INTERORGANISATIONAL COLLABORATION IN THE PUBLIC SECTOR

Submitted in fulfilment of the requirement for the degree of Doctor of Philosophy

By
Mohammed Al-Shahi

Brunel Business School
Brunel University

May 2011

(واتَّقوا اللهَ ويعلِمكمُ اللهُ واللهُ بكلِّ شىئ عَليم)

"So fear ALLAH; for it is ALLAH that teaches you. And ALLAH is well acquainted with all things" (2/282)

Abstract

The research applies the contextual context, content, and process (CCP) framework to explore the contextual and processual factors that are associated with implementing interorganisational collaborative arrangements in the public sector. Collaborative arrangements in the public sector are found to be complex, difficult to implement, and liable to failure when not fully explored and recognised. Background theory reveals the absence of a multilevel lens that can embrace the multifaceted nature of interorganisational collaborations, the multiple contextual levels, the process stages and micro-actions, and the interplay between the process and the context. By identifying the need to explore contextual and processual factors, the background theory informs the focal theory which proposes an extended CCP framework as a useful multilevel lens to elucidate the research problem. The framework is developed and validated through multidisciplinary literature synthesisation, the pilot stage, and the main fieldwork which applies qualitative methods based on multiple case studies from the public sector in Oman as data sources' techniques. The originality of this study stemming from developing and validating a novel multilevel contextual framework. The emerged multifaceted CCP framework, used to explore contextual and processual factors when implementing collaborative arrangements in the public sector, is found to be an applicable, feasible, and useful analysis tool. It can help public policy-makers, public management, academics, change agents, and collaborating organisations in identifying the inhibitive, supportive prerequisites, and in general influencing contextual factors. It helps also in elucidating and minimising uncertainty about the nature and micro-actions of the processual stages.

Keywords: interorganisational collaboration, public administration and policy, public sector management, CCP framework, context and process, case study, Oman.

Dedication

This doctoral research is dedicated to my parents, wife, children, brothers and sisters, and to all my family members for their love, prayers, and endless support.

Table of contents

List of Figures

List of Tables

List of abbreviations

C1	Case Study One
C2	Case Study Two
CC	Collaborative Capacity
CCP	Context, Content and Process Framework
CEO	Chief Executive Officer
CGC	Career Guidance Curriculum
CKC	Community Knowledge Centres
CPIs	Certified Professional Inspectors
DDG	Deputy Director General
DG	Director General
DHD	Deputy Head of Department
EP	Educational Portal
EX	External Context
GCC	Gulf Cooperation Council
GITTC	Government IT Training and Certification
HD	Head of Department
HEAC	Higher Education Admission Centre
HEIs	Higher Education Institutions
HRM	Human Resource Management
IC³	Computing Core Certification
ICT	Information and Communication Technology
IN	Internal/Organisational Context
INS	Institutional Context
IOC	Interorganisational Collaboration Context
IOCs	Interorganisational Collaborations
IOR	Interorganisational Relation
IORs	Interorganisational Relations
IS	Information System
IT	Information Technology

ITA	Information and Communication Authority
IVR	Interactive Voice Response
LMS	Learning Manager System
MoCSs	Ministry Of Civil Services
MoE	Ministry Of Education
MoHE	Ministry Of Higher Education
N/A	Not Applicable
NCGC	National Career Guidance Centre
PM	Project Manger
RD	Royal Decree
TRA	Telecommunications Regulatory Authority
US	Undersecretary
USs	Under Secretaries
WSA	World Summit Award

Acknowledgment

First of all, my all thanks and gratitude go to Almighty ALLAH for guiding and inspiring me during this research.

The accomplishment of this investigation was only possible by the guidance, professional supervision, and encouragement that have been offered by my supervisor Professor Zahir Irani. I am grateful for the devoted time, efforts, constructive feedback, and thoughts and creativity provoking ideas you have honoured me with Professor.

I would like to express my deep appreciation and gratitude to H.E. Dr. Yahya bin Mahfood Al-Mandari, Chairman of the State Council in Oman for offering me this opportunity to accumulate and enhance my knowledge and academic professionalism.

I am appreciative of academic members, administrative staff, and colleagues in Brunel Business School for all their support during my PhD program.

I would like also to thank the participants from the cases for accepting and taking part in this research. Finally, special thanks may family and every person who prayed and loved to see the successful accomplishment and achievement of this work.

Declaration

I Mohammed Alshahi declare that this research, its idea, analysis, findings and conclusions that are included in this PhD dissertation are entirely developed by me for the purpose of this program only and have not been submitted for another qualification.

1 Chapter one: Introduction

1.1 Introduction

The main premise of this research is applying the contextual context, content, and process (CCP) framework (Pettigrew, 1985) to explore the contextual and processual factors that are associated with the implementation of interorganisational collaborative efforts in the public sector. It is becoming increasingly difficult to ignore that public sector reforms, changes, and development are moving towards more reliance on an interorganisational collaboration (IOC) (Feldman, 2010). Due to the increasing level of interdependency in this sector, and because the "institutional infrastructures become more complex and interdependent, the demand for collaboration increases" (Ansell and Gash, 2007, p.2).

This era in public sector context is therefore marked by networking and interorganisational arrangements (Getha-Taylor *et al.,* 2011). That is why scholars recently stated that "collaboration is no longer a luxury but rather a necessity" (Bushouse *et al.,* 2010, p.100) and "an inescapable feature of the future public administration" (Bingham and O'Leary 2006, p.165), and an "imperative" phenomenon (Thomson and Perry, 2006, p.20). Collaboration has a futuristic nature in the public sector context, fuelled by many contextual, demographical, and technological changes, as O'Leary and Van Slyke (2010) assert. Particularly in the public sector context, the increasing world population and technological changes in the world are expected to provoke the need to join efforts to meet public demands, therefore placing collaboration in the forefront of the public policy and administration debates. Accordingly,

> *"It is safe to say that most public challenges will continue to be larger than one organisation can handle, and that public managers will continue to do more with less. Technology will continue to flatten hierarchy, yielding changing views of leadership and management. There will be a greater role for the public, a greater need for collaborative governance, and a greater*

appreciation for deliberative democracy. Clearly, partnerships are at the heart of the future of public administration in 2020". (O'Leary and Van Slyke, 2010, p.10)

The above claims are evidently supported by the real-life cases, which elucidate clearly the implications of underestimating the role that collaboration can and should play. A research conducted by the Institute of Government (2009) in the UK has found that irrespective of the efforts to enhance the performance of public governmental bodies, there is a need to reposition collaboration as a strategic choice to contribute to strengthening current public sector organisations' performance. Commenting on the report, Dudman (2009) says in the Guardian:

> *Persistent lack of coordination in both local and central government is still the main culprit. Without greater collaboration, the public sector will not be capable of rising to tomorrow's thorny issues.*

In addition, Luna-Reyes *et al*. (2007) cited the phrase *'Collaboration or Failure'* which was the front page headline of the February–March (2006) issue of the Mexican trade magazine *'Digital Policy'*. The headline encapsulated the central conclusion reached by policy-makers and stakeholders in their discussions on the future of the transition triggered by the implementation of electronic government. In general, the main objective of IOC is "to solve a problem or create an opportunity that neither can address individually" (Selin and Chavez, 1995, p.260). Therefore, the underlying assumption for collaborative arrangements stems from the perceived limitation of organisational individualism, where organisations through collective efforts can achieve goals further than their means (O'Leary and Van Slyke, 2010). The assumed and the anticipated outcomes encourage public organisations to engage in such arrangements. This is inspired by the frequently mentioned collaborative advantages in the literature, such as: resource acquisition (Provan and Milward, 2001); expanding experience of an organisation and increasing organisational power (Keast *et al*., 2004); minimising risks (Barringer and Harrison, 2000); and achieving legitimacy (Provan and Milward, 2001).

However, despite the progress in the theoretical and empirical efforts to study IOCs in the public sector context, and despite the consensus that asserts the role of collaboration as a key administrative strategy for tackling today's and tomorrow's complex problems (Krueathep *et al.,* 2010, p.181), there are overlooked areas that need attention from both scholars and practitioners (for more information see figures: 1-1; 2-2; and 3-4). Consistently with the recent studies (Isett *et al.,* 2011; Walker *et al.,* 2010; Feldman, 2010), this study through literature synthesisation finds a persistent need to bridge a knowledge gap stemming from the lack of a multilevel lens that explores the contextual forces, factors, and characteristic interventions and impacts on IOC, and how the processual stages shape and are shaped by the context. In addition, questions about the interplay between the context and the process remain unanswered, and catalyse this study. More details about the underlying assumptions of the study are in the following sections which present and narrow down the underlying rationality and the alignment between the theoretical and philosophical underpinnings. This chapter also offers glances into the research aim, objectives, and an insight into the contribution of the research. The chapter concludes by presenting the sequence and the structure this dissertation follows.

1.2   From theoretical to philosophical underpinnings

This section provides an explanation about the main theses/arguments, and the underlying assumptions that motivate the research. It starts with stating the rationality and the problem that is derived from synthesising multidisciplinary literature. The catalysts which brought up this problem are discussed to clarify the roots of the knowledge gap that this study aims to illuminate and contribute to filling. The second thesis is the focal theory which presents the proposed solutions for the identified gap highlighting the alignment logic between theses A and B. Finally the data theory is presented to define the epistemological stance that has been adopted in this research. The relation between theses A, B, and C is clarified to demonstrate the consistency between the theoretical bases and the philosophical assumptions of this research (see sections 3.3 and 4.2).

More details and discussions about the consistency and the alignment between the background, focal, and data theory are offered in chapters 2, 3, and 4.

1.2.1 Background theory: thesis (A)

In the forefront of selecting collaborative arrangements to be investigated through a large-scale empirical study are the personal motives which are based on the author's experience. Working in the upper house in the research and information department in Oman implies working jointly and interorganisationally with a large number of stakeholders from different sectors. Collaborative arrangements with many organisations have resulted in establishing many initiatives, such as the annual conference for those who are responsible for managing research departments in their organisations. This arrangement, which is steered by the upper house jointly with another two organisations, as well as other collaborative arrangements, have informed the researcher with many lessons and questions about collective efforts.

What might be the main learned lesson is the need to understand the fine line between rationality by having a clear reasoning and/or take collaboration for granted that collectivity produces more than individuals when planning to initiate a collaborative public arrangement. Perceiving collaboration as common sense, and/or a preplanned and predefined stage, is a myopic stance that can mislead practitioners because of the dynamic nature, complexity, high rate of failure, and level of difficulties, as found by the author when arranging collaborative projects. It is not a straightforward task, and therefore requires cautious and careful implementation and understanding as to the required resources, skills, awareness, and management tools. In view of that, the failed collaborative attempts and the difficulties in reaching consensus about the collaborative agenda, and in aligning the collective and individual organisations' interests, motivate the researcher to have a rigorous insight to the field by accumulating and combining the experience with an academic elucidation of the supportive and inhibitive factors.

Theoretically, while collaborative advantages and benefits can be perceived as beacons that encourage organisations to take part in such interorganisational arrangements, the majority of IOCs face difficulties until arriving at those benefits, and the majority of such interorganisational relations fail (Rod and Paliwoda, 2003; Barringer and Harrison, 2000). Huxham and Vangen (2005) advise policy-makers not to establish or go for collaboration unless they have to, because of the inherited implementation difficulties associated with collaborative arrangements. Moreover, in the public sector context, using IOCs to implement reforms and introduce changes is perceived by many with a "considerable amount of scepticism" (Daley, 2009, p.1).

