. To ensure its services remained relevant to its member, almost after each deployment, it commissioned independent evaluations. Thereafter, it used the findings to adjust and improve its services. The UNJLC case highlights the importance of timely and sufficient allocation of resources by its members as a means to ensure effectiveness and minimize quality variation across deployments. Currently, WFP, UNJLC's host institution, has to bridge the facility's resource gaps. UNJLC needs to improve on this aspect of its operations possibly through a Contribution Protocol that ensures a firm commitment of the virtual web members towards its resource requirements as it cannot rely only on the goodwill of its host institution.

In terms of market opportunities, virtual organizations can address the need for additional or new services on a temporary basis. As the UNJLC case illustrates, virtual web members may require additional territorial coverage or a new service. The first need can be met through the activation of additional antenna offices. The second need can be addressed through the activation of a "specialized" cell as was the case of the fuel cell for the UNJLC.

As far as new market opportunities for the structure and its stakeholders are concerned, the actual deployment of virtual corporations can assist in unearthing them. For example, as

the Afghan and Iraq crises demonstrate, logistics plays an instrumental role in the political and economic recovery and development of war shattered and disaster stricken countries.

Figure 10.14 –Risks and Opportunities facing Humanitarian Virtual Organizations and the UNJLC Response

| Risks facing virtual organizations | UNJLC response | Recommendation |
|--|---|--|
| Hosting organization of core unit and virtual corporations: undue interference and influence | Neutral and autonomous facility, clear custodian-customer relationship | |
| Undue dependency | Strengthening as opposed to substituting for organizational logistics functions | |
| Across-the-board activation | Selective activation | |
| Prolonged deployment | - | <i>To avoid mission creep establish, communicate and adhere to an exit strategy expressed in terms of milestones</i> |
| Dispersed working-place: increase in admin costs | Co-location | |
| Dispersed teams: goal displacement, prioritization, loyalty and motivation problems | Regular face-to-face meetings | |
| Outdated, irrelevant services; lack of focus | Regular evaluations and service design adjustments | |
| Under-resourced | The host institution bridges gap | <i>Drafting and signing up to a Contribution Protocol</i> |
| Market opportunities facing virtual organizations | UNJLC response | Recommendation |
| Need for new services on a temporary basis | Activation of antenna offices Establishment of “specialized” cells | |
| Long-term logistics services | Unable to meet this market need beyond immediate post-emergency phase | <i>Establishment of a dedicated logistics-provider entity</i> |

In the absence of adequate national logistics capabilities and assets as well as commercial logistics providers, a humanitarian logistics coordination platform can highlight the need for UNJLC-type entity until national logistics capability is established. At the same time, the UNJLC experience emphasizes the perils of getting involved in non-humanitarian logistics-intensive operations. More specifically, although humanitarian space is not particularly in danger during natural disaster, close collaboration with combatant, occupying or peacekeeping forces during complex disasters has the potential to undermine the humanitarian space increasing the vulnerability and safety of the humanitarian community. For example, collaboration with occupying forces can be in conflict with the humanitarian principles of neutrality, impartiality and humanity. This could point to the need for the establishment of a dedicated entity that can address the logistics vacuum.

Figure 10.14 summarizes our discussion by contrasting the risks and opportunities identified by the literature with the UNJLC's response and the UNJLC's response with our recommendation further developed in Chapter 11.

We conclude this section by arguing that the outcome of our research on virtual organizations is extendable to other types of organizations whether for-profit or not-for-profit, humanitarian or non-humanitarian organizations.

10.4 Business/CSO-Humanitarian Partnerships

In this section, we verify the validity of the following proposition and answer the research question related to humanitarian partnerships.

- | |
|---|
| <p>P3: For the parties involved, the risks and benefits of strategic partnerships are higher than those of brokered partnerships.</p> <p>Q4: What type of humanitarian organizations can engage in strategic partnerships?</p> <p>Q5: What are the best practices that can help avert predictable risks and increase benefits of business-humanitarian partnerships?</p> |
|---|

10.4.1 Risks and Benefits of Strategic Compared to Brokered Partnerships

In this section, we verify the validity of the proposition that compares strategic to brokered partnership from the risk-benefit profile.

P3: For the parties involved, the risks and benefits of strategic partnerships are higher than those of brokered partnerships.

We start our discussion by defining the two different partnership types and the parties involved in each of them. Strategic partnerships are those types of partnerships that engage a firm/CSO in a detailed cooperation with one humanitarian organization over a medium to long period of time. Parties to strategic partnerships include a corporate or CSO partner and a humanitarian organization. Brokered partnerships consist of partnerships where a nodal structure or organization matches the demand for goods and services of humanitarian organizations with the contribution of third parties. Three distinct groups are involved in this type of partnership: the brokering institution, the humanitarian organization(s), and the assisting partner which can be a corporation, an academic institution, the media, etc.

As seen in Chapter 3, the literature has identified the benefits and risks of partnerships between for-profit and non-profit organizations, which we apply to business/CSO-humanitarian organization partnerships. In short, the motivations of the concerned parties constitute the range of expected benefits. In terms of risks, the humanitarian organization is expected to face greater risks because while such partnerships are typically a side program for the corporate partner, they intervene in the core activity of a humanitarian organization.

To verify the validity of our proposition, we select a number of cases. Since the unit of analysis for this proposition is organizations, our three cases relate to two strategic and one brokered partnerships between organizations. In sections 6.4.5, 8.4.2, and 9.2, we respectively discussed the risks and benefits of the IFRC-Fritz Institute, WFP-TNT and Fritz Institute-humanitarian organization partnerships. Figures 10.15 and 10.16 summarize the discussions.

As illustrated in Figure 10.15, our case analysis allows us to conclude that strategic partnerships help improve the performance of the assisted humanitarian organizations,

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

increase their actual or potential access to additional knowledge and, in different degrees, contribute to signaling other donors. On the whole, they result in substantial benefits for the assisted humanitarian organizations.

**Figure 10.15 – Benefits and Risks of Strategic Partnerships
(WFP-TNT and IFRC-Fritz Institute Partnerships)**

| Main benefits for HOs | WFP | IFRC | Main benefits for partners | TNT | FI |
|---|------------|-------------|--|------------|-----------|
| Improving effectiveness | H | H | Moral Market Place | | |
| Advance status of knowledge & practice | H | H | • Improve employee motivation & productivity | H | n.a |
| Signal other donors | H | L | • Fulfill the CSR expectation of the market | H | n.a |
| | | | Competitive Advantage | | |
| | | | • Increase in reputational assets | H | H |
| | | | • Enhance brand recognition | H | H |
| | | | Extra-benefits | H | H |
| Main Risks | WFP | IFRC | Main risks | TNT | FI |
| Divergence in working cultures | H | H | Divergence in working cultures | H | H |
| Absorptive capacity | H | H | Shortage of credible & promising non-profits | H | H |
| Reduced donations from traditional donors | H | L | Accused of partnering exclusively for self-serving reasons, PR, image building or tax purposes | H | n.a |
| Loss of organizational flexibility | H | H | Failure | H | |
| Structural dependency | H | H | Deteriorating reputation | H | H |
| Tainted partners, anti-ethical activities | H | L | | | H |
| Overwhelming success | H | H | | | H |
| Failure | H | H | | | |

In terms of risks, the assisted humanitarian organization needs to take a calculated risk when it decides to forge business/CSO partnerships. Assistance can create dependency on the corporate/CSO partner and result in loss of organizational flexibility (e.g. IFRC-Fritz Institute partnership). Success can result in additional effort and investment by both parties (e.g. the IFRC-Fritz Institute and WFP-TNT partnerships). As the WFP-TNT partnership shows, when the partnership is a top-down initiative, its success, continuation and funding depends heavily on the interest and commitment of the top management. In addition, divergence in working cultures, lack of employee buy-in, negative impact on traditional donor funding, and lack of dedicated partnership resources can undermine

success. On the whole, we can conclude by stating that humanitarian organizations face considerable risks when they engage in strategic partnerships.

The CSO and corporate partner benefit from strategic partnerships. Typically, they are recognized for their efforts by a wide range of stakeholders. They can create both economic and social value. For example, while the Fritz Institute fulfilled its mission and TNT responded to the expectation of the moral market place, both enhanced their competitive advantage. In addition, strategic partnerships can be a source of extra-benefits. For example, in the case of the Fritz Institute, the Institute has the possibility to extend the use of its logistics software to more organizations. For TNT, the extra-benefit consists of the possibility to exploit its achievements (enhanced brand recognition and reputational assets) in its marketing efforts as well as identify new markets into which expand. On the whole, the CSO and corporate partner reap substantial benefits by devoting resources to strategic partnerships. In terms of risks, a CSO does not run the same risks as a corporation given their fundamental difference: non-profit versus for-profit organizations. Deteriorating reputation of the partners is a risk all parties are exposed to throughout the life of the partnership. However, at the aggregate level, CSO and corporate partners run considerable risks while they are engaged in strategic partnerships. In conclusion, parties involved in strategic partnerships face considerable risks and can reap considerable benefits.

As far as brokered partnerships are concerned, it is worth noting that we consider the risks and benefits of each assistance brokered, event or activity and not the cumulative effort of the matchmaker or broker. Given the nature of the partnership, in the following paragraphs we explore its benefits and risks for three distinct groups of actors: Humanitarian organizations, the broker institution and the private sector partners.

As shown in Figure 10.16, humanitarian organizations participating in brokered activities reap low levels of benefits. The broker's efforts make the corporate world aware of the vast needs of the humanitarian organizations, which to a large extent continue to persist. By mobilizing resources residing in academia, foundations and the corporate world, the broker facilitates the advancement in the status of knowledge and practice among humanitarian organizations but cannot ensure long-term impact. Concurrently, the risk

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

faced by the humanitarian organization involved in brokered partnerships is minimal given the low level of investment required and impact expected.

**Figure 10.16 – Benefits and Risks of Brokered Partnerships
(Fritz Institute Initiatives)**

| Main benefits for HOs | HOs | Main benefits for partners | Broker | Private Sector Partners |
|---|-----|--|--------|-------------------------|
| Improving effectiveness | L | Moral Market Place | | |
| Advance status of knowledge & practice | L | <ul style="list-style-type: none"> • Improve employee motivation and productivity | n.a. | L |
| Signal other donors | L | <ul style="list-style-type: none"> • Fulfill the CSR expectation of the market | n.a. | L |
| | | Competitive Advantage | | |
| | | <ul style="list-style-type: none"> • Increase in reputational assets | H | L |
| | | <ul style="list-style-type: none"> • Enhance brand recognition | H | L |
| | | Extra-benefits | H | L |
| Main Risks | | Main risks | | |
| Divergence in working cultures | L | Divergence in working cultures | L | L |
| Absorptive capacity | L | Shortage of credible & promising non-profits | L | L |
| Reduced donations from traditional donors | L | Accused of partnering exclusively for self-serving reasons, PR, image building or tax purposes | n.a. | L |
| Loss of organizational flexibility | L | Failure | | |
| Structural dependency | L | Deteriorating reputation | L | L |
| Tainted partners, anti-ethical activities | L | | L | L |
| Overwhelming success | L | | | |
| Failure | L | | | |

As far as the broker is concerned, should the initiatives spearheaded by it be successful, it will gain in terms of reputational assets and brand recognition. However, it is possible that as it engages in more initiatives, their impact is diluted. There is also potential for extra-benefit. The accumulated efforts of the broker can enable it to raise funds from both corporations and donors and gradually replace internal with external funding. Therefore, the broker stands to benefit from its matchmaking efforts. In terms of risks, the broker does not face considerable risks given the short duration and impact of each activity or event.

As far as the private sector partner is concerned, its engagement in brokered initiative does not produce the same benefits or the same risks as company-specific and led initiatives. This is because ad hoc assistance provided by the private sector partner lacks the depth and

long-term financial and emotional commitment. However, as long as benefits outweigh the risks, companies are expected to contribute to brokered initiatives.

Our analysis as summarized in the below figure allows us to make the following observations. As long as benefits outweigh the risks, there is a business case for strategic partnerships that imply long-term commitment and investment by both parties. Humanitarian organizations and private sector partners engaged in strategic and brokered partnerships are exposed to a level of risk that is commensurate, proportionate to the expected benefits. As such, efforts are expected to be rewarded with proportionate amount of returns. In general, business and humanitarian organizations are expected to engage in different types of humanitarian-business partnerships should the net benefit be higher than the effort. Therefore, it is recommended that both parties take time to evaluate and identify the potential risks and benefits associated to their partnership so as to avoid surprises.

Figure 10.17 – Result of Tests Related to Proposition 3

| Case | IFRC-Fritz Institute (Strategic Partnership) | | WFP-TNT (Strategic Partnership) | | Fritz Institute-HOs-Private sector (Brokered Partnership) | | |
|--|--|--------------|---------------------------------|------------------|---|------------------|----------|
| | HO | CSO Partner | HO | Business Partner | HO | Business Partner | Broker |
| The risks & benefits of strategic partnerships are higher than those of brokered partnerships. | Not rejected | Not rejected | Not rejected | Not rejected | Not rejected | Not rejected | Rejected |

As far as brokered partnerships are concerned, the situation is different for the brokering institution. The brokering institution, should it be successful in its efforts, while exposed to minimal levels of risk is expected to reap substantial benefits for itself.

In view of above, we reformulate and refine our proposition to reflect the outcome of our test as follows:

P3: For the business partner and humanitarian organization, the risks and benefits of strategic partnerships are higher than those of brokered partnerships.

10.4.2 Humanitarian Organizations and Strategic Partnerships

As stated below, the research question in this section intends to explore whether all types of humanitarian organizations can engage in strategic partnerships or they need to have a number of characteristics before they can attract a corporate partner.

Q4: What type of humanitarian organizations can engage in strategic partnerships?

Since the unit of analysis for this research question is organizations, our cases relate to three organizations: IFRC, WFP and UNJLC. As illustrated in Appendix A, WFP is one of the largest humanitarian organizations in terms of annual budget. Similar to WFP, IFRC has global operations and office infrastructure. Both organizations rely on global funding and attract considerable media attention. As discussed in Chapter 8, WFP has an on-going strategic partnership with the global logistics company, TNT. IFRC for close to two years was engaged in a strategic partnership with the Fritz Institute for the development of a humanitarian logistics software. As for UNJLC, the facility benefits from its custodian relationship with WFP. While it is not directly engaged in a strategic partnership with any corporation, where and when appropriate, WFP extends the services and support of its corporate partners to it. Corporate partners view their support through WFP to UNJLC going beyond the facility itself, as one benefitting the humanitarian community as a whole. The IFRC and WFP cases show that large humanitarian organizations attract the strategic interest of corporate partners and CSOs. In contrast, it seems that all types of humanitarian organizations can be part of and benefit from brokered partnerships. Indeed, as seen in Chapter 9, the Fritz Institute, in its broker function, has established a multi-disciplinary and wide network of partner organizations. Almost 50 humanitarian organizations part of the UN and NGO community with global or local operations, large and limited budgets, are listed among partner organizations.

A number of reasons can explain this outcome. First, contrary to small organizations operating on limited budgets, large organizations seem to have the financial space to make the onerous up-front investments in a long-term partnership. Second, compared to smaller organizations, this category of organizations has the capacity to fully benefit and absorb

the long-term assistance provided through a strategic partner. Third, a corporate partner needs to have a business case (e.g. meeting its CSR objectives) before engaging in a strategic partnership. Only large humanitarian organizations, given the level of visibility they can offer, can assist the corporate partner in fulfilling the proposed business case (e.g. responding to the expectations of the moral market place, improving upon their competitive advantage, etc.). Similarly, since a corporation needs to partner with a humanitarian organization that is present in the same or similar markets, only larger humanitarian organizations can increase the probability of geographical overlap.

In contrast, our cases do not indicate the presence of a large corporation/CSO as the counterpart for a strategic partnership. Indeed, while TNT is a multinational logistics company serving the global market, the Fritz Institute is a specialized non-profit organization with a global mission and aspiration, but limited budget and staffing.

In conclusion, we have identified the size of a humanitarian organization as a critical factor in strategic partnerships. As such, future research can test the validity of the following proposition: Only large humanitarian organizations can engage in strategic partnerships, where large humanitarian organizations are defined as those organizations with global operations and office infrastructure that attract global (and hence substantial) funding and media attention.

10.4.3 Partnership Best Practices

In this section, by combining the frameworks provided by the non-profit-business partnership literature and our observation on the WFP case, we derive at some lessons learnt on business-humanitarian partnerships and respond to the following question:

| |
|--|
| <p>Q5: What are the best practices that can help avert predictable risks and increase benefits of business-humanitarian partnerships?</p> |
|--|

In terms of risks, through careful design and subsequent policy measures TNT and WFP averted some risks (Figure 10.18). For example, TNT followed best practices during the design phase of the partnership by engaging its management early-on and committing itself to a medium term program for the right reasons. With a view to select the ‘best’

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

humanitarian organizations, during the partner search phase, TNT attached great importance to organizational fit. Together with WFP, it identified the partnership initiatives and the respective monitoring processes. To avoid structural dependency, early-on, TNT introduced a new corporate partner to the organization to help WFP’s expand its private sector network.

To minimize the impact of the partnership on its traditional donors and operations, WFP put forward a policy paper entitled “New Partnerships to Meet Rising Needs – Expanding the WFP Donor Base” for its Board approval. The approved policy ensured that private sector contributions were not viewed as a substitute for Member State funding, that WFP would not be expected to grant exclusivity to any private sector company and that the partnership would not be a source of profit for the private sector partner. WFP also committed itself to conducting a thorough due diligence on the potential partner in order to avoid reputational problems down the road.

Figure 10.18 – WFP-TNT Partnership: Problems encountered and risks avoided

| Problems Encountered | Risks Avoided |
|--|--|
| TNT | TNT |
| <ul style="list-style-type: none"> • Divergence in working cultures • Difficulty in identifying logistics needs | <ul style="list-style-type: none"> • Failure averted <ul style="list-style-type: none"> ○ Staff involvement early-on ○ Ensured organizational fit ○ Identified “best” partner • Accused of partnering exclusively for self-serving reasons <ul style="list-style-type: none"> ○ Skepticism dispelled through immediate implementation |
| WFP | WFP |
| <ul style="list-style-type: none"> • Divergence in working cultures • Temporary lack of absorptive capacity due to surge in operations (Iraq crisis) and lack of dedicated partnership resources • Difficulty in articulating logistics needs | <ul style="list-style-type: none"> • Structural dependency <ul style="list-style-type: none"> ○ New Corporate partner (BCG) • Reduced donations from traditional donors <ul style="list-style-type: none"> ○ Private donor fundraising policy • Loss of organizational flexibility <ul style="list-style-type: none"> ○ Avoid granting exclusivity • Tainted partners <ul style="list-style-type: none"> ○ Partner due diligence • Antithetical activities <ul style="list-style-type: none"> ○ Ensure no commercial benefits |

In the initial stages of implementation, the partners encountered a range of problems related to suspicion, differences in working culture, resource alignment, relevance of assistance and absorptive capacity. To dispel any suspicion and to ensure credibility among employees and the marketplace, TNT developed a well-motivated and long-term partnership and quickly proceeded with the actual implementation. The divergence in working cultures encouraged TNT to take time out to learn about the operations, culture, working style, practices, jargon, etc. of humanitarian organizations in general and WFP in particular. In terms of resources, while TNT had allocated dedicated resources to the partnership, WFP had not provisioned for additional human resources. Lack of human resources and a temporary absorptive capacity issue on the side of WFP were the other reasons for a slow take-off of the two logistics-related initiatives. In terms of relevance of assistance, TNT listened to WFP in the design phase of the initiatives hence all the initiatives reflected priority needs. However, TNT had made assumptions about WFP and humanitarian supply chains which were not confirmed on the ground. Concurrently, WFP had failed to promptly communicate its particular needs in the area of logistics. Lack of dedicated partnership resources and difficulties related to articulation of logistics needs, delayed progress on the more resource-intensive logistics initiatives. However, the commitment and eagerness of both parties to make the partnership a success helped overcome all emerging issues.

Combining the findings of the literature (section 3.3.2) and our observations on the WFP case, there are a number of lessons that can be drawn on how to successfully manage strategic partnerships. To ensure a successful strategic partnership with a non-profit organization in general and a humanitarian organization in specific, business needs to be aware of a number of issues and undertake a number of measures during the design as well as launch and implementation phases of its partnership (Figure 10.19).

For a strategic partnership to be effective and engaging it should be linked to the core competencies and values of the corporation. To have the required credibility internally and on the “moral marketplace”, it should envisage sustained involvement, that is, commit the resources of the corporation for a medium to a long-term period.

It is important for the partnership to be well-motivated and driven by pre-identified objectives. This will help dispel any suspicion regarding the real motivation of business in

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

contributing to social and development projects. To ensure the desired level of credibility among employees and the market, the partnership has to be tailored so as to meet the specific needs and objectives of the assisted organization. What it should not be is i) an emulation of programs initiated by the competition, ii) driven primarily from the top, iii) a response to the latest fad or iv) implemented to appease the financial markets.

Figure 10.19 – The Strategic Partnership Checklist

| Dos | Don'ts |
|--|---|
| <ul style="list-style-type: none"> • Design a medium to long-term CSI • Ensure organizational fit • Select 'best' cause-specific non-profit • Early organizational buy-in • Remain Focused: Design initiatives that leverage your core competencies and respond to identified needs of the non-profit • Confirm relevance of assistance offered • Establish deliverables and monitoring processes • Work on organizational 'understanding'. Take time out to learn about the operations, culture, working style, practices, jargon, etc. of the non-profit • Resource alignment. Request the non-profit to dedicate resources to the partnership • Request the non-profit to articulate needs during the design and implementation phases • Gauge absorptive capacity of the non-profit | <ul style="list-style-type: none"> • To ensure credibility among your employees and the market, don't engage in a CSI for the 'wrong' reasons • Don't allow too much time to elapse between the launch and the actual implementation of the partnership • Don't under-resource the partnership • Avoid frequent changes in the partnership team composition • Avoid creating undue resource/expertise dependency |

One of the first decisions a corporation needs to make is with respect to the scope of its partnership – global, regional, or national. Global initiatives are the riskiest given the fact that success hinges on one partner only. However, they are more effective as time and resources are tied up in the implementation of only one partnership. To hedge against potential partnership failure, a global corporation may wish to diversify its options by

entering into specific partnerships with non-profit organizations at the regional or national level.

For a partnership to deliver its potential, business has to devote sufficient time to the preparation phase: partner selection, program design, collaboration structure, and reporting mechanisms and procedures. The corporation should try to identify and partner with the “best” cause-specific non-profit. In other words, an organization that is neutral, does not have a controversial track record, enjoys a good reputation and has effective operations. A “socialization” period can facilitate the selection process of the non-profit organization. In this respect, participation in focused practitioner networking events facilitates the partner search process. To be able to contribute with core competencies and be in line with the corporation’s values, the corporation should look for organizational fit.

Immediate implementation is crucial as it allows the corporate partner to maintain the momentum created around the partnership as well as to build trust and confidence in its good intentions, winning over the sceptics. Once the partnership is launched, the corporation should devote sufficient time and effort to understand the specifics of the assisted organization in terms of its operations, environment, requirements and absorptive capacity.

To avoid early misunderstandings and cultural clashes especially if the partnership type is a first, an educational period for mutual appreciation and adjustment is required. A learning period helps partners to appreciate differences in culture and operational environments and to workout a common working culture.

The corporate partner should be sensitive to the needs of the assisted organization, critically consider the relevance of standard business practices to the operations of non-profit organizations and be open to evolving goals. The non-profit should be asked to articulate its needs as early on in the partnership as possible. This facilitates the design of initiatives that leverage the core competencies of the corporation while addressing the needs of the non-profit. In addition, it should assess the absorptive capacity of the non-profit to avoid wastage of resources and repercussions on the motivation level of those involved in the management of the partnership on both sides. In this respect, to avoid partnership for partnership sake and in view of its absorptive capacity and the need to

nurture partnerships, the non-profit has to determine the optimal number of partners it could and would like to partner with.

For a partnership to achieve its objectives, the assisted organization is expected to make a certain level of upfront investment or diversion of staff from regular to partnership activities. This investment may be onerous and not within the reach of all non-profit organizations. Indeed it is the absorptive capacity of each organization that will determine its ability, capability, appetite and opportunity to engage in time, labour or capital intensive partnerships. Business should be aware of the assisted organization's trade-offs in terms of increased learning/change opportunities, transfer of best practices and the required investment. Other considerations relate to the sustainability of change and preferences between external- versus internal-driven change.

Apart from commitment at the highest level, commitment during the implementation phase, that is, allocation of resources in line with the partnership requirements is of paramount importance. The delayed allocation of resources to the partnership by either of the partners results in lack of a counterpart for the day-to-day management of the partnership. Allocation of mobile and temporary human resources results in frequent changes in the partnership team composition slowing down implementation. Hence, it is important not to under-resource the partnership and dedicate enough human resources towards its management.

Partnership with the private sector is expected to have short and long-term consequences on the non-profits financial resources, performance and staff morale. Consequently, the non-profit has to be aware of its level of engagement and reliance on corporations given their unstable, uncertain nature. The corporation has to avoid creating an undue resource and expertise dependency by the non-profit on its resources. To achieve the above, it has to manage its medium to long-term involvement with the non-profit by assisting in the identification of other suitable partners and paying particular attention to the sustainability of its assistance.

In terms of power and expected partnership results, given the voluntary nature of these partnerships, the business partner should have a realistic view in terms of its influence over the assisted organization.

10.5 Social Capital

We concluded Chapter 3 by suggesting that disaster response is deeply embedded in networks and in the structure of network relations. We identify the ability of a humanitarian organization in creating and exploiting social capital as the differentiating factor in their performance. We argue that increasing amounts of social capital are required in order to coordinate actions during disaster response and gain access to disaster management resources and capabilities.

As mentioned in Chapter 3, the social capital literature suggests that an interplay between structural (network ties), cognitive (shared codes and language, shared narratives), and relational (trust, norms, identification, and obligations and expectations) variables help reinforce the level of social capital. The literature distinguishes between individual and group-level social capital. Within these two levels, two types of relations are identified: internal and external. External ties result in bridging forms of social capital. Internal ties, fostered within communities, result in bonding forms of social capital (Putman, 2000).

As illustrated below, in Chapter 4, we formulate two research questions in order to explore how social capital is created in the humanitarian world and one to explore the contribution of bridging social capital to resource/capability enhancement. We also advance one proposition that relates intense partnerships to increase in social capital and two propositions that relate social capital to an organization's disaster management capabilities. In this section we try to respond to these research questions and verify whether the propositions can be validated.

- Q6:** How is bonding social capital developed among humanitarian organizations?
- Q7:** How is bridging social capital developed between humanitarian organizations and other key stakeholders?
- Q8:** What is the contribution of bridging social capital to resource/capability enhancement of operational humanitarian organizations?
- P4:** Only intense partnerships, that is, partnerships with long-standing, interactive, interdependent and closely-knitted partners or structures, will increase a humanitarian organization's stock of social capital.
- P5:** Bonding social capital is a necessary condition for inter-organizational coordination during disasters.
- P6:** Bridging social capital is a necessary condition for disaster response.

10.5.1 Bonding Social Capital

Bonding social capital is the type of social capital created within communities. As such, in this section, we try to answer the following research question by distinguishing between activities, structures and the period during which social capital is developed and strengthened among humanitarian organizations.

Q6: How is bonding social capital developed among humanitarian organizations?

As the social capital literature indicates, at the functional level, collaboration and communities of practice help the development of a system of obligations and expectations as well as trust. They also reinforce social norms and group identity. Dense and repeated interactions enhance the quality of exchange as parties better understand each others requirements, modus operandi and develop effective cooperation and coordination processes and routines.

Given that logistics is human centric, we argue that both group-level and interpersonal relationships among logisticians contribute to the development of bonding social capital. At the group level, shared language and experience facilitate coordination and supply network management. Relational norms help create a trusting environment. Shared destiny, common goals together with altruism limit opportunistic behavior and ensure that the interest of individual humanitarian operators is consistent and aligned with that of the organization.

In the next paragraphs, by drawing upon the WFP, UNJLC and the Fritz Institute cases as well as different partnership possibilities, we discuss how certain activities and structures active or activated during the supply network management, coordination and resource/capability enhancement efforts contribute to the strengthening of bonding social capital (Figure 10.20).

Figure 10.20 – Strengthening of Individual and Group-level Bonding Social Capital

| Disaster Management Capability/Period | Organization/ Partnership Scheme | Activity | Contribution to Dimensions of Social Capital |
|--|---|---|---|
| Supply Network Management | | | |
| During disasters | WFP | Inter-agency services <ul style="list-style-type: none"> • UN Humanitarian Relief Depot • UN Humanitarian Air Services | Structural Cognitive Relational |
| Coordination | | | |
| Prior to disasters | UNJLC | Joint contingency planning | Structural Cognitive Relational |
| In-between disasters | UNJLC | Regular inter-agency meetings Training Field Operations Manual Independent evaluations Distinct Logo | Structural Cognitive Relational |
| During disasters | UNJLC | Secondments Regular intra-organizational meetings Coordination effort Provision/sharing of assets and information | Structural Cognitive Relational |
| Enhancing Resource/Capability | | | |
| In-between disasters | Brokered Partnerships (Fritz Institute- FI) | Logistics Supply Chain Initiative <ul style="list-style-type: none"> • Conferences • Humanitarian logistics association • Communities of practice Preparedness & Impact Initiative <ul style="list-style-type: none"> • Establishing common definitions and standards | Structural Cognitive Relational |
| In-between disasters | Cross-cutting Partnerships (FI) | HELIOS | Structural Cognitive Relational |
| In-between disasters | Cross-cutting Partnerships (Kjaer) | Fleet Forum | Structural Cognitive Relational |

First and foremost, we argue that a certain level of bonding social capital exists among humanitarian organizations given the prevailing common belief/value system and the

shared strategic vision. As far as supply network management effort is concerned, among other things, the WFP case is an example of an organization delivering a range of services - the Humanitarian Relief Depot and the UN Humanitarian Air Services - to the humanitarian community. In its service provider function, WFP creates bonding social capital between itself and a group of humanitarian organizations as these humanitarian organizations depend on its services and have to interact with it using a shared language. For example, before the UNJLC, WFP provided logistics advice and services to organizations providers of small volumes of high value goods (i.e., medicine, seeds) such as WHO and FAO. WFP leveraged its stock of bonding social capital with these humanitarian organizations when it came to the custodianship of UNJLC, which was an undisputed decision.

The UNJLC case allows us to conclude that joint inter-organizational coordination efforts contribute to the creation and reinforcement of bonding social capital among humanitarian organizations. As mentioned in section 10.3.2, the success of the UNJLC depends on a number of strategic and operational building blocks. Some of the listed UNJLC building blocks such as trust, direction, communication, identification and business processes contribute to the creation and strengthening of bonding social capital among humanitarian organizations. Enhanced trust, a vision shared by participating humanitarian organizations, clear and efficient communication and common and easily recognizable identity are the strategic building blocks that strengthen bonding social capital. Common business processes is the operational building block which ensures common understanding of how cooperation in the area of inter-organizational coordination is to be executed at the organizational level during field operations.

More specifically, without a shared language and experience, it would be difficult if not impossible for a diverse group of humanitarian organizations to coordinate with each other. The development of common jargon helps improve understanding and reaffirms the fact that all participating humanitarian organizations share the same objective. Common jargon at the functional level, such as logistics, ensures successful coordination. UNJLC has contributed to the development of shared language and experience especially in the area of inter-organizational coordination. Examples include the logistics training sessions and the quarterly inter-agency meetings along with the Field Operations Manual.

The UNJLC has also contributed to the development of the relational dimension of social capital between itself and other humanitarian organizations. WFP, as an inter-agency service provider, enjoyed a good reputation in the area of logistics. Humanitarian organizations had trust in the capability of WFP and, given its custodian role, in the capability of the UNJLC to deliver the promised services. With each deployment and as the UNJLC proved itself on the ground, addressed its weaknesses (e.g. marketing and communication strategy, secondments, service design) and undertook independent evaluations, the level of confidence and trust in it increased.