With this level of acknowledged ambiguities and difficulties in mind, scholars repeatedly admit the inevitability of the reliance on collaborative arrangement in the public sector because of the growing complexity and interdependency in the sector (Bushouse *et al.,* 2010; Agranoff, 2006; Thomson *et al.,* 2007) Accordingly, while the reliance on IOCs has many promises and advantages to the collaborating organisations, as well as being an inevitable choice, there are many barriers standing against a proper utilisation and understanding of IOC, and therefore an unsatisfactory result may occur "because collaboration has been incompletely realised" (O'Looney, 1997, p.35). The questions to be asked therefore are: What are the main reason(s) for the acknowledged high rate of failure, scepticisms, and difficulties in IOCs, and in which area do policy-makers and public managers not have a solid understanding of the phenomenon?

The background theory and the critical synthesisation to the previous studies are consistent with the conclusion offered by Luna-Reyes *et al* (2007, p.809), who attribute this to the "few models that can help them to understand and manage collaboration". In particular, as they acknowledge, collaboration in the public sector is more complicated because of the diversity of partners' values, goals and cultural aspects. The same conclusion was reached by Thomson *et al* (2007, p.49) who stressed that "in the field of collaboration research, few

empirically tested tractable models exist". As a result, "public sector scholars have only a modest understanding of how networks operate and evolve in public and non-profit contexts" (Isett and Provan, 2005, p.150).

Accordingly,

> *Unless policy makers have a full understanding of what it means to work through network structures, they will continue to develop traditional policies and management techniques that mitigate against the positive attributes of networked arrangements. Practitioners and decision makers in the public, private, and voluntary sectors need to understand what can be expected from these network structures as innovative approaches to governance, and they can then act accordingly.* (Keast *et al.*, 2004, p.364)

To contribute to elucidating the remaining questions about the IOC in the public sector, a multidisciplinary literature synthesisation across management studies, public administration, change management, and public policy has been conducted by the researcher. As can be seen in Figure 1-1, it is found that the field lacks in particular an empirically tested framework or a lens that can offer an in-depth understanding of the *contextual* and *processual* factors that are associated with IOC in the public sector. Consequently, there are two dimensions which need scholars' and practitioners' attention to minimise uncertainty, hesitation, and the unanswered critical questions in the interorganisational relation's field; namely the contextual and the processual factors and characteristics.

Figure 1-1 The Research Problem Identfication Roadmap

IOC

In this era and the future of public policy

| Inevitability | Necessity | Imperative phenomenon |

However, there are:

| High rates of failure | Implementation difficulties | Scepticism |

Why

Few empirically tested models that can help cultivating an in-depth understanding about the phenomenon

In which area(s) this problem manifests more

Contextual — **And** → Processual dimensions

Public policy-makers, public management, change agents, academics and consultants, and public organisations will produce partial views about the phenomenon, its success and inhibitive factors, its prerequisites, and the essential collaborative process and skills.

Consequently

So what

- Decisions are made myopically because the phenomenon is not fully understood.
- The contextual enablers and constraints are not mapped from multilevel.
- Uncertainty about the processual factors to set a proper implementation strategy accordingly.

So what

Uncertainty about the processual stages and micro-actions

And

In which way(s) → Lack of multi contextual levels analysis, and overemphasis on the organisational level

With regard to the contextual dimension, background theory indicates, as mentioned in Figure 1-1, that less attention has been paid to the contextual enablers, constraints, prerequisites, and qualities in macro levels, as previous researches have focused mainly on the organisation level enablers and constraints to successful arrangements. Bryson *et al.*, (2006) argue that there is a shortage of deep analyses of, and insight into, the factors which inhibit organisations from utilising collaboration opportunities. The overreliance on the organisational-level analysis may lead to partial decisions making process because the wider contextual factors were not recognised. That is why the scholars' calls to adapt a multilevel of analysis are growingly recommended in the literature (e.g. Cropper *et al.,* 2008; Cropper and Palmer, 2008; Marchington and Vincent, 2004; Brass *et al.,* 2004; Hardy *et al.*, 2003). In addition, "multilevel studies may help to understand how, and to what extent, contexts bear on interorganisational relation processes" (Cropper and Palmer, 2008, p.655). The background theory suggests that the contextual factors can be found in four levels: the organisational; the arrangement settings and qualities; the institutional; and the wider environmental and external levels.

 However, the simultaneous multifaceted exploration to the contextual levels, the sub-factors under each level, and the nature and the patterns of the interactions between these levels remain largely unexplored. To examine background theory suggestion, to respond to scholar calls, and to contribute to deepening the understanding of the phenomenon, this study has taken these considerations in an empirical exploration and investigations in parallel with the second dimension; the processual factors. The process dimension and the expected actions are not discussed rigorously and empirically in the public sector literature, in particular, as the review reveals: the uncertainty about the possible process and actions (Reilly, 2001); the contradictory results about the nature of the process, whether they are linear or cyclical (Thomson and Perry, 2006); and the micro-actions within the different stages (Keast *et al.,* 2004; Luna-Reyes *et al.,* 2007; Ansell & Gash, 2007). IOC might have promise for public policy-makers, however, Reilly (2001, p.72) asserted that:

"Despite many of the purported benefits of this method, it remains an uncertain process. This uncertainty, coupled with the high transaction costs, clearly is a major deterrent in its enhanced deployment"

Having said that, the possible implications of the insufficient studies that explore the contextual and processual factors can be seen in:

- The focus on one level rather than multilevel of analysis means treating organisations as autonomous bodies that can make choices without referring to the wider external levels which might have factors that inhibit or support the process, and are not recognised because of the partial understanding.

- The omission, uncertainty, and confusion about the processual stage or practice that might support or inhibit the implementation.

- Influencing decisions made by large numbers of impacted stakeholders and populations, such as:

  - The public managers who develop an arrangement proposal and rely on myopically developed assessments which have not considered the multilevel of contexts and the processual stages' requirement.

  - The evaluators who have to understand the processual stages and micro-actions to develop proper measurements and evaluation tools.

  - The target groups who are affected because the implementers are unable to accurately address their needs and requirements.

  - The collaborative skills and competencies of developers or HR managers who are unable to draw and anticipate accurately the potential processual stages and practices, and therefore develop their strategies speculatively rather than with empirically and data-driven findings.

  - Policy-makers, project managers, change agents, and organisational representatives in IOC who are unable to find guidelines about the possible interventions from the contextual factors in the timeframe, budgeting, sourcing and general implementation requirements.

  - Consultants who are led by the pre-assumed traditional incomplete views to the context and the process.

  - Academics who maintain the focus on particular areas in the IOC field without accumulating the literature in the role of the context and process in shaping the arrangement, or examining the transferability of western IOC practices and understanding in the developing countries,

and drawing of a future research roadmap to strengthen the field and fostering its coherence.

Therefore, to reduce rate of failure, uncertainties and hesitations, and also to decode the ambiguity about the likely impacting contextual and processual factors, the solution and/or the framework that aim to do so should:

- ❖ Pay attention to the contextual levels and factors in a multilevel of analysis, and not only at the organisational level.
- ❖ Elucidate the interaction patterns and nature between different levels.
- ❖ Provide exploration to the processual stages and micro-actions and processes under each stage.
- ❖ Describe the pattern of the sequence of the stages, whether it is linear or cyclical, to develop implementation strategies accordingly.
- ❖ Analyse the interplay between the contextual and the processual factors.

The translation of these requirements, background theory findings, and the emerged problem in the IOC field, is the concern of the second part of this study, which is the focal theory or thesis B.

1.2.2 Focal theory: thesis (B)

To articulate clearly the focal theory of this research, the research applies an extended version of the context, content, and process (CCP) framework to explore the contextual and processual factors that are associated with the IOC in the public sector in Oman. The focal theory assumes the suitability and usefulness of applying an extended multilevel CCP framework. The proposed appropriateness of the framework stems from its main and initial premise of analysing the interplay, interrelations, and interconnectivity between the context, content, and process. As thesis A indicates that the main underdeveloped areas which work against achieving in-depth understandings of IOC are the contextual and processual factors, and as the CCP lens pays primary attention to those constructs, the researcher prefers to apply, validate, and examine an extended CCP framework to decode uncertainties and unresolved questions in the IOC field.

Thesis B proposes that applying the framework can lead to widening the opportunities in understanding the field that are created by previous theoretical

paradigms and lenses. As the researcher believes, and as thesis A indicates, there is a need for a multifaceted, macroscopic, and multidisciplinary approach to the problem. To fulfil this aim, the research analyses and explores the multiple contexts, contents, and processes of IOC by applying the CCP framework and using literature from different disciplines to derive the theoretical underpinnings. By doing so, the research is an urgent response to the scholars' recent call for future direction and recommendations for the development of the public policy and administration field. Raadschelders and Lee (2011, p.29) state that:

> *"Macroscopic research tackles the big questions that practitioners would like to see answered ... The multifaceted nature of the society that public servants deal with requires that public administration students should be systematically exposed to interdisciplinarity. They have to learn how to search for and process information about social problems and public policy challenges across the entire range of the social sciences. Only by embracing interdisciplinarity can the study of public administration map, discuss, and address the big questions that government faces"*

Moreover, to maximise the suitability, validity and reliability of the proposed framework, it was refined by two main stages: the emerged literature themes and factors, and the pilot stage implications and restructuring of the frame. More details are offered in chapters 2 and 3 about the philosophical roots, the evolution, and the deployment of the framework in this research.

1.2.3   Data theory: thesis (C)

The epistemological stance for this research is applying interpretive and qualitative means to collect and analyse the data. Developing a qualitative paradigm was motivated by the findings and assumptions of the background and the focal theories. Thesis A indicates the need to *understand* a dynamic social phenomenon, in particular its contextual and processual dimensions. Therefore, the qualitative methods are more appropriate and sensitive to an in-depth investigation that seeks *understanding* rather than *measuring* significance. In addition, the qualitative paradigm is the proper mechanism to answer the research questions which are mainly 'why' and 'how' questions about IOCs. Moreover, the data theory applies interpretivist approaches to be aligned with the contextual CCP framework, which is an interpretive lens applied to analyse dynamic phenomena (Pettigrew, 1988; Pettigrew *et al.,* 2001; Piotrowicz, 2007; Stockdale *et al*., 2008; Serafeimidis and Smithson, 1996). The justifications and the underlying philosophical underpinnings for the research design are explained in detail in chapter 4.

1.3 Research aim and objectives

Theses A, B, and C indicate a need to understand indepth the contextual and processual factors that are associated with IOC arrangement in the public sector. They suggest that a qualitative paradigm is more applicable to cultivate a profound understanding to the contextual and processual factors. The position of this research therefore is to produce and/or enhance the knowledge about the IOC arrangements in public sector by applying the contextual perspective. The aim of this research is:

> *To explore, through applying the CCP framework, the*
> *contextual and processual factors that are associated*
> *with the implementation of IOC in public sector*

To facilitate achieving this aim, more detailed objectives were developed and were linked with the initial aim and these objectives are:

- ❖ To explore the contextual levels and sub-factors that are associated with the implementation of interorganisational collaborative implementation in the public sector.
- ❖ To describe the process of the implementation, stages, and micro-processes in the public sector.
- ❖ To describe the interplay between the context and the process.
- ❖ To explore the relationship between collaborative capacity and the processual factors.
- ❖ To identify different levels of stakeholders involved in the implementation.
- ❖ To describe the content in which collaborations take place.
- ❖ To identify the benefits and the outcome of being in IOCs.

1.4 The research questions

To operationalise the investigation and to keep it narrowed and focused to the research aim and objectives, the investigation is developed into five levels of questions which lead to the formulation of the data collection strategy, procedures, methods and techniques, and which are derived from the strategy and taxonomisation proposed by Yin (2009). According to Yin (2009, p.87) there are five levels of protocol questions that the investigator should deal with as they are presented to him. Level 1 consists of questions "asked of specific interviewees"; level 2 has questions

"asked of the individual cases"; whereas level 3 questions track and figure out "findings across multiple cases". Level 4 questions are "asked of an entire study"; and level 5 questions are "normative questions about policy recommendations and conclusions".

In Appendix (A), the five levels are presented based on the categorisation proposed by Yin, and linked with the objectives and data collection sources. The levels of questions were linked with the main components and themes of the framework, and also with the objectives of the research, to ensure consistency and rigorous alignment between different parts of the research design. Among all these five levels, Yin stresses that the researcher "should concentrate heavily on level 2 for the case study protocol" (p.87), because questions in level 2 encapsulate the main assumptions and propositions of the thesis, and address its anticipated outcomes. In this study, the main research questions or level 2 which are literature-grounded and pilot stage driven and refined are presented in Table 1-1 below.

Table 1-1 The research questions

Dimensions	Questions
Context	1. Which factors under organisational, interorganisational collaborative settings, institutional, and external/environmental contexts are associated with the implementation of interorganisational collaborative arrangements?
	2. How do the factors impact the collaboration?
Process	3. How is IOC implemented, and what are the stages and the micro-actions within the process steps?
	4. How does collaborative capacity impact, and how is it impacted by, the process?
Content	5. What is the area in which collaboration takes place?
Implementation context	6. What is involved in the implementation context?
Stakeholders	7. Who is involved in the collaboration from inside and outside the cases?
Outcome	8. What are the outcomes of the collaborative implementation?

1.5 The research and previous CCP studies

This research intends to take forward the CCP framework components. When compared with other studies as figure 1-2 indicates, the project can be considered among those few studies that intend to modify the framework and use the framework as a focal rather than as a background theory. In addition, previous works on CCP studies pay attentions to the micro and macro levels and ignore the importance and the entity of the meso level or in between factors (an exception to this is the work of Piotrowicz, 2007; Piotrowicz and Irani, 2008). This omission may be responsible for limited understanding about the factors between the organisational and the wider environment levels, particularly when applying the CCP framework. This research intends to pay the required attention to the meso level or in-between by covering interorganisational arrangements and institutional levels between the organisational and environmental or external level. By moving in this direction, the emerged and validated CCP framework offers a more precise and accurate description of the contextual factors. Furthermore, CCP framework has been used in a single inner context where change or the case being researched is conducted by or is introduced within one organisation, while this research investigates change introduced by more than one organisation in which multi-inner contexts are present. Moreover, the research is the first attempt to combine the CCP framework with the collaborative capacity framework (Sullivan, *et al.,* (2006) to understand the process of IORs. The anticipated outcome from this step is to develop a precise description of the process beyond generic abstraction.

Figure 1-2 the position of the research within CCP studies

Simple CCP framework as a background theory or a data collection guideline		CCP as a focal theory and modifications that have been, or are to be introduced
The majority of CCP studies	Stockdale and Standing, (2006); Stockdale *et al.*, (2006) and Stockdale *et al.*, (2008)	Piotrowicz (2007) Piotrowicz and Irani, (2008)
		This research
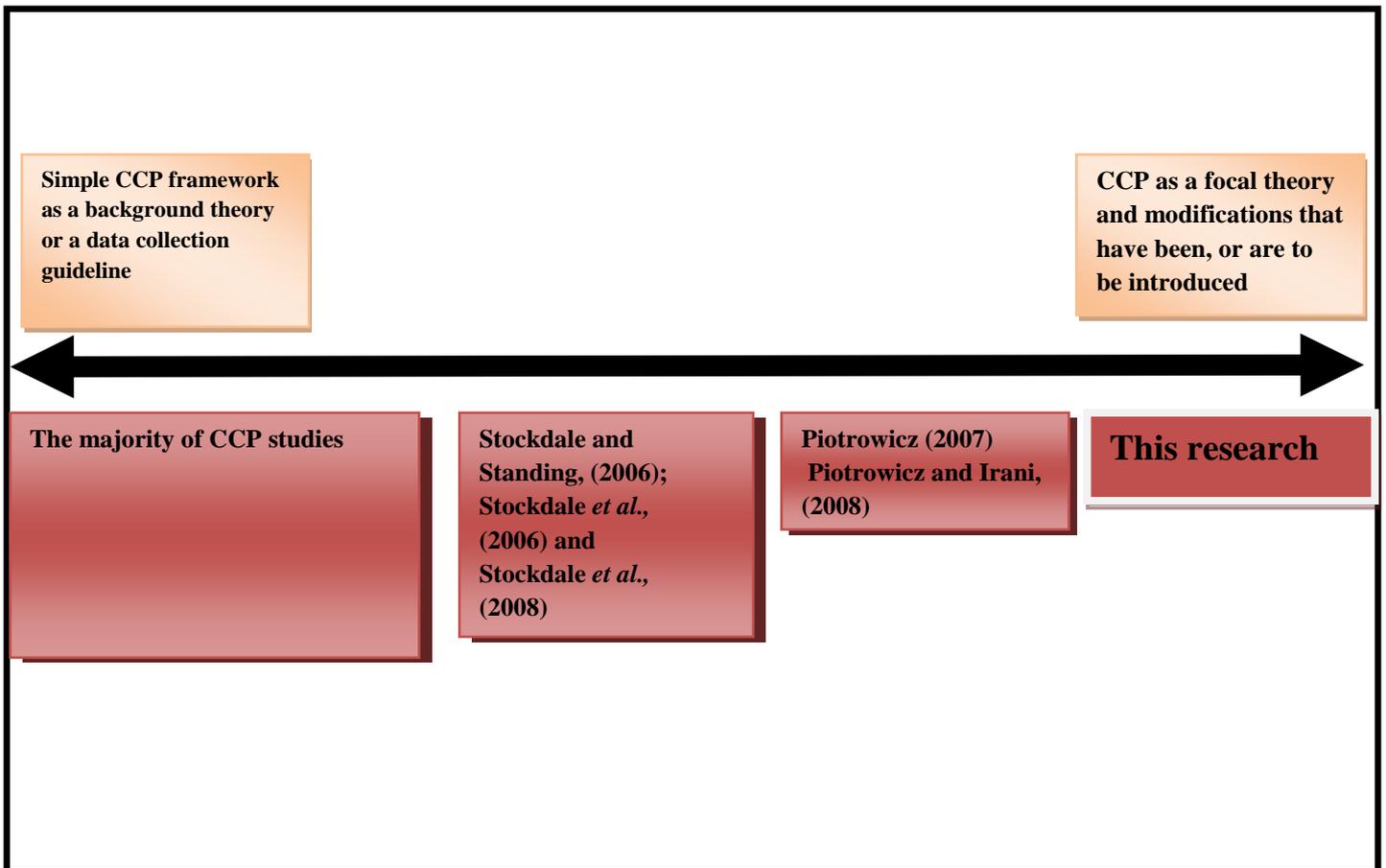
Source: developed for the purpose of this research

1.6 Contributions

The primary contribution of this research is the *emerged extended novel CCP framework* to analyse and explore the contextual and processual factors that are associated with the implementation of IOC efforts and arrangements in the public sector in Oman. Testing the framework and validating its dimensions empirically have advanced the framework to suit exploring IOCs in the public sector. Previous studies in the IOC field have failed to produce a multifaceted framework to understand the role of the contextual factors in impacting the arrangement and how this process evolves, shaping and shaped by the context. This research has offered a lens to explore these factors, and simultaneously has produced a novel multifaceted CCP framework to elucidate and embrace the unsolved questions in the IOC field. The research also contributes to validating many theoretical propositions and advancing the field theoretically, practically, and methodologically. Linking the gap with the findings, contributions, and implications is comprehensively discussed and explained in sections 7.2 and 7.3.

1.7 Outline of the thesis

This study consists of seven chapters, which are:

Chapter one: Introduction: presents the background and the scope of the study and the underlying assumptions. It offers an introduction to the theoretical and philosophical underpinnings and justifications, and the alignment between the two dimensions. The chapter highlights the main contributions of the study and the structure of the dissertation.

Chapter two: The background theory: this is the literature review in IOC studies and CCP framework. The chapter, through synthesising a multidisciplinary literature review in management, public administration, public policy, and social interaction critically reveals an identified gap to be bridged. The chapter cultivates its theoretical underpinnings from taxonomising the literature into context, content, and process dimensions.

Chapter three: The focal theory: the chapter discusses the framework, its main concepts, structures, factors, and sub-factors. The framework evolution is also mentioned to clarify the root of the frame and justify the proposed extensions. The framework is presented based on the findings from the literature and the pilot stage.

Chapter four: The data theory: in this chapter the philosophical underpinnings are discussed in-depth. The chapter starts with linking the focal theory with the data theory to clarify the bridge and the consistency between them. The chapter presents the epistemological stance of the author, and justifies the research design and data collection and analysis methods.

Chapter five: The preliminary findings and analysis: the chapter provides in-depth details about the findings from the case studies from different data sources. It offers an initial analysis of the collected data. It follows the selected data

analysis techniques and presents the results based on the research questions and objectives.

Chapter six: Revision and discussions: This chapter offers an in-depth discussion of the findings while highlighting the implications and the emerged lessons from the findings. The chapter provides synthesis to the revised and emerged CCP framework and describe the data-driven levels, factors and sub-factors from the discussions.

Chapter seven: Conclusions: This chapter concludes the final and empirically confirmed contributions and lessons. It classifies the contributions into theoretical, practical or managerial, and methodological contributions. The chapter sums the novelty dimensions and possible future advancement and development studies in the field.

2 Chapter two: the literature review (background theory)

2.1 Introduction

This chapter offers insights and critical analysis of the literature on IOC in the public sector context. This review attempts to draw out the main patterns, directions, and key dominant themes in the field to cultivate a mature and solid understanding to the phenomenon. The review also, helps in developing a conceptual framework whereby its theoretical underpinnings are derived from the findings and the results of the literature synthesisation. The chapter commences with an investigation into the meanings and key shared denominators that are emphasised in the definitions of IOC. The review presents its analysis by taxonomising the findings into three main categories: context, content and process. To understand the background of the phenomenon, the researcher highlights the theoretical paradigms that offer lenses to study IOC. In addition, the chapter introduces the contextual perspective and/or the CCP framework which is applied in this research and discusses its theoretical background and empirical acceptance among researchers. The chapter also illuminates the strengths, shortcomings, and implications of the current literature to define gaps and possible areas for further contributions. Finally, the researcher summarises the main findings and contributions discussed in this chapter.

2.2 Terminology and definitions

IOC has received growing attention in the literature (see table 2-2). However, there are many areas (discussed in detail in the coming sections) that need further investigation and research. In the forefront of such areas is the definition of the phenomenon itself (Isett *et al.,* 2011). Hudson *et al.,* (1999, p.236) argue that IOC "has remained conceptually elusive and perennially

difficult to achieve". Phillip *et al.,* (2000, p. 24) contend that one of the main challenges when studying and researching "a phenomenon as complex as collaboration is defining it". However, Provan *et al.,* (2007, p.481) found that: "Despite differences, nearly all definitions refer to certain common themes, including social interaction (of individuals acting on behalf of their organisations), relationships, connectedness, collaboration, collective action, trust, and cooperation". The main concerns and core interests for the researcher when studying IOC are the organisations and the relations between them as Cropper *et al.,* (2008, p. 9) argue that:

> *"Despite the considerable differences in the theoretical approaches, what unifies interorganisational relation research is this: in one way or another , it focuses on the properties and overall pattern of relations between and among organisations that are pursuing a mutual interest while also remaining independent and autonomous, thus retaining separate interests"*

This study investigates the collaborative and interorganisational relations in the public sector context where many terms are found frequently used to describe the phenomenon such as: 'interorganisational relation or networks', 'collaboration' 'coordinations' and 'public-public partnership'. However, and because the literature uses mostly two phrases: interorganisational collaboration (IOC) and interorganisational relation (IOR), this study has used them interchangeably. From the many attempts to define IOC by various authors as Table 2-1 presents, there are some shared denominators and commonalities which can help improve understanding of the meaning and boundaries of this phenomenon.