By creating and adopting a distinct logo early-on, the UNJLC ensured the identification of member organizations and their employees with the concept. By preparing and adhering to an Activation Protocol, developing a Fields Operations Manual, prioritizing the movement of relief items and personnel, managing the flow of information between different parties, ensuring asset sharing, etc. it created a system of obligations and expectations between humanitarian organizations as well as between the facility and its users. The Activation Protocol, the Field Operations Manual, and secondment agreements also contributed to the development of norms, another dimension of bonding social capital, necessary for a smooth coordination.

As the UNJLC case demonstrates, the facility resorts to a number of tools/mechanisms to reinforce bonding social capital at the individual and group-level. Prior to emerging disasters (e.g. Iraq crisis, winterization for Afghanistan), it initiates joint contingency planning sessions allowing humanitarian organizations to apprise themselves of the response plans of each other averting and working out predictable dependencies and duplications and contributing to the development of a series of obligations and expectations. In-between disasters, it organizes quarterly inter-agency meetings allowing participants to interact with each other on a regular basis, developing a sense of identity and common jargon. It organizes UNJLC training sessions; yet another opportunity for networking and deriving at a common jargon. In-between disasters and during disaster response, it calls for agency secondments – a strong bonding mechanism - to its office network as well as sharing of logistics assets and information. During disasters it organizes intra-organizational meetings. Finally, repeated coordination efforts and sharing of

resources and capabilities among the same humanitarian organizations through the UNJLC helps not only to maintain but increase the level of bonding social capital.

As mentioned in section 10.3.1, the UNJLC structure results in intra, inter and extra-organizational linkages. Given the level of interaction, interdependence and closure between the core unit and field offices and between the virtual organization and the humanitarian community, that is, the first and second levels of linkages, bonding social capital is created and enforced at both the individual and group level.

As far as the partnership schemes are concerned, brokered and cross-cutting partnerships can stimulate the reinforcement of bonding social capital between humanitarian organizations. This is because they provide a structure within which humanitarian operators can interact and socialize with each other. By creating additional networking opportunities, these types of partnerships help prorogate a sense of identity among individuals and groups. They also allow time and space for relationship and trust building, creation of common norms, culture, and language.

For example, the Fritz Institute through three of its initiatives contributes to the creation of bonding social capital among humanitarian organizations at the individual and group-level. The first initiative - the Logistics and Supply Chain initiative - helps create bonding social capital through organization of conferences, the humanitarian logistics association, training programs for humanitarian logistics, and establishment of communities of practice. By establishing common definitions and standards (for the measurement and communication of impact), the Preparedness and Impact initiative contribute to the cognitive dimension of bonding social capital. Finally, by developing and rolling out a more user-friendly and cost-effective humanitarian logistics software, HELIOS, the Fritz Institute through its Technology initiative induces exchange of opinion and experience between humanitarian organizations. This contributes to the development of common norms, culture and language among those humanitarian organizations that choose to adopt a common software.

In the framework of the WFP-TNT partnership, TNT organized a fleet forum that brought together 26 humanitarian organizations. The initiative currently pursued by the Danish fleet services company, Kjaer, provides a regular thematic networking opportunity to the fleet managers of the participating humanitarian organizations. The Forum has helped

reinforce the level of trust and common identity among practitioners as well as improve the overall fleet management practices and capabilities of the humanitarian community across geographies.

We can conclude by saying that humanitarian organizations through a number of schemes, structures and activities active or activated prior, during and in-between disasters create and reinforce their level of bonding social capital.

10.5.2 Bridging Social Capital

Bridging social capital is the type of social capital created through external links. With reference to the IFRC, UNJLC, WFP, and the Fritz Institute cases as well as different partnership possibilities, in this section, we answer the following research question by discussing how certain activities and structures active or activated during the supply network management, coordination and resource/capability enhancement efforts contribute to the strengthening of bridging social capital (Figure 10.21).

| |
|---|
| <p>Q7: How is bridging social capital developed between humanitarian organizations and other key stakeholders?</p> |
|---|

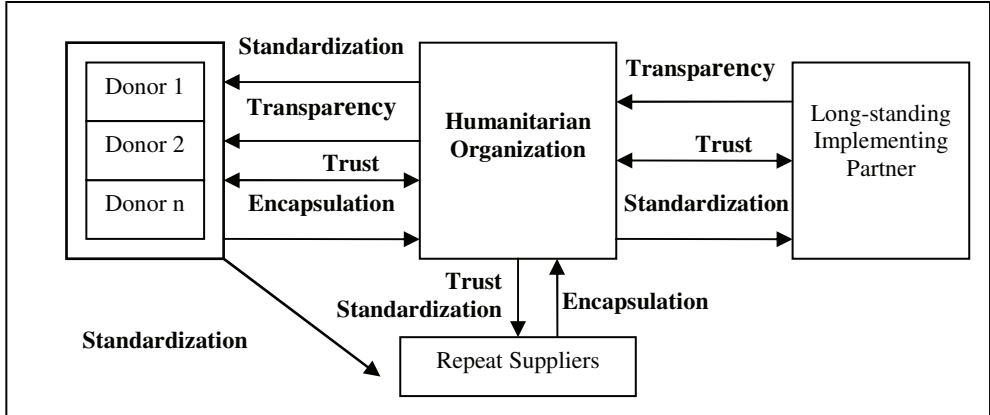
The IFRC and WFP cases indicate that a number of enablers – trust, transparency, standardization and encapsulation – can help create and strengthen bridging social capital between a humanitarian organization and its long-standing donors, implementing partners, and repeat suppliers.

Trust is essential for any collaborative effort between humanitarian organizations and their long-standing donors, implementing partners and repeat suppliers. Trust is the glue that cements the relationship facilitating the supply network management processes.

As far as the humanitarian organization-donor relationship is concerned, a transparent relationship with donors ensures accuracy: the mobilization of the right amount (money and goods) and mix (food, NFIs and services) of items at the right time. Similarly, implementing partners have to maintain a transparent relationship with the humanitarian organization. Trust combined with transparency ensures that information on needs and

activities, in continuous evolution, is used to avoid unsubscribed/oversubscribed initiatives, the arrival of unsolicited goods and stock-outs.

Figure 10.21 – Enablers of the Goods Mobilization and Delivery Process



To facilitate sourcing and expedite relief operations, humanitarian organizations and their donors and implementing partners need to rely on well-developed operational norms and a shared language. Process standardization (e.g. delivery to final destination, distribution criterion), goods standardization (e.g. quality and product specification), framework agreements with suppliers for key items, and code of conduct for donations are among the set of norms and routines developed by humanitarian organizations. Given the history of collaboration, long-standing donors and implementing partners are expected to be aware and adhere to standards and guidelines. Well-established norms and routines improve accuracy and help reduce search, negotiation, contracting, coordinating and monitoring time and cost with repeat suppliers.

Finally, by implementing the encapsulation concept, notably, the execution of a number of tasks and adherence to agreed operating procedures by i) donors upon commitment, ii) suppliers upon placement of orders, and iii) implementing partners upon receipt of goods, humanitarian organizations streamline in an effective and efficient manner the goods delivery process. The combination of trust, process standardization and encapsulation allows humanitarian organizations to ‘out-source’ entire segments of the supply chain from

procurement to transportation to the port of delivery to their long-standing donors. Similarly, trust, process standardization and encapsulation streamline the relationship between a humanitarian organization and its long-standing implementing partner.

To conclude, trust, transparency, standardization and encapsulation regulate the humanitarian organization-long-standing donor relationship. Trust, transparency and standardization regulate the humanitarian organization-implementing partner relationship. Since humanitarian organizations do not share their plans and the flow of donations with their repeat suppliers, the humanitarian organization-supplier relationship is regulated by trust, standardization and encapsulation. These relationships, a source of bridging social capital, have the potential to improve the supply network management ability of a humanitarian organization.

Extra-organizational coordination efforts also result in the creation and reinforcement of bridging social capital. As the IFRC and UNJLC case studies indicate, prior to a disaster, an operational or non-operational humanitarian organization by communicating its or the community's plans to key stakeholders – donors, recipient and neighboring governments – and seeking feedback can build and strengthen the level of bridging social capital. In-between disasters, it can engage donors through visits to capital cities and by inviting key stakeholders including the military to its planning and training sessions. Throughout a disaster, to debottleneck and de-conflict use of key logistics assets and ensure adequate funding, it can organize coordination and information meetings with key stakeholders (donors, military forces, etc.).

A virtually organized humanitarian logistics coordination platform through its extra-organizational linkages (see section 10.3.1) contributes to the creation of bridging social capital between humanitarian organizations and key stakeholders. We argue that even if a party does not use all the links created by the structure, the general connectivity between humanitarian community and key stakeholders is a potential source of bridging social capital. However, we argue that the contribution of this set of linkages to the creation of bridging social capital maybe directly related to decisions concerning the life-time of the structure, the number of offices, the timing of activation and demobilization and the level of interconnectivity.

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

Brokered and strategic partnerships, that is, initiatives aimed at introducing external partners to a humanitarian organization, are also a source of bridging social capital. They enable a humanitarian organization to build structured relationships with a new group of actors – business and CSOs – and through them with other corporations and actors such as academia. Examples are provided in Figure 10.22. Indeed, apart from contributing directly, these partnerships can heighten the profile of and further the cause of humanitarian organizations with new set of actors. These new partners, by organizing networking sessions, apart from lowering a humanitarian organization’s networking and partnership transaction costs, help expand and diversify their network of contacts.

Figure 10.22 – Building and Strengthening of Bridging Social Capital

| Period/Disaster Management Capability | Structures | Activity | Contribution to Dimensions of Social Capital |
|--|---|--|---|
| Supply Network Management | | | |
| During and in-between disasters | HO | Good mobilization & delivery. Enablers: Transparency, Trust, Standardization, Encapsulation | Structural Cognitive Relational |
| Coordination | | | |
| Prior to disasters | HO UNJLC | Communication | Structural Cognitive Relational |
| In-between disasters | HO UNJLC | Visits to donor capital cities Invitation to UNJLC trainings Partnerships with governments, donors, corporations | Structural Cognitive Relational |
| During disasters | HO UNJLC | Coordination meetings Debottlenecking & de-conflicting with governments & military | Structural Cognitive Relational |
| Enhancing Resource/Capability | | | |
| In-between disasters | Brokered Partnerships (Fritz Institute) | Conferences Humanitarian logistics association Publications Back-office assistance | Structural Cognitive Relational |
| In-between disasters | Strategic Partnership (WFP-TNT) | Introduce new corporate partners Establish business advisory council Private sector fund raising initiative | Structural Cognitive Relational |

The above discussions allow us to derive at the following conclusion. Bonding or bridging social capital developed in one context – prior, during or in-between disasters – or during one activity – supply network management, coordination or resource/capability enhance – is appropriate, convertible in other contexts and activities.

10.5.2 Partnerships and Social Capital

In this section our aim is to validate the necessary condition proposition that relates intense partnerships to social capital as stated below:

P4: Only intense partnerships, that is, partnerships with long-standing, interactive, interdependent and closely-knitted partners or structures, will increase a humanitarian organization’s stock of social capital.

As indicated in the proposition, intense partnerships are defined as those partnerships with long-standing, interactive, interdependent and closely-knitted partners or structures. To measure the contribution of different network ties to the development and hence increase of social capital, we propose to qualify relationships along Nahapiet & Ghoshal’s (Nahapiet & Ghoshal, 1998) four criteria: time, interaction, interdependence and closure.

To verify the validity of our proposition, we select a number of cases. Since the unit of analysis for this proposition is organizations, our cases related to both operational and non-operational humanitarian organizations namely: IFRC, WFP, and UNJLC. The hypothesis for each case is that a humanitarian organization’s stock of social capital does not increase in the absence of intense partnerships. In other words, non-intense partnerships do not contribute to the creation of social capital.

Research at IFRC allows us to confirm that in response to each disaster, to mobilize relief items and stage its response, the Federation depends on the collaboration and contribution of its response network. The IFRC disaster response network includes the media, donating and receiving NSs, recipient and bordering governments, military, donors and suppliers.

Since IFRC responds mainly to natural disasters, news on a disaster is what often activates its emergency supply chains. However, the result of our research does not indicate any intense relationship with any particular news agency, whether local or international. On the

contrary, relationship with the media appears to be short with low levels of interaction and in absence of closure or interdependence.

Similar to other humanitarian organizations, IFRC can stage its assistance only after the recipient country welcomes “acts of solidarity”. Often the recipient NS plays a crucial role in ensuring a rapid announcement from the government. For example during the Gujarat earthquake, the Indian Red Cross convinced the government to ‘open up its doors’. Thereafter, it negotiated the use of local assets with the local government and obtained necessary administrative clearances. Therefore, typically, there are high levels of interaction between IFRC and the recipient government especially immediately after a disaster and there is high level of closure and interdependence throughout disaster response.

IFRC and the NSs often use military assets to stage their response. For example, during the Gujarat earthquake, the Federation used the Bhuj military airport to receive relief items. During the 2000 Mozambique floods, before the arrival of civil assets, humanitarian organizations including the IFRC used the fleet of the South African National Defense Force to stage the first wave of relief operations. Therefore, the relationship is characterized more by dependence than interdependence with high levels of interaction and closure over the short period of time that coincides with disaster response.

Emergencies that occur close to a border or those that involve more than one country, such as the destructive Hurricane Mitch, render humanitarian organizations dependent on neighboring country infrastructure. IFRC and its network of NSs often rely on neighboring country physical assets and as such need to liaise with different government authorities to ensure a rapid response. Similar to the relationship with military forces, there is low level of interdependence but IFRC maintains high levels of interaction and closure with neighboring country authorities over a short period.

IFRC depends on two sets of donor groups to fuel its emergency supply chain: its worldwide network of NSs and the donor community composed of institutional and ad hoc donors. The NS network is a closed and stable one that springs into actions as required. IFRC choreographs the operations of a selected group of donor and receiving NSs - participating NSs - in response to each disaster. The Federation also receives donations from other public (e.g. ECHO) or private organizations as well as individuals. The

contribution of this second source is more unpredictable and unreliable. It follows that IFRC entertains two different types of relationships with its donors. Relationship with long-standing NS donors is characterized by closure, interdependence and high levels of interaction over a long period while the opposite is valid for ad hoc donors.

IFRC manages a decentralized but coordinated procurement process. At one end, it releases inventory from its regional warehouses, mobilizes standby resources from its network of NSs and raises ad hoc donations from the international community. At the other end, it uses funds mobilized for a disaster to procure from local and international suppliers. Similar to its donor base, IFRC maintains two types of relationship with its suppliers. Relationship with repeat suppliers is characterized by closure, interdependence and high levels of interaction over a long period while the opposite is valid for ad hoc suppliers.

Given its organizational structure, IFRC does not depend on the NGO community for the “last mile” delivery as much as the other humanitarian organizations. Instead, it uses its NS office network, assets of the recipient/donating NS and its pool of relief delegates to distribute relief operations. As a result, the recipient NS becomes IFRC’s implementing arm. As such, similar to its network of donor NS, the IFRC maintains intense relationships with its recipient NS network.

The afflicted population assisted by IFRC is at the receiving end. The IFRC relief supply chain confirms the silent role of the beneficiaries in the goods mobilization process. The NSs and the IFRC relief delegates are the forces that activate the goods mobilization process.

Similar to any other humanitarian organization, to resolve structural and temporary logistical failures, IFRC needs to coordinate its activities throughout a disaster with other humanitarian organizations. For example during the Mozambique 2000 floods, since for weeks airlifts were the only way to move relief items, it moved its cargo by going through the airlift services of the UNJLC. It also exchanged information on its stock and the situation on the ground with other organizations directly and through UNJLC. Therefore, the IFRC maintains an intense relationship with the logistics coordination platform when and if it is deployed.

IFRC was engaged in a one-to-one intense partnership with the Fritz Institute for the development of a humanitarian logistics software. However, that is not the only interface IFRC has with the Institute. Similar to other major humanitarian organizations, IFRC maintains a long term relationship with the Institute and participates in and benefits from activities and initiatives meant for the community as a whole. IFRC participates on a case-to-case basis to short-term Fritz Institute events and activities where the level of interaction, closure and interdependence with other parties involved is low. Finally, IFRC participates in the fleet forum initiative currently run by Kjaer.

Figures 10.23 and 10.24 help us visualize and qualify the range of relationships maintained by IFRC with different actors part of its network. As discussed in section 10.5.2, IFRC builds social capital not only with long-standing donors, its network of NSs repeat suppliers and Fritz Institute but also with receiving and neighboring governments, military forces, as well as promoters and participants of cross-cutting and brokered partnerships. As such the IFRC case rejects proposition 4.

As far as WFP is concerned, its disaster response network comprises the media, donors, implementing partners, governments, military forces, and suppliers. WFP is also engaged in a one-to-one strategic partnership with TNT. WFP, as the host and custodian of the UNJLC as well as a user of its services, maintains intense relationship with the facility prior, during and in-between disasters. In addition, similar to other major humanitarian organizations, WFP maintains a long-term relationship with the Fritz Institute. It also participates in and benefits from its activities and initiatives meant for the community as a whole. As such, it participates on a case-to-case basis to these short-term events and activities where the level of interaction, closure and interdependence is low. Similar to IFRC, WFP participates in the fleet forum initiative currently run by Kjaer. Finally, it maintains relationship with the Citigroup emergency network initiative which involves some 20 private sector companies.

Figure 10.23 – IFRC: Interaction & Duration of Relationships with Network Actors/Partners

| | | | |
|-------------|------|--|---|
| Interaction | High | <p><i>Military</i> <i>Recipient Government</i> <i>Neighboring Governments</i></p> | <p><i>Donating NSs</i> <i>Recipient NSs</i> <i>Institutional donors</i> <i>Repeat Suppliers</i> <i>Humanitarian Organizations</i> IFRC-Fritz Institute Partnership Fleet Forum (Kjaer) UNJLC</p> |
| | Low | <p><i>Media</i> <i>Ad hoc Suppliers</i> <i>Ad hoc Donors</i> Fritz Institute Initiatives</p> | <p>Fritz Institute</p> |
| | | Short | Long |
| | | Time | |

Figure 10.24 – IFRC: Interdependence and Closure with Network Actors/Partners

| | | | |
|---------|------|--|--|
| Closure | High | <p><i>Military Forces</i> <i>Neighboring Government</i> Kjaer</p> | <p><i>Donating NSs</i> <i>Recipient NSs</i> <i>Institutional donors</i> <i>Repeat Suppliers</i> <i>Recipient Government</i> <i>Humanitarian Organizations</i> IFRC-Fritz Institute Partnership UNJLC</p> |
| | Low | <p><i>Ad hoc Suppliers</i> <i>Media</i> <i>Ad hoc Donors</i> Fritz Institute & its Initiatives</p> | |
| | | Low | High |
| | | Interdependence | |

Figures 10.25 and 10.26 help us visualize and qualify the range of relationship maintained by WFP with different actors part of its network. Similar to IFRC, WFP builds social capital not only with long-standing donors, its repeat implementing partners, repeat suppliers, and TNT but also with receiving and neighboring governments, military forces,

as well as promoters and participants of cross-cutting and brokered partnerships. As such the WFP case also rejects our proposition.

Figure 10.25 – WFP: Interaction & Duration of Relationships with Network Actors/Partners

| | | | |
|--------------------|------|--|---|
| Interaction | High | <p><i>Military</i> <i>Recipient Government</i> <i>Neighboring Governments</i></p> | <p><i>Donors</i> <i>Repeat Implementing Partners</i> <i>Repeat Suppliers</i> <i>Humanitarian Organizations</i> TNT Kjaer UNJLC</p> |
| | Low | <p><i>Media</i> <i>Ad hoc Suppliers</i> <i>Ad hoc Donors</i> WFP Emergency Network Fritz Institute Initiatives</p> | <p>Fritz Institute</p> |
| | | Short | Long |
| | | Time | |

Figure 10.26 – WFP: Interdependence and Closure with Network Actors/Partner

| | | | |
|----------------|------|--|--|
| Closure | High | <p><i>Military Forces</i> <i>Neighboring Governments</i> Kjaer</p> | <p><i>Donors</i> <i>Repeat Implementing Partners</i> <i>Repeat Suppliers</i> <i>Recipient Government</i> <i>Humanitarian Organizations</i> TNT UNJLC</p> |
| | Low | <p><i>Ad hoc Suppliers</i> <i>Media</i> <i>Ad hoc Donors</i> Fritz Institute & its Initiatives WFP Emergency Network</p> | |
| | | Low | High |
| | | Interdependence | |

Similarly, the UNJLC in fulfilling its mandate interacts with a range of actors. Since humanitarian organizations are its primary clients, it maintains intense relationship with

them as well as with its donors. Throughout its deployment, it maintains high levels of interaction, closure and interdependence with recipient governments. Its relationship with military forces, neighboring countries and ad hoc suppliers of critical items is characterized by high levels of interaction over a short period of time combined with high closure with low levels of interdependence.

Figures 10.27 and 10.28 help us visualize and qualify the range of relationship maintained by UNJLC. UNJLC builds social capital not only with other humanitarian organizations and its donors, but also receiving and neighboring governments, military forces and ad hoc suppliers of critical services/products. As such the UNJLC case also rejects our proposition.

Figure 10.27 – UNJLC: Interaction & Duration of Relationships with Network Actors/Partners

| | | | |
|--------------------|------|---|--|
| Interaction | High | <i>Military</i> <i>Recipient Government</i> <i>Neighboring Governments</i> <i>Ad hoc Suppliers</i> | <i>Humanitarian Organizations</i> <i>Donors</i> |
| | Low | | |
| | | Short | Long |

Time

Figure 10.28 – UNJLC: Interdependence and Closure with Network Actors/Partners

| | | | |
|----------------|------|---|---|
| Closure | High | <i>Military Forces</i> <i>Neighboring Governments</i> <i>Ad hoc Suppliers</i> | <i>Humanitarian Organizations</i> <i>Donors</i> <i>Recipient Government</i> |
| | Low | | |
| | | Low | High |

Interdependence

The results of our tests are presented in Figure 10.29. Such results allow us to conclude the following: Humanitarian organizations build social capital not only with those actors appearing in the top quadrants of the interaction/time and closure/interdependence matrixes but also other actors.

Figure 10.29 – Results of Tests Related to Proposition 4

| Case | Intense Partnerships | Social Capital | Test result |
|-------|----------------------|----------------|-------------|
| IFRC | No | Yes | Rejected |
| WFP | No | Yes | Rejected |
| UNJLC | No | Yes | Rejected |

Our results show that the simultaneous presence of the four factors – interaction, time, closure and interdependence – is not a necessary condition for the development of social capital. What is sufficient for social capital to develop within and among humanitarian organizations and other parties is the presence of at least two of the factors. In view of the above, we reformulate and refine our proposition as follows:

P4: A humanitarian organization’s stock of social capital increases should it meet at least two of the following four relationship criteria – long-term relationship, high interaction, closure or interdependence – with the concerned entity.

10.5.3 Social Capital and Disaster Management Capability

In this section, we try to validate the remaining two necessary condition propositions relating social capital to inter-organizational coordination and disaster response and to respond to the research question that aims to explore the contribution of bridging social capital to organizational resource/capability enhancement capabilities.

We start by verifying the first proposition that relates bonding social capital to inter-organizational coordination as stated below:

P5: Bonding social capital is a necessary condition for inter-organizational coordination during disasters.

As stated earlier on, bonding social capital is social capital created within communities which in our case consists of humanitarian organizations. Inter-organizational coordination ensures coordination between the activities of humanitarian organizations in the UN system, NGO and international organization community prior and during disasters. For

inter-organizational coordination to be successful, we argue that there has to be structural connections, common cognitive experiences and strong relationships, i.e., bonding social capital among the concerned humanitarian organizations.

As discussed in section 10.5.1, a certain level of bonding social capital exists among humanitarian organizations. Moreover, major humanitarian organizations find themselves on the same disaster scenes time and again. As such, their staff interact with each other, become aware of each others activities, and exchange information and assets. Since the advent of the UNJLC in late 1990s, organizational ties have been more structured, frequent and maintained interruptedly over longer periods of time.

The unit of analysis for this proposition is disasters. Since the domain of our research is large disaster and the humanitarian community has deployed UNJLCs to deal with logistics coordination during the period covered by our research (2002-2005), our cases embedded in UNJLC relate to its deployment in four disasters namely, the Mozambique floods, the Gujarat earthquake, and the Afghanistan and Iraq crises. The hypothesis for each case is that during disasters, inter-organizational coordination through a logistics coordination platform cannot be successful without bonding social capital.

In the case of the Mozambique floods, during the first wave of floods, it was OCHA's UNDAC that set up the Cell for Logistics Coordination, with the mandate to coordinate assessment and relief activities. When the second wave of floods hit the country, no single organization was prepared for its abruptness and magnitude. Again on the initiative of UNDAC, local authorities requested that the Cell be converted into a UNJLC. The UNJLC, hosted in the building of the National Institute for Disaster Management (INGC), had the required legitimacy to direct air operations. Upon its activation, it was accepted by the military as the body in charge of prioritizing, tasking, and scheduling air assets. WFP designated an ex-pilot and several-time OCHA consultant as head of the centre.

At the onset, there was little understanding of the concept and mandate of the UNJLC among the humanitarian community and military actors. The concept gained credibility through the daily updates at the coordination meetings chaired by the Minister of Foreign Affairs which were attended by humanitarian organizations and the media. These meetings became a forum where UNJLC reiterated that it was there to support the humanitarian community with the commonly available logistics assets. But it still failed to ensure the

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

participation of other humanitarian organizations through secondment of their experienced staff.

In this operation, the UNJLC coordinated only 'regional' airlifts. To ensure the smooth influx and movement of relief items, with the support of OCHA, INGC and the Minister of Foreign Affairs, it dealt with a series of administrative issues (e.g. facilitation measures such as exemption from landing and navigation fees, immigration procedures, customs clearance, etc.).

This case shows the importance of the strong relationship between OCHA and WFP, the custodian of the UNJLC prior to the disaster. Indeed, OCHA by supporting the transformation of the Cell into a UNJLC showed its confidence in the capability of the facility and WFP in coordinating the use of assets. In return, WFP/UNJLC appointed a several-time OCHA consultant to lead the initiative. At the onset, the level of understanding between UNJLC and other humanitarian organizations was little. However, no time was lost in building confidence and trust through daily meetings. In conclusion, without bonding social capital between OCHA and WFP, the UNJLC would not have been established. Similarly, without growing levels of bonding social capital between UNJLC and client humanitarian organizations, the UNJLC would not have been able to prioritize humanitarian cargo, coordinate the use of air assets, and transport 30,400 passengers and 11,623 metric tonnes of relief items.

In the case of the Gujarat earthquake, the UNJLC was deployed without consultation with the humanitarian community. Moreover, few people among the UN agencies were aware of the concept. UNJLC staff arrived at the disaster site without knowing what type of assistance was required by the humanitarian community. With no relationship between the UNJLC and those it was meant to serve, the need for the facility was questioned. Without establishing connections to or serving the humanitarian community, the UNJLC was demobilized just four weeks after its deployment.

In contrast, in view of the Afghan crisis, the UNJLC was deployed after a consultation process among humanitarian organizations. Its mandate was clear: coordination of UN's logistics effort. During this crisis, the facility could rely on the office network of the Humanitarian Information Centre (an OCHA facility) and the administrative support and fundraising mechanisms of WFP. Prior to its deployment, the UNJLC had started work on

its Field Operations Manual and conducted training sessions for humanitarian logisticians. To attract and ensure agency secondments, UNJLC established dedicated funds to cover the costs of full-time secondments. It then communicated the opportunity for secondments to the relevant organizations. As a result, at the height of the operations, the UNJLC offices had attracted 30 seconded staff from six different humanitarian organizations. These secondments further contributed to the creation and reinforcement of bonding social capital.

To discuss logistics issues, task scarce resource and set priorities, UNJLC organized regular inter-agency meetings. By gaining the respect of agency staff as a neutral facility and building bonding social capital, UNJLC managed to obtain timely and accurate information from each agency in terms of their assets, requirements and activities. This allowed it to forewarn and forearm agencies of emerging bottlenecks such as shortage in storage capacity or deteriorating road conditions and to negotiate with local authorities and service providers on issues of common concern to the community.

Among other things, the UNJLC provided tailored logistics support (e.g. UNICEF's *Back-to School Campaign*) to select humanitarian organizations. More significantly, as early as June, it focused the attention of the humanitarian community on the upcoming winter through a winterization strategy workshop. The workshop, which paved the way for a joint-contingency plan, was attended by 25 representatives of the five major humanitarian organizations, donors and NGOs. The coordination efforts of the UNJLC were substantial and deemed as highly successful. Just in terms of air cargo, UNJLC ended up coordinating flights into the Afghan region for 28 organizations for a total of 2,772 MT of humanitarian cargo.

In preparation of the Iraq crisis, the UNJLC set off on a social bonding and expectation management mission: a UNJLC planning officer traveled to countries potentially involved and affected by the crisis to learn about their needs and sensitize and brief UN agency country teams on the services it could offer. The issue of fuels was identified as a potential bottleneck to humanitarian operations. In order to achieve economies of scale and negotiating power in the purchasing, transport, storage and distribution of fuels, the UNJLC had to highlight the merits of common sourcing to humanitarian organizations. With a view to convey the message, get support and formalize the concept of joint fuel

supplies, the UNJLC sat down with each agency to discuss the proposal and determine their fuels needs. Thereafter, the UN Office for Project Services was identified as the supply fuel agent for the community. Again, in this case, inter-organizational coordination on the issue of fuels would not have been possible if UNJLC had not taken out enough time to understand the specifics of the emergency with the humanitarian operators, establish a dialogue with each organization, and identify and appoint a supply agent.

As summarized in Figure 10.30, our cases show that without efforts directed to the reinforcement of bonding social capital among humanitarian organizations, it is difficult for inter-organizational coordination through a logistics coordination platform to be successful. As a result, it is recommended that humanitarian organizations directly and through the UNJLC devote time and effort to build and strengthen the level of social capital among them in-between and during disasters.

Figure 10.30 – Results of Tests Related to Proposition 5

| Case | Bonding Social Capital | Inter-Organizational coordination | Test result |
|-------------|------------------------|-----------------------------------|--------------|
| Mozambique | Yes | Yes | Not rejected |
| Gujarat | No | No | Not rejected |
| Afghanistan | Yes | Yes | Not rejected |
| Iraq | Yes | Yes | Not rejected |

In the next paragraphs, we verify whether we can validate the proposition that relates bridging social capital to successful disaster response as stated below:

P6: Bridging social capital is a necessary condition for successful disaster response.

As mentioned earlier on, bridging social capital is social capital created through external links. As argued in Chapter 2, a humanitarian organization depends on the contribution of seven forces to stage a successful response. We assert that to mobilize and distribute goods, humanitarian organizations depend on the media, recipient country(s), military, neighboring countries, donors, suppliers and implementing partners who are usually part of the NGO community. As depicted in our conceptual framework, coordination is a subset of

supply network management. We assert that to manage dependencies and avoid duplications arising from failure modes, humanitarian organizations need to coordinate their activities not only with other humanitarian organizations but also with key stakeholders. Therefore, to mobilize and distribute goods from supply networks as well as coordinate the use of logistics assets with key stakeholders, humanitarian organizations need to leverage their bridging social capital in order to ensure a cost-effective, speedy, accurate and flexible response.

To verify the validity of our proposition, we select a number of cases. Since the unit of analysis for this proposition is disaster response, our cases relate to the disaster response activities of IFRC and WFP namely, the Gujarat earthquake, Hurricane Mitch and Zaire crisis but also UNJLC's coordination efforts during the Mozambique floods, Gujarat earthquake, and Afghanistan and Iraq crises. This is justified by the fact that our research shows that since late 1990s, operational humanitarian organizations engage in inter- and extra-organizational coordination through the UNJLC (non-operational humanitarian organization). The hypothesis for each case is that disaster response, of which coordination is a subset, cannot be successful without bridging social capital.