Table 2-1 Collaboration definitions and common themes

Definitions	Key themes/focal points	Author(s)	Shared denominators
"A reciprocal and voluntary agreement between two or more distinct public sector agencies, or between public and private or non-profit entities, to deliver government services"	Reciprocal arrangement to deliver services	Dawes and Prefontaine (2003, p. 1)	Reciprocity
"An intense form of mutual attachment, operating at the level of interest, intent, affect and behaviour: actors are bound together by the mutually supportive pursuit of individual and collective benefit"	Mutual interest	Cropper (1996, p.82)	
"Very positive form of working in association with others for some form of mutual benefit"	Mutuality	Huxham and Vangen (1996, p.7)	
"Collaboration is a process in which autonomous or semi-autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions"	Mutually beneficial interactions	Thomson *et al.,* (2009, p.25)	
"Collaboration is a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible. Collaboration is based on the simple adage that two heads are better than one ... the objective of collaboration is to create a richer, more comprehensive appreciation of the problem among the stakeholders than any one of them could construct alone"	Collaborative advantage	Gray (1989, p.5)	Perceived limitation of organisational individualism
Utilising collective skills in order to bring about an outcome that cannot be achieved by applying another approach	Collective skills	Hallett and Blrchall (1992)	
"Collaborative networks are collections of government agencies, nonprofits, and for-profits that work together to provide a public good, service, or ''value'' when a single public agency is unable to create the good or service on its own and/or the private sector is unable or unwilling to provide the goods or services in the desired quantities"	Overcoming individual shortcomings	(Isett *et al.,* 2011, p. 158).	
"pooling or sharing of resources among two or more stakeholders to solve a problem or create an opportunity that neither can address individually"	Overcoming individual shortcomings	Selin and Chavez (1995, pp. 260)	
"Collaboration is the collection of knowledge, skills, values and motives applied by practitioners to translate the following into effective practice: formal systematic joint working arrangements...less formalised joint work between different professions and agencies arising in the course of assessing for, arranging, providing and evaluating services... collaboration is variously described as multi-professional or multi-disciplinary practice and inter professional or inter-disciplinary practice"	Multi-disciplinary practice and inter professional or inter-disciplinary practice	Whittington, (2004, p.15-16)	
"A governing arrangement where one or more public agencies directly engage	Managing	Ansell and Gash	Public policy governance

Definitions	Key themes/focal points	Author(s)	Shared denominators
non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets"	collaboratively public policy implementation	(2007, p. 2)	strategy
"Stakeholders engaging in an interactive process to act or decide on issues related to a problem domain"	Interaction between stakeholders to solve shared problem	Everett and Jamal (2004, p.57)	A problem domain
"purposive relationship designed to solve a problem by creating or discovering a solution with a given set of constraints"	Relations to solve problems	Agranoff and McGuire (2003,p. 4)	
"enduring transactions, flows, and linkages that occur among or between an organization and one or more organizations in its environment"	Linkages within specific context	Oliver (1990, p.241)	
"Collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures to act or decide on issues related to that domain"	Domain problem	Wood and Gray, (1991, p.146).	
"collaboration refers to partnership formation that is believed to bring about change"	Partnership to make changes	O'Looney (1997, p.32)	Change management tool/strategy/mechanism
"Cooperative, interorganisational relationship that is negotiated in an ongoing communicative process and that relies on neither market nor hierarchical mechanisms of control"	Ongoing communicative process	Lawrence *et al.,* (2002, p.282)	
"When groups and organisations begin to embrace a collaborative process to engage in intra- or inter- organisational strategic management and change, they are in essence, inventing a new type of organisation ...[a] type of transformational organisation"	transformational organisation	Finn (1996, p.152)	

Source: developed for the purpose of this research

From the definitions presented in Table 2-1, the researcher and for the purpose of this research, defines IOC based on the shared denominators that are derived from the previous attempts with careful consideration to the public sector contextual idiosyncrasies. It is possible to define the main characteristics of IOC and its main features to be encapsulated in the idea that collaboration is an ongoing, dynamic and reciprocal interorganisational arrangement which is initiated and sustained in order to respond to a mutual interest among interested stakeholders. Establishing such an arrangement is based mainly on the rationale of the power of collective versus individual efforts to create opportunity, introduce changes, or solve a problem. In the public sector context, collaboration pools resources for more effective and efficient public service delivery or public policy implementation.

With identified aims and processes, linkages and domains are unique and are contextually sensitive. They represent a bridge between the single organisation and the wider environment to implement public policies, solve public problems, introduce changes or manage externalities. Definitions show that (IOC) can take a formal or informal shape, can be between two collaborators or more, and can be within or across sectors. IOC in the public sector context is perceived mainly as a voluntary rather than a market-based initiative. Accordingly, it "is governed by some negotiated alternative to the price mechanism" where the exchange and market structure define the relationship (Phillip *et al.,* 2000).

2.3   Interorganisational collaborative relations in the public sector

The research investigates and reviews the relevant literature in order to highlight the main patterns, trends, and areas that require more academic attention and further research. The literature synthesisation is from different disciplines; public administration, public sector management, public policy, organisation theory, interorganisational and social networks. Most of the studies were found in journals including the following:

Journal of Management; Journal of Public Administration Research and Theory; Public Administration Review; Human Relations; Administrative Science Quarterly; American Review of Public Administration; British Journal of Management; Journal of Applied Behavioral Science; Organization Science;

Strategic Management Journal; International Journal of Public Sector Management; and *Administration and Society.*

The review follows advice and guidelines offered by Webster and Watson (2002, p.3) who asserted that reviewing literature should end with articulated and clear contributions. This can be demonstrated by, for example, developing the current understanding of a phenomenon, clarifying limitations and where insufficient attention has been paid to a topic, coming with "calls from well-respected academics to examine this topic", and finally leading to significant "implications for practice" being highlighted. Accordingly, and guided by these criteria, this research presents its contributions and thereafter examines claimed findings through a large-scale empirical project using multiple-case study techniques. Following also Webster and Watson's (2002) suggested paradigm to review the literature systematically, a concept-based taxonomy is developed. The taxonomy used to investigate the literature on IOC in the context of the public sector is derived mainly from the main categories in the contextual framework, the Content, Context and Process (CCP) framework (Pettigrew, 1985, Symons, 1991; Stockdale *et al.,* 2008; Serafeimidis and Smithson, 1996; Piotrowicz, 2007 Piotrowicz and Irani, 2008).

The review is then, taxonomised into contextual levels (organisational and national), the process of the interorganisational relations, and the content dimension. However, the interorganisational collaborative relations and institutional level as units of analysis were found to be distinct and significant levels when studying collaborative networks in the public sector. Accordingly, new levels of investigation in the contextual dichotomy were used to organise the revision of the literature and found to be an integral part of the contextual components.

In Table 2-2, studies are organised in alphabetical order based on the contextual level that is repeatedly mentioned in the literature starting with the organisational level. The studies were labelled based on the main focused levels' variables such as: forces, prerequisites, drivers, triggers, constraints, success factors, stakeholders, and outcome. The table shows the more emphasised level (■), the moderately mentioned (▣), the less recognised or mentioned (⊡), and the ignored

or not mentioned level (□). The aim of this taxonomisation is to define the main tendency in previous studies to cultivate solid and rigorous theoretical underpinnings to the research. This technique helps in defining what has and what has not received sufficient attention in both theoretical and empirical studies. Findings from the review are presented under the following sections:

- The theoretical paradigms that are used repeatedly in the field.
- The contextual levels
- The process
- The content
- The identified research tendencies, shortcomings, and implications.

The main findings, implications, and proposed areas for development are explained as a synthesisation for the emerged theoretical tendencies.

Table 2-2 Summary of IOC studies in the public sector and some key general articles

*(E (QN): Empirical/quantitative) (E (QL): Empirical/qualitative) (T: Theoretical)

**(EX: external) (INS: institutional) (IOC: interorganisational collaboration) (IN: internal/organisational)

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
Akinbode and Clark (1976)		✔		To develop and test a socio-psychological framework to analyse interorganisational relations	▣	□	▫	■	A socio-psychological framework to analyse interorganisational relations was developed and validated. The interpersonal perception found to be a very important factor in the collaboration as a psychological determinant of leadership strategy and characteristic of an interorganisational process
Ansell and Gash (2007)			✔	To develop a contingency model of collaborative governance	□	▣	▣	■	There are many factors that are associated with collaborative governance such as prior history of conflict or cooperation, the incentives for stakeholders to participate, power and resources imbalances, leadership, and institutional design. Other factors that are crucial within the collaborative process itself include face-to-face dialogue, trust building, and the development of commitment and shared understanding
Barringer and Harrison (2000)			✔	To discuss the main theoretical perspectives that offer explanations of the phenomenon of interorganisational arrangements	□	▣	▣	■	They conclude that a "multidisciplinary approach to examining the characteristics of successful and unsuccessful interorganisational relationship formation and implementation will expedite the discovery of knowledge that is useful to both researchers and practitioners" (p. 397). Theories discussed offer an explanation of interorganisational relationship formation from a narrow point of view. Insufficient research has been devoted to how interorganisational relationships are managed
Boje and Whetten (1981)		✔		To study the influence of organisational strategies and contextual constraints on interorganisational centrality	▣	□	▫	■	There is a need to include both organisational and environmental constraints when studying interorganisational relations. Regardless of the centrality of an organisation, the level of autonomy is more important. Dyadic analysis is limited in exploring the network context
Brass *et al.,* (2004)			✔	To highlight the main antecedents and consequences of different types of networks	▣	▣	▣	■	"Early research focused on motives behind cooperation, but later research has focused on the conditions facilitating cooperation, such as learning, trust, norms, equity, and context" (p. 802) "Interorganisational networks offer a variety of knowledge, innovation, performance, and survival benefits, but the issues of competition, information control, and trust in partners makes the problem of building effective networks highly complex" (p. 807). The focus of the article was in multilevel of analysis by discussing antecedents and consequences of networks at the interpersonal, inter-unit, and interorganisational levels of analysis

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
Brown *et al.,* (1998)	✓			To compare the favourability in practice of partnership and single-based implementation and define the characteristics of partnership that are associated with a particular outcome	□	□	▣	■	"The findings from this study suggest that managers interested in gaining the benefits of GIS should institute formal procedures, develop strong leadership, and cap growth in the number of actors involved and the number of resources shared". "Technological advances can promote effective partnership arrangements" (p.522)
Daley (2009)	✓			To examine the effects of specific interagency collaboration determinants on collaboration outcomes	□	□	▣	■	Most important determinants of effective collaboration or partnership synergy are: previous collaborative experience and trust
Gil-Garcia (2007)	✓			To find how users' perceived impediments affect a project's expected benefits in collaborative digital government initiatives	□	□	□	■	Perception of the outcome is affected by perceived impediments and prior organisational experiences
Gray and Hay (1986)		✓		To understand interorganisational settings that impact the policy domain level	□	□	▣	■	Diagnosing the domain stakeholders is a critical step to ensure solid assessment of the domain dynamic. Project legitimacy is the key critical success factor
Gray and Wood (1991)			✓	To identify key theories that can help in shifting the level of analysis from the individual organisation to the interorganisational domain level	▫	□	▣	■	Theories offer a partial and insufficient understanding of collaboration. The role of the goals and interests of stakeholders in shaping the outcome remains unexplored thoroughly
Greasley *et al.,* (2008)		✓		To explore public-public partnership issues arising when public sector organisations work together in order to deliver a new government sponsored initiative	□	□	□	■	The research finds that the communications strategy or framework both intra- and interorganisationally is a critical factor to be considered. Lack of interpersonal relationships and involvement of the key players are serious reasons for failure
Hudson *et al.,* (1999)			✓	To discuss the main components of collaboration in the public sector	□	□	▣	■	A collaboration framework defines the main components and factors of IOC to be contextual factors: expectations and constraints; recognition of the need to collaborate; identification of a legitimate basis for collaboration; assessment of collaborative capacity. Articulation of a clear sense of collaborative purpose; building up trust from principled conduct; ensuring wide organisational ownership; nurturing fragile relationships; selection of an appropriate collaborative relationship; and selection of a pathway.
Jones *et al.,* (1997)			✓	To explain exchange conditions based on integrative conceptualisation that blends transaction cost in economic and social network theories	▣	□	▫	■	The paper extends TCE by integrating task complexity and structural embeddedness into the TCE framework. The paper also extends the work on structural embeddedness by identifying exchange conditions that promote its development, elaborate its role in social mechanisms. The paper finally explains some key social mechanisms needed for networks to function effectively.