IFRC's response during the Gujarat earthquake demonstrates that to mobilize relief items and stage a successful response, the organization depended on the collaboration and contribution of its response network. As depicted in Figure 10.2, IFRC's donating NSs dispatched a range of Emergency Response Units (ERUs) to the disaster site within 3 to 5 days from the disaster (speed and accuracy). To mobilize goods, IFRC leveraged not only its relationship with its donating NSs, but also those with its repeat suppliers (speed, accuracy and cost-effective). Indeed, within five days, international relief supplies arrived on the disaster scene. On the other hand, the Indian Red Cross leveraged its relationship with the Indian government. It was instrumental in obtaining the endorsement of the Indian government for international help soon after the disaster (speed) and thereafter the collaboration of the Indian military forces in terms of use of military assets and staff by IFRC. As the tents example shows, the on-going dialogue with local authorities ensured an accurate and flexible response. More specifically, initially the Indian government expressed its contrariness to setting up of tent camps. It changed its mind several times to

ORGANIZING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

settle on the total figure of 35,000 tents. Bearing in mind the prevailing supply constraint, IFRC contributed to the supply request.

In contrast, lack of understanding on the needs of the populations and quick activation of contacts with governments affected by Hurricane Mitch resulted in poor response on the part of IFRC. Lack of standby agreements with repeat suppliers and understanding with donating NSs prevented a speedy dispatch of goods and ERUs.

WFP's response during the Zaire crisis demonstrates how an organization building upon its existing logistics network can quickly mobilize the required air and ground logistics resources (speed, flexibility, accuracy, cost-effectiveness). WFP's bridging social capital with traditional and long-standing donors ensured the diversion of relief stocks in the region to the disaster and the use of slack WFP logistics resources by other humanitarian organizations. Indeed, WFP managed to obtain donor agreement on these two issues on a timely basis contributing to the speed, flexibility, accuracy, cost-effectiveness of its response.

In terms of coordination, the UNJLC activities during the four selected crises show that to manage dependencies and avoid duplications, the humanitarian community depends on the collaboration and contribution of local authorities, military forces, donors and suppliers. With the exception of the Gujarat earthquake where the facility was not recognized by the local authorities, by centralizing coordination with the UNJLC, the humanitarian community ensured that bridging social capital created with recipient (e.g. Mozambique authorities in case of Mozambique floods), interim (interim authorities during the Iraq crisis) and bordering governments (Uzbek authorities during the Afghanistan crisis; Jordan, Iran, etc. during the Iraq crisis) as well as with national and foreign military forces (South African military forces during Mozambique floods, Coalition forces during Afghanistan crisis) was used to coordinate, that is, de-conflict and de-bottleneck, in a timely, flexible and accurate fashion humanitarian operations with others in the interest of all.

In addition, during the Afghan crisis, the UNJLC coordinated road rehabilitation projects with the donors and military forces. After having completed an infrastructure survey projects, the UNJLC approached donors and military forces interested in rehabilitation

works (roads, hospitals, schools, etc.) with a view to avoid duplication of funding on project and ensuring the most urgent repair interventions.

Figure 10.31– Results of Tests Related to Proposition 6

| Case | Bridging Social Capital | Successful Disaster Response | Test Result |
|-----------------|-------------------------|------------------------------|--------------|
| Gujarat (IFRC) | Yes | Yes | Not rejected |
| Hurricane Mitch | No | No | Not rejected |
| Zaire | Yes | Yes | Not rejected |
| Gujarat (UNJLC) | No | No | Not rejected |
| Mozambique | Yes | Yes | Not rejected |
| Afghanistan | Yes | Yes | Not rejected |
| Iraq | Yes | Yes | Not rejected |

As indicated in Figure 10.31, we can conclude by stating that to ensure a successful response, that is, overcome resource gaps at the organizational and to resolve dependencies and avoid duplications at the community level during disasters, operational and non-operational humanitarian organizations should take time to build and reinforce their level of bridging social capital with key stakeholders.

In the remaining paragraphs, we explore the contribution of bridging social capital to organizational resource/capability enhancement as stated below:

Q8: What is the contribution of bridging social capital to resource/capability enhancement of operational humanitarian organizations?

Since the unit of analysis for this research question is organization, our cases relate to two operational humanitarian organizations: WFP and IFRC.

The WFP case shows that with the contribution of an external corporate partner, the organization made a sustainable quantum leap in its operations and business processes. Examples include the remodeling of the Brindisi warehouse, the results-based budgeting and project closure exercises, fleet management, aviation training program, and the comprehensive Business Process Review (BPR). The external partner, a source of bridging capital, contributed with its specific core competency. As such, it was well positioned to help WFP identify and overcome its persistent HR, operational and business processes

weaknesses over a relatively short period of time. In this specific case, the improvements have been sustainable since the TNT, the corporate partner, committed to a long-term partnership had the necessary time horizon to implement them. In addition, the interest of TNT was aligned with that of WFP, the assisted organization, in terms of achieving measurable results according to schedule.

On a smaller scale, the IFRC case demonstrates that external expertise was required for the development of a humanitarian logistics software. While IFRC was fully aware of the need to automate its supply chain activities, none of its internal resources (NSs, traditional donors, etc.) were able to overcome this gap. IFRC had the choice to commission the development of the software on commercial basis to an external firm. However, the Fritz Institute, a source of bridging social capital, was able to enhance its capability through the development of a tailor-made software, free of charge and within the shortest delay.

While without an external partnership, WFP and IFRC respectively would not have found the specialized and additional resources to make that quantum leap in their internal operations (Figure 10.33), the duration of the partnership and the aligned interest of the partners in ensuring success have been important variables for the sustainability of the proposed improvements. It appears that to enhance organizational resources and capabilities, humanitarian organizations need to build long-term relationships with parties committed to the humanitarian cause with core competencies that match their requirements. Future research could test the validity of the following propositions: Long-term bridging social capital is a necessary condition for resource/capability enhancement of operational humanitarian organizations.

10.6 Summary

In Chapter 3 we developed our conceptual framework which is based on the integration of network, coordination, resource-based view, social capital and corporate social responsibility theories. In Chapter 4, we developed our research framework which consists of a number of research questions and propositions. In this Chapter, using the empirical data developed in Chapters 6 to 9, we tested the propositions and responded to the research questions. In this section, we summarize our findings.

As far as supply network management is concerned, we distinguished between unpredictable and predictable disasters. Our cases show that a speedy, accurate, and flexible response to unpredictable disasters depends on if a humanitarian organization resorts to broad supplier networks or not as only a broad supplier network can ensure good performance. As such, it is recommended that they put in place systems and procedures that support the construction of broad supplier networks. Our cases did not allow us to extend our results to predictable disasters and to link broad supplier network to cost-effectiveness.

To pre-empt dependencies and duplications arising during disaster response, humanitarian organizations can engage in a number of agency-specific measures. Similarly, by engaging in a number of inter-organizational and extra-organizational coordination mechanisms directly or through a logistics coordination platform, our cases show that humanitarian organizations can avert and manage dependencies and avoid duplications.

As far as the governance structure of the logistics coordination platform is concerned, our results show that a virtually organized structure can lead to the provision of good services. As such, it is recommended that humanitarian organizations opt for this organizational structure when deploying a coordination platform. In terms of structural components, the virtually organized logistics coordination platform requires four distinct elements: Virtual Web, Core Unit, focal virtual organization and a series of antenna offices. Success depends on a number of strategic and operational building blocks. In line with the relevant literature, our cases highlight the fact that there are a number of risks inherent to virtual organizing which need to be addressed and market opportunities that members can capitalize upon.

As far as business/CSO partnerships are concerned, we derive at two conclusions. First that the risk-benefit profile of brokered partnerships is different for the three parties involved. More specifically, while the risk-benefit profile is low for the business partner and the assisted humanitarian organization, the broker organization can reap substantial benefits while facing low levels of risk. Second, the risk-benefit profile of brokered partnerships for the business partner and the concerned humanitarian organization is lower than that of strategic ones. Our cases tend to indicate that a certain type of humanitarian organizations, that is larger organizations, attract strategic partnerships. We also observe

that business and humanitarian organizations can minimize the risks of their partnership and increase its benefits by adhering to some best practices.

A certain level of bonding social capital exists among humanitarian organizations. However, humanitarian organizations can strengthen the level of their bonding social capital with other humanitarian organizations by engaging in a number of activities and structures prior, in-between and during disasters. Our cases allow us to identify ways in which humanitarian organizations currently develop their bonding and bridging social capital in-between and during disasters. As far as bridging social capital is concerned, our cases show how through trust, transparency, standardization and encapsulation humanitarian organizations create and reinforce it with their long-standing donors, implementing partners and repeat suppliers.

Our test results show that humanitarian organizations do not build and reinforce their stock of social capital only with partners with whom they have intense relationships but also with other parties as long as a combination of two of these factors – high interaction, long-relationship, closure, interdependence – is satisfied. Enhanced trust, a set of social and operational norms, and a system of obligations and expectations between humanitarian organizations increase their ability to engage in inter-organizational coordination through a logistics coordination platform. More specifically, our cases show that bonding social capital built in-between and during disaster response is necessary for a successful inter-organizational coordination. Similarly, given the need to bridge resource and capability gaps and coordinate, operational and non-operational humanitarian organizations require to build bridging capital both during disaster response and in-between disasters to ensure successful operations. We can conclude by stating that the performance of any type of humanitarian organization depends on the structure, health and multiplicity of its partnerships which results in a combination of bridging and bonding social capital.

PART IV

CONCLUSIONS

Chapter 11 **Key Findings, Contributions and Future Research**

This thesis provides a first overview on how humanitarian organizations, the relief arm of the international community, respond to the growing challenge of emergency response. It accomplishes the investigation task by drawing and building upon four streams of literature – network theory, coordination theory, the resource-based view of the firm and social capital theory – as well as the case study methodology.

The case study approach is chosen because experiments, archival and historic research as well as surveys fail to provide the necessary insights to the complex subject of disaster management. Yin (Yin, 2003) argues that the type of research questions, extent of control a researcher has over actual behavioral events and the contemporary versus the historical nature of the phenomena under study determine the investigator's empirical approach. In our case, the case study approach is justified as our research questions are mainly exploratory, it is possible to document humanitarian operations in 'real-life', and because partnerships are a contemporary phenomenon in the humanitarian sector.

To contribute to an under-researched branch of the supply chain literature, humanitarian supply chains, this thesis set out to explore two main research questions.

- | |
|---|
| <ol style="list-style-type: none">1. <i>What factors contribute to the performance of humanitarian organizations during disaster response?</i>2. <i>How do humanitarian organizations manage their disaster response activities?</i> |
|---|

To build an initial understanding of the disaster management capabilities of humanitarian organizations, this thesis develops a framework that helps explain the contribution of partnerships to performance during disaster response. It first explores the contribution and impact of well-designed and implemented partnerships on humanitarian operations. Thereafter, it identifies supply network management and coordination as key disaster response capabilities, a continuous need for resource and capability enhancement as a requirement and social capital as the differentiating factor in organizational performance.

This closing chapter is organized as follows. Section 11.1 summarizes our findings related to the first main research question while section 11.2 to the second one. Section 11.3 takes stock of the contribution of this thesis to the virtual organizing literature, which is an unexpected outcome of this study. Lessons emerging from this research for business and humanitarian organizations are reviewed in sections 11.4 and 11.5 respectively. To set the stage for future research on the topic, the closing section sketches the limitations of this research and highlights future research areas.

11.1 Factors Contributing to Performance during Disaster Response

In this section, we summarize the findings of our research in terms of factors that contribute to the performance of humanitarian organizations during disaster response. Performance is defined in terms of cost-effective, timely, flexible and accurate response and operation accountability.

To master disaster management, that is, ensure the arrival of the right goods, at the right time and place, humanitarian organizations have to excel in disaster preparedness and response. To tackle preparedness and response challenges related to their supply chains, this thesis advances that humanitarian organizations engage in a range of partnership arrangements.

In terms of response, in order to bridge their resource and capability gap, humanitarian organizations need to call upon the contribution and resources of their response network. Seven actors compose a humanitarian response network. These actors are the media, donors, receiving government(s), military, neighboring governments, suppliers and implementing partners. For each disaster, a humanitarian organization needs to construct and manage a temporary supply network. The ability of a humanitarian organization to access and leverage the resources and capabilities within its supply network defines its performance in terms of its cost-effectiveness, timeliness, accuracy and flexibility.

It follows that the response capability of a humanitarian organization depends on the response capability and willingness of each of these forces. As mentioned in section 2.7.1, the supplier network is the only node of the supply network over which a humanitarian

organization can exercise direct power. We have observed that during unpredictable disasters, in order to mobilize and transport relief items, humanitarian organizations need to construct broad and loose emergency supply networks. This is explained by the fact that a broad network of multiple and geographically dispersed, interchangeable and complementary suppliers renders the emergency supply chain more resilient to supply, transport and communication failure modes ensuring timeliness, flexibility and accuracy.

In Chapter 2 we argue that to respond to unpredictable and predictable disasters, humanitarian organizations need to pursue and excel in two distinct supply chain strategies. For predictable disasters, they should construct and manage efficient supply chains while for unpredictable ones they need to setup agile supply chains that are responsive to demand and hedged against any supply shortage. Good performance implies existence of capabilities and systems that allow for the parallel and simultaneous implementation of these strategies.

Contrary to commercial supply chains that are designed for repetitious, routine operations, humanitarian organizations are increasingly engaged in mounting and managing non-routine supply chains in response to large-scale, sudden and complex disasters. In addition, given the geographies they operate in and the impact of disasters, they often face a range of significant structural to temporary logistics failure modes. These failure modes create a series of inter- and extra-organizational dependencies and lend themselves to duplication of efforts and activities by the concerned actors. In Chapter 2, we argue that the increasing number of unpredictable and competing large scale disasters - often in fragmented, less developed countries of the world with limited or depilated infrastructure - coupled with insufficient resources at the disposal of each organization has increased the need for coordination.

To deal satisfactorily with logistics dependencies and in order to avoid duplications, humanitarian organizations have opted for a distinct and independent partnership scheme: a logistics coordination platform. The platform allows for coordinated inter-agency actions and provides an adequate interface with other key stakeholders. Our research indicates that to provide a good service, this neutral non-operational facility needs to have the organizational characteristics of a virtual organization. This is because virtual organizing is

the only organizational structure that can provide a good service, that is, ensure a speedy, flexible, accurate and cost effective response and access to resources available within the community during time sensitive environments.

As discussed in Chapter 2, humanitarian organizations suffer from a generalized underinvestment in preparedness capability and need to improve upon their response function. To achieve a quantum leap and address their weaknesses, they need to tap into specialized and additional resources. To this end, they need to go beyond the generic and tied resources offered to them by their traditional donors. In this regard, select resources within business and CSOs are relevant. As a result, business/CSO-humanitarian partnerships are the third type of partnership arrangement sought by humanitarian organizations.

Although business and CSO partnerships cannot substitute for good internal operations, they can complement and enhance internal operations, provide an impetus for improvement and expand the humanitarian virtual web. We argue that such partnerships, if carefully implemented, contribute both to disaster preparedness and response capabilities. They can assist individual humanitarian organizations achieve faster and more accurate results for less cost to society.

Our research suggests that disaster response is deeply embedded in networks and in the structure of network relations. We identify social capital as the driver behind the participation of different actors during disasters. We equally identify the ability of humanitarian organizations to build and exploit it as the differentiating factor in their performance. We conclude that in order to increase its social capital, a humanitarian organization needs to fulfill at least two of the following relationship criteria - long-term relationship, high interaction, closure or interdependence - with the concerned entity.

Our research highlights the importance of both bonding and bridging social capital to disaster management. More specifically, it shows that without efforts directed to the reinforcement of bonding social capital among humanitarian organizations, it is difficult for inter-organizational coordination to be successful. As a result, it is recommended that humanitarian organizations, directly and through their logistics coordination platform, devote time and effort to build and strengthen the level of social capital among them in-between and during disasters.

Similarly, our research shows that without efforts directed to the creation and reinforcement of bridging social capital, it would be difficult for humanitarian organizations to overcome their resource and capability gaps at the organizational level and to resolve dependencies and avoid duplications at the community level. As far as the latter is concerned, we argue that humanitarian organizations need to build long-term relationships with parties committed to the humanitarian cause with core competencies that match their requirements.

11.2 Management of Disaster Response Activities

In this section we summarize the findings of our research in terms of how humanitarian organizations manage their disaster response activities. We summarize how humanitarian organizations manage dependencies and avoid duplications, how they operationalize the logistics coordination platform, and how to best manage the risks and opportunities associated to it. Then we summarize the concepts, activities and structures that contribute to the creation and reinforcement of bonding and bridging social capital.

To manage eventual dependencies and avoid duplications, first and foremost, operational humanitarian organizations engage in a series of pre-emptive agency-specific measures. To address recurrent, common and disaster-specific dependencies and duplications, operational humanitarian organizations take collective action by calling upon the services of a non-operational organization in form of a logistics coordination platform. The logistics coordination platform engages in a range of inter and extra-organizational coordination mechanisms contributing to the accuracy, flexibility, response time and operational costs of disaster response. Inter-organizational coordination mechanisms include joint contingency planning, prioritization, debottlenecking, common logistics capability and information brokerage, joint procurement and inventory management activities. Extra-organizational coordination mechanisms include standardization, partnerships, coordinated funding strategy, common negotiations, de-conflicting, and de-bottlenecking.

Our research shows that a successful logistics coordination platform needs to have four distinct elements: virtual web, virtual corporation, core unit and a series of antenna offices.

The virtual web and core unit are the permanent features of the structure. Virtual corporations and antenna offices are activated and deactivated in response to each and every large-scale disaster. The humanitarian virtual web is necessary to attract and include humanitarian organizations, donors, CSOs, and private sector companies. A focal virtual corporation is established for each large-scale disaster. Territorial coverage is achieved by the opening and closing of temporary antenna offices augmenting the resources at the disposal of the participants. It is worth noting that the deployment of virtual corporations may help unearth the structural or temporary logistics needs of a country, which need to be addressed by a separate entity(s).

The humanitarian community has decided to nest the logistics coordination platform in WFP: an organization with strong logistics expertise, committed to provide infrastructural support, and experienced provider of inter-agency services. To avoid a dependent relation between the platform and the assisted humanitarian organizations or loss of control over logistics resources, the platform complements rather than substitutes an organization's logistics function. To remain a credible, reliable and manageable structure, it resists across-the-board activation and tries to keep its ambitions within its operational capabilities. It has realized the importance of timely dismantling of focal virtual corporations to avoid mission creep. To avoid an increase in administrative cost and loss of cost-efficiencies due to dispersed workplaces, it has often opted for the co-location solution with an existing structure of a virtual web member.

To avoid lack of direction and motivation among its staff, during deployments, the platform organizes a number of meetings among the geographically dispersed teams. To ensure that its services remain relevant to its member, almost after each deployment, it commissions independent evaluations and uses results and findings to adjust and improve services.

Timely and sufficient allocation of resources by members ensures effectiveness and minimizes quality variation across deployments. Typically WFP, UNJLC's host institution, bridges the facility's resource gaps. UNJLC needs to improve upon this aspect possibly by obtaining a firm commitment of its virtual web members towards its resource requirements.

Our view of organizational performance is a socially-driven one. We see disaster response deeply embedded in networks and in the structure of network relations. Therefore, it is important to explore and explain how humanitarian organizations develop and manage bonding and bridging social capital.

First and foremost, we conclude that a certain level of bonding social capital exists among humanitarian organizations given the prevailing common belief/value system and the shared strategic vision. Those humanitarian organizations engaged in the delivery of services to other humanitarian organizations create bonding social capital. Inter-organizational coordination also results in the reinforcement of social bonding capital through enhanced trust, shared vision, communication, common identity, and common business processes. Activities and arrangements that contribute to its reinforcement include joint contingency planning sessions, inter-agency meetings, training sessions, agency secondments, etc.

As far as business/CSO-humanitarian partnership schemes are concerned, brokered and cross-cutting partnerships stimulate the reinforcement of bonding social capital between humanitarian organizations by creating additional networking opportunities, providing training, developing a common IT platform or standards, etc.

We conclude that a number of enablers – trust, transparency, standardization and encapsulation – help create and strengthen bridging social capital between a humanitarian organization and its long-standing donors, implementing partners, and repeat suppliers. Extra-organizational coordination efforts result in the creation and reinforcement of bridging social capital. Prior dialogue as well as networking, planning, training and coordination activities with key stakeholders – donors, recipient and neighboring governments – help build and strengthen the level of bridging social capital. Brokered and strategic partnerships are also a source of bridging social capital. They enable a humanitarian organization to build structured relationships with new groups of actors.

11.3 Virtual Organizing

One of the unintended contributions of this research has been to the virtual organizing literature. To respond rapidly to logistics failure modes, humanitarian organizations have

considered a specific governance structure - a virtual resource base - for their logistics operations. The humanitarian community’s experience provides empirical evidence for the emergence and management of logistics virtual organizations and contributes to the virtual organizing literature in several ways.

Figure 11.1 – Structural Components of UNJLC

| UNJLC Structural Components | Virtual Organization Literature |
|------------------------------------|--|
| Virtual Web | Virtual Web |
| Core Unit | - |
| UNJLC deployments | Virtual Corporations |
| UNJLC Antenna Offices | - |

In terms of structure, the UNJLC example highlights two structural aspects of virtual organizing not explicitly covered by the literature: the Core Unit and the Antenna Offices (Figure 11.1). The first element consists of the need for a small permanent virtual web secretariat, which in effect results in physicality. The UNJLC example shows that it is through the Core Unit that the caretaker operationalizes the virtual web and the UNJLC deployments; addresses incompatibilities; carries out forecasting, planning and preparedness activities; and ensures continuity.

A structural strength of the virtual organization concept not explicitly emphasized by the literature is the possibility of quickly activating and demobilizing a series of temporary and interlinked offices during the project cycle. The function of these antenna offices is to support the activities of the virtual corporation and its stakeholders. Their advantage is that they allow for the rapid adaptation of services to the changing and unexpected needs of the environment and clients. They also result in intra, inter and extra-organizational linkages. These linkages are of particular value to emergency relief environments. They ensure speedy response in time sensitive environments by a temporary augmentation of resources at key geographical points. They create value not just for their direct users but also for the community. Moreover, even if a given organization or stakeholder does not use all the links created by the antenna offices, it values the general connectivity between organizations guaranteed by the structure.

UNJLC provides some indication regarding the advantages and disadvantages of nesting the Core Unit within the setup of a virtual web member. Advantages include the immediate operability. Disadvantages include the perceived or effective interference and dominant position of the host institution in the decision-making process and direction of the facility. In terms of the profile of the most eligible organization, our research underscores the importance of nesting the core unit in a financially and technically strong and credible organization recognized for its competence. The core unit would benefit from residing in an organization that occupies an information-rich position within the community in terms of knowledge about inter-organizational resources. The hosting organization's prior experience in forging partnerships with other organizations and managing inter-firm services are additional assets. Finally, our research underlines the usefulness of a logo in the organizational identification process.

Our research elaborates on the comparative advantages of virtual organizing in overcoming the specific challenges of emergency environments. Virtual organizations facilitate the rapid activation of temporary, dynamic, and flat coordination structures staffed with virtual teams. These organizational features are of particular relevance in time sensitive environments that depend on the resources of a host of small and large organizations.

In Chapter 10 we propose a framework that distinguishes between the strategic and operational building blocks necessary for the operationalization of virtual organizations. We argue that for the virtual organizing concept to realize its potential, trust needs to prevail among the virtual web member and the concept should have a clearly defined mission. For cooperation to take place, virtual web members have to set the direction. In this regard, the quality of communication and leadership is fundamental. To ensure the achievement of the set objective, the caretaker and lead operators have to overcome identification problems associated to virtual organizing. They have to rise to the challenge of creating an organizational identity and facilitating a bonding process for the virtual corporation to which the seconded staff can sign up to and identify with.

At the operational level, we argue that under resourced virtual corporations are not able to realize their objectives and would suffer from lack of credibility. To remain a value-adding partnership, the services of virtual corporations need to be demand-driven.

Comprehensive reference business processes and the provision of a reliable support infrastructure such as IT services by a virtual web member ensure operational effectiveness.

We also review the drawbacks to virtual organizing. These range from difficulties arising from lack of authority and control over the virtual web members and their resources, incompatibility between cooperating members, and shortcoming in the strategic and operational building blocks. Our research also points to the very advantages of virtual organizing – flat organizations, temporary and dispersed units – as the source of potential drawbacks. It discusses challenges related to the novelty and the very nature of the concept - dynamic and temporary non-organizations, in terms of stakeholder buy-in. Undue dependency, misapplication, and mission creep are the other risks facing the concept and its members.

In terms of new market opportunities, the activation of virtual corporations can help in their identification. We argue that whenever services provided by the virtual corporation are sought by third parties, to capitalize on the market opportunity, the virtual web members should seriously consider the setting up of a separate entity.

11.4 Lessons for Business

In this section we summarize the relevance of our research to business. We first discuss the different partnership possibilities and how business can best engage with humanitarian organizations. Our discussion goes beyond humanitarian organizations since it can be extended to other non-profit organizations. We also summarize under which circumstances business can apply the solution adopted by the humanitarian community to deal with failure modes during disasters. More specifically section 11.4.2 verifies the relevance of the humanitarian logistics coordination platform to business while section 11.4.3 discusses what business can learn from UNJLC's institutionalization process.

11.4.1 Business-Humanitarian Partnerships

This research provides several takeaways on business-humanitarian partnerships. After having identified four different partnership possibilities, it highlights their different risk-to-benefit profile. For example, the risk and benefits of strategic partnerships are found to be higher than brokered ones for the humanitarian organization and business partner. Given the different risk-to-benefit profile, we recommend that the parties involved take time to identify and evaluate them so as to avoid surprises. However, it should be noted that as long as benefits outweigh the risks, there is a business case for each partnership scheme.

As far as strategic partnerships are concerned, to guide the two parties in their partnership path, we propose a checklist. Emphasis is placed on well-motivated partnerships that are driven by pre-identified objectives and linked to the core competencies and values of the business partner. To achieve the desired level of credibility, we stress that it is important that partnerships commit corporate resources for a medium to a long-term period. The importance of partnering with the “best” humanitarian organization and devoting enough time to the preparation phase is also highlighted.

Immediate implementation is considered crucial as it helps build trust and confidence. A learning and educational period helps build mutual appreciation and understanding. To ensure the delivery of valued services, emphasis is placed on the need for the humanitarian organization to articulate its requirements and assess its own absorptive capacity as early on in the partnership as possible. The partners should also ensure the adequate and timely allocation of dedicated resources to the partnership. Finally, the partners should consciously avoid an undue resource and expertise dependency by the humanitarian organization on the resources of the corporate and CSO partners.

In conclusion, early management engagement, commitment to medium term collaboration, organizational fit, an adequate socialization period, clear program objectives and deliverables ensure that the program starts off on the right foot. Subsequent policy measures meant to minimize the impact of the partnership on traditional donors, ensure the participation of other corporate partners and build firewalls between CSR activities and commercial relationships help avert predictable partnership pitfalls. Working out

differences in working culture, ensuring resource alignment and relevance of assistance ensure smooth partnership implementation.

As far as brokered partnerships are concerned, our research highlights the limitations of a decentralized, voluntary network where short-term one-to-one relationships prevail. Indeed, in such partnerships, the broker cannot centralize decisions as it is not vested with the necessary power and authority. Other challenges facing the brokering institution could include lack of focus and control over expected or desired results. As far as the private sector partner is concerned, its engagement in brokered initiative does not produce the same benefits or the same risks as company-specific and led initiatives.

11.4.2 Commercial Supply Chains and Logistics Coordination platform

As already mentioned in Chapter 3, firms need to overcome failure modes under a variety of situations. For example, firms sourcing from developing countries may face a set of structural and temporary country-specific barriers in the areas of purchasing, transportation, warehousing, and technology and inventory control. As a result, they need to plan and be prepared to overcome a range of predictable logistics failure modes.

Business is equally exposed to natural and man-made disasters and hence subject to damage and destruction. Surveys among US businesses confirm that companies have plans against recurrent, low-impact risks. However, few have plans and are capable to respond to high-impact, low-likelihood risks (Rice & Caniato, 2003a). In this regard, we argue that should firms shift their focus from risks to failure modes, their preparedness efforts will be simplified. Contingency plans as well as the need for flexibility and redundancy would be conceived for a limited number of dependencies that emerge because of failure modes as opposed to a wide range of high - and low-likelihood and impact risks.

Finally, as the 9/11 terrorist attacks in the US demonstrated, government response, policies and regulations on the availability and reliability of public infrastructure and systems can severely affect the performance of commercial supply chains. It also highlighted that business is not necessarily consulted on security-related decisions that affect its operations. Since the 9/11 terrorist attacks, there is growing consensus on the importance of private-public partnerships in form of cooperation and coordination. Indeed, the US government's

decision to close US airspace and enforce security measures at borders immediately after the attacks disrupted the supply chains of many businesses. It brought to the forefront and put into perspective the importance of government response and the dependency of industry on government infrastructure like customs, ICT, transportation and energy (Rice & Caniato, 2003a). In addition, in the aftermath of the attacks, a series of policy measures and programs were initiated. These measures and policies that aim to build security and ensure the smooth flow of materials transiting the US are expected to have a permanent impact on the supply chains of global companies.

Against this background, Rice & Caniato (Rice & Caniato, 2003b) recommend a significant increase in business, government and public sector collaboration. More specifically, they advance the need for companies to forge new relationships, partnerships with those government agencies that are involved in rendering supply networks secure and resilient. In their view, those companies that can only respond to government regulations and actions are not protected from major supply chain disruptions. Only proactive firms that make security and resilience part of their company culture and are involved in the decision making process - can anticipate and have prior knowledge of government response - are protected. They recommend “industry leaders to have a voice in planning emergency response and at the point of emergency response” (Rice & Caniato, 2003a). However, they admit that “it is not clear how industry could and should be represented in emergency response” (Rice & Caniato, 2003a).

The literature indicates that logistics alliances in business are driven by the logic of cost, risk and waste reduction; quality maximization; improved time to market and better access to resources (Gentry & Vellenga, 1996; Bowersox & Daugherty, 1995). They are not necessarily pursued as a business continuity strategy, a strategy to address dependencies or mitigate specific logistics-related bottlenecks and failure modes. This is not a surprise given the fact that commercial supply chains are designed for repetitious and routine actions that through standardization and other techniques work towards the minimization, if not elimination, of operational disruptions. Evidence of structured cooperation is even scarcer between business and key stakeholders such as government authorities.

Figure 11.2 –Mitigation Measures Pursued by Business & Humanitarian Organizations

| Failure Mode | Mitigation Measures | |
|----------------|---|---|
| | Commercial Operations | Humanitarian Organizations |
| Supply | <ul style="list-style-type: none"> • Contingency planning • Redundant capacity • Inventory, suppliers, production capacity • Flexible operations • Supplier substitutability • Design changes • Direct sales model | <ul style="list-style-type: none"> • Contingency planning • Redundant capacity • Funds, inventory, suppliers, equipment, staff • Flexible operations • Supplier substitutability • Mix of international, regional, national suppliers • Guidelines for donations <p>UNJLC</p> |
| Facilities | <ul style="list-style-type: none"> • Recovery centers • Global, dispersed operations • Redundant/standby production facilities | <ul style="list-style-type: none"> • Regional warehouses • Warehouses at logistics nodes • Temporary operational sites • Various distribution networks <p>UNJLC</p> |
| Transportation | <ul style="list-style-type: none"> • Transportation mode substitutability • Alternative transportation routes • Logistics provider exchangeability | <ul style="list-style-type: none"> • Transportation mode substitutability • Alternative transportation routes • Logistics provider exchangeability • Change in destination, receiving port <p>UNJLC</p> |
| Communication | <ul style="list-style-type: none"> • Business continuity plans | <ul style="list-style-type: none"> • Standby ICT capacity • Use of wide range of information sources <p>UNJLC</p> |
| HR | <ul style="list-style-type: none"> • Temporary staff | <ul style="list-style-type: none"> • Standby capacity • Agile workforce <p>UNJLC</p> |

To verify whether the solutions adopted by humanitarian organizations can be relevant to business, we first compare the range of mitigation measures applied by commercial firms with those pursued by humanitarian organizations. Figure 11.2 allows us to draw two conclusions. First, humanitarian organizations manage disruptions to their emergency response supply chain similarly to how firms deal with unpredictable one-off events

affecting their supply chains. Second, humanitarian organizations resort to a logistics coordination platform, the UNJLC, to manage dependencies and avoid duplications that emerge during disaster response. Humanitarian organizations outsource logistics coordination to UNJLC when they lack the resources and expertise to deal satisfactorily with a wide range of failure modes single-handedly in a cost effective, speedy, flexible and accurate manner.