21

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
Keast *et al.,* (2004)		✓		To explore what to expect from network structure and what are the main features of an effective structure.	□	□	▣	■	The research finds that the use of network structure to deliver services and to deal with wicked and complex problems is a productive strategy. The main characteristics of the network structure are common commission, interdependency and horizontal structure
Luna-Reyes *et al.,* (2007)		✓		Exploring the relationships between trust/ collaboration/ and the institutional and organisational environments when implementing digital governance in Mexico	□	▣	□	■	Regulations, laws, communication channels, administrative procedures impact the trust-building process by creating success or inhibiting factors to collaborative efforts
Miles and Snow (1986)			✓	To develop and characterise a new level of analysis: the Dynamic Network Framework	□	□	▣	■	A proposed framework to analyse the dynamic of networks where the main constructs are: Vertical disaggregation / market governance mechanisms/ broker strategy-maker and full disclosure information system
Oliver (1990)			✓	Analysing the determinants of interorganisational relations	▣	▣	⊡	■	There are many contingencies which help in understanding IORs. These are found to be: necessity, asymmetry, reciprocity, efficiency, stability, and legitimacy. However, the author proposes many contextual factors that can shape such characteristics such as: enforceable laws or mandates, external threats or constraints, inter-participant compatibility, relationship costs and benefits, environmental uncertainty and risk, and institutional disapproval or indifference.
O'Toole and Meier (2004)	✓			How structural features of intergovernmental networks and also the networking behaviour of top managers influence an array of performance results	□	□	▣	■	Managerial networking, managerial quality, and selected stabilising features (most systematically, personnel stability) contribute positively to project performance. Nonlinear interactions among structure, management, and environmental forces are commonplace in the world of networked public project.
O'Toole and Montjoy (1984)		✓		Exploring the role of networks in policy implementation	□	□	▣	■	Resource availability is key factor for the success of interorganisational implementation
Provan and Milward (2001)			✓	To highlight the evaluation levels of public network effectiveness	▣	⊡	▣	■	The researchers argue that in the public sector context it is necessary for policy makers, practitioners, and researchers to consider three level of analysis when evaluating networks in the public sector namely: community, network, organisational/participant level of analysis. Networks in the public sector differ from the for-profit arrangements in terms

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
									of evaluating effectiveness as the latter is based on financial performance
Provan *et al.,* (2003)	✓			To explore how the structure of collaboration evolves and how network participants feel about working together	☐	☐	▣	■	Building community capacity through collaborative network of relationships among local organisations can be successful when moving from modest levels of collaboration to increasingly dense and multiplex relationships that can be used to address complex health problems. Developing relationships based on shared resources and clients/patients involves organisational commitment that goes beyond simply talking at meetings or on the phone
Thomson and Perry (2006)			✓	To define the process of collaboration	☐	☐	▣	■	Researchers propose that collaboration takes place over time when participants cooperate formally and informally through cyclic sequences of negotiation, development of commitments, and execution of those commitments. There are five dimensions which constitute the process of the collaboration in the public sector of which two are structural dimensions (governing and administering), two are dimensions of social capital (mutuality and norms), and one is an agency dimension (organisational autonomy)
Thomson *et al.,* (2009)	✓			To measure collaboration and to define key dimensions contribute to an overall construct of collaboration	☐	☐	☐	■	Collaboration is a multidimensional, variable construct composed of five key dimensions, two of which are structural in nature (governance and administration), two of which are social capital dimensions (mutuality and norms), and one of which involves agency (organisational autonomy). Findings from this study support the proposed structural equation model of collaboration. Collaboration is more than just a normative and subjective construct
Borgatti and Foster (2003)			✓	To portray and identify the mainstream in networks' research	☐	☐	■	☐	Exploring the consequences of interorganisational networks has received more attention from the researchers. The main levels of analysis are: dyadic, actor and network
Cline (2000)			✓	To compare communications model of intergovernmental policy implementation (CM) and implementation regime framework (IRF)	☐	☐	■	☐	The comparison found that the CM view of the process of implementation as centralised authority without being able to recognise the social settings that are associated with the network implementation because "Networked implementation settings are approached from an instrumental viewpoint" (p. 567). On the other hand, IRF covers the strategic interactions of participants in their larger institutional context
Gajda (2004)		✓		To develop a framework for collaboration evaluation	☐	☐	■	☐	Any attempt to study collaborative arrangements should know that collaboration principles include: (1) collaboration is an imperative, (2) collaboration is known by many names, (3) collaboration is a journey and not a destination, (4) with collaboration the personal is as important as the

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
									procedural, and (5) collaboration develops in stages
Everett and Jamal (2004)		✓		To examine the role of power in multi-stakeholder collaboration	☐	☐	■	☐	There are two levels of power within collaborative efforts: surface and deep, especially symbolic power
Fedorowicz et al., (2006)		✓		To draw lessons from e-government collaborative projects	☐	▫	■	▣	There are political, administrative and technical challenges. To overcome them the research offers many recommendations based on its findings such as: establish a shared understanding of goals and objectives, cultivate a team of champions, assess readiness and facilitate participation in the collaboration. Consider leading-edge technologies, but accept the legacy reality. Solicit many informed opinions on what software tools to use, and choose them carefully. Adhere to standards and, if possible, help set them.
Huxham and Vangen (2000a)		✓		To examine the role of collaborative leadership in the success of joined-up efforts	☐	☐	■	▣	Structure of interorganisational arrangement influences and influenced by the process of the arrangement's agenda "The structure of public sector collaborations is often externally imposed by policy makers or funders rather than determined explicitly by the collaborations' initiators or members" (p. 1166). The emergent structure is also evident as a result of the interaction between members. "Many of the processes that shape collaboration are not designed by members, or even wholly within their control. It is common for external forces—commonly, funding deadlines— to drive processes"(p. 1167) the positions of the members in the collaboration or in society can determine and influence the agenda
Huxham and Vangen (2000b)		✓		To explore the nature and the impact of membership on collaborative advantages	☐	☐	■	☐	Collaboration is complex and dynamic and has an ambiguous nature. Nurturing the collaboration by providing essential resources and support is a key factor in success.
Isett and Provan (2005)		✓		To find how operational-level interorganisational relationships change over time in a publicly funded network setting	☐	☐	■	☐	The operating environment encourages more formal interaction (Formal contracts). Networks in the public context evolve differently compared with private sector networks
Johnsen et al., (1996)	✓			To answer these questions: - How can the systems of care for children with SED be measured and characterised? How can changes associated with service systems interventions	☐	☐	■	☐	Findings assert that systems-level change can lead to service system change and improvement, which means the structure of the network (system) can change the delivered services or project.

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
				be assessed over time?					
Knight & Pye (2004).		✓		To explore the relationship between interorganisational networks' changes and learning	▫	□	■	▣	Learning outcomes are found to be changes in network practices, network interpretations and network structures. Learning processes are seen as relating to: developing meaning, developing commitment and developing method "There are multiple, complex, and often iterative, links between contextual factors and the various learning outcomes and processes found in an episode" (p. 388)
Lasker et al., (2001)			✓	To develop a framework to understand and strengthen collaborative advantage and to answer the question of how to analyse and assess collaborative efforts to address community health problems	▫	□	■	▣	A framework for partnership synergy was proposed whereby members can: think creatively, develop realistic goals, plan and implement comprehensive tasks, realise the interaction and its outcomes, incorporate and embrace different perspectives, communicate methods, and finally obtain support from the target community
Lawless and Moore(1989)		✓		Validating and applying in the public sector the *Dynamic Network Framework* developed by Miles and Snow (1986)	□	▣	■	□	The validation and extension of the Miles and Snow model in a public sector context. One of the main findings is the role of the strategy maker or the broker who takes different responsibilities and positions. In the private context the role was: facilitator, coordinator. However, does not make commands as they found the role of the broker in the public sector context.
Mandell (1984)		✓		To analyse the impact of the nature of interorganisational level dynamics on managerial process	▫	□	■	▣	The research found that administrators have to adapt to the dynamic nature of the network through acquiring appropriate skills and attitudes
McGuire (2006)			✓	Review the current research in collaborative public management	□	□	■	□	Growing attention in collaborative public management research to: Understand the skills required to accomplish tasks collaboratively. Determine the strength and influence of collaborative management. The researcher identified the key questions that need to be answered as: what do collaborative managers do when faced with an imbalance of power and influence among participants within collaboration? How do managers ensure accountability in collaborative settings? Do collaborations in the public sector evolve over time, such that there is an identifiable cycle or sequence to their development? That is, do collaborations "learn"?