The humanitarian experience during emergency relief operations demonstrates that a distinct coordination structure can, among other things, help avoid duplication of efforts among humanitarian organizations and provide for a negotiation mechanism that can help mitigate or reverse disruptive decisions and actions taken by other stakeholders including governments. An adaptive and responsive strategy, it can effectively address dependencies with other key stakeholders and mitigate bottlenecks affecting operations under a wide range of exceptional situations on a continual basis, repeatedly.

We argue that a similar coordination mechanism can assist firms to i) overcome logistics-related infrastructure gaps, ii) contrast temporary logistics failure modes caused by natural and man-made disasters and iii) engage in a constructive dialogue with government agencies in control of public goods. For example, firms sourcing from developing countries or operating in disaster-stricken areas may face a set of structural or temporary country-specific logistics-related barriers. An inter-firm coordination platform allows for common action in response to common logistics barriers. Through a coordination structure, business can achieve inter-firm coordination (joint contingency planning and implementation, prioritize movement of goods, aim at the optimal use of limited or disabled logistics infrastructure and assets, ensure geographical coverage and avert operational bottlenecks, etc.). Indeed, an institutionalized emergency response coordination platform established by industry leaders can facilitate the articulation of a common strategy and action plan by firms.

Apart from achieving inter-firm coordination, an institutionalized emergency response coordination platform established by industry leaders can provide for the much-needed interface and coordination with government authorities regulating or in control of public infrastructure. Industry depends on government infrastructure like customs, ICT,

transportation, and energy. While the humanitarian community has always maintained relationships with government agencies, in the commercial world, firms need to strengthen their relationships with government agencies that have the responsibility for making their supply network secure and resilient. A coordination structure can be an effective response mechanism to eventual disruptive government actions.

Similarly, a logistics coordination platform is indicated for those one-off supply chain initiatives with permanent impact on the global supply that require the coordinated and active participation of industries, governments and local authorities. An example is the safe and secure trade lanes initiative led by the US government that aims to introduce new security measures in the maritime transportation. The initiative involves the active cooperation of transport, retail and manufacturing industries as well as port and government authorities of many countries for its implementation. The initiative is novel and can have unexpected outcomes. In addition, it cannot fall back on prior experience for its implementation. As such, a coordination platform, manned with the representatives of the involved parties, set up for the duration of the project can ensure coordination, an all-inclusive and holistic stakeholder approach and adequate response to unpredictable developments.

Humanitarian organizations have considered a virtual resource base for their logistics coordination platform given its contribution to time-sensitive and resource scarce environments that involve a large number of actors. Its implication for business is that, apart from facilitating the exploitation of specific business opportunities, virtual organizing can be a winning strategy for commercial supply chain management during disasters. More specifically, it can be a winning strategy in two scenarios. First, it is a winning strategy during large scale, exceptional events such as disasters that depend on the contribution and participation of a host of small and big organizations in the manufacturing, retail, transport and service industries. It is argued that when delivery infrastructure is affected, virtual organizing is effective in providing a fast, flexible, cost-effective and accurate response and access to critical resources. Second, when the objective of the network members is time sensitive and information and knowledge at the disposal of the actors is dispersed, incomplete or scarce.

In terms of organizational structure, the structure adopted by the UNJLC deployments - a series of temporary, dynamic, small antenna offices and specialized cells - is replicable by business. The core-focal-antenna results in valuable intra, inter and extra-organizational linkages and as such adds further agility to the virtual corporation concept, a feature of potential interest to business. To adequately address issues related to the management and an eventual vacuum in terms of infrastructural support of the virtual organization, guidance is provided to business in terms of nesting of the caretaker function in a strong institution. It is however worth noting that there are contexts that are beyond the response capabilities of coordination structures. In the context of humanitarian operations, there are certain natural disasters, such as the 2004 tsunami, that given their scale, unpredictable and devastating nature are beyond the response capability of any humanitarian organization, set of humanitarian organizations or a coordination platform. In these cases, should the necessary planning data and information be readily available, success depends on the availability of an unworkable level of redundant or standby capacity and assets.

11.4.3 Institutionalization Process of Logistics Coordination Platform: Lessons Learnt

In establishing a logistics coordination platform similar to the UNJLC, business may face similar problems to those faced by the UNJLC architect. First, it is important to recognize the different capabilities and potential contribution of each member firm. Then there is a need to work on the organizational buy-in of the facility as most firms may not be prepared to realize and admit to the need for cooperation on logistics issues. More precisely, the concept may need the buy-in of two very different sets of members: firms with and those without logistics capability and sufficient financing. The challenge is to secure the active participation and contribution of those larger firms that do not necessarily see the need and merits of sharing resources. To overcome resistance, the platform should make sure it does not overshadow firm visibility and brand identity.

The virtual organization literature recommends a sequential implementation of tasks - preparation and initiation of the virtual web; maintaining and improving the virtual web

collaboration; and the initiation and operation of virtual corporations - by the caretaker for the institutionalization of the virtual organization (Franke, 1999).

In UNJLC, instead of the caretaker, the architect carried out most of the institutionalization and deployment tasks. Moreover, the order of the tasks was often reversed and at times overlapped. For example, the architect through a consultative process delivered a vision of the concept to the IASC long after the deployment of UNJLCs.

The UNJLC case study demonstrates that should the virtual web members share a common vision and set of values, operational incompatibilities including differences in supply chain design at the organizational level can be overcome by the efforts of the different managerial figures and sound business processes collated in an operations manual.

In commercial virtual organizations, firm pre-qualification criteria aims to ensure that each participating firm contributes to the initiative with its specialized resources. While the avoidance of free riders is relevant in profit making contexts, in the humanitarian context, the noble mission of the participating organization rather than its specialized resources is the qualifying parameter.

In terms of business processes, UNJLC deployments interrupted the “preparatory phase” several times. To improve the partnering process and the efficiency of UNJLC deployments, the UNJLC did not have reference guidelines. It used the recommendations and findings of the independent reviews, conducted after each UNJLC deployment, to prepare, update and refine its administrative procedures and its work on the facility’s Field Operations Manual. More precisely, with little guidance and few precedents in the UN system on how to establish an inter-agency facility within an existing operational agency, the UNJLC learnt by doing and addressed a range of administrative issues as they emerged.

The overlapping of managerial figures and the reversed order of tasks delayed the institutionalization of the UNJLC concept as a permanent response structure of the humanitarian community. The concept was reinforced through a trial and error process, which is a costly approach. Unsuccessful deployments as well as slow ramp-ups could have been avoided if dedicated resources were allocated towards the development of the UNJLC concept right from the outset.

Business is expected to adhere to a sequential implementation of tasks related to the establishment of virtual organizations. Contrary to humanitarian organizations that may launch an initiative before securing the necessary funding from the donor community, firms usually obtain approval, secure funding and develop business plans before venturing in any new initiative.

The literature recommends a marketing strategy to compensate for lack of physicality of the virtual corporations. The UNJLC case elaborates on the need for marketing by distinguishing between the need for communication and organizational identification. Communication aims to create awareness and ownership around the concept as well as set the right set of expectations and ensure cooperation. Organizational identification activities aim to support the bonding process between the concept and the member organizations and the team members of the virtual corporation.

In this regard, compared to humanitarian organizations, business is typically better equipped to address communication and marketing related activities. Firms with their sales and marketing department are expected to be more experienced in developing and implementing communication campaigns. The other major difference between humanitarian organizations and business is in the area of finance. Humanitarian organizations depend mainly on donors for funding. Compared to business, they still have limited control over their financial resources and as a result may end up managing grossly under-resourced operations.

In Chapter 10, we propose and discuss a framework for the operationalization of virtual organizations. The framework identifies five strategic and five operational building blocks. We advance that this framework is equally relevant to business in the operationalization of virtual organizations.

The network literature emphasizes the importance of agile workforce in turbulent environment. The UNJLC case study brings to the forefront the need for an agile workforce in the activation of virtual corporations. It also provides a definition for an agile workforce which is a responsive, collaborative, empowered, skillful, flexible, mobile, devoted, self-motivated and connected workforce. To ensure success of the virtual resource base, business should be able to depend on an agile workforce. To facilitate the

contribution of virtual corporation team members to the success of the operation, the virtual corporation and its spin-offs should be flat organizations in which the decision-making responsibility of each employee is high and decisions are decentralized at the unit level.

The literature points to ICT as the key enabler of virtual organizing. The UNJLC case study advances a more inclusive view by emphasizing the importance of support infrastructure which goes beyond IT to include finance and administrative support.

Finally, the UNJLC case study confirms that to remain relevant and responsive to the needs of its membership, particular attention should be given to the design and evolution of the facility's services.

In section 10.2.2, we discuss the range of inter and extra-organizational coordination mechanisms the UNJLC adopts to address dependencies and avoid duplications. We argue that both these and the additional coordination mechanisms of joint procurement and inventory optimization can be adopted by business in view of catastrophic disasters such as terrorist attacks.

In sections 7.4.5 and 10.3.3, we argue that the services of a virtual corporation may be of value to third parties. In this regard, we propose that prompted by new market opportunities, business should be prepared to capitalize on opportunities presenting commercial value. It should plan for an eventual transfer of services still in demand to existing or newly created commercial setups.

11.5 Lessons for Humanitarian Organizations

In this section we shall review the impact of the UNJLC on the humanitarian community, discuss the role of IT in humanitarian supply chain management and the background for and impact of business-humanitarian partnerships for humanitarian organizations.

11.5.1 UNJLC and the Humanitarian Community

Williamson (Williamson, 1985) argues that parties engaging in frequent, recurring transactions are more predisposed to adopt more specialized and complex governance

structures. This certainly has been the case for humanitarian operations during relief emergencies. While network arrangements among humanitarian organizations were virtually unheard of a decade ago, today, the humanitarian community can rely on a number of coordination tools and services. Given the recurrent need for intensified inter-agency coordination, to address logistics failure modes the humanitarian community has been receptive to the establishment of a specialized structure in the form of the UNJLC.

Collaboration between agency logisticians and the advent of the UNJLC has underscored the central role of logistics in emergency relief and the need for coordination. It has also strengthened the profile of logistics and logisticians within the humanitarian network. At the organizational level, agencies with weaker logistics setups have recognized the UNJLC's contribution in enhancing their internal logistics capability. Participation to UNJLC activities has also produced an indirect benefit. The increased intensity and frequency of formal and informal networking opportunities and socio-technical meetings and interaction have contributed to an increase in the "absorptive capacity" and knowledge base of the UNJLC web members.

Big and small humanitarian organizations part of the UN, international organization or NGO community contribute to and benefit from the UNJLC. As the UNJLC case shows, they value the coordination efforts of the UNJLC especially for those back-office activities that do not interfere with or compromise their visibility and hence fund raising capability with the donor community.

Logistics presents itself as a natural field for coordination in emergency response. The humanitarian community, however, has already identified other services within the humanitarian supply chain - air services, warehousing, procurement, vehicle maintenance, information, security, civil military coordination and telecommunication - that can be shared and rationalized (Samii & Van Wassenhove, 2004a). As the most successful common service provider, the UNJLC is foreseen to assume an active role in this debate. In addition, a series of initiatives that would benefit from a common approach such as the harmonization of the humanitarian community's supply chains systems and processes could see the UNJLC in the driving seat.

The demonstration effect of the UNJLC has been fundamental in bringing to the forefront new partnering opportunities within the sector. Although the catalytic and multiplier effect of the UNJLC on the humanitarian sector has yet to be realized, this inter-agency coordination platform has helped shape new attitudes. It has made organizations more receptive to the potentials of coordination and collaboration. An example is the 2003 Fleet Forum that aimed to identify and put into motion inter-agency collaboration ideas such as the possibility of joint vehicle purchase and maintenance currently pursued by the Danish company, Kjaer. Organized with the assistance of TNT by WFP, World Vision and IFRC, it was attended by some 26 humanitarian organizations and NGOs; a level of attendance and participation unimaginable just few years ago.

It is not excluded that in the context of UN reforms, certain functions of the UN humanitarian value chains, such as logistics, currently managed at the organizational level and coordinated through various mechanisms are integrated, centralized, regrouped and streamlined so as to be executed by one or few organizations.

In section 11.5.1.1, we explore how the humanitarian community can capitalize on the opportunities unearthed by the UNJLC during disaster response. In section 11.5.1.2, we highlight the need for a Contribution Protocol to ensure that the facility is always adequately resourced.

11.5.1.1 Capitalizing on Opportunities

As we saw in section 7.4.5 of Chapter 7, the UNJLC may provide a series of services that have market value for external parties. The UNJLC's support to combatant forces or authorities has highlighted the need to protect the humanitarian space especially in conflict situations. The humanitarian community needs to retain its neutrality and avoid taking sides in politically sensitive and charged emergencies. As such, it has to manage its collaboration with combatant, peacekeeping or occupying forces - at times a necessity to better assist the afflicted populations - with care. A set of guidelines regulate the use of Military and Civil Defense Assets (MCDA). To avoid putting at risk the effective or perceived independence of humanitarian operations and to safeguard the humanitarian

space in general, we argue that guidelines need to be regularly updated and extended to define or limit new forms of collaboration and coordination.

In the absence of commercial logistics providers and adequate government logistics capabilities and assets, our discussion on the UNJLC illustrates the importance of logistics services and support in the political and economic stabilization of conflict, war-torn countries. While it highlights that there is a market for UNJLC services, it also emphasizes the fact that seconding such market needs can lead to mission creep. The UNJLC can be subject to mission creep if it does not farm out its services to an existing organization or group of organizations.

To avoid a prolonged presence and at the same time in order to ensure the provision of key UNJLC services past the emergency phase, we argue that there might be scope for the establishment of a dedicated structure. This structure would have the mandate to assist governments and donors on issues related to logistics during emergencies and their immediate aftermath. The structure, with no affiliation with humanitarian organizations, could still be part of the UN's nation building effort. Initially, it can be included in the mandate of a UN or international peacekeeping force effort before the roll-out of a UN recovery and reconstruction program. The structure could be funded by the donor community and staffed with short-term experts from the private, development or NGO sector. Once security is established, the gap in logistics services could be filled by the domestic private sector, should capabilities be locally available, or outsourced to a foreign company. In all events, the humanitarian community could use the networking opportunities provided by the virtual web to discuss alternatives to the UNJLC and decide, on a case-to-case basis, the best way forward.

11.5.1.2 Consolidating the Facility

The success of UNJLC deployments and their capability and credibility continues to largely depend on the quick mobilization of equipment, the extent and quality of secondments and availability of emergency funds. Given these limitations, the UNJLC tends to respond more effectively to emerging as opposed to natural disasters. The UNJLC is not always in a position to react swiftly, with credibility and at an appropriate scale to

unpredictable disasters. This is because capability is determined by voluntary secondments of logisticians, the collaboration of the recipient country and the response of the donor community. In terms of staffing, given the very limited number of logistics staff at the agency level, most agencies cannot afford secondments to the UNJLC during large-scale emergencies.

To coordinate the activities of humanitarian organizations during sudden large scale disasters, the UNJLC needs to go a step further. To ensure timely and adequate response, it has to increase the level and availability of its stand-by resources. This can be done by keeping redundant capacity and resources at the UNJLC Core Unit level. The facility can also enter into a formal agreement – Contribution Protocol – that commits donors and humanitarian organizations to a quick ramp-up of the UNJLC deployments in line with the requirements of the emergency. The requirements of the emergency could be determined on objective grounds. For instance, contributions could be linked to a number of demand and supply parameters such as number of people affected and recipient government's response capability.

For emerging emergencies, the UNJLC gets involved in the contingency planning phase of operational agencies. As such, it has the luxury of time to understand its own and its users' requirements, design its intervention and plan the secondments. It can consult with, inform and sensitize local authorities and counterpart institutions on the concept, agree on the course of action, raise funds for its operations and ensure cooperation on the operational level. This preparatory work ensures that the UNJLC services are not redundant and that they do not duplicate the work of capable national agency(s).

In terms of implementing an exit strategy, the UNJLC, a short term facility has come to the conclusion that prolonged deployments make their execution difficult as demobilization is faced with increasing resistance. To ensure a well planned and communicated exit strategy, the UNJLC needs to define clear milestones as well as a range of humanitarian and political indicators. In order to avoid surprises and interruption in key services, it has to mobilize enough resources for the implementation of an appropriate hand-over to a pre-identified entity for services still in demand.

11.5.2 Role of IT in Humanitarian Supply Chain Management

What has emerged from our research is that compared to business, the humanitarian community does not leverage the power of information technology to estimate demand and hedge against supply risks and failure modes.

To avoid supply shortages, humanitarian organizations share their supply chain resources. For example, they share their logistics assets with each other, “borrow” from, divert stocks from on-going to new emergencies and call upon a mix of national, regional and international suppliers and donors. However, no entity has a comprehensive overview of the response of the humanitarian community to a disaster. This has prevented the possibility for inventory optimization during disaster response. Likewise, none of the interviewed organizations collects and analyzes, in a systematic way, historic information on its supplier base production and delivery capacity in terms of pricing, quality and volume. Lack of aggregate and historic information is one of the reasons that have prevented humanitarian organizations to engage in joint procurement activities. One of the justifications provided by the interviewees for the absence of aggregate data was a generic deficiency in adequate information systems and lack of inter-operability between the IT systems of different humanitarian organizations.

An obvious conclusion is that there is scope for improving the effectiveness of humanitarian supply chains. For example, humanitarian organizations can improve the response capability of their supply chains by collecting and analyzing operational data and by drawing lessons from their own errors and successes. They can also improve their performance by adopting adequate or investing in and making a more extensive use of common or inter-linked IT systems such as the one provided by the Fritz Institute. As the Fritz Institute case demonstrates, availability of an inter-linked IT system may be a necessary condition for improved supply chain performance but not a sufficient one. Indeed as long as the culture of humanitarian organizations does not include a systematic measurement of performance, the full potential of an IT system will not be captured.

11.5.3 Business–Humanitarian Partnerships

Our research highlights the short and long-term impact of strategic partnerships on humanitarian organization’s financial resources, performance and staff morale. It alerts humanitarian organizations to protect their reputation and brand image and to be aware of their level of engagement and reliance on corporations given their unstable, uncertain nature. To make sure that private contributions are not viewed as a substitute for traditional funding, it is recommended that humanitarian organizations seek the approval of their donors. After obtaining such approval, humanitarian organizations should proactively seek and accept contributions from those private donors whose products, services, core competencies and expertise are a strategic fit with their needs.

Another aspect of business/CSO-humanitarian partnerships covered by our research is that not all humanitarian organizations may be able to benefit from strategic partnerships. What will determine their possibility of engaging in such partnerships is their level of absorptive capacity and their ability to come up with the upfront investment required for the successful implementation of such partnerships.

It is worth noting that contrary to the UNJLC which emerged from a concrete need at the field operations level during disaster response by the humanitarian community itself, the possibility of business-humanitarian partnerships was something humanitarian organizations had not foreseen or contemplated on. For example, both WFP and IFRC were ‘surprised’ when they were approached by TNT and the Fritz Institute respectively. In other words, the humanitarian community has tapped into the in-kind contribution of government agencies and NGOs, but it still stands to capture the in-kind resources available with the private sector in a systematic way. Indeed, most of the fund raising efforts of the humanitarian organizations are geared to cash donations from government sources. It is only after experiencing the potential of business contributions that humanitarian organizations have set up their private sector funding units, developed their strategies and established targets.

11.6 Limitations and Future Areas for Research

To respond to the identified research questions, this research describes the context in which humanitarian organizations operate. It unearths the set of supply chain and organizational strategies humanitarian organizations need to adopt to respond effectively and efficiently to the needs of disaster-stricken populations. Finally, it discusses when, to what extent and under what conditions the organizational solutions and practices of humanitarian organizations can be applied to improve the resilience of commercial supply chains.

Each partnership scheme addresses a specific need and can be directly linked to the range of challenges facing the sector identified in Chapter 2 (Figure 11.3). Temporary supply networks intend to facilitate the goods mobilization and distribution process. The logistics coordination platform activated during large-scale multi-sectoral emergencies seeks to help the humanitarian community overcome logistics dependencies and avoid duplications arising from common and recurrent disaster specific failure mode. Finally, bearing in mind their absorptive capacity, humanitarian organizations may seek partnerships with business and CSO in order to improve their disaster management capability. Our cases allowed us to verify how humanitarian organizations operationalize each partnership type.

Figure 11.3 – Contribution of Partnership Schemes to Key Challenges

| Challenge | Partnership Scheme |
|---|---|
| <ul style="list-style-type: none"> • Ensure accurate, timely and predictable funding • Ensure speedy, accurate, flexible and cost-effective response operations • Manage logistics dependencies and avoid duplications • Address need for a rapid professionalization of the sector and of the logistics function • Increase investments in disaster preparedness • Address underinvestment in infrastructure | <ul style="list-style-type: none"> • Broaden the donor base: Business/CSO partnerships • Temporary Supply Network & Logistics Coordination Platform • Logistics Coordination Platform • Business/CSO partnerships • Business/CSO partnerships • Business/CSO partnerships |

The scope of this research is limited. First, this study provides an overview of the humanitarian supply chains only during emergency relief operations. However, many humanitarian organizations are involved in development operations. Indeed, development and prevention activities often constitute the bulk of a humanitarian organization's activities and tie up a larger portion of their financial and human resources.

By focusing mainly on partnerships, this thesis does not map the state of humanitarian preparedness in terms of existing capacity and systems. Likewise, it does not explore the impact of politics, insecurity, health hazards, cultural sensibilities and technologically appropriateness on the response capability of humanitarian organizations.

Similarly, by taking an overall view, the thesis does not provide any detailed information on the capability gap of individual organizations. It does not propose a blueprint, an organizational enhancement work-plan with a related timeline with a view to level out the existing differences between the preparedness and response ability of individual organizations. Also, it does not explore the opinion of key actors, such as beneficiary governments and end beneficiaries, on the preparedness and response performance and capability of humanitarian organizations.

This thesis does not explore the impact of humanitarian supply chains on economic development targets such as crowding out of domestic suppliers and/or creating domestic markets dependent on serving it.

The thesis is written mainly from the perspective of humanitarian organizations part of the UN and Red Cross Movement. The perspective of humanitarian organizations part of the NGO community is not adequately incorporated. Lastly, this thesis discusses only one of the existing coordination mechanisms, the UNJLC, without attempting a critical analysis of the other coordination tools and mechanisms.

As stated throughout this thesis, humanitarian organizations are differentially endowed with capabilities and resources and depend on the active contribution and cooperation of a range of players to stage their response. Because of the non-hierarchical, collaborative and voluntary nature of the humanitarian supply network, uncertainty prevails around the when, if, and level of such cooperation. In this research, we advance that social capital can help mitigate the uncertainties related to the if and level of cooperation and contribution. We argue that a humanitarian organization's social capital is the intangible resource that

allows it to gain access and leverage the resources and capabilities available within its supply network. It follows that since humanitarian organizations dispose of different levels of social capital, their ability to access and leverage resources and capabilities within their supply network differs.

However, despite a humanitarian organization's social capital, its performance can still vary substantially from emergency to emergency. This is because it lacks control over key nodes of its emergency supply chain. Therefore, in addition to a humanitarian organization's social capital, there are some exogenous, external factors beyond the control and influence of a humanitarian organization that influence supply chain performance. Although the elimination of supply network contribution variability is beyond humanitarian organizations, the topic is worth investigating.

All things being equal in terms of disaster management capability of a humanitarian organization, it appears that the performance of each and every network actor in terms of accuracy and speed of response matters. More specifically, the speed and accuracy in which the media cover a disaster, donors provide funds, the recipient government asks for international assistance, suppliers deliver goods to the disaster site, the implementing partners distribute relief items and recipient country, neighboring country(s) and military cooperate may determine the effectiveness of emergency operations. It follows that the capability, capacity and willingness of each actor to contribute to a disaster can impact the performance of a humanitarian organization.

It is worth noting that the actors part of the humanitarian supply chain do not operate in a vacuum or in isolation from each other. Therefore, the combined support and performance of the actors can matter. For example, once a sovereign country invites international solidarity, the combined speed, duration and level of media coverage as well as donor community, recipient country, neighboring country(s) and the military contribution and collaboration define the reach and scope of the humanitarian community's operations. Similarly, the goods mobilization effort depends largely on the response capability of donors and suppliers. The amount of donor pledges and the speed in which donors honor their pledges are the propelling forces, the fuel of an accurate and timely activation of the supplier network and ultimately response. However, the speed in which relief items are

mobilized and distributed does not only depend on donor funding but may also depend on the response capacities and capabilities of supplier and implementing partners.

As independent entities, the actors composing the humanitarian supply network each have their own mission, vision, objectives and priorities. Their willingness to contribute to a disaster may not necessarily be in function of the size and gravity of the disaster. For example, media coverage varies from emergency to emergency. “Creeping” crises such as famine or health emergencies tend to obtain less airtime than highly visible natural disasters such as hurricanes and earthquakes. Indeed, the geography, origin of populations afflicted and timing of a disaster rather than the sheer size and urgency of an emergency seem to influence and drive the intensity and duration of media coverage. Similarly, the level and speed of donor support varies from emergency to emergency. Often donor support is not positively correlated to the magnitude or gravity of a disaster but by political and budgetary considerations (Samii & Van Wassenhove, 2006). As a result, compared to natural disasters, “creeping” crises often remain under-subscribed.

In addition, there may be a correlation between the actions of the various actors. If so, each node in the supply chain can directly and indirectly affect the performance of other members. The intensity and accuracy of support and response of some actors may accelerate or delay, increase or decrease the response of other actors. For example, national and international media coverage and pressure may directly or indirectly influence the speed and accuracy of response of donors, military forces, the recipient country and other governments. Extensive media coverage can attract donor and public attention and drive the funding potential of an emergency. Media coverage and pressure may also affect the level of government or military contribution and collaboration. Donor pressure can accelerate or delay recipient government request for assistance.

In conclusion, similar to commercial supply chain, the performance of each network actor, in isolation and in combination with other actors, affects the performance of the humanitarian emergency supply chain. What appears to be different in humanitarian supply networks is that supply of relief items is not necessarily driven by demand, but other factors. As such, not only the concerned humanitarian organization or the beneficiaries have the power to shape supply but all the other actors in the supply network

can positively and negatively affect the flow of goods, services, people and information by exercising pressure on others.

The impact of the humanitarian response network on emergency response and the study of interdependencies between actors, activities, and resources call for an in-depth survey. For example, it would be interesting to explore the positive or negative correlation between the actions of the various forces in terms of level, duration, timing and quality of support. Similarly, it would be interesting to verify whether the speed and duration of support is in function of objective parameters such as size and level of urgency or subjective parameters such as the nature, timing and location of a disaster. It is equally important to study the motivational parameters of each partner. A survey among the actors and a large number of humanitarian organizations is a more indicated investigation and validation methodology than the case study methodology and as such is left for future research.

In terms of future research areas, it would be of interest to conduct in-depth research on the first component of disaster management, namely disaster preparedness. It would also be important to identify the pros and cons of coordination versus integration, centralization of common functions such as logistics among humanitarian organizations. The impact of group size and diversity on coordination and cooperation is also worthy of study. As humanitarian partnerships are here to stay, research on how to improve their impact, especially those with business, is worth exploring. In addition, as far as business/CSO-humanitarian partnerships are concerned, issues such as sustainability of assistance are key.

Academia does not have a monopoly over knowledge creation but it has a comparative advantage. As a member of the CSO community, we argue that it has a social obligation to expand its research and educational agenda with a view to cover the needs of the humanitarian community. By applying and channeling some of its resources and attention to the humanitarian cause, it can advance the state of knowledge and practice in disaster management. Through research and its divulgation, academia can intervene at the four levels. It can i) help create awareness around the challenges of the humanitarian community, furthering its cause, ii) develop knowledge and teaching material, iii) design and conduct tailored training courses, and iv) become a source of talents for the sector.

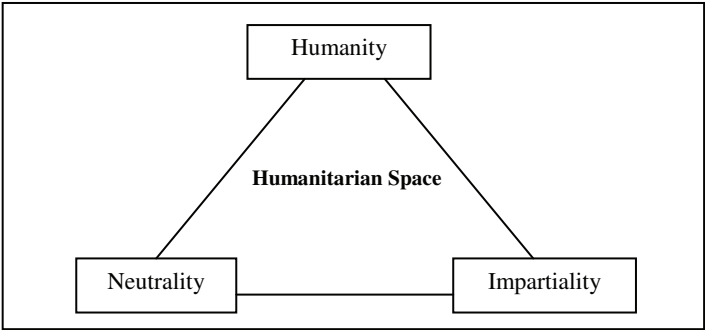
Appendix A – Overview of Humanitarian Organizations

This Appendix aims to introduce the reader to the structures and concepts relevant to the humanitarian community. Section A.1 defines the concept of “humanitarian space”. This is followed by a brief description of the humanitarian constellation in terms of major humanitarian actors, structures and their sources of funding.

A.1 “The Humanitarian Space”

Humanitarian organizations operate in accordance with the principles of humanity, neutrality and impartiality. Humanity ensures that human dignity is restored and suffering relieved wherever founded. Neutrality demands for relief to be provided to the needy without bias or affiliation to one party or the other. Impartiality implies that assistance is extended without discrimination and proportionally to the most urgent needs and segments of the population. The principles of humanity, neutrality and impartiality are the building blocks of “the humanitarian space” (Figure A.1).

Figure A.1 – Humanitarian Space



Source: Tomasini & Van Wassenhove, 2004b

The founder of the Red Cross Movement, Henri Dunant, was also the father of the humanitarian space concept (ECHO, 2003). The driving force behind the first Geneva Convention, he worked towards the indiscriminate treatment of victims of war by ensuring

APPENDIX A – OVERVIEW OF HUMANITARIAN ORGANIZATIONS

an inviolable space for medical personnel that operated under an identifiable symbol: the Red Cross or Red Crescent emblem. The Geneva Convention, apart from protecting humanitarian operations from attack, aims to clear humanitarian space from interference and exploitation by combating forces.

To ensure the prompt and effective delivery of relief to victims of conflicts, combatant forces are expected to respect humanitarian space. There are times, however, when authorities refuse humanitarian organizations access to the victims. During intense fighting, humanitarian organizations themselves abandon the emergency scene as a security measure.

While combatant forces need to grant humanitarian operators full and secure access to the distressed, to safeguard their space, humanitarian organizations are responsible to distinguish themselves from fighting forces. Although humanitarian space is protected by international law, humanitarian organizations are its guardian and defender. They also have an important role in reinforcing the concept in unfriendly, hostile and uninformed environments. This is typically achieved by providing relief repeatedly and continuously in line with humanitarian principles to those in need regardless of identity and location (Kellenberger, 2003).

Humanitarian assistance is complex in conflict situations. While the neutral and impartial humanitarian action is irreplaceable, humanitarian organizations recognize the role governments and military play in assisting and protecting vulnerable people during times of war (Kellenberger, 2003). Their reconstruction role in post-conflict situations is equally acknowledged. This overlap begs for a clear distinction between humanitarian and military activities, lack of which can undermine the effectiveness of humanitarian aid and put at risk the security of humanitarian staff.

To address the need for cooperation with the military and more specifically the use of Military and Civil Defense Assets (MCDAs), the humanitarian community has a set of guidelines. These guidelines are particularly relevant during conflicts and post-conflict situations. They underline the importance of separating humanitarian aid from policy and military interests. Concurrently, they recognize the role the military and UN peacekeeping forces can play in restoring security for humanitarian operations.

A.2 The Humanitarian Constellation

The humanitarian sector is a fragmented and crowded one with a predominant oligopolistic structure both on the demand and supply side (Binder & Witte, 2007). On the demand side, it is composed of few major relief agencies in the UN and International Organization community, a small number of large Non-governmental Organizations (NGOs) and a large number of small NGOs. While for each major disaster, new NGOs are created, governments are involved as either donors or recipients.

A.2.1 Humanitarian Organizations

Humanitarian crises leave the affected populations in need of food, medicine, and shelter. To respond to the staggering needs of the afflicted populations, over decades, the international community has created a number of organizations; UN programs/funds, entities and specialized agencies; and NGOs. The following paragraphs will provide a brief overview of the typologies of humanitarian organizations.

International Organizations. The oldest international humanitarian organization is the International Committee of Red Cross (ICRC). Established in 1863, ICRC's mission is to protect the lives and dignity of victims of war and internal violence and to provide assistance. ICRC is one of the three independent bodies that compose the International Red Cross and Crescent Movement. The other two bodies are the National Societies (NSs) and the IFRC.

NSs, approved by ICRC, are independent bodies that act as auxiliaries to their respective governments. Almost 60% of their funding comes from their respective governments and the remaining 40% from income-generating activities and private donations. Their services include disaster relief, health and social programs and assistance to people affected by war. By the end of 2006 there were 185 NSs; almost one in every country in the world.

The IFRC was established in Paris in 1919. Its founding members were the British, French, Italian, Japanese and American NSs. Today the NSs cover 50% of IFRC's operational budget. IFRC, as the representative of its NSs, directs and coordinates international assistance of the Red Cross Movement to victims of disaster, refugees and in health

APPENDIX A – OVERVIEW OF HUMANITARIAN ORGANIZATIONS

emergencies. It provides support to its NSs by launching international appeals, mobilizing goods and personnel, and coordinating the relief operation of the network.

Apart from the ICRC and IFRC, there are a number of other humanitarian organizations with international status. The most prominent one is the International Organization for Migration (IOM), the leading international organization working with migrants and governments to provide humane responses to migration issues.

The UN Family. There are four major operational organizations within the UN that focus on the different needs and aspects of disasters and humanitarian crises. To protect the most defenseless segment of the population, i.e. children, UNICEF, established as early as 1946 as a special fund of the UN, helps meet the basic needs of children, protecting their rights and expanding their opportunities. To safeguard the rights and well-being of another category of vulnerable people, i.e. refugees, in 1950 the UN establishes the UN High Commissioner for Refugees (UNHCR). As the leading and coordinating institution on refugee matters, UNHCR has the mandate to resolve refugee problems worldwide. To address global hunger and food imbalances worldwide, in 1963 the UN sets up the World Food Programme (WFP). Given the importance of health and the regular occurrence of health emergencies, in 1948, the World Health Organization (WHO) is established. WHO, a specialized agency within the UN family, is the frontline agency during all health emergencies such as HIV/AIDS as well as outbreak of diseases in their aftermath.

To strengthen and coordinate its response to both natural disasters and complex emergencies that involve refugees, Internally Displace Peoples (IDPs) and combatant forces, in 1991, the UN establishes the Office for the Coordination of Humanitarian Affairs (OCHA). Based in Geneva and New York, OCHA is a non-operational organization which is headed by the Emergency Relief Coordinator (ERC). The ERC reports on humanitarian affairs directly to the UN Secretary-General (SG).

OCHA provides a number of common services to the humanitarian community. It is the secretariat for the following four coordination mechanisms and tools: the Consolidated Appeal Process (CAP), the Central Emergency Relief Fund (CERF), the United Nations Disaster Assessment Coordination teams (UNDAC), the Humanitarian Information Centre (HIC), and the Military and Civil Defense Unit (MCDU) (Figure A.2).

Figure A.2 – Humanitarian Coordination Mechanisms

| Coordination Mechanism | Objective | Housed |
|-------------------------------|----------------------------------|---------------|
| CERF | Stand-by disaster response funds | OCHA |
| CAP | Funds mobilization | OCHA |
| UNDAC | Disaster needs assessment | OCHA |
| HIC | Information | OCHA |
| MCDU | Civil military coordination | OCHA |
| UNJLC | Humanitarian logistics | WFP |

The Central Emergency Response Fund (CERF) is a stand-by \$500 million fund set up for rapid response and under-funded emergencies. It complements funds raised through the CAP. Through the CAP, OCHA, on behalf of the humanitarian organizations and the recipient government(s), leads and coordinates the mobilization of resources from the international community of donors. To prepare a consolidated appeal, it fields UNDAC teams. UNDAC, a standby resource deployed upon the request of the disaster-stricken country, conducts a rapid needs assessment exercise with a view to estimate the cost of a collective relief operation. As humanitarian response depends as much on timely information as it does on assets, to ensure availability of information throughout a crisis, it activates the HIC. Depending on the nature of the disaster and the need for military and civil defense assets, OCHA’s MCDU sets policies for Civil Military Coordination (CMCoord) services.

In terms of logistics capability, humanitarian organizations have unequal strengths. There are agencies with good logistics capabilities and sufficient financing for their activities and those with limited logistics resources, competency and a relatively small pool of core logistics staff. This together with the complexity of more recent humanitarian crises has led to the unbundling of logistics from generic coordination and the institutionalization, in 2002, of the UN Joint Logistics Center (UNJLC). The UNJLC, an inter-agency logistics coordination platform hosted by WFP, aims to complement and coordinate the logistics capabilities of cooperating humanitarian organizations during large-scale disasters.

The NGO Community. The humanitarian and development NGO community is a very large and diverse group in terms of size, visibility, area of focus, religious affiliation, country of origin, etc. Oxfam, CARE, Médecins Sans Frontières (MSF) and World Vision

APPENDIX A – OVERVIEW OF HUMANITARIAN ORGANIZATIONS

are among the most renowned ones. Oxfam (the Oxford Committee for Famine Relief) is a development, relief and campaigning organization dedicated to finding lasting solutions to poverty and suffering around the world. CARE (the Cooperative for Assistance and Relief Everywhere) is dedicated to fight global poverty. MSF is an independent humanitarian medical aid agency that provides medical aid wherever needed and raises awareness of the plight of people assisted. World Vision is a Christian relief and development organization working for the well being of all people, with particular emphasis on children.

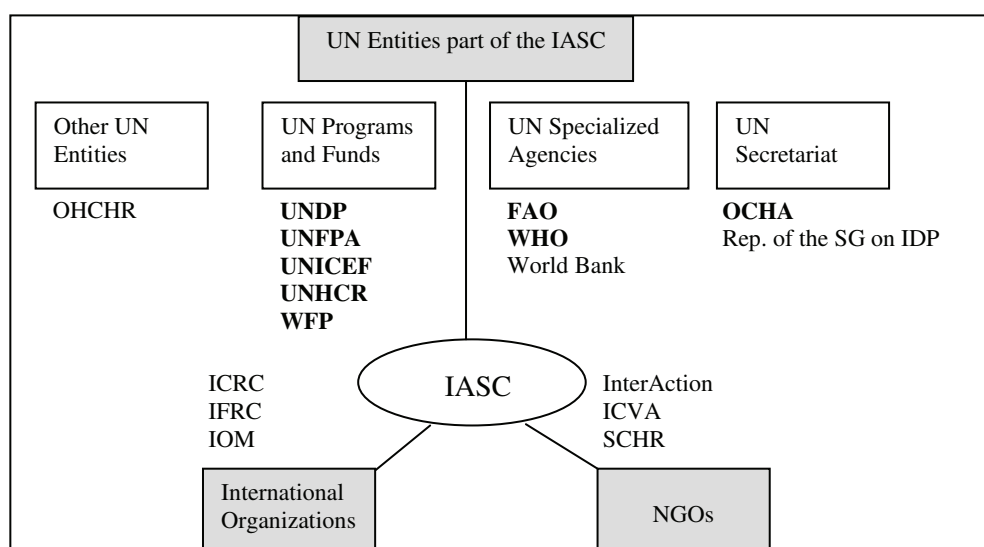
Given the number and diversity of the NGO community, the sector is represented by three consortia notably, InterAction, International Council of Voluntary Agencies (ICVA) and the Steering Committee for Humanitarian Response (SCHR). InterAction is a 160-member US-based international development and humanitarian NGO coalition that aims to promote human dignity and development in 165 countries around the world. Its members include CARE, Mercy Corps, Save the Children, Refugees International, World Vision and the US subsidiaries of NGOs like Oxfam and MSF (Doctors of the World). The ICVA, a Geneva-based organization founded in 1962, is a global network of more than 70 human rights, humanitarian and development NGOs. Its members include organizations such as CARE, CARITAS, ICRC, IFRC, InterAction, MSF, Norwegian Refugee Council, Oxfam UK, Salvation Army and World Vision International. The SCHR is an alliance for voluntary action of CARE International, Caritas International, ICRC, IFRC, International Save the Children Alliance, the Lutheran World Federation, MSF International, Oxfam International, and World Council of Churches.

A.2.2 Policy Making Organ of the Humanitarian Community

Soon after the creation of OCHA, the humanitarian community establishes its policy making organ, the Inter-Agency Standing Committee (IASC). IASC, chaired by the Emergency Relief Coordinator (ERC), has as full members the executive heads of eight UN organizations. The standing invitees include the executive heads of three other UN organs, three international organizations and the three NGO consortia. Apart from OCHA, UNICEF, UNHCR, WFP and WHO, the other UN entities part of IASC are: the United Nations Development Programme (UNDP), the United Nations Population Fund

(UNFPA), the Office of the United Nations for Human Rights (OHCHR), the World Bank, the Food and Agriculture Organization (FAO) and the Office of the Special Representative to the Secretary General on Internally Displaced People (IDP). The three NGO consortia representing up to 200 NGOs are InterAction, ICVA and SCHR. The three international organizations are IFRC, ICRC and IOM. As represented in Figure A.3, the full members of IASC are in bold.

Figure A.3 – IASC’s Full Members and Standing Invitees



At the field level, the ERC on behalf of the UN Secretary-General (SG) and after consultation with the IASC designates a Humanitarian Coordinator (HC). The HC who is also the in-country head of a designated lead agency (typically the UNDP representative) is responsible for coordinating the operational and strategic activities of the UN organizations throughout a humanitarian emergency.

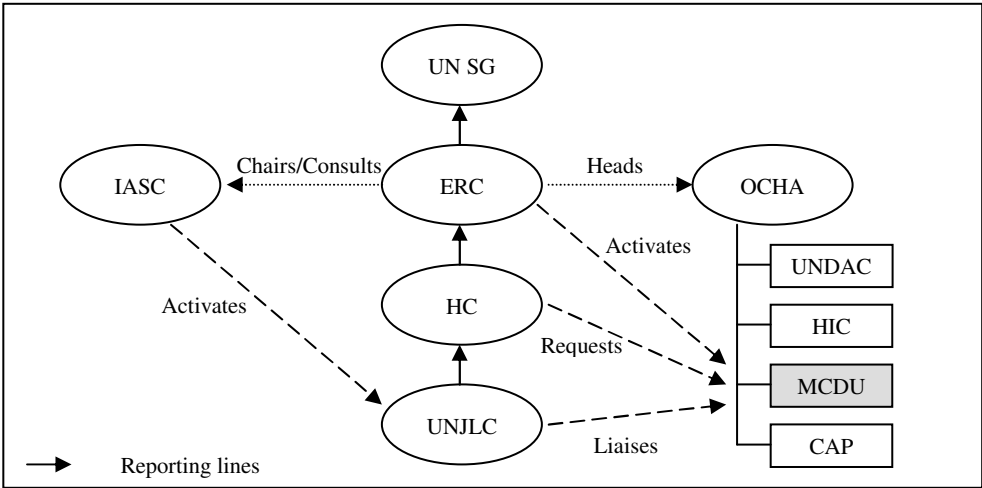
The ERC, in consultation with the IASC, provides the overall guidance for a particular complex emergency including parameters for the use of Military and Civil Defense Assets (MCDAs) and resources in support of UN humanitarian activities. To protect humanitarian space and to ensure a clear distinction between humanitarian and military operations, the

APPENDIX A – OVERVIEW OF HUMANITARIAN ORGANIZATIONS

use of MCDAs for humanitarian purposes is regulated by a six-point guideline that emphasizes its temporary, extraordinary and limited nature (OCHA, 2003). The HC is the authority that initiates the request for the use of military and civil defense resources in the field within the parameters set by the ERC. S/he initiates the process only upon the request and consent of the affected country.

OCHA’s MCDU, activated by the ERC upon the recommendation/decision of the IASC, ensures the most efficient use of MCDAs by the humanitarian organizations. The MCDU serves as the UN focal point for governments, international organizations and military and civil defense establishments. As such, it facilitates the relationship between the humanitarian and military components of a relief operation.

Figure A.4 – Relationship between IASC, Non-Operational and Operational Entities



To address logistics-related issues in large scale and complex emergencies, the IASC has the prerogative to activate the UNJLC. While the IASC is the organ that decides on its deployment, the HC is responsible for overseeing its operations through supervision of its Chief. If a UNJLC is activated, MCDU coordinates with and supports those logistics initiatives and services of the UNJLC that depend on MCDAs. Likewise, MCDU assists HIC and UNJLC in obtaining relevant information from the military (Figure A.4).

A.2.3 Donors

On the supply side, the donor community is composed of governments and their institutions, citizens and corporations. The IFRC estimates global humanitarian assistance to total at least US\$ 10 billion a year (IFRC, 2004). Figures compiled by OCHA on the basis of information provided by donors and appealing organizations offer an indication on the origin of humanitarian contributions (Figure A.5). Figure A.6 shows the sectoral distribution of the 2007 contribution as compiled by OCHA.

Figure A.5 – Global Humanitarian Contributions, 2007

| Donor | % of Total |
|---|-------------------|
| 13 European Countries * | 38.7 |
| US | 24.4 |
| European Institutions | 14.9 |
| Allocations of un-earmarked funds by the UN | 4.0 |
| Canada | 3.6 |
| Japan | 2.8 |
| Saudi Arabia | 2.8 |
| Private | 2.0 |
| Others | 6.8 |
| Total | 100.0 |

* UK, Netherlands, Germany, Sweden, Norway, Denmark, Switzerland, France, Finland, Ireland, Spain, Belgium and Italy. Source: <http://www.reliefweb.int.fts> (July 2008)

Figure A.6 – Global Humanitarian Contributions 2007: Totals per Sector

| Sector | % of Total |
|--|-------------------|
| Multi-sector | 27.7 |
| Food | 27.4 |
| Sector not yet specified | 9.0 |
| Health | 9.0 |
| Coordination and support services | 7.0 |
| Agriculture | 5.3 |
| Family Shelter and Non Food Items (NFIs) | 3.5 |
| Economic recovery | 3.1 |
| Water and Sanitation | 2.8 |
| Other | 5.2 |
| Total | 100.0 |

Source: <http://www.reliefweb.int.fts> (July 2008)

APPENDIX A – OVERVIEW OF HUMANITARIAN ORGANIZATIONS

In 2007, bilateral and multilateral European aid accounted for more than 53% of such contributions. Among inter-governmental organizations, the EU, through the European Community Humanitarian Office (ECHO), is the largest single donor. ECHO's mandate is to provide emergency assistance and relief to the victims of natural disasters or armed conflict outside the EU. USAID and DFID are the bilateral institutions through which the US and UK channel most of their funding to humanitarian organizations.

The amount of resources raised by each organization determines the size and scope of their operations. Figure A.7 provides an overview of the resources mobilized by a sample of organizations in the UN, international and NGO community.

Figure A.7 – Funds Raised by Select Humanitarian Organizations, 2007/2006

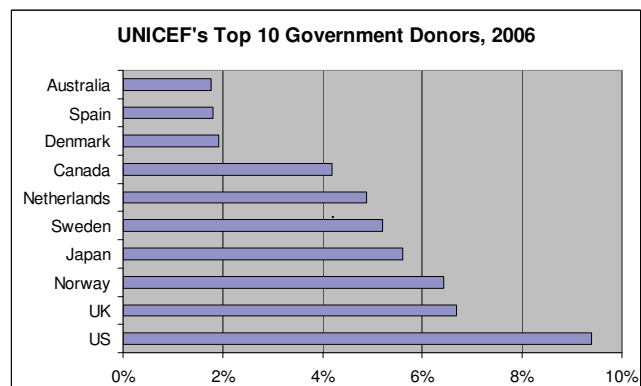
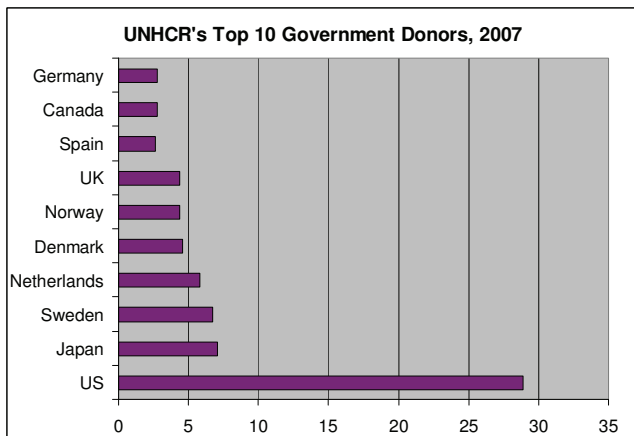
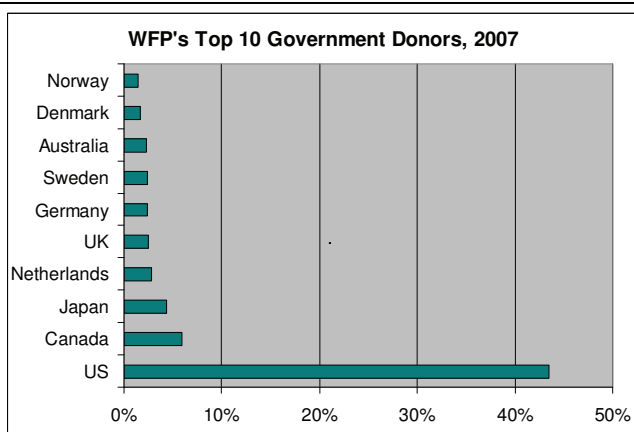
| Organizations | Resources (in millions of US\$) |
|----------------------------|--|
| UNICEF | 2,768 |
| WFP | 2,705 |
| World Vision International | 2,220 |
| UNHCR | 1,268 |
| IFRC | 412 |

Source: 2007 Annual Reports of respective organizations. 2006 Annual Report of UNICEF & IFRC

As far as the source of contributions is concerned, in 2007, the US accounted for almost half of WFP's budgetary resources. Moreover, 69% of its total funds originated from just 10 governments. Similarly, the top 10 government donors accounted for 70% of the contributions received by UNHCR, with the US accounting for almost 30% of it. The situation is slightly more balanced at UNICEF. In 2006, the organization depended on 10 countries for 48% of its resources. Figure A.8 provides an overview of WFP, UNHCR and UNICEF top 10 donors.

In 2007, private sector contributions to UNHCR represented a very small fraction of total resources mobilized (USD 34.1 million). Those to WFP were around 2% while NGO and private sector contribution accounted for 31% of resources mobilized by UNICEF (2006).

Figure A.8 – WFP, UNHCR and UNICEF Top 10 Donors



Source: UNHCR & WFP 2007 Annual Reports, UNICEF 2006 Annual Report

Appendix B - Acronyms of Organizations and Facilities

| | |
|----------------|---|
| ASOC | Aviation Support Operations Centre operated by UNOPS. |
| DAB | Da Afghanistan Bank. |
| Canadem | Canadem is a roster of Canadians skilled in human rights, peace building, democratisation, administration-logistics, security, reconstruction, etc. It serves as a civilian stand-by mechanism for the UN and other international agencies conducting field operations. |
| CARE | Cooperative for Assistance and Relief Everywhere is dedicated to fighting global poverty. |
| CJCMOTF | Coalition Joint Civil-Military Operations Task Force was set up as a coordinating body between UN Agencies, ISAF and NGOs |
| CHLC | Coalition Humanitarian Liaison Centres were the civil affairs arm of the Coalition. |
| DFID | Department for International Development is the UK government department responsible for promoting development and the reduction of poverty. |
| DPKO | Department of Peace-Keeping Operations, UN. |
| ECHO | European Community Humanitarian Aid Office's mandate is to provide emergency assistance and relief to the victims of natural disasters or armed conflict outside the European Union. |
| FAO | Established in 1945, the UN's Food and Agriculture Organization has the mandate to raise levels of nutrition and standards of living, improve agricultural productivity, and better the condition of rural populations. |
| GTZ | The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) is an international cooperation enterprise for sustainable development with worldwide operations. In acute emergencies, such as natural disasters, it implements emergency aid and refugee programs. |
| IASC | Inter-Agency Standing Committee is composed of UN humanitarian agencies and representatives of 200-250 humanitarian NGOs. |
| ICAO | International Civil Aviation Organization aims to ensure the safe and orderly growth of international civil aviation throughout the world. |
| ICRC | Established in 1863, the International Committee of Red Cross's mission is to protect the lives and dignity of victims of war and internal violence and to provide them with assistance. |
| IFRC | International Federation of Red Cross and Red Crescent's mission is to improve the lives of vulnerable people by mobilising the power of humanity. It focuses on four core areas: promoting humanitarian values, disaster response, disaster preparedness, and health and community care. |
| INGC | National Institute for Disaster Management of Mozambique. Set up in 1999, this oversight institution attached to the Ministry of Foreign Affairs and Cooperation, Mozambique, has the mandate to manage, develop mitigation policy, prepare for and coordinate disasters. |

APPENDIX B – ACRONYMS OF ORGANIZATIONS AND FACILITIES

| | |
|--------------|---|
| IOM | International Organization for Migration is the leading international organisation working with migrants and governments to provide humane responses to migration challenges. |
| ISAF | The establishment of the UN International Security Assistance Force was part of the Bonn Agreement (December 5, 2001) in support of the Afghan Interim Government. ISAF was mandated to assist in maintaining security for Kabul and its surrounding areas until the constitution and functioning of a new Afghan security and armed forces. |
| JICA | Japan International Cooperation Agency extends technical assistance for national development and human resources development as a part of Japan's Official Development Assistance programmes. |
| MPW | The Afghan Ministry of Public Works. |
| MRRD | The Afghan Ministry of Rural Rehabilitation and Development. |
| MSF | Médecins Sans Frontières is an independent humanitarian medical aid agency committed to two objectives: providing medical aid wherever needed and raising awareness of the plight of people assisted. |
| NATO | North Atlantic Treaty Organization signed in 1949 created an alliance of 12 countries committed to each other's defence. By 1999 it had 19 member countries. Together with non-member countries and other international organisations it is involved in peacekeeping and crisis management tasks. |
| NS | IFRC's National Societies |
| OCHA | United Nations Office for Coordination of Humanitarian Affairs mobilizes and coordinates the efforts of the international community to meet the needs of those exposed to human suffering in disasters and emergencies. OCHA is a Geneva-based, non-operational UN agency that reports to the UN Secretary General. It coordinates the launch of a consolidated emergency appeal among the donor community, liaises between local governments and humanitarian agencies and provides a number of common services to the humanitarian community. The major ones include setting policies for Civil Military Coordination (CMCoord) services, the United Nations Disaster Assessment Coordination team (UNDAC) and the Humanitarian Information Center (HIC). |
| OFDA | Office of Foreign Disaster Assistance of USAID. |
| Oxfam | Oxford Committee for Famine Relief is a development, relief, and campaigning organisation dedicated to finding lasting solutions to poverty and suffering around the world. |
| SHA | Swiss Humanitarian Aid is an instrument of the Humanitarian Aid of the Swiss Confederation for direct activities and in support of international organisations through secondment. |
| SIDA | The Swedish International Development Cooperation Agency is the Swedish government agency for bilateral international development cooperation. |

LEVERAGING PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATIONS

| | |
|---------------------|--|
| UNAMA | In late March 2002, UN New York established and funded the United Nations Assistance Mission for Afghanistan (UNAMA) as a means to assist the interim government. As a result all UN activities had to be coordinated through UNAMA. Consequently, the UNJLC technically became part of one of UNAMA's pillars, the one dealing with humanitarian issues. |
| UNDAC | The UN Office for Coordination of Humanitarian Assistance's (OCHA) Disaster Assessment Coordination team (UNDAC) is a rapid response tool (members arrive quickly and stay no longer than two weeks) deployed for "sudden onset of natural disaster". Its mandate consists of the preparation of a consolidated appeal for the emergency on behalf of the government and UN humanitarian organisations (Inter-Agency) for donor funding. |
| UNDP | United Nations Development Programme is the UN's principal provider of development advice, advocacy and grant support. It has six priority practice areas: Democratic governance, poverty reduction, crisis prevention and recovery, energy and environment, IT and communications, and HIV/AIDS. |
| UNFPA | The United Nations Populations Fund is dedicated to improving access to and the quality of reproductive health care, upon request of developing countries. |
| UNHAS | The UN Humanitarian Air Service was operated by WFP. |
| UNHCR | Established in 1950, the United Nations High Commissioner for Refugees is dedicated to leading and coordinating international action to safeguard the rights and well being of refugees worldwide. |
| UNICEF | Established in 1946, the United Nations Children's Fund advocates the protection of children's rights, helps them meet their basic needs and expands their opportunities to reach their full potential. |
| UNMNF | UN mandated Multi-National Peacekeeping (Military) Force deployed for the Eastern Zaire emergency. |
| UNOPS | The United Nations Office of Project Services is an arm of the United Nations that provides project-management services in every field where the UN has a mandate. |
| USAID | United States Agency for International Development is an independent government agency that conducts foreign assistance and humanitarian aid to advance the political and economic interests of the United States. |
| WFP | Set up in 1963, World Food Programme is the United Nations' frontline agency in the fight against global hunger. |
| WHO | Established in 1948, World Health Organization is the UN Agency dedicated to attaining the highest levels of health for all people. |
| World Vision | A Christian relief and development organisation working for the well being of all people, especially children. |

Appendix C - Functions Interviews at each Site

Chapter 6 - IFRC

- Head of Logistics and Resource Mobilization department
- Head of the Resource Mobilization Unit
- Head of Fleet Logistics Unit
- FACT officer
- Field Logistics Officer
- Operations Manager
- India Desk Officer

Chapter 7 - UNJLC

- Head of UNJLC
- Head of UNJLC Core Unit
- Iraq Operations Coordinator
- Head of UNJLC Mozambique
- Regional Coordination for the Afghan UNJLC
- Head of UNJLC Kabul
- UNJLC Field Coordinator
- Members of the Fuel team
- Head of Fuel Planning Unit
- UNJLC liaison person in NY

Donors

- NGO/International Organization Coordinator of ODFA, USAID
- Director of the Conflict and Humanitarian Affairs Department, DFID

Other Humanitarian Organizations

- Chief of the Office for Coordination of Normative Operational and Decentralized Activities, FAO
- Logistics Officer, IFRC
- Deputy Chief, Military, Civil Defence and Logistics Section, OCHA
- Emergency Officer, OCHA
- Director, Supply Management Service, UNHCR
- Head Field Logistics Support Unit, UNHCR
- UNHCR Officer seconded to UNJLC Core Unit
- Head of Operations Unit, IOM
- Deputy Head of Logistics Division, ICRC
- Emergency and Field Logistics Officer, UNICEF
- UNICEF Officer seconded to the UNJLC Core Unit
- Technical Officer, WHO

External Organizations

- Members of the independent evaluation team

Chapter 8 - WFP

WFP

- Chief of Staff
- Deputy Executive Director
- Director, Office of Budget
- Budget Officer
- Director, Transport & Logistics
- Chief of Logistics
- Head of Emergency Response Unit (ALITE)
- Emergency Officer, ALITE
- Program Officer, Surface Transport Services
- Chief Logistics Officer
- Logistics Officer
- Head of International Staff Management and Recruitment Unit
- Donor Relations Officer
- Managers of the School Feeding Program

TNT

- Director of the TNT Moving the World Programme, TNT
- Logistics Initiative Sponsor, TNT
- Fund Raising Initiative Sponsor, INT
- School Feeding Initiative, Corporate Communication Sponsor, TNT
- Emergency Response Initiative Sponsor, TNT

BIBLIOGRAPHY

- Achrol, R. S.; L. K. Scheer & L. W. Stern (1990), *Designing Successful Transorganizational Marketing Alliances*, Report No. 90-118, Cambridge, MA: Marketing Science Institute.
- Aken, J. E. V. (1998), "The Virtual Organization: A Special Mode of Strong Inter-Organizational Cooperation." In M.A. Hitt, J.E. Ricart and R.D. Nixon, eds., *Managing Strategically in an Interconnected World*, pp. 301-320. Chichester; Wiley.
- Andreasen, A. R. (1996), "Profits for Nonprofits", *Harvard Business Review*, Vol. 74 Issue 6, pp. 47-59.
- Ariss, S.; N. Nykodym & A. A. Cole-Laramore (2002), "Trust and Technology in the Virtual Organization", *S.A.M Advanced Management Journal*, Vol. 64 Issue 4, pp. 22-26.
- Barney, J. B. (1991), "Firm Resources and Sustained Competitive Advantage", *Journal of Management*, Vol. 17, pp. 99-120.
- Barney, J. B. & P. M. Wright M. (1998), "On Becoming a Strategic Partner: The Role of Human Resources in Gaining Competitive Advantage", *Human Resource Management*, Vol. 37 Issue 1, pp. 31-47.
- Beamon, B.M. (1996), "Performance Measures in Supply Chain Management", Proceedings of the 1996 Conference on Agile and Intelligent Manufacturing Systems, Rensselaer Polytechnic Institute, Troy, New York, NY, 2-3 October.
- Beamon, B M. (1999), "Measuring Supply Chain Performance", *International Journal of Operations & Production Management*, Vol. 19 Issue 3/4, pp. 275-292.
- Beamon, B. M. & Balcik, B. (2008), "Performance Measurement in Humanitarian Relief Chains", *International Journal of Public Sector Management*, Vol. 31 Issue 1, pp. 4-25.
- Beauregard, A. (1998) *Civil-Military Cooperation in Joint Humanitarian Operations: A Case Analysis of Somalia, the Former Yugoslavia and Rwanda*. Waterloo, Canada, Ploughshares Monitor.

BIBLIOGRAPHY

- Becker, B. E. & M.A. Huselid (1999), "Overview: Strategic Human Resource Management in Five Leading Firms", *Human Resource Management*, Vol. 38, No. 4, pp. 287-301.
- Becker, B. E. & M.A. Huselid (1998), "High Performance Work Systems and Firm Performance: A Synthesis of Research and Managerial Implications", *Research in Personnel and Human Resource Management*, 16, pp. 53-101.
- Benini, A. A. (1999), "Network Without Centre? A Case Study of an Organizational Network Responding to an Earthquake", *Journal of Contingencies & Crisis Management*, Vol. 7 Issue 1, pp. 38-47.
- Benjamin, R I. & E. Levinson (1993), "A Framework for Managing IT-Enabled Change", *Sloan Management Review*, Vol. 34 Issue 4, pp. 23-33.
- Black J.A. & K.B. Boal (1994), "Strategic Resources: Traits, Configurations and Paths to Sustainable Competitive Advantage", *Strategic Management Journal*, Summer Special Issue, Vol. 15, pp. 131-148.
- Blau P. M. (1964), *Exchange and Power in Social Life*, New York: Wiley
- Binder, A. & J. M. Witte (2007), "Business Engagement in Humanitarian Relief: Key Trends and Policy Implications", *Humanitarian Policy Group*, Overseas Development Institute, London, UK.
- Boland, T. & A. Fowler (2000), "A Systems Perspective of Performance Measurement in Public Sector Organizations", *International Journal of Public Sector Management*, Vol. 13, No. 5, pp. 417-46.
- Borton J. (1993), "Recent Trends in International Relief System", *Disasters*, Vol. 17, No. 3, pp. 187-201.
- Bosch-Sijtsema, P. (2002), "A Structure of Roles within Virtual Organizations", *International Journal of Information Technology & Decision Making*, Vol. 1, Issue 3, pp. 371-384.
- Bourdieu, P. (1985), "The Forms of Capital" in *Handbook of Theory and Research for the Sociology of Education*, ed. JG Richardson, pp. 241-258. New York: Greenwood.
- Bowersox, D. J. (1990), "The Strategic Benefits of Logistics Alliances", *Harvard Business Review*, Vol. 68 No. 4, pp. 36-45.
- Bowersox, D. J. & P. J. Daugherty (1995), "Logistics Paradigms: The Impact of Information Technology", *Journal of Business Logistics*, Vol. 16 No. 1, pp. 65-80.
- Bowman, R. J. (1995), "A High-Wire Act", *Distribution*, December, pp. 36-39.