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
Milward (1982)			✓	To introduce the term interorganisational policy system into the public sector	□	▣	■	□	An initial conceptualisation of a policy system is that it may be public or and private and might be individuals who have a shared interest in a particular policy. It represents a collective unit of analysis. It is a dynamic system whereby its boundaries expand due to its interactions and evolution
Morrissey *et al.,* (1985)		✓		Assessing interagency collaboration	▫	▣	■	▣	The low level of resource flow within an interorganisational structure corresponds with a low level of formality and centralisation
Provan *et al.,* (2007)			✓	Review the empirical literature and studies on the network level	□	□	■	□	There are very few empirical studies at the level of networks beyond the organisational level. "Network researchers in business, public management, and health care services have only a marginal understanding of whole networks, despite their importance as a macro-level social issue" (p. 512). The interplay between the networks and its "regional clusters, organizational fields, or complete societies" (p. 512). has to be given the due attention by researchers.
Oliver and Ebers (1998)			✓	Reviewing patterns of research in interorganisational relations	▫	□	■	▣	The review finds that resource dependencies, social networks, power and control, institutional, and strategic underlying assumptions represent the main dominant perspectives in the field. The authors find that the level of analysis varies and depends on theoretical positions, for example: individual (social network), or societal groups of individuals (institutional).
Provan and Milward (1995)		✓		Analysing and assessing factors which impact network effectiveness	■	□	■	□	Direct state control of the network maximises its effectiveness. Instability of the network impacts negatively on the effectiveness of the network. Resource availability is positively linked with the network effectiveness
Provan and Sebastian (1998)		✓		To explore the role of cliques analysis in understanding network effectiveness	□	□	■	□	Network effectiveness can be explained by intensive integration through network cliques strong, multiplex, reciprocal ties among small network subgroups can be particularly effective.
Bryson *et al.,* (2006)			✓	The aim is to develop theoretical propositions that might help in enhancing understanding of a network's arrangement	▫	■	▣	□	Support from the institutional environment is critical for legitimising cross-sector collaboration but is not easily controlled by local managers. Structural variables mediated and moderated by environmental factors.
Dawes and Prefontaine (2003)		✓		To understand collaborative initiatives for delivering government services	□	■	▣	▫	There are many important aspects in interorganisational collaboration arrangements : formal institutional framework, organisational technical tools, collaboration settings and dynamism
Provan *et al.,* (2004)	✓	✓		To explore the institutional effects on the evolution of interorganisational networks	□	■	▣	▫	"Community-based system of health and human services can strategically adapt to conflicting pressures from the state and the profession. The

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
									mechanism for balancing this conflict is through development of an interorganisational network governed by a strong central administrative organization" (p. 509). "Successful network evolution depends on the active role of a network administrative organization, maximize incentives to cooperate, minimize incentives to compete, and act as a buffer between the state and local providers" (p. 511)
Mandell and Steelman (2003)			✓	To typologies interorganisational arrangements in the public sector and to define the main contextual determinants	■	□	▫	▣	The main conclusion is "contextual factors are important in the consideration of which type of interorganisational arrangement makes the most sense. To insist on one type of arrangement over another without considering the characteristics of the arrangement as well as the context in which they will operate is foolish, at best" (p. 220). Decisions to form interorganisational arrangements should be based on a careful assessment of the contextual factors
Mandell & Keast (2008)			✓	To develop a multilevel framework to evaluate the effectiveness of collaborative networks	■	□	▣	▣	A framework is proposed to evaluate networks in the public sector context that is based on three levels: environmental, organisational and operational. This combines with measurement suggested to evaluate the phases which are proposed to be network formation, stability, routinisation, and extension
Fried *et al.,* (1998)		✓		To analyse interorganisational network-based services at the network level	■	□	▫	▣	Resource richness and contextual factors play vital roles in shaping the structure of the interorganisational network
Gray (1985)			✓	To identify key conditions and factors that are significant at each phase of collaboration	■	□	▫	▣	A process-oriented model was proposed in three stages: problem setting, direction setting, and structuring. Generic conditions were also proposed for each phase.
O'Toole (1997)			✓	To propose a research-based agenda for networks in the public sector	■	□	▣	□	The main suggestions for the research agenda are (p. 50): Undertake systematic research to explore the descriptive questions on the network agenda. Shift units and/or levels of analysis to the network. Develop and test theoretical ideas that emphasise network features in explaining program or service delivery results. Emphasis on some highly networked contexts. And translate some of the most enduring normative concepts into notions that have meaning in these larger arrays
Reilly (2001)		✓		Defining the process and conditions of collaboration	■	□	▣	▫	A process-based analysis was developed as the following steps: identification path; formation; implementation; engagement/maintenance; resolution; and evolution. There is an uncertainty level associated with the collaborative process

Author(s)	Methodology *			Aims and purpose of the work	The most emphasised contextual levels**				Conclusions/Findings/suggestions
	E (QN)	E (QL)	T		EX	INS	IOC	IN	
Schroeder (2001)			✔	To build a new methodological system for implementation of network policy	■	□	▣	□	A methodological system for networked-policy implementation based on: 1) "Contextual Assessment" - Mapping a Network's Political Economy; 2) "Stakeholder Analysis & Management" – Understanding Who Should be at the Table and Furthering the Conditions for Cooperation; and, 3) "Joint Visioning" – The Facilitation of Project Planning in a Network Setting.
Smith (2009)	✔			To examine the institutional and government structure impact on collaboration	■	□	□	▣	The research finds that the form of government, the rules governing debt accumulation, and designation of open-plan offices—affect the breadth of county government collaboration
Wood and Gray (1991)			✔	To define the main preconditions / processes and outcomes of collaboration	■	▪	▣	▣	The paper argues that the role of the convener can take many forms such as facilitator or a mandatory role, however it remains a vital component of collaborative initiatives. Legitimacy and control are the main themes and/or motives behind the initiation of interorganisational relations. Environmental complexity, uncertainty, and turbulence are contextual factors that impact IORs

Source: developed for the purpose of this research

2.3.1   The dominant explanations

2.3.1.1   Theoretical paradigms and underlying assumptions

Over the years, literature in IOC has evolved from a variety of disciplinary backgrounds and underlying theoretical assumptions. Paralleling with the development in the literature, the context of the public sector also evolved and is "increasingly characterised by hybrid forms of organisation variously described as partnerships, collaborations, networks, or alliances" Andrews and Entwistle (2010, p. 679). The questions that to be asked in this regard is about the ability of the theoretical paradigms in analysing and studying the complexity of the merged forms. There are many theoretical paradigms that have tried to explain IORs in the public sector context such as social network theory (e.g. Isett and Provan, 2005; Keast *et al.,* 2004; Mandell, 1984); institutional theory (e.g. Provan *et al.,* 2004; Smith, 2009); resource dependency (e.g. Aldrich, 1976); and stakeholder theory (e.g. Gray and Hay, 1986; Rod and Paliwoda, 2003; Schroeder, 2001). However, the field in general is argued to be dominated by narrower explanations offered by theories such as transaction cost economics, resource dependency, and stakeholder theory (Barringer and Harrison, 2000) and the primary focus of the majority of the previous theoretical paradigms is on the economic perspectives and explanations (Lotia and Hardy, 2008). In a similar vein, Oliver and Ebers (1998) argue that resource dependencies, social networks, power and control as underlying assumptions represent the dominant perspectives in the field. Consequently, authors in the field (e.g. Isett, *et al.,* 2011; Lotia and Hardy, 2008; Everett and Jamal, 2004; Marchington and Vincent, 2004 Barringer and Harrison, 2000) argue that such narrow explanations insufficiently address the IOR issue because there are still many unanswered questions beyond the economic, control of resources, and power dimensions. To illuminate such shortcomings, this research firstly defines the main premises and/or arguments of such theories followed by highlighting the main tendencies in IOR studies.

*Resource dependency theory***:** From the resource dependency perspective, organisations strive to gain and acquire external resources and cultivate interactions with their environment to do so. The theory suggests that no organisation is

independent; accordingly, it focuses on explaining why organisations engage in external linkages and arrangements (Medcof, 2001; Barringer and Harrison, 2000; Ulrich and Barney, 1984). The perceived need to acquire external resources leads organisations to establish coalitions to handle exchange and interaction within this fabric of relations (Casciaro and Piskorski, 2005). The resource dependency theory pays more attention to the ways in which organisations can exert power to control external resources. Accordingly, it provides more detail on why and how organisations can decrease dependency on others or increase others' dependency on them (Barringer and Harrison, 2000).

Transaction cost theory: The main premise of the transaction cost theory is based on the idea that economic exchange occurs with costs that are needed to maintain this exchange where costs take many forms as Dyer (1997, p. 536) found that transaction costs can be encapsulated into four types: "search costs, contracting costs, monitoring costs, and enforcement costs". Transactions then depend on many interdependent variables such as the extent to which specific assets are used, the perceived level of uncertainty, coordination costs, transaction risk, opportunism, and risk and trust (Standifird and Weinstein, 2007; Dyer, 1997; Roberts and Greenwood, 1997). Transaction theory is therefore, concerned more with outcomes, in particularly cost and benefits and acceptance of transaction costs, therefore it tackles interorganisational collaborative arrangements from economic and financial stances.

Institutional theory: suggests that institutional fields are developed through an interaction between institutions whereby shared and understood schemes, norms, and routines govern such interaction, and therefore these developed norms produce and reproduce the relationship between organisations or institutions (Bada *et al.,* 2004; Barringer and Harrison, 2000; Phillips *et al.,* 2000). The reason for the institutional context being a source of pressures and changes is ascribed to the "wider intuitional expectations of normative prescriptions from professionals, modelling and mimetic influence through the benchmark or standard set by organisations that are perceived as exemplars within the industry, and coercive influence through the regulatory demands of government agencies"(Bada *et al.,* 2004, p.29). While scholars admit the influence of the institutional level on interorganisational collaborative arrangements they call for more academic attention to it (Phillips *et al.,* 2000; DiMaggio and

Powell, 1983; Bryson *et al.,* 2006; Dawes and Prefontaine, 2003; Luna-Reyes *et al.,* 2007; Provan *et al.,* 2004). This is because previous studies pay more attention to the influence of institutional forces on an organisation and not IORs. As a unit of analysis, the institutional level explains why organisations behave or respond in particular ways and why relationships evolve using specific routes and helps also in understanding the context in which organisations operate.

Stakeholder theory: The main premise of the stakeholder theory is based on the idea that at the heart of organisations are a set of stakeholders that influence and are influenced by the organisation. This set of relationships may involve stakeholders such as suppliers, customers, investors, employees, and competitors and so on. The theory can be used to determine which stakeholders are more important to the organisation (Barringer and Harrison, 2000) and also to explain why management behaves in particular ways with different parties involved in organisational performance (Donaldson and Preston, 1995). Whether individuals or groups, formal or informal linkages or direct or indirect stakeholders, according to the theory, determining and mapping all these types is at the core of achieving organisational goals. This helps organisations in prioritising their main stakeholders and considering them accordingly (Scott and Lane, 2000).

Social network theory: Social network theorists (Burt, 1980; Nohria and Eccles, 1992; Gulati, 2000) view organisations as embedded entities in social linkages (through nodes which are the individual, and ties which refer to the relationships between the actors) whereby such relations might inhibit or facilitate organisational strategies and actions. Social network theory is preoccupied with the ways in which organisations can exercise power to achieve the centrality of the network (Rowley *et al.,* 2000). Collaboration, from the social network point of view, is therefore a tool to gain the centrality of the network (Lotia and Hardy, 2008). While the theoretical paradigms facilitate understanding of the IOC, shortcomings still produce some unanswered questions and arguments.

Ultimately, the inability of the previous theories to offer a multifaceted lens to understand the IOC and the emphasis on one aspect of the phenomenon of IOC mean cultivating a narrow and inadequate view which might result in ignoring critical

impact factors that are outside the scope of these paradigms. The majority of the previous studies and the largest body of the literature in IOC is based on economic perspectives whereby organisations seek to minimise costs, acquire and control external resources, and increase power for competitive advantage (Marchington and Vincent, 2004; Lotia and Hardy, 2008). Earlier, Kumar and Van Diesel (1996) consider this tendency in the literature is at the expense of socio-political perspectives, as the economic rationale is not only the underlying factor. More recently, Cropper *et al.,* (2008) reach the same conclusion that the economic assumptions and basis are the primary contributors in developing theoretical approaches that study IOC. Therefore, a part of the argument of this study is the need for more lenses and approaches that consider not only the economic/financial/profit contexts and underpinnings but also the social, political and embraces public sector idiosyncrasies.

2.3.1.2 Public vs. Private sector-oriented explanations

While the previous lenses, studies, and interpretations primarily serve the private sector domain, IOC in the public sector differs from the for-profit arrangements in many ways. First of all, the collectivist nature and evident level of interdependency compared with the individualist nature of the private sector (Hudson *et al.,* 1999; Metcalfe and Richards, 1990) means that collaboration is an inherent mechanism and approach in public sector management (Krueathep *et al.,* 2010; Bushouse *et al.,* 2010). According to Feldman (2010, p. 159):

> *"The public organization of the future will be more collaborative, the boundaries will be more porous, and there will be more connecting to the public as well as to other jurisdictions and to the private and nonprofit sectors. Ultimately, the organization of the future will be primarily concerned with the process of acting, and structures will be seen as interrelated with actions rather than as independent of actions"*

Due to the acknowledged differences between the two domains, scholars admit the need to differentiate the treatment to them when IOC implemented. For example, while evaluating the effectiveness of an arrangement is based on financial performance and measurement in the private context, in the public sector, evaluation takes into consideration social, political, and community factors (Provan and Milward, 2001). Empirically, differences are reported, for example,

in a study conducted by Lawless and Moore (1989) to validate and apply in the public sector the Dynamic Network Framework (DNF) developed by Miles and Snow (1986). One of the main findings is the differences in the responsibilities, positions, and roles of the strategy maker or the broker (the focal organisation who initiates the collaboration). In the private context the role was: facilitator or coordinator however, without commanding as Lawless and Moore (1989) found in the public sector context where the hierarchy and chain of commands are more noticeable (such as the collaboration between central and local governments' organisations.

Isett and Provan (2005) also found that IOC in the public context evolves differently compared with private sector networks because of direct government interventions and control as a funder or a convener to establish such an arrangement. While it is true that there are many findings in interorganisational arrangement studies that have been conducted in the private sector context that can be transferred to the public sector context, nevertheless, scholars insist on the need to understand public sector context specifics and idiosyncrasies which have received little attention and which can only be achieved through more rigorous studies that consider the differences between the two sectors (Isett and Provan, 2005; Provan and Milward, 2001).

In general, the question is what makes the public sector differ such that economic/rational perspectives might not be able to analyse the growing complexity of its contextual idiosyncrasies? In another words, what are the sector specifics that might play vital roles in determining levels and possibilities of transferability from the private to public sector context? Compared with the private sector, scholars repeatedly refer in the literature to the bureaucratic, hierarchical and inflexible arrangements as barriers that prevent the embracing and introduction of change in the public sector (Keast *et al.,* 2004; Zeffane, 1994; Lan and Rainey, 1992; Perry and Rainy, 1988). In addition, it is argued that "public management lacks an adequate theoretical underpinning; it lacks logic of its own. Filling this gap involves going back to the basics and addressing a set of conceptual and theoretical issues which usually have been mishandled" (Metcalfe, 1993, p.293). For example, it is stated that while the private sector has found a

way to respond to contextual changes, the situation in the public sector is not the same:

> "*As globalization of national economies intensifies, much of the private sector has had to reform business practices in order to make a stronger commitment to customer service for differentiation and survival. Consequently, the private sector has increasingly set high standards of service both domestically and internationally. Public sector departments and agencies however, were initially slow to respond to the challenge of improved service delivery within the information age*" Asgarkhani (2005, p.466).

Therefore, the transferability of strategies from the private to public context is not a straightforward task because "private and public organizations are not homogeneous" (Thong *et al.,* 2000, p.247). As Table 2-3 shows, the differences between them might include also government interventions, the political system, service-based motives, and the differences in time and effort required to change these sector-specifics which label the sector with many social, political, but not only economically dominant characteristics.

Table 2-3 Differences between public and private contexts

Dimensions	Descriptions	Reference(s)
External intervention	More external intervention in decision-making process in the public sector	(Baldwin 1990; Coursey and Bozeman, 1990; Perry and Rainy, 1988)
Motives' structure	Service-based motives in public organisations versus profit-based motives in private organisations	(Khojasteh, 1993; Isett and Provan, 2005)
Complexity	Highly political nature, interdependencies and complex linkages in public organisations	(Robertson and Seneviratne, 1995; Bretscneider, 1990)
Market incentives	Lack of market incentives in public organisations	(Perry and Rainy, 1988)
Change management	Implementing change in the public sector takes a longer time compared to the private sector; the difficulty stems from the time needed to gain support and funding which means that "more time is spent lobbying for interventions"	(Robertson and Seneviratne, 1995, p.548)
	In the literature, less attention has been paid to the public sector context compared with the private sector context in terms of managing change	Thong *et al.,* 2000; Coram and Burnes, 2001
	Hiring and buying equipment, as administrative functions take more time in the public sector	(Bozeman and Bretschneider, 1994)
interorganisational relations	Collectivism and evident level of interdependency comparing with individualist nature of the private sector	Hudson *et al.,* (1999), Metcalfe and Richards (1990)
	The evolution of interorganisational relations in the public sector takes a different route because of direct governmental control and intervention	Isett and Provan (2005)

Source: developed for the purpose of this research

Ultimately, studying IOC in the public sector context is triggered by the need to offer more public sector-oriented and socio-political lenses that enable us to move beyond the market structure and beyond the economic conceptualisation in which the sector specifics are well-defined.

2.3.2 Outcomes of collaborative arrangements

It is important to mention that the previous studies have paid extensive attention to the outcomes and the results of establishing interorganisational collaborative networks in the public sector as Table 2-4 indicates below. There are many lessons that can be derived from studies that have been conducted in IOC and discussed its consequences and outcomes, and theses lessons are:

- The majority of the previous studies are theoretical articles that claim and predict the characteristics and potential benefits of collaboration and only a limited number of studies have supported such claims empirically. Hence, it is necessary to move beyond the articulated common sense claims of interorganisational arrangements' outcomes in order to examine empirically such conceptual claims (Connelly and Canestraro, 2007; Barringer and Harrison, 2000). Green and Thorogood (2008, p.29) state that "some of the most interesting research can arise from the questioning of taken-for-granted 'common-sense' explanations".

- From Table 2-4, it can be seen that the outcomes of IOC are classified into four categories: the organisational level, the interorganisational level, the external and environmental level. One can conclude that the majority of the studies are designed to explore organisational level impacts or what an individual organisation can achieve, whereas the interorganisational and the external levels' impacts have received little attention.

- In terms of the type of outcomes, studies indicate tangible outcomes are achieved and gained by the establishment of interorganisational collaborative networks. Although these types of outcomes are more evident in the private sector context, outcomes such as cost reduction and cost-based motives have also been recognised theoretically or empirically in the public sector context. For example, at an organisational level, cost reduction is at the core of the benefits

of IOC networks (Gray, 1989; Brown *et al.,* Gil-Garcia, 2007; Provan *et al.,* 2003).

- The research shows that intangible outcomes are frequent in research in the public sector. At the organisational level, for example, outcome can be in changing organisational perception (Bryson *et al.,* 2006) or increasing organisational power (Keast *et al.,* 2004). In additions to this dichotomy (tangible/intangible), literature indicates the importance of the financial/ non-financial benefits of IOC.

- If a comprehensive evaluation of the outcomes is to be developed, scholars suggest that there is a need to move beyond exploring the organisational level outcome to assess also the impact on the arrangement and the community level (Mandell & Keast, 2008; Provan and Milward, 2001) and therefore using a multifaceted lens to examine the outcome in a multilevel assessment. As this research intends to do, examining the impact of IOCs beyond the organisational level is one important way of improving the theoretical and empirical contribution so far in the field.

Table 2-4 Outcomes of interorganisational collaborations

Outcome and impact dimensions	Contextual levels				Authors
	EX	INS	IOR	IN	
Shift to broader concerns				*X*	Reilly (2001): Lasker *et al.,* (2001)
Organisational interests are considered				*X*	Gray (1989)
Improved quality of solution to the domain problem			*X*		Gray (1989)
Managing and balancing institutional pressures		*X*			Phillips (2000); Provan *et al.,* (2004)
Increased social capital	*X*				Reilly (2001); Provan and Milward (2001)
Enhancing the interrelationship and interaction between the domain parties			*X*		Gray (1989)
Joint agreements and developing domain consensuses with regard to the problem			*X*		Gray and Wood (1991); Gray (1996)
Organisations retain ownership of the solutions				*X*	Gray (1989)
Enhancing organisational acceptance and motivation to solve the problem				*X*	Gray (1989)
Effectiveness of program implementation at community level		*X*			Provan and Milward (1995); Provan *et al.,* (2003)
Increasing the probability of coming up with a novel solution to the problem				*X*	Gray (1989)
Achieving collaborative advantages			*X*		Huxham (1996); Huxham and Vangen (2000b); Lasker *et al.,* (2001)
Collaboration productivity			*X*		Cropper (1996)
Collaboration efficiency			*X*		Cropper (1996)
Development of policy making in local government		*X*			Agranoff and McGuire (2003)
Collaboration legitimacy			*X*		Cropper (1996)
Collaboration adaptability			*X*		Cropper (1996)
Sustaining collaborative process			*X*		Ansell and Gash (2007); Cropper (1996); Gray and Wood (1991)
Minimising costs associated with the implementation				*X*	Gray (1989); Brown *et al.,* (1998); Provan and Milward (2001); Barringer and Harrison (2000); Oliver and Ebers (1998); Gil-Garcia (2007); Provan *et al.,* (2003)
Minimising risk				*X*	Gray (1989); Barringer and Harrison (2000); Keast *et al.,* (2004)
Enhancing organisational capacity to exchange information				*X*	Gray (1996) in Huxham
Building trust				*X*	Ansell and Gash (2007); Oliver and Ebers (1998);

Outcome and impact dimensions	Contextual levels				Authors
	EX	INS	IOR	IN	
					Keast *et al.,* (2004)
Cost to community, and indicators of client well-being		*X*			Provan and Milward (2001)
Agency survival				*X*	Provan and Milward (2001); Brass *et al.,* (2004)
Enhanced legitimacy				*X*	Provan and Milward (2001); Oliver and Ebers (1998)
Product development				*X*	Barringer and Harrison (2000); Oliver and Ebers (1998); Brown *et al.,* (1998)
Range of services provided				*X*	Provan and Milward (2001)
Absence of service duplication		*X*			Provan and Milward (2001); Gil-Garcia (2007)
Public perception	*X*				Provan and Milward (2001)
Relationship strength			*X*		Provan and Milward (2001); Keast *et al.,* (2004); Provan *et al.,* (2003)
Services integration				*X*	Provan and Milward (2001); Gil-Garcia (2007)
Resource acquisition				*X*	Provan and Milward (2001)
Access to services and resources				*X*	Provan and Milward (2001); Barringer and Harrison (2000)
Collaboration performance			*X*		Dawes & Eglene (2008); Brass *et al.,* (2004)
Information diffusion between organisations				*X*	Brass *et al.,* (2004)
Organisational performance				*X*	Brass *et al.,* (2004)
Reducing duplication of work				*X*	Ezz and Papazafeiropoulou (2006)
Conserving time and money				*X*	Keast *et al.,* (2004)
Increasing organisational power				*X*	Keast *et al.,* (2004)
Creating public value	*X*				Bryson *et al.,* (2006)
Less destructive conflict among organisations				*X*	Bryon *et al.,* (2006); Keast *et al.,* (2004); Gil-Garcia (2007)
Creation of social, intellectual, and political capital	*X*	*X*			Bryson *et al.,* (2006)
New institutional norms and characteristics		*X*			Bryson *et al.,* (2006)
Cost of network maintenance			*X*		Provan and Milward (2001)
Expanding experience of organisation				*X*	Keast *et al.,* (2004)
Influencing externalities through collective lobbying	*X*	*X*			Barringer and Harrison (2000); Provan *et al.,* (2003)
Accessing others' expertise				*X*	Keast *et al.,* (2004)
Building new resources				*X*	Keast *et al.,* (2004); Provan *et al.,* (2003)
Change in organisational perception				*X*	Bryon *et al.,* (2006); Keast *et al.,* (2004)
Change in the incidence of the problem	*X*				Provan and Milward (2001)
Revenues				*X*	Oliver and Ebers (1998)
Innovation				*X*	Oliver and Ebers (1998); Brass *et al.,* (2004); Keast *et*