- Bradi, E. J. & M. Tracey (1991), "Transportation Outsourcing: A Survey of US Practices", *International Journal of Physical Distribution & Logistics Management*, Vol. 21 No.3, pp.15-21.
- Bremer, C. F. B.; A. Molina & L. M. Ortega (2000), "Virtual Organization Models: Brazil and Mexico. Building Competencies for International Manufacturing: Perspectives for Developing Countries", *Proceedings of the VIth International Conference on Industrial Engineering and Operations Management*, São Paulo, 29 October – 1 November.
- Breu, K.; C. J. Hemingway; M. Strathern & D. Bridger (2002), "Workforce Agility: The New Employee Strategy for the Knowledge Economy", *Journal of Information Technology*, Vol. 17 Issue 1, pp. 21-31.
- Brocades-Zaalberg, T. (2005), "Soldiers and Civil Power: Supporting or Substituting Civil Authorities in Peace Support Operations during the 1990s", Amsterdam, University, Amsterdam.
- Burt, R. S. (1992), "Structural Holes: The Social Structure of Competition", *The Social Structure of Competition*, Cambridge, MA: Harvard University Press, pp. 8-49.
- Byrne, J. A. (1993), "The Virtual Corporation", *Business Week*, 8 February, pp. 98-102.
- Byrne, P. M. (1993), "A New Road Map for Contract Logistics", *Transportation & Distribution*, April, pp. 58-62.
- Cascio, W. F. (2000), "Managing a Virtual Workplace", *Academy of Management Executive*, Vol. 14 Issue 3, pp. 81-90.
- Chomilier, B.; R. Samii & L. N. Van Wassenhove (2003), "The Central Role of Supply Chain Management at IFRC", *Forced Migration Review*, No. 18, pp. 15-16.
- Chung, S.; S. Harbir & K. Lee (2000), "Complementarity, Status Similarity and Social Capital as Drivers of Alliance Formation", *Strategic Management Journal*, Vol. 21 Issue 1, pp. 1-22.
- Clases, C.; R. Bachmann & T. Wehner (2003), "Studying Trust in Virtual Organizations", *International Studies of Management & Organization*, Vol. 33 Issue 3, pp. 7-27.
- Coleman, J. S. (1988), "Social Capital in the Creation of Human Capital", *American Journal of Sociology*, 94: S95-S120.
- Conner K.R. (1991), "A Historical Comparison of Resource-Based Theory and Five Schools of Thought within Industrial Organization Economics: Do We Have a New Theory of the Firm?", *Journal of Management*, Vol. 17, No. 1, pp. 121-154.

BIBLIOGRAPHY

- Cooke, J. A. (1994), "Third Party Logistics: Has Its Time Come?" *Traffic Management*, October, pp. 71-73.
- Cooper, W. W. & M. L. Muench (2000), "Virtual Organizations: Practice and the Literature", *Journal of Organizational Computing & Electronic Commerce*, Vol. 10 Issue 3, pp. 189-208.
- Cravens D. W.; N. F. Piercy & S. H. Shipp (1996), "New Organizational Forms for Competing in Highly Dynamic Environments: The Network Paradigm", *British Journal of Management*, Vol. 7, pp. 203-218.
- Crowston, K. (1997), "A Coordination Theory Approach to Organizational Process Design", *Organizational Science*, Vol. 8 Issue 2, pp. 157-175.
- Davidson, A.L. (2006) *Key Performance Indicators in Humanitarian Logistics*, MIT thesis.
- De Saá-Pérez, P. & J. M García-Falcón (2002), "A Resource-Based View of Human Resource Management and Organizational Capabilities Development", *International Journal of Human Resource Management*, Vol. 13 Issue 1, pp. 123-140.
- Dierickx, I. & K. Cool (1989), "Asset Stock Accumulation and Sustainability of Competitive Advantage", *Management Science*, Vol. 35 Issue 12, pp. 1504-1513.
- Drucker, P. F. (1989), "What Business Can Learn from Nonprofits", *Harvard Business Review*, Vol. 67 Issue 4, pp. 88-93.
- Drucker, P. F. (2002), "They're Not Employees, They're People", *Harvard Business Review*, Vol. 80 Issue 2, pp. 70-77.
- Dul, J.; T. Hak & G. Goertz (2008), "New Directions in Case Study Methodology: Testing Necessary Conditions Hypotheses with Cases", Paper presented to the 15th International Annual Euroma Conference, Groningen, The Netherlands.
- Dul, J & T. Hak (2008), *Case Study Methodology in Business Research*. Elsevier, Oxford, UK
- Dunfee, T. W. & D. N. Hess (2000), "The Legitimacy of Direct Corporate Humanitarian Investment", *Business Ethics Quarterly*, Vol. 10 Issue 1, pp. 95-109.
- Dyer, J. H. & H. Singh (1998), "The Relational View: Cooperative Strategy and Sources of Inter-organizational Competitive Advantage", *Academy of Management Review*, Vol. 23 Issue 4, pp. 660-679.

- Easton G. & M. Quayle (1990), "Single and Multiple Networking Sourcing – Network Implications", *Proceedings of 6th IMP Conference, Research and Developments in International Industrial Marketing & Purchasing*, Milan, pp. 474-488.
- Elkington, J. & S. Fennell (1998), "Partners for Sustainability", *Greener Management International*, Issue 24, pp. 48-60.
- European Case Clearing House - ECCH (2003), "Developing the Case for Humanitarian Aid", Vol. 31, pp. 18-19.
- ECHO (2003), "Iraq Crisis Highlights an Alarming Trend", *Protecting the Humanitarian Space*, European Commission, Brussels, Belgium, p.9.
- Ferdows, K.; M. A. Lewis & J. A. D. Machuca (2004), "Rapid-Fire Fulfillment", *Harvard Business Review*, November, pp. 104-110.
- Fine, C. H. (2000), "The Clockspeed Chronicles", *Supply Chain Management Review*, May/June, pp. 60-64.
- Fischer, P. (1995). *Die Selbständigen von Morgen: Unternehmer oder Tagelöhner?* [The Self-Employed of Tomorrow: Entrepreneurs or Day Labourers?]. Frankfurt/Main: Campus Verlag.
- Fisher, M. L. (1997), "What is the Right Supply Chain for Your Product?" *Harvard Business Review*, March-April, pp. 105-116.
- Fisher, M. L.; J. Hammond; W.H. Obermeyer & A. Raman (1994), "Making Supply Meet Demand in an Uncertain World", *Harvard Business Review*, Vol. 72 No. 3, pp. 83-93.
- Flamholtz, E. G. & J. M. Lacey (1981), *Personnel Management, Human Capital Theory, and Human Resource Accounting*, Los Angeles, CA: Institute of Industrial Relations, University of California.
- Forslund, J.; M. Hogberg & C. Stahl (1998), *Importance of Organizational Structure and Branding in Virtual Organizations*, Working Paper, School of Business, Stockholm University, <http://www.busnav.se/sagt2.htm>.
- Franke, U. J. (1999), "The Virtual Web as a New Entrepreneurial Approach to Network Organizations", *Entrepreneurship & Regional Development*, Vol. 11 Issue 3, pp. 203-229.
- Fritz Institute (2005a), *Logistics and the Effective Delivery Of Humanitarian Relief*, San Francisco, CA.

BIBLIOGRAPHY

- Fritz Institute (2005b), *From Logistics to Supply Chain Management: The Path Forwards in the Humanitarian Sector*, San Francisco, CA.
- Galbraith, J.R. (1973), *Designing Complex Organizations*, Addison-Wesley Publishing Company, Reading, MA,
- Gentry, J. J. & D. B. Vellenga (1996), "Using Logistics Alliances to Gain a Strategic Advantage in the Marketplace", *Journal of Marketing Theory & Practice*, Vol. 4 Issue 2, pp. 37-44.
- Giarraputo, J. (2006), "Citigroup and WFP Work Together to Combat Hunger", *Global Finance*, October, pp. 84-86.
- Goldman, S. L. & R. N. Nagel (1993), "Management, Technology and Agility: The Emergence of a New Era in Manufacturing", *International Journal of Technology Management*, Vol. 8, pp. 18-38.
- Goldman, S. L.; R. N. Nagel & K. Preiss (1995), *Agile Competitors and Virtual Organizations: Strategies for Enriching the Customer*, New York: Van Nostrand Reinhold.
- Granovetter, M.; (1974), *Getting a Job: A Study of Contacts and Careers*, Cambridge, MA: Harvard University Press.
- Grant, R. M. (1991), "The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation", *California Management Review*, Vol. 33 Issue 3, pp. 114-135.
- Hakansson, H. & I. Snehota (1995), *Developing Relationships in Business Networks*. International Thomson Business Press, London.
- Hansen, M.; J. Podolny & J. Pfeffer (2001), "So Many Ties, so Little Time: A Task Contingency Perspective on Corporate Social Capital", *Research in the Sociology of Organizations*, 18, pp. 21-57.
- Harrington, B. (2001), "Organizational Performance and Corporate Social Capital: A Contingency Model", *Research in the Sociology of Organizations*, 18, pp. 83-106.
- Heap, S. (2000), "NGO-Business Partnerships", *Public Management*, Vol. 2 Issue 4, pp. 555-563.
- Henderson, D. A.; Chase, B. W. & Woodson, B. M. (2002), "Performance Measures for NPOs", *Journal of Accountancy*, Vol. 193 Issue 1, pp. 63-68.

- Hess, D.; N. Rogovsky & T. W. Dunfee (2002), "The Next Wave of Corporate Community Involvement: Corporate Social Initiatives", *California Management Review*, Vol. 44 Issue 2, pp. 110-125.
- Hoffman W. (2005), "Avoiding Logistics Disasters", *Traffic World*, July 4, p.1.
- Hughes, J. A.; J. O'Brien; D. Randall; M. Rouncefield & P. Tolmie (2001), "Some 'Real' Problems of 'Virtual' Organisation New Technology", *Work & Employment*, Vol. 16 Issue 1, pp. 49-64.
- IFRC (2001), *World Disasters Report- Focus on Recovery*. Geneva, Switzerland: IFRC.
- IFRC (2002), *World Disasters Report- Focus on Reducing Risk*. Geneva, Switzerland: IFRC.
- IFRC (2003), *World Disasters Report- Focus on Ethics in Aid*. Geneva, Switzerland: IFRC.
- IFRC (2004), *World Disasters Report- Focus on Community Resilience*. Geneva, Switzerland: IFRC.
- IFRC (2007), *Annual Report 2006*, Geneva, Switzerland: IFRC.
- Jagdev H.S. & K.-D. Thoben (2001), "Anatomy of Enterprise Collaboration", *Production Planning and Control*, Vol. 12, Issue 5, pp. 437-45.
- Jägers, H.; W. Jansen & W. Steenbakkens (1998), "Characteristics of Virtual Organizations", in *Proceedings of the VoNet – Workshop 'Organizational Virtualness.'* Bern, Switzerland.
- Jahre, M. & N. Fabbes-Costas (2005), "Adaptation and Adaptability in Logistics Networks", *International Journal of Logistics: Research and Applications*, Vol. 8, No. 2, pp. 143-157.
- Johanson, J. (2001), "The Balance of Corporate Social Capital: Network Cohesion as a Determinant of Instrumental and Expressive Benefits in a Public Organization", *Research in the Sociology of Organizations*, 18, pp. 21-57.
- Johnsen T.; F. Wynstra; J. Zheng; C. Harland & R. Lamming (2000), "Network Activities in Supply Networks", *Journal of Strategic Marketing*, 6, pp. 161-181.
- Johnston, W. J.; M.P. Leach & A.H. Liu (1999), "Theory Testing Using Case Studies in Business-to-Business Research," *Industrial Marketing Management*, Vol. 28, No.3, pp. 201-213.

BIBLIOGRAPHY

- Kaatrud, D. B., R. Samii & L. N. Van Wassenhove (2003), "UN Joint Logistics Centre: A Coordinated Response to Common Humanitarian Logistics Concerns", *Forced Migration Review*, No. 18, pp. 11-14.
- Kaplan, R.S. (2001), "Strategic Performance Measurement and Management in Non-Profit Organizations", *Non-Profit Management and Leadership*, Vol. 11 Issue 3, pp. 353-370.
- Kaplan, R. S. & Norton, D. P (1992), "The Balanced Scorecard- Measures That Drive Performance", *Harvard Business Review*, Vol. 70, Issue 1, pp. 71-79.
- Kasper-Fuehrer, E. C. & N. M. Ashkanasy (2003), "The Interorganizational Virtual Organization", *International Studies of Management & Organization*, Vol. 33 Issue 4, pp. 34-64.
- Kellenberger, J. (2003), "Independent Humanitarian Action under Pressure", *Protecting the Humanitarian Space*, European Commission, Brussels, Belgium, pp.6-8.
- Kent, R. C. (1987), *Anatomy of Disaster Relief: The International Network in Action*, London: Pinter.
- Klein, H. K. & M.D. Myers (1999), "A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems", *MIS Quarterly*, Vol. 23 Issue 1, pp. 67-94.
- Klein, S. (1994), "Virtuelle Organisation [Virtual Organization], " *Das Wirtschaftsstudium*, Vol. 23, pp. 309-311.
- Kovács, G. & Spens, K. M. (2007), "Humanitarian Logistics in Disaster Relief Operations", *International Journal of Physical Distribution and Logistics Management*, 37, pp. 99-114.
- Lee, A.S. (1991), "Integrating Positivist and Interpretive Approaches to Organizational Research", *Organization Science*, Vol. 2 Issue 4, pp. 342-365.
- Lee H. W. & Zbinden M. (2003), "Marrying Logistics and Technology for Effective Relief", *Forced Migration Review*, No. 18, pp. 34-35.
- Letts, C.W.; Ryan, W.P. & Grossman, A. (1999), *High Performance Nonprofit Organizations: Managing Upstream for Greater Impact*, New York, NY: Wiley & Sons.
- Levins, J.; R. Samii & L. N. Van Wassenhove, "Fuels: A Humanitarian Necessity in 2003 Post-Conflict Iraq, The Role of UNJLC", INSEAD case study 07/2005-5290.

LEVERAGING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATION

- Lippman, S. A. & R P. Rumelt (1982), "Uncertain Instability: An Analysis of Interfirm Differences in Efficiency under Competition", *Bell Journal of Economics*, Vol. 13 Issue 1, pp. 418-438.
- Long, D. C. & D. F. Wood (1995), "The Logistics of Famine Relief", *Journal of Business Logistics*, Vol. 16 No.1, pp. 213-229.
- Luhmann, N. (1979), *Trust and Power*. Chichester, England: Wiley.
- Lynch, M. E.; S. J. Imada & J. H. Bookbinder (1994), "The Future of Logistics in Canada: A Delphi-Based Forecast," *Logistics & Transportation Review*, Vol. 30 No.1 pp. 95-112.
- Magretta, J. (1998), "The Power of Virtual Integration: An Interview with Dell Computer's Michael Dell", *Harvard Business Review*, Vol. 76 No. 2, pp. 72-83.
- Malone, T. W. (1987), "Modelling Coordination in Organizations and Markets", *Management Science*, Vol. 33 Issue 10, pp. 1317-1332.
- Malone, T. W.; K. R. Grant; F. A. Turbak; S. A. Brobst & M. D. Cohen (1987), "Electronic Markets and Electronic Hierarchies", *Communications of the ACM*, Vol. 30 Issue 5, pp. 390-402.
- Malone, T. W. & K. Crowston (1994), "The Interdisciplinary Study of Coordination", *ACM Computer Surveys*, Vol. 26 Issue 1, pp. 87-119.
- Malone, T. W.; K. Crowston; J. Lee; B. Pentland; C. Dellarocas; G. Wyner; J. Quimby; C. S. Osborn; A. Bernstein; G. Herman; M. Klein; E. O'Donnell & Elissa (1999), "Tools for Inventing Organizations: Toward a Handbook of Organizational Processes", *Management Science*, Vol. 45, Issue 3, pp. 425-443.
- March, J. G. & H. A. Simon (1958), *Organizations*, New York : John Wiley and Sons.
- Marshall C. & G. B. Rossman (1995), *Designing Qualitative Research* (2nd Edition), Thousand Oaks (CA): Sage
- Mathews, M. R. (1997), "Twenty-Five Years of Social and Environmental Accounting Research: Is there a Silver Jubilee to Celebrate?" *Accounting Auditing and Accountability Journal*, Vol. 10 Issue 4, pp. 481-531.
- Maxwell J.A. (1996), *Qualitative Research Design: An Interactive Approach*, Thousand Oaks (CA): Sage.
- Mentzer, J. T. (1999), "Supplier Partnering" In *Handbook of Relationship Marketing*, J. N. Sheth & A. Parvatiyar (Eds.), pp. 457-477. Thousand Oaks, CA: Sage Publications, Inc.

BIBLIOGRAPHY

- Mentzer, J. T.; S. Min & Z. G. Zacharia (2000), "The Nature of Inter-firm Partnering in Supply Chain Management", *Journal of Retailing*, Vol. 76 Issue 4, pp. 549-568.
- Mertens, P. & W. Faisst (1996), "Virtuelle Unternehmen: eine Organisationsstruktur für die Zukunft?" [Virtual Corporations: an Organizational Structure for the Future?], *Das Wirtschaftsstudium*, Vol. 6, pp. 280-285.
- Miles, R. E. & C. C. Snow (1986), "Network Organisations: New Concepts for New Forms", *California Management Review*, Vol. 28, pp. 62-73.
- Miles, R. E. & C. C. Snow (1992), "Causes of Failure in Network Organizations", *California Management Review*, Vol. 34 Issue 4, pp. 53-72.
- Moran, P. & S. Ghoshal (1996), *Value Creation by Firms*. In J. B. Keys & L. N. Dosier (Eds.), *Academy of Management Best Paper Proceedings*: 41-45.
- Moore, M.H. (2000), "Managing for Value: Organizational Strategy in For-Profit, Nonprofit, and Governmental Organizations", *Nonprofit and Voluntary Sector Quarterly*, Vol. 29 Issue 1, p183-204.
- Mowshowitz, A. (1986), "Social Dimensions of Office Automation", In *Advances in Computers*, Vol. 25, ed M. Yovitz, pp. 335-404. New York: Academic Press.
- Mowshowitz, A. (1994), "Virtual Organization: A Vision of Management in the Information Age", *The Information Society*, Vol. 7 Issue 10, pp. 267-288.
- Nahapiet, J & Ghoshal, S. (1998), "Social Capital, Intellectual Capital, and the Organizational Advantage", *Academy of Management Review*, Vol. 23 Issue 2, pp. 242-266.
- Neely, A.D.; Gregory, M. & Platts, K. (1995), "Performance Measurement System Design: A Literature Review and Research Agenda", *International Journal of Operations & Production Management*, Vol.15, No. 4, pp 80-116.
- Neely, A. (2005), "The Evolution of Performance Measurement Research: Developments in the Last Decade and a Research Agenda for the Next", *International Journal of Operations & Production Management*, Vol. 25 Issue 12, pp. 1264-1277.
- Nelson, R. R & S. G. Winter (1982), *An Evolutionary Theory of Economic Change*, Cambridge, MA: Harvard University Press.
- Newell, S. & J. Swan (2000), "Trust and Inter-Organizational Networking", *Human Relations*, 53, pp. 1287-1328.
- OCHA (2003), *Guidelines on the Use of Military and Civil Defence Assets to Support United Nations Humanitarian Activities in Complex Emergencies*, Geneva, Switzerland: OCHA.

- Oloruntoybar, R. & Gray, R. (2006), "Humanitarian Aid: An Agile Supply Chain", *Supply Chain Management: An International Journal*, 11, pp. 115-120.
- Oster, S.M.; C. W. Massarsky & S. L. Beinhacker (2004), *Generating and Sustaining Nonprofit Earned Income: A Guide to Successful Enterprise Strategies*; San Francisco, CA: Jossey-Bass
- Parung, J. & U.S. Bititci (2006), "Conceptual Metric for Managing Collaborative Networks", *Journal of Modelling in Management*, Vol. 1, Issue 2, pp. 116-136.
- Pfeffer, J. (1994), "Competitive Advantage through People", *California Management Review*, Vol. 36 Issue 2, pp. 9-28.
- Phillips, J. K. (2004), "An Application of the Balanced Scorecard to Public Transit System Performance Assessment", *Transportation Journal*, Winter, pp.26-55.
- Pihkala, T.; El Varamaki & J. Vesalainen (1999), "Virtual Organization and the SMEs: a Review and Model Development", *Entrepreneurship & Regional Development*, Vol. 11, pp. 335-349.
- Pires, S. R. I.; C. F. Bremer; L. A. De Santa Eulalia & C. P. Goulart (2001), "Supply Chain and Virtual Enterprises: Comparisons, Migration and a Case Study", *International Journal of Logistics: Research & Applications*, Vol. 4 Issue 3, pp. 297-311.
- Porter, M. E. (1985), *Competitive Advantage*; New York: Free Press.
- Porter, M. E. (1991), "Towards a Dynamic Theory of Strategy", *Strategic Management Journal*, Vol. 12 Issue Winter, pp. 95-117.
- Porter, M. E. & M. R. Kramer (1999), "Philanthropy's New Agenda: Creating Value", *Harvard Business Review*, Vol. 77 Issue 6, pp. 121-130.
- Porter, M. E. & M. R. Kramer (2002), "The Competitive Advantage of Corporate Philanthropy", *Harvard Business Review*, Vol. 80 Issue 12, pp. 56-68.
- Portes, A. (1998), "Social Capital: Its Origins and Applications in Modern Sociology", *Annual Review of Sociology*, Vol. 24 Issue 1, pp.1-24.
- Powell, T. C. & A. Dent-Micallef (1997), "Information Technology as Competitive Advantage: The Role of Human, Business, and Technology Resources", *Strategic Management Journal*, Vol. 18 Issue 5, pp. 375-405.
- Prater, E.; M. Biehl & M. A. Smith (2001), "International Supply Chain Agility: Tradeoffs between Flexibility and Uncertainty", *International Journal of Operations and Production Management*, Vol. 21, No. 5/6, pp. 823-839.

BIBLIOGRAPHY

- Putnam, R. D. (1993), "The Prosperous Community: Social Capital and Public Life", *AM. Prospect*, 13, pp. 35-42
- Putnam, R. D. (1995), "Bowling alone: America's declining social capital", *Journal of Democracy*, 6: pp. 65-78.
- Putnam, R. D. (2000), *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Rahman, Z. & S. K. Bhattachryya (2002), "Virtual Organisation: A Stratagem", *Singapore Management Review*, Vol. 24 Issue 2, pp. 29-45.
- Rai, A.; P. Ravi & S. Nainika (2006), "Firm Performance Impacts of Digitally Enabled Supply Chain Integration Capabilities", *MIS Quarterly*, Vol. 30 Issue 2, pp. 225-246.
- Ray, G.; W.A. Muhanna & J.B. Barney (2001), "Information Technology and Competitive Advantage: A Process-Oriented Assessment," Working Paper, University of Texas at Austin.
- Ray, G.; J. B. Barney, & W. A. Muhanna. (2004), "Capabilities, Business Processes, and Competitive Advantage: Choosing the Dependent Variable in Empirical Tests of the Resource-Based View", *Strategic Management Journal*, Vol. 25 Issue 1, pp. 23-37.
- Rice Jr., J. B. & F. Caniato (2003a), "Supply Chain Response to Terrorism: Creating Resilient and Secure Supply Chains", *Supply Chain Response to Terrorism Project, Interim Report of Progress and Learning*, MIT Center for Transportation and Logistics.
- Rice Jr., J. B. & F. Caniato (2003b) "Building a Secure and Resilient Supply Network", *Supply Chain Management Review*, Vol. 7 Issue 5, pp. 22-30.
- Richardson, H. L. (1993), "Why Use Third Parties?" *Transportation & Distribution*, January, pp. 29-31.
- Rietjens, S. J. H.; H. Voordijk & S. J. De Boer (2007), "Coordinating Humanitarian Operations in Peace Support Missions", *Disaster Prevention and Management*, 16, pp. 56-69.
- Ross, J. W.; C. M. Beath & D. L. Goodhue (1996), "Develop Long-Term Competitiveness through IT Assets", *Sloan Management Review*, Vol. 38 Issue 1, pp. 31-42.
- Saabeel, W.; T. M. Verfuijin; L. Hagdorn & K. Kumar (2002), "A Model of Virtual Organizations: A Structure and Process Perspective", *Virtual-Organisation.net Newsletter*, Vol. 4 Issue 1, pp. 1-17.

- Sabel, C.; G. Herrigel; R. Kazis & R. Deeg (1987), "How to Keep Mature Industries Innovative", *Technology Review*, Vol. 90 Issue 3, pp. 26-35.
- Samii, R. (2006) "Capital Markets or Alms? An Emerging Paradigm Shift in Disaster Funding", INSEAD Teaching Note 11/2006-5408.
- Samii, R.; L. N. Van Wassenhove & S. Bhattacharya (2002), "An Innovative Public-Private Partnership: New Approach to Development", *World Development*, Vol. 30 Issue 6, pp. 991-1088.
- Samii, R.; L. N. Van Wassenhove; K. Kumar & I. Becerra-Fernandez (2002a), "International Federation of the Red Cross and Red Crescent (IFRC): Choreographer of Disaster Management: The Gujarat Earthquake", INSEAD case study 06/2002-5032.
- Samii, R.; L. N. Van Wassenhove (2002b), "International Federation of the Red Cross and Red Crescent (IFRC): Choreographer of Disaster Management: The Gujarat Earthquake", INSEAD Teaching Note 06/2002-5032.
- Samii, R.; L. N. Van Wassenhove; K. Kumar & I. Becerra-Fernandez (2002c), "IFRC: Preparing for Tomorrow's Disasters", INSEAD case study 06/2002-5039.
- Samii, R.; L. N. Van Wassenhove (2002d), "IFRC: Preparing for Tomorrow's Disasters", INSEAD Teaching Note 06/2002-5039.
- Samii, R. & L. N. Van Wassenhove (2003a), "UNJLC: The Genesis of a Humanitarian Relief Coordination Platform", INSEAD case study 04/2003-5093.
- Samii, R. & L. N. Van Wassenhove (2003b), "UNJLC: The Afghanistan Crisis", INSEAD case study 05/2003 – 5092.
- Samii, R. & L. N. Van Wassenhove (2003c), "Logistics Moving the Seeds of a Brighter Future (UNJLC's Second Year in Afghanistan)", INSEAD case study 09/2003-5135.
- Samii, R. & L. N. Van Wassenhove (2004a) "UNJLC: An Operational and Conceptual Inter-Agency Logistics Platform", INSEAD case study 05/2004-5213.
- Samii, R. & L. N. Van Wassenhove (2004b), "The TPG-WFP Partnership: Learning How to Dance", INSEAD case study 06/2004-5194.
- Samii, R. & L. N. Van Wassenhove (2006), "Capital Markets or Alms? An Emerging Paradigm Shift in Disaster Funding", INSEAD case study 11/2006-5408.

BIBLIOGRAPHY

- Scholz, C. (1994), "Die virtuelle Organisation als Strukturkonzept der Zukunft?" [The Virtual Organization as a Structure Concept of The Future?], *Arbeitsbericht Nr. 30 September. Lehrstuhls für Betriebswirtschaftslehre, insbesondere organisation, Personal- und Informationsmanagement an der Universität des Saarlandes, Saarbrücken, Germany.*
- Scholz, C. (1996), "Virtuelle Organisation: Konzeption und Realisation" [Virtual Organization: Conception and Realization], *ZFO Zeitschrift für Organisation*, Vol. 65 Issue 4, pp. 204-210.
- Scott, J. E. (2000), "Facilitating Inter-organizational Learning with Information Technology", *Journal of Management Information Systems*, Vol. 17 Issue 2, pp. 81-113.
- Sheffi, Y. (1990), "Third Party Logistics: Present and Future Prospects", *Journal of Business Logistics*, Vol. 11 Issue 2, pp. 27-39.
- Shi, Y. & M. Gregory (2005), "Emergence of Global Manufacturing Virtual Networks and Establishment of New Manufacturing Infrastructure for Faster Innovation and Firm Growth", *Production Planning and Control*, Vol. 16, No.6, pp. 621-631.
- Simchi-Levi, D.; P. Kaminsky & E. Simchi-Levi (2000), *Designing and Managing the Supply Chain: Concepts, Strategies, and Case Studies*, Irwin McGraw-Hill, New York.
- Simon, F. L. (1995), "Global Corporate Philanthropy: A Strategic Framework", *International Marketing Review*, Vol. 12 Issue 4, pp. 20-37.
- Smith, N. C. (2003), "Corporate Social Responsibility: Whether or How?" *California Management Review*, Vol. 45 Issue 4, pp. 52-76.
- Snow, C. S.; R. E. Miles & H. J. Coleman (1992), "Managing 21st Century Network Organizations", *Organizational Dynamics*, Vol. 20, pp. 5-16.
- Speckbacher, G. (2003), "The Economics of Performance Management in Non-profit Organizations", *Non-Profit Management and Leadership*, Vol. 13, No. 3, pp. 267-281.
- Stephenson Jr., M. (2004), "Making Humanitarian Relief Networks More Effective: Exploring the Relationships Among Coordination, Trust and Sense Making", Paper prepared for Delivery at the National Conference of the Association for Research on Non-Profit Organizations and Voluntary Action (ARNOVA). Los Angeles, California.
- Stephenson Jr. M. & Schnitzer (2006), "Inter-organizational Trust, Boundary Spanning, and Humanitarian Relief Coordination," *Non-Profit Management & Leadership*, Vol. 17, No.2, pp. 211-233.

LEVERAGING LOGISTICS PARTNERSHIPS: LESSONS FROM HUMANITARIAN ORGANIZATION

- Stevenson, H. H. (1976), "Defining Corporate Strengths and Weaknesses," *Sloan Management Review*, Spring, pp. 51-68
- Surana, A.; S. Kumara; M. Greaves & U. N. Raffhavan (2005), "Supply Chain Networks: A Complex Adaptive Systems Perspective", *International Journal of Production Research*, Vol. 43, No. 20, pp. 4235-4265.
- TNT (2005), "Tsunami Support", TNT Website.
- Tomasini, R. M. & L. N. Van Wassenhove (2004a), "The TPG-WFP Partnership: Looking for a Partner", INSEAD case study 06/2004-5187.
- Tomasini, R. M. & L. N. Van Wassenhove (2004b), "A Framework to Unravel, Prioritize and Coordinate Vulnerability and Complexity Factors Affecting a Humanitarian Response Operations", *Working Paper No. 2004/41/TM*. INSEAD, Fontainebleau, France.
- Thomas, A. (2003), "Fritz Institute: Leveraging Private Expertise for Humanitarian Supply Chains", *Forced Migration Review*, Issue 21, pp. 64-65.
- Thomas, A. & L. Fritz (2006), "Disaster Relief", *Harvard Business Review*, Vol. 84 Issue 11, pp. 114-122.
- Turnick, P.A. (2005), "Fading into a Bad Dream", *Logistics Today*; Vol. 46 Issue 10, p1-3.
- UNHCR (2008), *UNHCR Global Report 2007*, Geneva, Switzerland: UNHCR.
- UNICEF (2007), *UNICEF Annual Report 2006*, New York, USA: UNICEF.
- Upton, D. M. & A. McAfee (1996), "The Real Virtual Factory", *Harvard Business Review*, Vol. 74 Issue 4, pp. 123-133.
- Uzzi, B. (1997), "Social Structure and Competition in Inter-firm Networks: The Paradox of Embeddedness", *Administrative Science Quarterly*, Vol. 42 Issue 1, pp. 35-67.
- Van der Laan, E.; M.P. de Brito & S. Vermaesen (2007), "Logistics Information and Knowledge Management Issues in Humanitarian Aid Organisations" proceedings of the SIMPOI/POMS conference, Brazil, August 8-10.
- Van Hoek, R.I; R. Chatham & R. Wilding (2002), "Managers in Supply Chain Management the Critical Dimension", *Supply Chain Management: An International Journal*, Vol. 7, No.3, pp. 119-125.

BIBLIOGRAPHY

- Van Oyen, M. P.; E. G. S. Gel & W. J. Hopp (2001), "Performance Opportunity for Workforce Agility in Collaborative and Non-Collaborative Work Systems", *IIE Transactions*, Vol. 33 Issue 9, pp. 761-777.
- Van Wassenhove, L.N. (2006) "Humanitarian Aid Logistics: Supply Chain Management in High Gear", *Journal of the Operational Research Society*, 57, pp. 475-489.
- Venkatraman, N. & J. C. Henderson (1998), "Real Strategies for Virtual Organizing", *Sloan Management Review*, Vol. 40 Issue 1, pp. 33-48.
- Waddock, S. & N. Smith (2000), "Corporate Responsibility Audits: Doing Well by Doing Good", *Sloan Management Review*, Vol. 41 Issue 2, pp. 75-83.
- Wade, M. & J. Hulland (2004), "The Resource-Based View and Information Systems Research: Review, Extension, and Suggestions for Future Research", *MIS Quarterly*, Vol. 28 Issue 1, pp. 107-142.
- Walker, G.; Kogut, B., & Shan, W. (1997), "Social Capital, Structural Holes And The Formation Of An Industry Network", *Organization Science*, Issue 8, pp. 109–125.
- Weick, K. E. (1982), "Management of Organizational Change Away Loosely Coupled Elements". In *Change in Organizations*, edited by P.S.E. A. Goodman, pp. 375-408. Jossey Bass: San Francisco.
- Wernerfelt, B. (1984), "A Resource Based View of the Firm", *Strategic Management Journal*, Vol. 5, pp. 171-180.
- West III, G. P. & J. DeCastro (2001), "The Achilles Heel of Firm Strategy: Resource Weakness and Distinctive Inadequacies", *Journal of Management Studies*, Vol. 38 Issue 3, pp. 417-442.
- Wicher, H. (1996), "Virtuelle Organisationen" [Virtual Organizations]. *WiSt Wirtschaftswissenschaftliches Studium*, Vol. 25 Issue 6, pp. 541-542.
- Williamson, O. E. (1985), *The Economic Institutions of Capitalism*. New York: Free Press.
- World Food Programme (2004), "New Partnerships to Meet Rising Needs – Expanding the WFP Donor Base", *WFP/EB.3/2004/4-C*.
- World Food Programme (2007), "Summary of the Work of the First Regular Session of the Executive Board, 2007", *WFP/EB.1/2007/16*.
- World Food Programme (2008), *WFP Annual Report 2007*, WFP: Rome, Italy.
- World Vision International (2008), *World Vision International 2007 Review, Hope for the Most Vulnerable*.

- Wright, P. M.; G. C. McMahan & A. McWilliams (1994), "Human Resources and Sustained Competitive Advantage: A Resource-Based Perspective", *International Journal of Human Resource Management*, Vol. 5 Issue 2, pp. 301-326.
- Yin, R. K. (2003), *Case Study Research: Design & Methods* (Third Edition), Thousand Oaks (CA): Sage.
- Zaheer, A. B. McEvily & V. Perrone (1998), "The Strategic Value of Buyer-Supplier Relationships," *International Journal of Purchasing and Materials Management*, Vol. 3, No. 3, pp. 20-26.

Websites:

www.reliefweb.int.fts
www.fritzinstitute.org
www.wfp.org
www.unjlc.org
www.tnt.org

SUMMARY IN ENGLISH

The supply chain management literature, although extensive, has focused almost exclusively on commercial operations. Little research has been conducted on humanitarian supply chains. An understanding of humanitarian supply chains is important given the increasing number of disasters and their impact on the livelihood of millions of people each year. By drawing and building upon four streams of literature – network theory, coordination theory, the resource-based view of the firm and social capital theory – as well as the case study methodology, this thesis aims to fill this gap.

To master disaster management and ensure the arrival of the right goods as fast as possible to the disaster areas, humanitarian organizations have to excel in disaster preparedness and response. To tackle preparedness and response challenges related to their supply chains, this thesis advances that humanitarian organizations rely on a range of partnership arrangements.

In terms of response, in order to bridge their resource and capability gap, humanitarian organizations call upon the contribution and resources of their response network. Seven actors compose a humanitarian response network. These actors are the media, donors, receiving government(s), military, neighboring governments, suppliers and implementing partners.

SUMMARY IN ENGLISH

Humanitarian organizations respond to an increasing number of unpredictable and competing large scale disasters often in less developed countries of the world where the infrastructure is limited, depilated or destroyed. To pre-empt a range of potential failure modes, humanitarian organizations first resort to a series of agency-specific measures. To deal with a range of common and recurrent disaster-specific logistics dependencies and in order to avoid duplications, the humanitarian community resorts to a logistics coordination platform. To improve the performance of operational humanitarian organizations, through a number of coordination mechanisms, the logistics coordination platform ensures inter- and extra-organizational coordination.

The third type of partnership sought by humanitarian organizations with impact on disaster management is that with civil society organizations (CSOs) and the private sector. CSOs and business can contribute with their resources during disaster response. Moreover, humanitarian organizations have limited resources to invest in the strengthening of their organizations. Business and CSOs with their specialized resources can enhance the resources and capabilities of humanitarian organizations.

This thesis identifies four different business/CSO-humanitarian partnership possibilities: strategic, cross-cutting, localized and brokered. It then highlights their different risk-to-benefit profile. Strategic partnerships have short and long-term impact on a humanitarian organization's financial resources, performance and staff morale. There is a need for humanitarian organizations engaged in these types of partnerships to protect their reputation and brand image and be aware of their level of engagement and reliance on corporations given their unstable, uncertain nature. To make sure that private contributions are not viewed as a substitute for traditional funding, it is recommended that humanitarian organizations seek the approval of their donors. This research also underscores that not all humanitarian organizations can benefit from strategic partnerships. What will determine their possibility of engaging in such partnerships is their level of absorptive capacity and their ability to come up with the upfront investment required for the successful implementation of such partnerships.

To guide business and humanitarian organizations interested in strategic partnerships, this thesis proposes a partnership checklist. Among other things, it argues in favor of well-motivated partnerships driven by pre-identified objectives and linked to the core

competencies and values of the corporation. It stresses the importance of pursuing a medium to a long-term partnership without losing sight of its implementation implications.

Our research suggests that disaster response is deeply embedded in networks and in the structure of network relations. We identify both forms of social capital, bonding and bridging, as drivers behind the participation of different actors to humanitarian disasters. We argue that bonding social capital among humanitarian organizations contributes to successful inter-organizational coordination. Bridging social capital helps enhance resources and capabilities at the organizational level and resolve dependencies and avoid duplications at the community level. Since we identify the ability of humanitarian organizations to build and exploit social capital as the differentiating factor in their performance, we derive two recommendations. First, humanitarian organizations, directly and through their logistics coordination platform, should devote time and effort to build and strengthen the level of social capital among them in-between and during disasters. Second, in order to enhance their resource and capabilities, humanitarian organizations should build long-term relationships with parties committed to the humanitarian cause in possession of core competencies that match their requirements.

The thesis holds some lessons for humanitarian organizations. By differentiating between unpredictable and predictable disasters, it argues that humanitarian organizations should pursue and excel in two distinct strategies: efficient and agile supply chains. More specifically, for predictable disasters humanitarian organizations should manage efficient supply chains. For unpredictable disasters, humanitarian supply chains need to be agile, that is, responsive to demand and hedged against any supply shortages. It also argues that humanitarian organizations can improve their supply chain management capabilities by learning from the errors and successes of business, adopting adequate supply chain solutions and making a more extensive use of IT.

This thesis argues that humanitarian organizations manage global, multiple, temporary and dynamic supply chains. In terms of supply chain strategies, we have observed that during unpredictable disasters, in order to mobilize and transport relief items, humanitarian organizations need to construct broad and loose emergency supply networks. This is

SUMMARY IN ENGLISH

explained by the fact that a broad network of multiple and geographically dispersed, interchangeable and complementary suppliers renders the emergency supply chain more resilient to failure modes impacting performance.

Humanitarian organizations mount and manage non-routine supply chains while commercial supply chains are designed for repetitious, routine operations. It follows that business calls upon supply chain mitigation measures in extraordinary circumstances. In light of the above, it is argued that structured cooperation between firms as well as those between firms and key stakeholders such as government authorities can assist business overcome infrastructural deficiencies and emergencies. More specifically, they can assist firms i) overcome an infrastructure gap, ii) contrast temporary logistics failure modes caused by natural and man-made disasters and iii) engage in a constructive dialogue with government agencies in control of public goods.

Indeed, apart from achieving inter-firm coordination, an institutionalized emergency response coordination platform established by industry leaders can be an effective response mechanism to eventual disruptive government actions. It can also be useful for those one-off supply chain initiatives with permanent impact on the global supply chains that require the coordinated and active participation of industries, governments and local authorities for their design and implementation.

Our investigation on how humanitarian organizations operationalize their logistics coordination platform - the UNJLC - has led to new observations on virtual organizing. Indeed, the humanitarian community's experience has provided empirical evidence for the emergence and management of logistics virtual organizations.

In terms of application of the virtual organizing concept, the experience of the humanitarian community demonstrates that virtual organizing can be a winning strategy for commercial supply chain management during disasters. Apart from facilitating the exploitation of specific business opportunities, a virtually organized coordination structure can help address the challenges of large scale, exceptional events. It is argued that virtual organizing is effective in time sensitive environments that depend on the contribution of numerous organizations and government authorities since they enable a good response and access to resources available in the community.

In terms of design feature, the humanitarian experience highlights the need for a small permanent structure in a virtual organization. It discusses the advantages and disadvantages of nesting this structure within the setup of a virtual web member. In terms of the profile of the most eligible organization, it underscores the importance of nesting the permanent structure in a financially and technically strong and credible organization capable of addressing issues related to the management and support infrastructure vacuum. The analysis of the UNJLC deployments highlights the possibility of quickly activating and demobilizing a series of temporary and interlinked antenna offices during the project cycle. Such offices allow for the provision of services close to the market as well as adaptation of said services to the changing and unexpected needs of the environment and clients. In other words, they would increase the potentials of the virtual organization to achieve its primary objective and would be valid mitigation measures against supply chain failures.

This thesis advances that for the virtual organizing concept to realize its potential, trust needs to prevail among its member and the concept should have a clearly defined mission. For cooperation to take place, the members have to set the direction. In this regard, the quality of communication and leadership is fundamental. To ensure the achievement of the set objective, identification problems associated to virtual organizing have to be overcome. At the operational level, it stresses the importance of timely allocation of the right quality and quantity of resources, the delivery of demand-driven services, the existence of comprehensive reference business processes and a reliable support infrastructure such as IT services.

In terms of drawbacks, the very advantages of virtual organizing – flat organizations, temporary and dispersed units – are identified as the source of potential drawbacks. The challenges and opportunities facing the implementation of virtual organizing are also discussed. Challenges are mainly related to the novelty and the very nature of the concept - dynamic and temporary non-organizations. Decisions regarding the physical location of the various components of the virtual organization result in a series of managerial and control-related consequences. Lack of resources, undue dependence, irrelevant services, misapplication, and mission creep are the other major risks facing the success of concept.

SUMMARY IN ENGLISH

Logistics capabilities developed by virtual corporations can result in new market opportunities or, if pursued, in temporary mission creep. The humanitarian experience highlights the need to plan for an eventual transfer of services provided by the virtual corporation still in demand to existing setups. It argues that there is scope for the establishment of a dedicated structure that can assist governments and donors on a temporary basis during emergencies and their immediate aftermath. It is recommended for the structure to be part of the UN's effort in the recovery phase and as such be funded by the donor community.

In conclusion, this thesis argues that complex and large scale emergencies, time pressure, demand and supply uncertainty, resources and capability gaps, logistics failure modes, and the need to include smaller humanitarian organizations are positively related to the formation of humanitarian partnerships. It advances that well-designed and implemented partnerships boost the operations of individual humanitarian organizations on two fronts: disaster response and disaster preparedness. In terms of disaster response, partnerships allow humanitarian organizations to be more flexible and provide relief items to affected populations in faster, more accurately, and cost-effectively. As for disaster preparedness, they enable them to better meet the strategic, operational and organizational challenges of the future.

SUMMARY IN DUTCH

De *supply chain management* literatuur is zeer uitgebreid, maar richt zich bijna exclusief op commerciële operaties. Weinig onderzoek is gedaan naar humanitaire supply chains. Een begrip van humanitaire supply chains is belangrijk, gezien het toenemende aantal rampen en noodsituaties en hun impact op de leefomstandigheden van miljoenen mensen elk jaar. Gebruikmakend en bouwend op vier stromen van literatuur – netwerk theorie, coördinatie theorie, *resource-based view of the firm*, en *social capital* theorie – naast *case study* methodologie, richt deze dissertatie zich op het vullen van deze leemte.

Om rampmanagement te beheersen en om te garanderen dat goederen zo snel mogelijk aankomen in het noodgebied, moeten humanitaire organisaties excelleren in het voorbereid zijn (*preparedness*) en het nemen van actie (*respons*). Deze dissertatie betoogt dat humanitaire organisaties steunen op een variëteit van partnerschappen om de hindernissen met betrekking tot *preparedness* en *response* het hoofd te bieden.

Om de ruimte tussen benodigde en voorhanden middelen en capaciteiten te overbruggen doen humanitaire organisaties een beroep op hun *respons* netwerk. Een *respons* netwerk bestaat uit zeven actoren: de media, donoren, ontvangende overheden, het leger, aangrenzende overheden, toeleveranciers en uitvoerende partners.

Humanitaire organisaties moeten actie ondernemen voor een groeiend aantal onvoorspelbare en onderling concurrerende rampen van grote omvang, vaak in minder ontwikkelde landen waar de infrastructuur beperkt of verwoest is. Om mogelijke manieren van falen (*faalmodi*) te voorkomen verlaten humanitaire organisaties zich eerst op een

aantal instellingspecifieke maatregelen. De humanitaire gemeenschap leunt op een logistiek coördinatie platform, zodat kan worden omgegaan met een aantal veel voorkomende, ramp specifieke logistieke afhankelijkheden en duplicaties kunnen worden vermeden. Om de prestaties van humanitaire organisaties te verbeteren garandeert het logistiek coördinatie platform inter- en extraorganisatorische coördinatie door middel van een aantal coördinatie mechanismen.

Een derde type partnerschap dat wordt aangegaan door humanitaire organisaties is die tussen *civil society organizations* (CSOs) en de private sector. CSOs en commerciële bedrijven kunnen met hun middelen bijdragen aan rampbestrijding. Bovendien kunnen ze de middelen en capaciteiten van humanitaire organisaties verbeteren.

Deze dissertatie identificeert vier verschillende commerciële/CSO-humanitaire partnerschapsmogelijkheden: strategisch, *cross-cutting*, *localized* en *brokered*. Vervolgens worden de bijbehorende *risk-to-benefit* profielen belicht. Strategische partnerschappen hebben een korte en lange termijn impact op de financiële middelen, performance en werkmoraal van humanitaire organisaties. Het is daarom belangrijk voor deze organisaties om hun reputatie en imago te beschermen en zich ervan bewust te zijn hoe intensief het samenwerkingsverband en de afhankelijkheidsrelatie is, gegeven hun onstabiele en onzekere natuur. Om zeker te zijn dat private bijdragen geen substituut zijn voor traditionele fondsgelden is het aan te raden om goedkeuring te vragen aan donoren. Het onderzoek geeft ook aan dat niet alle humanitaire organisaties kunnen profiteren van een strategisch partnerschap. Belangrijke determinanten hierin zijn het absorptief vermogen en het vermogen om investeringen vooraf te doen die noodzakelijk zijn voor succesvolle implementatie van dergelijke partnerschappen.

Om bedrijven en humanitaire organisaties die geïnteresseerd zijn in een strategisch partnerschap te begeleiden wordt in deze dissertatie een checklist geboden. Het verdient aanbeveling om te streven naar een goed gemotiveerd partnerschap, gedreven door vantevoren bepaalde doelstellingen die verbonden zijn met de waarden en kerncompetenties van de betrokken organisaties. Benadrukt wordt het belang om de implicaties voor implementatie hierbij niet uit het oog te verliezen.

Het onderzoek suggereert dat rampbestrijding diep in netwerken en de structuur van netwerk relaties is geworteld. Geïdentificeerd worden beide vormen van sociaal kapitaal,

bonding en *bridging*, als drijfveren achter de participatie van verschillende actoren bij humanitaire rampen. Beargumenteerd wordt dat *bonding* van sociaal kapitaal tussen humanitaire organisaties bijdraagt aan succesvolle inter-organisatorische coördinatie. *Bridging* van sociaal kapitaal draagt bij aan het verbeteren van beschikbare middelen en capaciteiten op organisatorisch niveau, het oplossen van wederzijdse afhankelijkheden en het vermijden van duplicaties op gemeenschapsniveau. Aangezien we de bekwaamheid van humanitaire organisaties om sociaal kapitaal te ontwikkelen en te gebruiken identificeren als een factor die het verschil kan maken als het gaat om prestaties, komen we tot twee aanbevelingen. Ten eerste zouden humanitaire organisaties tijd en moeite moeten besteden aan het opbouwen en versterken van onderling sociaal kapitaal, zowel direct als via het coördinatie platform, zowel tijdens als tussen noodsituaties. Ten tweede, om hun middelen en capaciteiten te verbeteren, zouden humanitaire organisaties lange termijn relaties moeten opbouwen met partijen die geëngageerd zijn aan de humanitaire zaak en die in het bezit zijn van kerncompetenties die aansluiten bij hun behoefte.

Deze dissertatie herbergt enige lessen voor humanitaire organisaties. Onderscheid makend tussen voorspelbare en onvoorspelbare noodsituaties, zouden humanitaire organisaties twee verschillende strategieën moeten nastreven. Voor voorspelbare noodsituaties moeten humanitaire organisaties efficiënte supply chains managen. Voor onvoorspelbare noodsituaties moeten supply chains behendig ('*agile*') zijn, wat betekent dat snel kan worden gereageerd op vraag en dat men beschermd is tegen toeleveringstekorten. Humanitaire organisaties kunnen hun supply chain management capaciteiten verbeteren aan de hand van de fouten en successen van het bedrijfsleven door het adopteren van adequate supply chain oplossingen en door extensiever gebruik van IT.

We beargumenteren dat humanitaire organisaties globale, meervoudige, tijdelijke en dynamische supply chains managen. In termen van supply chain strategieën hebben we gezien dat gedurende onvoorspelbare rampen humanitaire organisaties brede en losse noodhulp supply chains moeten opbouwen om hulpgoederen te mobiliseren en te transporteren. Dit kan worden verklaard doordat een breed netwerk van meerdere en geografisch verspreide, uitwisselbare en complementaire toeleveranciers de noodhulp supply chains meer weerbaar maken tegen faalmodi die de prestatie beïnvloeden.

SUMMARY IN DUTCH

Humanitaire organisaties organiseren en besturen non-routine supply chains, terwijl commerciële supply chains zijn ontworpen voor repetitieve routine activiteiten. Het volgt dat het bedrijfsleven vraagt om maatregelen om de supply chain te verbeteren in buitengewone omstandigheden. In dit licht bepleiten we dat gestructureerde samenwerking tussen zowel bedrijven onderling als ook tussen bedrijven en andere belangengroepen, zoals overheden, bedrijven kunnen helpen om 1) hiaten in infrastructuur te overbruggen en ii) een constructieve dialoog aan te gaan met overheidsinstanties die publieke goederen beheren.

Sterker nog, los van het behalen van coördinatie tussen bedrijven, een geïnstitutionaliseerd coördinatie platform voor hulpactie gevestigd door industrieleiders kan een effectief responsmechanisme zijn tegen mogelijke ontwrichtende overheidsacties. Het kan ook bruikbaar zijn in eenmalige supply chain initiatieven met een blijvende impact op globale supply chains, welke een gecoördineerde en actieve participatie van industrieën, overheden en lokale autoriteiten nodig hebben voor hun ontwerp en implementatie.

Ons onderzoek naar de manier waarop humanitaire organisaties hun logistieke coördinatie platform – het UNJLC - operationaliseren heeft geleid tot nieuwe observaties met betrekking tot virtuele organisaties. De ervaringen van de humanitaire gemeenschap bieden empirisch bewijsmateriaal voor de opkomst van virtuele logistieke organisaties en hun management.

De ervaringen van de humanitaire gemeenschap laten zien dat virtueel organiseren een winnende strategie kan zijn voor commerciële supply chains gedurende een ramp. Naast het faciliteren van de exploitatie van specifieke business opportuniteiten kan een virtueel georganiseerde coördinatie structuur helpen om de uitdagingen van uitzonderlijke gebeurtenissen van grote schaal aan te pakken. Beargumenteerd wordt dat virtueel organiseren effectief is in tijdsgevoelige omgevingen die afhankelijk zijn van de bijdrage van vele organisaties en overheidsinstanties, omdat ze een goede respons mogelijk maken en toegang tot middelen die beschikbaar zijn in de gemeenschap.

In termen van ontwerp benadrukken de humanitaire ervaringen de behoefte aan een kleine permanente structuur in een virtuele organisatie. We bespreken de voor- en nadelen van het inbedden van deze structuur in een van de virtuele leden. Het is belangrijk dat dit lid een financieel en technisch sterke en geloofwaardige organisatie is die de capaciteit heeft

om kwesties gerelateerd aan het vacuüm in de management- en ondersteuningsinfrastructuur aan te pakken.

Een analyse van de activiteiten van het UNJLC geeft aan dat het mogelijk is om snel een serie van tijdelijke antenne-kantoren op te zetten en weer ongedaan te maken gedurende de project cyclus. Zulke kantoren maken het mogelijk om diensten dicht bij de markt aan te bieden en ook die diensten indien nodig aan te passen aan veranderende of onverwachte behoeften van de omgeving en klanten. In andere woorden, zij zouden het potentieel vergroten van de virtuele organisatie om haar primaire doelstelling te behalen en zij zouden valide hulpmaatregelen bieden tegen het falen van de supply chain.

Om het potentieel van het virtuele organisatie concept volledig te benutten stelt deze dissertatie dat er voldoende vertrouwen moet zijn tussen haar leden en dat het concept een duidelijk gedefinieerde missie moet hebben. Om samenwerking te bewerkstelligen moeten de leden samen de richting aangeven. In dit licht is kwaliteit van communicatie en leiderschap van essentieel belang. Om de gestelde doelstelling te bewerkstelligen dienen de identificatie problemen die worden geassocieerd met virtueel organiseren te worden opgelost.

Op operationeel niveau is het belangrijk om de middelen op tijd en in de juiste hoeveelheid en kwaliteit te distribueren, om vraaggestuurde diensten af te leveren, en om een brede referentielijst met bedrijfsprocesses en een betrouwbare ondersteuningsinfrastructuur te hebben.

Juist de voordelen van virtuele corporaties – platte organisaties, tijdelijke en verspreide eenheden – worden geïdentificeerd als bron van potentiële schaduwzijden. De uitdagingen en kansen die de implementatie van virtuele organisaties met zich meebrengen worden ook besproken. Uitdagingen zijn voornamelijk gerelateerd aan de nieuwigheid van het concept en haar natuur zelf – dynamische en tijdelijke non-organisaties. Beslissingen met betrekking tot de fysieke locatie van de verschillende componenten van de virtuele organisatie resulteren in een aantal bestuurlijke en beheersmatige consequenties. Een gebrek aan middelen, ongepaste afhankelijkheid, irrelevante diensten, verkeerde toepassing en ongewenste uitbreiding van het project buiten de originele doelstelling (*'mission creep'*) zijn de andere risico's die het succes van het concept bedreigen.

Logistieke capaciteiten ontwikkeld door virtuele corporaties kunnen resulteren in nieuwe markt kansen of, indien gewenst, in tijdelijke mission creep. De humanitaire ervaringen benadrukken de behoefte om vooruit te plannen met betrekking tot een uiteindelijke verplaatsing van diensten die worden aangeboden door de virtuele corporatie en nog steeds worden gevraagd door bestaande structuren. Er is gelegenheid voor het opzetten van een toegeweide structuur die overheden en donoren tijdelijk kan assisteren gedurende rampen en hun directe gevolgen. Het wordt aanbevolen dat die structuur onderdeel is van de VN inspanningen in de herstellingsfase en als zodanig wordt gefinancierd door de donorgemeenschap.

Concluderend kunnen we zeggen dat complexe en grootschalige noodsituaties, tijdsdruk, onzekerheid in vraag en aanbod, tekorten in middelen en capaciteiten, logistieke faalmodi en de behoefte aan kleinere humanitaire organisaties positief zijn gecorreleerd met de opzet van humanitaire partnerschappen. We stellen dat goed ontworpen en geïmplementeerde partnerschappen de activiteiten van humanitaire organisaties op twee vlakken versterken: respons en preparedness. In termen van respons zorgen partnerschappen ervoor dat humanitaire organisaties meer flexibel zijn en hulpgoederen sneller, nauwkeuriger en meer kostenefficiënt kunnen aanbieden. Met betrekking tot preparedness stellen ze humanitaire organisaties in staat om de strategische, operationele en organisatorische uitdagingen van de toekomst het hoofd te bieden.

ABSTRACT IN ITALIAN

Far leva su partenariati logistici. Lezioni dalle organizzazioni umanitarie.

Questa tesi affronta un argomento non ancora sufficientemente esplorato: organizzazioni umanitarie e loro catene di fornitura. Le organizzazioni umanitarie rispondono alle esigenze primarie delle popolazioni soggette a tragiche catastrofi umane e naturali. Visto il contesto difficile nel quale operano le organizzazioni umanitarie, questa tesi in primo luogo analizza i fattori che contribuiscono all'efficienza e all'efficacia della loro assistenza, per identificare successivamente le strategie e le strutture organizzative che devono adottare per rispondere alla crescente sfida di un'efficace assistenza a più persone con minori risorse. Nella tesi si argomenta che le organizzazioni umanitarie per eccellere nella preparazione e risposta ad un disastro, inter alia, devono stabilire almeno tre forme di partenariato - reti provvisorie di fornitura, una piattaforma per la coordinazione logistica, e una serie di partenariati con settore privato e società civile – costruendo e rafforzando allo stesso tempo un certo numero di competenze. La risorsa intangibile che abilmente utilizzata aumenta l'occasione e le capacità di una organizzazione umanitaria di agire meglio è il suo capitale sociale con i partners coinvolti in questi partenariati. In termini di lezioni per il settore privato, questa tesi verifica l'attinenza ed i benefici di strutture di partenariato umanitarie per le catene di fornitura di tipo commerciale in specifici scenari. In più, oltre ad indicare lezioni per le stesse organizzazioni umanitarie, questa tesi contribuisce alla letteratura relativa alle organizzazioni virtuali e fornisce evidenza empirica per la creazione e la gestione di organizzazioni virtuali logistiche.

CURRICULUM VITAE



Photo by: R. Wintersteiner

Ramina Samii was born on 13 June, 1966 in Teheran, Iran. In 1983 she obtained her International Baccalaureate at St. Stephen's School in Rome, Italy. The same year she enrolled at the University of Rome, "La Sapienza", where she obtained her Laurea degree in Economics and Business Administration in 1989.

After some consulting assignments with the UN's Food and Agriculture Organization, in 1992, she joined the United Nations Industrial Development Organization's (UNIDO) Investment Promotion Office in Milan, Italy. In 1995, she moved to UNIDO headquarters in Vienna, Austria, and was part of the team that designed and launched the first UN public-private partnership tested in the context of the Indian automotive component sector.

She joined INSEAD in September 2000 as research associate. During her time at INSEAD, she conducted research on public-private partnerships and supply chain management with particular emphasize on humanitarian logistics. Her research resulted in the publication of articles in academic and practitioner journals as well as numerous INSEAD case studies. The research reported in this thesis was initiated at INSEAD and pursued thereafter.

Since end 2002, Ramina is part of the private sector team of the OPEC Fund for International Development (OFID), a development financial institution based in Vienna, Austria, that provides grants and extends financial support to the public and private sector of developing countries.

Erasmus Research Institute of Management (ERIM)

***ERIM Ph.D. Series
Research in Management***

ERIM Electronic Series Portal: <http://hdl.handle.net/1765/1>

Althuizen, N.A.P., *Analogical Reasoning as a Decision Support Principle for Weakly Structured Marketing Problems*, Promotor: Prof. dr. ir. B. Wierenga, EPS-2006-095-MKT, ISBN: 90-5892-129-8, <http://hdl.handle.net/1765/8190>

Alvarez, H.L., *Distributed Collaborative Learning Communities Enabled by Information Communication Technology*, Promotor: Prof. dr. K. Kumar, EPS-2006-080-LIS, ISBN: 90-5892-112-3, <http://hdl.handle.net/1765/7830>

Appelman, J.H., *Governance of Global Interorganizational Tourism Networks: Changing Forms of Co-ordination between the Travel Agency and Aviation Sector*, Promotors: Prof. dr. F.M. Go & Prof. dr. B. Nooteboom, EPS-2004-036-MKT, ISBN: 90-5892-060-7, <http://hdl.handle.net/1765/1199>

Baquero, G., *On Hedge Fund Performance, Capital Flows and Investor Psychology*, Promotor: Prof. dr. M.J.C.M. Verbeek, EPS-2006-094-F&A, ISBN: 90-5892-131-X, <http://hdl.handle.net/1765/8192>

Berens, G., *Corporate Branding: The Development of Corporate Associations and their Influence on Stakeholder Reactions*, Promotor: Prof. dr. C.B.M. van Riel, EPS-2004-039-ORG, ISBN: 90-5892-065-8, <http://hdl.handle.net/1765/1273>

Berghe, D.A.F. van den, *Working Across Borders: Multinational Enterprises and the Internationalization of Employment*, Promotors: Prof. dr. R.J.M. van Tulder & Prof. dr. E.J.J. Schenk, EPS-2003-029-ORG, ISBN: 90-5892-05-34, <http://hdl.handle.net/1765/1041>

Berghman, L.A., *Strategic Innovation Capacity: A Mixed Method Study on Deliberate Strategic Learning Mechanisms*, Promotor: Prof. dr. P. Mattyssens, EPS-2006-087-MKT, ISBN: 90-5892-120-4, <http://hdl.handle.net/1765/7991>

Bijman, W.J.J., *Essays on Agricultural Co-operatives: Governance Structure in Fruit and Vegetable Chains*, Promotor: Prof. dr. G.W.J. Hendrikse, EPS-2002-015-ORG, ISBN: 90-5892-024-0, <http://hdl.handle.net/1765/867>

Bispo, A., *Labour Market Segmentation: An investigation into the Dutch hospitality industry*, Promotors: Prof. dr. G.H.M. Evers & Prof. dr. A.R. Thurik, EPS-2007-108-ORG, ISBN: 90-5892-136-9, <http://hdl.handle.net/1765/10283>

Blindenbach-Driessen, F., *Innovation Management in Project-Based Firms*, Promotor: Prof. dr. S.L. van de Velde, EPS-2006-082-LIS, ISBN: 90-5892-110-7, <http://hdl.handle.net/1765/7828>

Boer, C.A., *Distributed Simulation in Industry*, Promotors: Prof. dr. A. de Bruin & Prof. dr. ir. A. Verbraeck, EPS-2005-065-LIS, ISBN: 90-5892-093-3, <http://hdl.handle.net/1765/6925>

Boer, N.I., *Knowledge Sharing within Organizations: A situated and Relational Perspective*, Promotor: Prof. dr. K. Kumar, EPS-2005-060-LIS, ISBN: 90-5892-086-0, <http://hdl.handle.net/1765/6770>

Boer-Sorbán, K., *Agent-Based Simulation of Financial Markets: A modular, Continuous-Time Approach*, Promotor: Prof. dr. A. de Bruin, EPS-2008-119-LIS, ISBN: 90-5892-155-0, <http://hdl.handle.net/1765/10870>

Boon, C.T., *HRM and Fit: Survival of the Fittest!?*, Promotors: Prof. dr. J. Paauwe & Prof. dr. D.N. den Hartog, EPS-2008-129-ORG, ISBN: 978-90-5892-162-8, <http://hdl.handle.net/1765/1>

Brito, M.P. de, *Managing Reverse Logistics or Reversing Logistics Management?* Promotors: Prof. dr. ir. R. Dekker & Prof. dr. M. B. M. de Koster, EPS-2004-035-LIS, ISBN: 90-5892-058-5, <http://hdl.handle.net/1765/1132>

Brohm, R., *Polycentric Order in Organizations: A Dialogue between Michael Polanyi and IT-Consultants on Knowledge, Morality, and Organization*, Promotors: Prof. dr. G. W. J. Hendrikse & Prof. dr. H. K. Letiche, EPS-2005-063-ORG, ISBN: 90-5892-095-X, <http://hdl.handle.net/1765/6911>

Brumme, W.-H., *Manufacturing Capability Switching in the High-Tech Electronics Technology Life Cycle*, Promotors: Prof. dr. ir. J.A.E.E. van Nunen & Prof. dr. ir. L.N. Van Wassenhove, EPS-2008-126-LIS, ISBN: 978-90-5892-150-5, <http://hdl.handle.net/1765/1>

Campbell, R.A.J., *Rethinking Risk in International Financial Markets*, Promotor: Prof. dr. C.G. Koedijk, EPS-2001-005-F&A, ISBN: 90-5892-008-9, <http://hdl.handle.net/1765/306>

Chen, H., *Individual Mobile Communication Services and Tariffs*, Promotor: Prof. dr. L.F.J.M. Pau, EPS-2008-123-LIS, ISBN: 90-5892-158-1, <http://hdl.handle.net/1765/11141>

Chen, Y., *Labour Flexibility in China's Companies: An Empirical Study*, Promotors: Prof. dr. A. Buitendam & Prof. dr. B. Krug, EPS-2001-006-ORG, ISBN: 90-5892-012-7, <http://hdl.handle.net/1765/307>

Damen, F.J.A., *Taking the Lead: The Role of Affect in Leadership Effectiveness*, Promotor: Prof. dr. D.L. van Knippenberg, EPS-2007-107-ORG, <http://hdl.handle.net/1765/10282>

Daniševská, P., *Empirical Studies on Financial Intermediation and Corporate Policies*, Promotor: Prof. dr. C.G. Koedijk, EPS-2004-044-F&A, ISBN: 90-5892-070-4, <http://hdl.handle.net/1765/1518>

Delporte-Vermeiren, D.J.E., *Improving the Flexibility and Profitability of ICT-enabled Business Networks: An Assessment Method and Tool*, Promotors: Prof. mr. dr. P.H.M. Vervest & Prof. dr. ir. H.W.G.M. van Heck, EPS-2003-020-LIS, ISBN: 90-5892-040-2, <http://hdl.handle.net/1765/359>

Derwall, J.M.M., *The Economic Virtues of SRI and CSR*, Promotor: Prof. dr. C.G. Koedijk, EPS-2007-101-F&A, ISBN: 90-5892-132-8, <http://hdl.handle.net/1765/8986>

Dijksterhuis, M., *Organizational Dynamics of Cognition and Action in the Changing Dutch and US Banking Industries*, Promotors: Prof. dr. ir. F.A.J. van den Bosch & Prof. dr. H.W. Volberda, EPS-2003-026-STR, ISBN: 90-5892-048-8, <http://hdl.handle.net/1765/1037>

Elstak, M.N., *Flipping the Identity Coin: The Comparative Effect of Perceived, Projected and Desired Organizational Identity on Organizational Identification and Desired Behavior*, Promotor: Prof. dr. C.B.M. van Riel, EPS-2008-117-ORG, ISBN: 90-5892-148-2, <http://hdl.handle.net/1765/10723>

Fenema, P.C. van, *Coordination and Control of Globally Distributed Software Projects*, Promotor: Prof. dr. K. Kumar, EPS-2002-019-LIS, ISBN: 90-5892-030-5, <http://hdl.handle.net/1765/360>

Fleischmann, M., *Quantitative Models for Reverse Logistics*, Promotors: Prof. dr. ir. J.A.E.E. van Nunen & Prof. dr. ir. R. Dekker, EPS-2000-002-LIS, ISBN: 35-4041-711-7, <http://hdl.handle.net/1765/1044>

Flier, B., *Strategic Renewal of European Financial Incumbents: Coevolution of Environmental Selection, Institutional Effects, and Managerial Intentionality*, Promotors: Prof. dr. ir. F.A.J. van den Bosch & Prof. dr. H.W. Volberda, EPS-2003-033-STR, ISBN: 90-5892-055-0, <http://hdl.handle.net/1765/1071>

Fok, D., *Advanced Econometric Marketing Models*, Promotor: Prof. dr. Ph.H.B.F. Franses, EPS-2003-027-MKT, ISBN: 90-5892-049-6, <http://hdl.handle.net/1765/1035>

Ganzaroli, A., *Creating Trust between Local and Global Systems*, Promotors: Prof. dr. K. Kumar & Prof. dr. R.M. Lee, EPS-2002-018-LIS, ISBN: 90-5892-031-3, <http://hdl.handle.net/1765/361>

Gilsing, V.A., *Exploration, Exploitation and Co-evolution in Innovation Networks*, Promotors: Prof. dr. B. Nooteboom & Prof. dr. J.P.M. Groenewegen, EPS-2003-032-ORG, ISBN: 90-5892-054-2, <http://hdl.handle.net/1765/1040>

Ginkel, W.P. van, *The Use of Distributed Information in Decision Making Groups: The Role of Shared Task Representations*, Promotor: Prof. dr. D. van Knippenberg, EPS-2007-097-ORG, <http://hdl.handle.net/1765/8424>

Govers, R., *Virtual Tourism Destination Image: Glocal Identities Constructed, Perceived and Experienced*, Promotors: Prof. dr. F.M. Go & Prof. dr. K. Kumar, EPS-2005-069-MKT, ISBN: 90-5892-107-7, <http://hdl.handle.net/1765/6981>

Graaf, G. de, *Tractable Morality: Customer Discourses of Bankers, Veterinarians and Charity Workers*, Promotors: Prof. dr. F. Leijnse & Prof. dr. T. van Willigenburg, EPS-2003-031-ORG, ISBN: 90-5892-051-8, <http://hdl.handle.net/1765/1038>

Groot, E.A. de, *Essays on Economic Cycles*, Promotors: Prof. dr. Ph.H.B.F. Franses & Prof. dr. H.R. Commandeur, EPS-2006-091-MKT, ISBN: 90-5892-123-9, <http://hdl.handle.net/1765/8216>

Gutkowska, A.B., *Essays on the Dynamic Portfolio Choice*, Promotor: Prof. dr. A.C.F. Vorst, EPS-2006-085-F&A, ISBN: 90-5892-118-2, <http://hdl.handle.net/1765/7994>

Hagemeijer, R.E., *The Unmasking of the Other*, Promotors: Prof. dr. S.J. Magala & Prof. dr. H.K. Letiche, EPS-2005-068-ORG, ISBN: 90-5892-097-6, <http://hdl.handle.net/1765/6963>

Halderen, M.D. van, *Organizational Identity Expressiveness and Perception Management: Principles for Expressing the Organizational Identity in Order to Manage the Perceptions and Behavioral Reactions of External Stakeholders*, Promotor: Prof. dr. S.B.M. van Riel, EPS-2008-122-ORG, ISBN: 90-5892-153-6, <http://hdl.handle.net/1765/10872>

Hartigh, E. den, *Increasing Returns and Firm Performance: An Empirical Study*, Promotor: Prof. dr. H.R. Commandeur, EPS-2005-067-STR, ISBN: 90-5892-098-4, <http://hdl.handle.net/1765/6939>

Hermans, J.M., *ICT in Information Services; Use and Deployment of the Dutch Securities Trade, 1860-1970*, Promotor: Prof. dr. drs. F.H.A. Janszen, EPS-2004-046-ORG, ISBN 90-5892-072-0, <http://hdl.handle.net/1765/1793>

Heugens, P.P.M.A.R., *Strategic Issues Management: Implications for Corporate Performance*, Promotors: Prof. dr. ir. F.A.J. van den Bosch & Prof. dr. C.B.M. van Riel, EPS-2001-007-STR, ISBN: 90-5892-009-7, <http://hdl.handle.net/1765/358>

Heuvel, W. van den, *The Economic Lot-Sizing Problem: New Results and Extensions*, Promotor: Prof. dr. A.P.L. Wagelmans, EPS-2006-093-LIS, ISBN: 90-5892-124-7, <http://hdl.handle.net/1765/1805>

Hoedemaekers, C.M.W., *Performance, Pinned down: A Lacanian Analysis of Subjectivity at Work*, Promotors: Prof. dr. S. Magala & Prof. dr. D.H. den Hartog, EPS-2008-121-ORG, ISBN: 90-5892-156-7, <http://hdl.handle.net/1765/10871>

Hooghiemstra, R., *The Construction of Reality: Cultural Differences in Self-serving Behaviour in Accounting Narratives*, Promotors: Prof. dr. L.G. van der Tas RA & Prof. dr. A.Th.H. Pruyun, EPS-2003-025-F&A, ISBN: 90-5892-047-X, <http://hdl.handle.net/1765/871>

Hu, Y., *Essays on the Governance of Agricultural Products: Cooperatives and Contract Farming*, Promotors: Prof. dr. G.W.J. Hendrkse & Prof. Dr. B. Krug, EPS-2007-113-ORG, ISBN: 90-5892-145-1, <http://hdl.handle.net/1765/10535>

Huij, J.J., *New Insights into Mutual Funds: Performance and Family Strategies*, Promotor: Prof. dr. M.C.J.M. Verbeek, EPS-2007-099-F&A, ISBN: 90-5892-134-4, <http://hdl.handle.net/1765/9398>

Huurman, C.I., *Dealing with Electricity Prices*, Promotor: Prof. dr. C.D. Koedijk, EPS-2007-098-F&A, ISBN: 90-5892-130-1, <http://hdl.handle.net/1765/9399>

Iastrebova, K., *Manager's Information Overload: The Impact of Coping Strategies on Decision-Making Performance*, Promotor: Prof. dr. H.G. van Dissel, EPS-2006-077-LIS, ISBN: 90-5892-111-5, <http://hdl.handle.net/1765/7329>

Iwaarden, J.D. van, *Changing Quality Controls: The Effects of Increasing Product Variety and Shortening Product Life Cycles*, Promotors: Prof. dr. B.G. Dale & Prof. dr. A.R.T. Williams, EPS-2006-084-ORG, ISBN: 90-5892-117-4, <http://hdl.handle.net/1765/7992>

Jansen, J.J.P., *Ambidextrous Organizations*, Promotors: Prof. dr. ir. F.A.J. Van den Bosch & Prof. dr. H.W. Volberda, EPS-2005-055-STR, ISBN: 90-5892-081-X, <http://hdl.handle.net/1765/6774>

Jong, C. de, *Dealing with Derivatives: Studies on the Role, Informational Content and Pricing of Financial Derivatives*, Promotor: Prof. dr. C.G. Koedijk, EPS-2003-023-F&A, ISBN: 90-5892-043-7, <http://hdl.handle.net/1765/1043>

Keizer, A.B., *The Changing Logic of Japanese Employment Practices: A Firm-Level Analysis of Four Industries*, Promotors: Prof. dr. J.A. Stam & Prof. dr. J.P.M. Groenewegen, EPS-2005-057-ORG, ISBN: 90-5892-087-9, <http://hdl.handle.net/1765/6667>

Kijkuit, R.C., *Social Networks in the Front End: The Organizational Life of an Idea*, Promotor: Prof. dr. B. Nooteboom, EPS-2007-104-ORG, ISBN: 90-5892-137-6, <http://hdl.handle.net/1765/10074>

Kippers, J., *Empirical Studies on Cash Payments*, Promotor: Prof. dr. Ph.H.B.F. Franses, EPS-2004-043-F&A, ISBN: 90-5892-069-0, <http://hdl.handle.net/1765/1520>

Kole, E., *On Crises, Crashes and Comovements*, Promotors: Prof. dr. C.G. Koedijk & Prof. dr. M.J.C.M. Verbeek, EPS-2006-083-F&A, ISBN: 90-5892-114-X, <http://hdl.handle.net/1765/7829>

Kooij-de Bode, J.M., *Distributed Information and Group Decision-Making: Effects of Diversity and Affect*, Promotor: Prof. dr. D.L. van Knippenberg, EPS-2007-115-ORG, <http://hdl.handle.net/1765/10722>

Knapp, S., *The Econometrics of Maritime Safety: Recommendations to Enhance Safety at Sea*, Promotor: Prof. dr. Ph.H.B.F. Franses, EPS-2007-096-ORG, ISBN: 90-5892-127-1, <http://hdl.handle.net/1765/7913>

Koppius, O.R., *Information Architecture and Electronic Market Performance*, Promotors: Prof. dr. P.H.M. Vervest & Prof. dr. ir. H.W.G.M. van Heck, EPS-2002-013-LIS, ISBN: 90-5892-023-2, <http://hdl.handle.net/1765/921>

Kotlarsky, J., *Management of Globally Distributed Component-Based Software Development Projects*, Promotor: Prof. dr. K. Kumar, EPS-2005-059-LIS, ISBN: 90-5892-088-7, <http://hdl.handle.net/1765/6772>

Kuilman, J., *The Re-Emergence of Foreign Banks in Shanghai: An Ecological Analysis*, Promotor: Prof. dr. B. Krug, EPS-2005-066-ORG, ISBN: 90-5892-096-8, <http://hdl.handle.net/1765/6926>

Langen, P.W. de, *The Performance of Seaport Clusters: A Framework to Analyze Cluster Performance and an Application to the Seaport Clusters of Durban, Rotterdam and the Lower Mississippi*, Promotors: Prof. dr. B. Nooteboom & Prof. drs. H.W.H. Welters, EPS-2004-034-LIS, ISBN: 90-5892-056-9, <http://hdl.handle.net/1765/1133>

Le Anh, T., *Intelligent Control of Vehicle-Based Internal Transport Systems*, Promotors: Prof. dr. M.B.M. de Koster & Prof. dr. ir. R. Dekker, EPS-2005-051-LIS, ISBN: 90-5892-079-8, <http://hdl.handle.net/1765/6554>

Le-Duc, T., *Design and Control of Efficient Order Picking Processes*, Promotor: Prof. dr. M.B.M. de Koster, EPS-2005-064-LIS, ISBN: 90-5892-094-1, <http://hdl.handle.net/1765/6910>

Leeuwen, E.P. van, *Recovered-Resource Dependent Industries and the Strategic Renewal of Incumbent Firm: A Multi-Level Study of Recovered Resource Dependence Management and Strategic Renewal in the European Paper and Board Industry*, Promotors: Prof. dr. ir. F.A.J. Van den Bosch & Prof. dr. H.W. Volberda, EPS-2007-109-STR, ISBN: 90-5892-140-6, <http://hdl.handle.net/1765/10183>

Lentink, R.M., *Algorithmic Decision Support for Shunt Planning*, Promotors: Prof. dr. L.G. Kroon & Prof. dr. ir. J.A.E.E. van Nunen, EPS-2006-073-LIS, ISBN: 90-5892-104-2, <http://hdl.handle.net/1765/7328>

Liang, G., *New Competition: Foreign Direct Investment and Industrial Development in China*, Promotor: Prof. dr. R.J.M. van Tulder, EPS-2004-047-ORG, ISBN: 90-5892-073-9, <http://hdl.handle.net/1765/1795>

Liere, D.W. van, *Network Horizon and the Dynamics of Network Positions: A Multi-Method Multi-Level Longitudinal Study of Interfirm Networks*, Promotor: Prof. dr. P.H.M. Vervest, EPS-2007-105-LIS, ISBN: 90-5892-139-0, <http://hdl.handle.net/1765/10181>

Loef, J., *Incongruity between Ads and Consumer Expectations of Advertising*, Promotors: Prof. dr. W.F. van Raaij & Prof. dr. G. Antonides, EPS-2002-017-MKT, ISBN: 90-5892-028-3, <http://hdl.handle.net/1765/869>

Maeseneire, W., de, *Essays on Firm Valuation and Value Appropriation*, Promotor: Prof. dr. J.T.J. Smit, EPS-2005-053-F&A, ISBN: 90-5892-082-8, <http://hdl.handle.net/1765/6768>

Londoño, M. del Pilar, *Institutional Arrangements that Affect Free Trade Agreements: Economic Rationality Versus Interest Groups*, Promotors: Prof. dr. H.E. Haralambides & Prof. dr. J.F. Francois, EPS-2006-078-LIS, ISBN: 90-5892-108-5, <http://hdl.handle.net/1765/7578>

Maas, A.A., van der, *Strategy Implementation in a Small Island Context: An Integrative Framework*, Promotor: Prof. dr. H.G. van Dissel, EPS-2008-127-LIS, ISBN: 978-90-5892-160-4, <http://hdl.handle.net/1765/1>

Maeseneire, W., de, *Essays on Firm Valuation and Value Appropriation*, Promotor: Prof. dr. J.T.J. Smit, EPS-2005-053-F&A, ISBN: 90-5892-082-8, <http://hdl.handle.net/1765/6768>

Mandele, L.M., van der, *Leadership and the Inflection Point: A Longitudinal Perspective*, Promoters: Prof. dr. H.W. Volberda & Prof. dr. H.R. Commandeur, EPS-2004-042-STR, ISBN: 90-5892-067-4, <http://hdl.handle.net/1765/1302>

Meer, J.R. van der, *Operational Control of Internal Transport*, Promoters: Prof. dr. M.B.M. de Koster & Prof. dr. ir. R. Dekker, EPS-2000-001-LIS, ISBN: 90-5892-004-6, <http://hdl.handle.net/1765/859>

Mentink, A., *Essays on Corporate Bonds*, Promotor: Prof. dr. A.C.F. Vorst, EPS-2005-070-F&A, ISBN: 90-5892-100-X, <http://hdl.handle.net/1765/7121>

Meyer, R.J.H., *Mapping the Mind of the Strategist: A Quantitative Methodology for Measuring the Strategic Beliefs of Executives*, Promotor: Prof. dr. R.J.M. van Tulder, EPS-2007-106-ORG, ISBN: 978-90-5892-141-3, <http://hdl.handle.net/1765/10182>

Miltenburg, P.R., *Effects of Modular Sourcing on Manufacturing Flexibility in the Automotive Industry: A Study among German OEMs*, Promoters: Prof. dr. J. Paauwe & Prof. dr. H.R. Commandeur, EPS-2003-030-ORG, ISBN: 90-5892-052-6, <http://hdl.handle.net/1765/1039>

Moerman, G.A., *Empirical Studies on Asset Pricing and Banking in the Euro Area*, Promotor: Prof. dr. C.G. Koedijk, EPS-2005-058-F&A, ISBN: 90-5892-090-9, <http://hdl.handle.net/1765/6666>

Mol, M.M., *Outsourcing, Supplier-relations and Internationalisation: Global Source Strategy as a Chinese Puzzle*, Promotor: Prof. dr. R.J.M. van Tulder, EPS-2001-010-ORG, ISBN: 90-5892-014-3, <http://hdl.handle.net/1765/355>

Mom, T.J.M., *Managers' Exploration and Exploitation Activities: The Influence of Organizational Factors and Knowledge Inflows*, Promoters: Prof. dr. ir. F.A.J. Van den Bosch & Prof. dr. H.W. Volberda, EPS-2006-079-STR, ISBN: 90-5892-116-6, <http://hdl.handle.net/1765>

Mulder, A., *Government Dilemmas in the Private Provision of Public Goods*, Promotor: Prof. dr. R.J.M. van Tulder, EPS-2004-045-ORG, ISBN: 90-5892-071-2, <http://hdl.handle.net/1765/1790>

Muller, A.R., *The Rise of Regionalism: Core Company Strategies Under The Second Wave of Integration*, Promotor: Prof. dr. R.J.M. van Tulder, EPS-2004-038-ORG, ISBN: 90-5892-062-3, <http://hdl.handle.net/1765/1272>

Ning, H., *Hierarchical Portfolio Management: Theory and Applications*, Promotor: Prof. dr. J. Spronk, EPS-2007-118-F&A, ISBN: 90-5892-152-9, <http://hdl.handle.net/1765/10868>

Noeverman, J., *Management Control Systems, Evaluative Style, and Behaviour: Exploring the Concept and Behavioural Consequences of Evaluative Style*, Promoters: Prof. dr. E.G.J. Vosselman & Prof. dr. A.R.T. Williams, EPS-2007-120-F&A, ISBN: 90-5892-151-2, <http://hdl.handle.net/1765/10869>

Oosterhout, J., van, *The Quest for Legitimacy: On Authority and Responsibility in Governance*, Promoters: Prof. dr. T. van Willigenburg & Prof. mr. H.R. van Gunsteren, EPS-2002-012-ORG, ISBN: 90-5892-022-4, <http://hdl.handle.net/1765/362>

Paape, L., *Corporate Governance: The Impact on the Role, Position, and Scope of Services of the Internal Audit Function*, Promoters: Prof. dr. G.J. van der Pijl & Prof. dr. H. Commandeur, EPS-2007-111-MKT, ISBN: 90-5892-143-7, <http://hdl.handle.net/1765/10417>

Pak, K., *Revenue Management: New Features and Models*, Promotor: Prof. dr. ir. R. Dekker, EPS-2005-061-LIS, ISBN: 90-5892-092-5, <http://hdl.handle.net/1765/362/6771>

Pattikawa, L.H., *Innovation in the Pharmaceutical Industry: Evidence from Drug Introduction in the U.S.*, Promoters: Prof. dr. H.R. Commandeur, EPS-2007-102-MKT, ISBN: 90-5892-135-2, <http://hdl.handle.net/1765/9626>

Peeters, L.W.P., *Cyclic Railway Timetable Optimization*, Promoters: Prof. dr. L.G. Kroon & Prof. dr. ir. J.A.E.E. van Nunen, EPS-2003-022-LIS, ISBN: 90-5892-042-9, <http://hdl.handle.net/1765/429>

Pietersz, R., *Pricing Models for Bermudan-style Interest Rate Derivatives*, Promoters: Prof. dr. A.A.J. Pelsser & Prof. dr. A.C.F. Vorst, EPS-2005-071-F&A, ISBN: 90-5892-099-2, <http://hdl.handle.net/1765/7122>

Popova, V., *Knowledge Discovery and Monotonicity*, Promotor: Prof. dr. A. de Bruin, EPS-2004-037-LIS, ISBN: 90-5892-061-5, <http://hdl.handle.net/1765/1201>

Pouchkarev, I., *Performance Evaluation of Constrained Portfolios*, Promoters: Prof. dr. J. Spronk & Dr. W.G.P.M. Hallerbach, EPS-2005-052-F&A, ISBN: 90-5892-083-6, <http://hdl.handle.net/1765/6731>

Prins, R., *Modeling Consumer Adoption and Usage of Value-Added Mobile Services*, Promoters: Prof. dr. Ph.H.B.F. Franses & Prof. dr. P.C. Verhoef, EPS-2008-128-MKT, ISBN: 978/90-5892-161-1, <http://hdl.handle.net/1765/1>

Puvanavari Ratnasingam, P., *Interorganizational Trust in Business to Business E-Commerce*, Promoters: Prof. dr. K. Kumar & Prof. dr. H.G. van Dissel, EPS-2001-009-LIS, ISBN: 90-5892-017-8, <http://hdl.handle.net/1765/356>

Quak, H.J., *Sustainability of Urban Freight Transport: Retail Distribution and Local Regulation in Cities*, Promotor: Prof. dr.M.B.M. de Koster, EPS-2008-124-LIS, ISBN: 978-90-5892-154-3, <http://hdl.handle.net/1765/11990>

Rinsum, M. van, *Performance Measurement and Managerial Time Orientation*, Promotor: Prof. dr. F.G.H. Hartmann, EPS-2006-088-F&A, ISBN: 90-5892-121-2, <http://hdl.handle.net/1765/7993>

Romero Morales, D., *Optimization Problems in Supply Chain Management*, Promotors: Prof. dr. ir. J.A.E.E. van Nunen & Dr. H.E. Romeijn, EPS-2000-003-LIS, ISBN: 90-9014078-6, <http://hdl.handle.net/1765/865>

Roodbergen, K.J., *Layout and Routing Methods for Warehouses*, Promotors: Prof. dr. M.B.M. de Koster & Prof. dr. ir. J.A.E.E. van Nunen, EPS-2001-004-LIS, ISBN: 90-5892-005-4, <http://hdl.handle.net/1765/861>

Rook, L., *Imitation in Creative Task Performance*, Promotor: Prof. dr. D.L. van Knippenberg, EPS-2008-125-ORG, <http://hdl.handle.net/1765/11555>

Schramade, W.L.J., *Corporate Bonds Issuers*, Promotor: Prof. dr. A. De Jong, EPS-2006-092-F&A, ISBN: 90-5892-125-5, <http://hdl.handle.net/1765/8191>

Schweizer, T.S., *An Individual Psychology of Novelty-Seeking, Creativity and Innovation*, Promotor: Prof. dr. R.J.M. van Tulder, EPS-2004-048-ORG, ISBN: 90-5892-07-71, <http://hdl.handle.net/1765/1818>

Six, F.E., *Trust and Trouble: Building Interpersonal Trust Within Organizations*, Promotors: Prof. dr. B. Nooteboom & Prof. dr. A.M. Sorge, EPS-2004-040-ORG, ISBN: 90-5892-064-X, <http://hdl.handle.net/1765/1271>

Slager, A.M.H., *Banking across Borders*, Promotors: Prof. dr. R.J.M. van Tulder & Prof. dr. D.M.N. van Wensveen, EPS-2004-041-ORG, ISBN: 90-5892-066-6, <http://hdl.handle.net/1765/1301>

Slout, L., *Understanding Consumer Reactions to Assortment Unavailability*, Promotors: Prof. dr. H.R. Commandeur, Prof. dr. E. Peelen & Prof. dr. P.C. Verhoef, EPS-2006-074-MKT, ISBN: 90-5892-102-6, <http://hdl.handle.net/1765/7438>

Smit, W., *Market Information Sharing in Channel Relationships: Its Nature, Antecedents and Consequences*, Promotors: Prof. dr. ir. G.H. van Bruggen & Prof. dr. ir. B. Wierenga, EPS-2006-076-MKT, ISBN: 90-5892-106-9, <http://hdl.handle.net/1765/7327>

Sonnenberg, M., *The Signalling Effect of HRM on Psychological Contracts of Employees: A Multi-level Perspective*, Promotor: Prof. dr. J. Paauwe, EPS-2006-086-ORG, ISBN: 90-5892-119-0, <http://hdl.handle.net/1765/7995>

Speklé, R.F., *Beyond Generics: A closer Look at Hybrid and Hierarchical Governance*, Promotor: Prof. dr. M.A. van Hoepen RA, EPS-2001-008-F&A, ISBN: 90-5892-011-9, <http://hdl.handle.net/1765/357>

Teunter, L.H., *Analysis of Sales Promotion Effects on Household Purchase Behavior*, Promotors: Prof. dr. ir. B. Wierenga & Prof. dr. T. Kloek, EPS-2002-016-MKT, ISBN: 90-5892-029-1, <http://hdl.handle.net/1765/868>

Tims, B., *Empirical Studies on Exchange Rate Puzzles and Volatility*, Promotor: Prof. dr. C.G. Koedijk, EPS-2006-089-F&A, ISBN: 90-5892-113-1, <http://hdl.handle.net/1765/8066>

Tuk, M.A., *Empirical Studies on Exchange Rate Puzzles and Volatility*, Promotors: Prof. dr.ir. A. Smidts & Prof.dr. D.H.J. Wigboldus, EPS-2008-130-MKT, ISBN: 978-90-5892-164-2, <http://hdl.handle.net/1765/1>

Valck, K. de, *Virtual Communities of Consumption: Networks of Consumer Knowledge and Companionship*, Promotors: Prof. dr. ir. G.H. van Bruggen & Prof. dr. ir. B. Wierenga, EPS-2005-050-MKT, ISBN: 90-5892-078-X, <http://hdl.handle.net/1765/6663>

Valk, W. van der, *Buyer-Seller Interaction Patterns During Ongoing Service Exchange*, Promotors: Prof. dr. J.Y.F. Wynstra & Prof. dr. ir. B. Axelsson, EPS-2007-116-MKT, ISBN: 90-5892-146-8, <http://hdl.handle.net/1765/10856>

Verheul, I., *Is There a (Fe)male Approach? Understanding Gender Differences in Entrepreneurship*, Prof. dr. A.R. Thurik, EPS-2005-054-ORG, ISBN: 90-5892-080-1, <http://hdl.handle.net/1765/2005>

Vis, I.F.A., *Planning and Control Concepts for Material Handling Systems*, Promotors: Prof. dr. M.B.M. de Koster & Prof. dr. ir. R. Dekker, EPS-2002-014-LIS, ISBN: 90-5892-021-6, <http://hdl.handle.net/1765/866>

Vlaar, P.W.L., *Making Sense of Formalization in Interorganizational Relationships: Beyond Coordination and Control*, Promotors: Prof. dr. ir. F.A.J. Van den Bosch & Prof. dr. H.W. Volberda, EPS-2006-075-STR, ISBN 90-5892-103-4, <http://hdl.handle.net/1765/7326>

Vliet, P. van, *Downside Risk and Empirical Asset Pricing*, Promotor: Prof. dr. G.T. Post, EPS-2004-049-F&A, ISBN: 90-5892-07-55, <http://hdl.handle.net/1765/1819>

Vlist, P. van der, *Synchronizing the Retail Supply Chain*, Promotors: Prof. dr. ir. J.A.E.E. van Nunen & Prof. dr. A.G. de Kok, EPS-2007-110-LIS, ISBN: 90-5892-142-0, <http://hdl.handle.net/1765/10418>

Vries-van Ketel E. de, *How Assortment Variety Affects Assortment Attractiveness: A Consumer Perspective*, Promotors: Prof. dr. G.H. van Bruggen & Prof. dr. ir. A. Smidts, EPS-2006-072-MKT, ISBN: 90-5892-101-8, <http://hdl.handle.net/1765/7193>

Vromans, M.J.C.M., *Reliability of Railway Systems*, Promotors: Prof. dr. L.G. Kroon, Prof. dr. ir. R. Dekker & Prof. dr. ir. J.A.E.E. van Nunen, EPS-2005-062-LIS, ISBN: 90-5892-089-5, <http://hdl.handle.net/1765/6773>

Vroomen, B.L.K., *The Effects of the Internet, Recommendation Quality and Decision Strategies on Consumer Choice*, Promotor: Prof. dr. Ph.H.B.F. Franses, EPS-2006-090-MKT, ISBN: 90-5892-122-0, <http://hdl.handle.net/1765/8067>

Waal, T. de, *Processing of Erroneous and Unsafe Data*, Promotor: Prof. dr. ir. R. Dekker, EPS-2003-024-LIS, ISBN: 90-5892-045-3, <http://hdl.handle.net/1765/870>

Watkins Fassler, K., *Macroeconomic Crisis and Firm Performance*, Promotors: Prof. dr. J. Spronk & Prof. dr. D.J. van Dijk, EPS-2007-103-F&A, ISBN: 90-5892-138-3, <http://hdl.handle.net/1765/10065>

Wennekers, A.R.M., *Entrepreneurship at Country Level: Economic and Non-Economic Determinants*, Promotor: Prof. dr. A.R. Thurik, EPS-2006-81-ORG, ISBN: 90-5892-115-8, <http://hdl.handle.net/1765/7982>

Wielemaker, M.W., *Managing Initiatives: A Synthesis of the Conditioning and Knowledge-Creating View*, Promotors: Prof. dr. H.W. Volberda & Prof. dr. C.W.F. Baden-Fuller, EPS-2003-28-STR, ISBN: 90-5892-050-X, <http://hdl.handle.net/1765/1042>

Wijk, R.A.J.L. van, *Organizing Knowledge in Internal Networks: A Multilevel Study*, Promotor: Prof. dr. ir. F.A.J. van den Bosch, EPS-2003-021-STR, ISBN: 90-5892-039-9, <http://hdl.handle.net/1765/347>

Zhang, X., *Strategizing of Foreign Firms in China: An Institution-based Perspective*, Promotor: Prof. dr. B. Krug, EPS-2007-114-ORG, ISBN: 90-5892-147-5, <http://hdl.handle.net/1765/10721>

Zhu, Z., *Essays on China's Tax System*, Promotors: Prof. dr. B. Krug & Prof. dr. G.W.J. Hendrikse, EPS-2007-112-ORG, ISBN: 90-5892-144-4, <http://hdl.handle.net/1765/10502>

Zwart, G.J. de, *Empirical Studies on Financial Markets: Private Equity, Corporate Bonds and Emerging Markets*, Promotors: Prof. dr. M.J.C.M. Verbeek & Prof. dr. D.J.C. van Dijk, EPS-2008-131-F&A, ISBN: 978-90-5892-163-5, <http://hdl.handle.net/1765/1>