Outcome and impact dimensions	Contextual levels				Authors
	EX	INS	IOR	IN	
					al., (2004)
Service performance				*X*	Dawes & Eglene (2008); Brown *et al.,* (1998); Provan *et al.,* (2003)
Members' commitment to network				*X*	Provan and Milward (2001)
Partnership synergy			*X*		Daley (2009); Lasker *et al.,* (2001)
Organisational learning				*X*	Barringer and Harrison (2000); Provan *et al.,* (2003)
High-quality agreements			*X*		Bryson *et al.,* (2006)
Minimum conflict				*X*	Provan and Milward (2001); Oliver and Ebers (1998); Gil-Garcia (2007)
Collaboration accountability			*X*		Bryon *et al.,* (2006); Gil-Garcia (2007)
Client outcome and customer services				*X*	Provan and Milward (2001); Provan *et al.,* (2003)
Innovative strategies				*X*	Bryson *et al.,* (2006); Oliver and Ebers (1998); Lasker *et al.,* .(2001)
Change in organisational practices				*X*	Bryson *et al.,* (2006)
New partnerships, coordination and joint action				*X*	Bryson *et al.,* (2006); Provan and Milward (2001)
Network learning			*X*		Provan *et al.,* (2007); Knight and Pye (2005)
Network effectiveness			*X*		Provan and Sebastian (1998); Lasker *et al.,* (2001)
Balancing the demands of the state for cost control and financial accountability		*X*		*X*	Provan *et al.,* (2004)
Building community capacity	*X*				Provan *et al.,* (2003)
Changes to network structures, network practices and network interpretations			*X*		Knight & Pye (2004)

Source: developed for the purpose of this research

2.3.3 The contextual levels

As it is presented in detail later in this section, the literature review indicates the importance of the endogenous and exogenous factors that are associated with IOC in the public sector. Contextual factors can lead to establishing and building an IOC, but sometimes such factors work as an inhibitive force to collaborative initiatives (Krueathep *et al.,* 2010; Amirkhanyan, 2009). Contextual factors not only play a vital role in triggering the need for initiating and/or arranging interorganisational collaboration, but Sharfman *et al.,* (1991) found that contextual factors also impact on the sustainability and willingness to continue

such collaboration. In the main time, managing the contextual environment and forces can be achieved by collaborative arrangements as:

> *"Collaboration can offer an antidote to turbulence by building collective capacity to reduce these unintended consequences... By building collective appreciations and sharing resources, organisations increase variety in their repertoire of response to environmental change"* (Gray, 1989, p.28-29).

However, questions of the extent to which collaboration provides Gray's mentioned outcomes and how this relation between the contexts, the process, and the outcome might be remain unanswered systematically. Therefore, it is "reasonable to ask if these various initiatives are haphazard occurrence or if they are indicative of a large trend in society" (ibid, p. 29). The following sections present the findings of the forces and contextual factors that belong to the organisational, interorganisational, institutional, and external levels.

2.3.3.1 Organisational level

Researchers find that many contextual factors belonging to the organisational level can have an impact on the process of interorganisational collaborative arrangements.

Table 2-5 A summary of the organisational level impact factors

Organisational level factor	Theoretical studies (T) Empirical studies (E)
Organisational structure	**(E)** Luna-Reyes *et al.,* (2007)
Organisational strategy	**(T):** Mandell and Steelman (2003); Thomson *et al.,* (2009);Wood and Gray (1991); Lasker *et al.,* (2001) **(E):** Fedorowicz *et al.,* (2006); O'Toole and Montjoy (1984)
Organisational support	**(E):** Fedorowicz *et al.,* (2006)
Organisational experience	**(T):** Brass *et al.,* (2004) ;Mandell and Steelman (2003);Thomson and Perry (2006) **(E):** Gil-Garcia (2007)
Organisational culture	**(T):** Mandell and Steelman (2003)
Organisational position and role within the arrangement	**(T):** Miles and Snow (1986); Gray (1985) **(E):** Mandell (1984); **(E):** Fried *et al.,* (1998)
Participants motivation	**(T):** Ansell and Gash (2007) Brass *et al.,* (2004) Oliver (1990)
Organisational characteristics	**(E):** Akinbode and Clark (1976); Huxham and Vangen (2000a) ; Boje and Whetten (1981)
Leadership role	**(E):** Akinbode and Clark (1976); Brown *et al.,* (1998)
Recognition and perceived level of interdependency	**(T):** Gray (1985) ; **(E):** Keast *et al.,* (2004)
Legitimacy of the participants	**(E):** Gray and Hay (1986)
Organisational staff involvement	**(E):** Greasley *et al.,* (2008)
Perceived organisational individualism limitations	**(T):** Hudson *et al.,* (1999)
Organisational reputation	**(T):** Jones *et al.,* (1997)
Organisational customisation	**(T):** Jones *et al.,* (1997)
Managerial processes and quality	**(T):** O'Toole and Meier (2004)

	(E): Luna-Reyes *et al.,* (2007)
Organisational commitment	(E): Provan *et al.,* (2003) Smith (2009)
Participant willingness to continue	(E): Reilly (2001)

Table 2-5 shows many interesting and influential contextual impacting factors. The common or primary idea which can be derived from the literature is the consensus about the importance of organisational level factors in determining the process and the outcome of an interorganisational collaborative arrangement. As noted in the literature earlier, for example, research conducted by Akinbode and Clark (1976), to analyse an interorganisational arrangement between the Ministry of Agriculture and Faculty of Agriculture in Nigeria, found that administrative strategy and leadership procedures within an organisation shape its interaction with others. They found that flexibility in treating self and collective interests from the leadership and top management from both organisations facilitated the accomplishment of the arrangement's tasks and goals. This conclusion was also reached by Brown *et al.,* (1998), where the leadership commitment to the interorganisational relation was revealed as a critical characteristic and factor in a partnership initiated to implement a governmental geographic information system.

Although, there are results that indicate contrary findings which undermine the importance of such factors in impacting an arrangement, nevertheless, this might be attributed to theoretical and methodological limitations and the scope of the models' used which might overlook this critical factor. For example, and by using a web-based Internet survey of agency personnel, Daley (2009), studied the most important determinants of effective collaboration or partnership synergy and found that "leadership is only modestly significant in understanding collaborative relationships" (p.12). While he acknowledges the importance of the leadership in collaborative efforts, he attributes this result to a methodological reason whereby the "survey asked about top leadership'' within the agency. "*However, it may be that leadership in mid-level management positions is more important in fostering effective interagency working relationships*" (p.12).

Organisational characteristics, goals, experience, and motivation are mentioned as critical contextual factors and therefore it is likely in any analytical attempt to find them determining interorganisational processes. Among the most interesting factors is

the finding of Reilly (2001), where the willingness to continue the IOC was found to be a critical factor. The importance of this result is because most of the studies on interorganisational collaborative arrangements pay more attention to the initiation stage and pre-implementation stage and limited efforts are devoted to the sustainability and the continuity of the relations' phases and stages. Therefore, it is possible to say that the dynamic of the IOC and the changes in perceptions, contextual factors, motives and outcomes imply choosing an analytical tool or methods (e.g. prolonged engagement or longitudinal strategies) that can embrace and track these changes and their relation with the process of the arrangement.

Interestingly, organisational factors, according to Keast *et al.,* (2004, p. 369), interact with other levels and factors outside the boundary of an organisation in which this interaction raises the role of the consistency and the alignment between the different levels' factors. They found that the way in which organisations see the relationship and, in particular, how the perceived level of interdependency impacts on the structure of the arrangement in terms of building trust and "the pool of expertise is expanded based on these new ways of relating to each other". This finding can be considered among those few studies that shift the focus from organisational (factors) and organisational (outcomes) to see the relation between organisational level (in this example, the perceived level of interdependency) and other contextual levels (in this example, trust or the arrangement's level culture). Such findings suggest that organisations are not free to make decisions or benefit from an arrangement unless different conditions inside and outside the boundaries of an organisation are considered.

For example, the alignment between the contextual levels, factors, and the process is a priority for the success of an arrangement as Mandell and Steelman (2003, p. 220) stated:

> *"Contextual factors are important in the consideration of which type of interorganisational arrangement makes the most sense. To insist on one type of arrangement over another without considering the characteristics of the arrangement as well as the context in which they will operate is foolish, at best"*

Whether, they are supportive, inhibitive, initial triggers, or essential requirements, identifying such impact factors and clarifying the role they play and their influence

have not received as much empirical attention as the outcome of IOC studies have received. Although, the organisational benefits and outcome variables are in the organisational domain or level, achieving the required outcome is subject to many organisational characteristics and factors as the literature above indicates. Moreover, going beyond the organisational level by examining other level factors such as the constituents of IOC structures and the ways of interaction and the result of this interaction are very critical steps to cultivate a mature understanding of interorganisational collaborative arrangements in the public sector.

2.3.3.2 Interorganisational collaboration level

The literature review finds that IOC settings and characteristics are at a unique and distinct level which is located between the single organisation and the institutional and wider environmental factors.

Table 2-6 Interorganisational collaboration level factors

Interorganisational level factors	Theoretical studies (T) Empirical studies (E)
Domain goals, vision and consensus	Akinbode and Clark (1976) Daley (2009); Keast *et al.,* (2004); Wood and Gray (1991)
Characteristics of the interaction	**(T):** Lasker *et al.,* (2001) Mandell & Keast (2008) Oliver and Ebers (1998); Jones *et al.,* (1997) **(E):** Aldrich (1976) Lawless and Moore(1989)
Power shared understanding	**(T):** Ansell and Gash (2007) Gray (1985) Mandell and Steelman (2003) Milward (1982) Oliver and Ebers (1998) **(E):** Everett and Jamal (2004) Fried *et al.,* (1998) Gray and Hay (1986) Morrissey *et al.,* (1994)
Interorganisational relation structure	**(T):** Bryson *et al.,* (2006) Mandell & Keast (2008) Mandell and Steelman (2003) McGuire (2006) Miles and Snow (1986) Milward (1982) **(E):** Brass *et al.,* (2004) Fedorowicz *et al.,* (2006) ;Fried *et al.,* (1998) Johnsen *et al.,* (1996) Keast *et al.,* (2004) Mandell (1984)
Collaboration ambiguity	**(E):** Huxham and Vangen (2000b)
Convenor characteristics	**(T):** Gray and Wood (1991)
Collaboration complexity	**(T):** O'Toole (1997) Thomson and Perry (2006) **(E):** Huxham and Vangen (2000b) O'Toole *et al.,* (1998)
Collaboration dynamics	**(T):** Provan and Milward (2001) **(E):** Huxham and Vangen (2000b)
Access restrictions within the domain	**(T):** Jones *et al.,* (1997)

As Table 2-6 indicates, in the public sector, collaborative networks and arrangements are unique and have their own settings which play a vital role in the success of the implemented policy or projects. The literature reveals that IOR structure and power are the main topics discussed in the field (Table 2-6). IOCs are distinct systems and a distinct unit of investigation, for example, Milward

(1982, p.475) argued that the term 'interorganisational policy system' refers to the collective efforts of different actors who are "dependent upon each other for resources and linked by social network which sustain a rough policy consensus". This means that the arrangement's characteristics (e.g. structure, governance and process) are vital components that impact on the delivery. That it is why, Milward (1982, p.457) found that an interorganisational policy domain is a "more appropriate unit of analysis" because it is a primary "building block for a large class of public organisations without, in fact, being an organisation or of an organisational subunit"

An important conceptualisation of interorganisational domains has been developed by Trist (1983) who clearly stated that an interorganisational arrangement's structure has its own entity and social space between the single participant and the wider environment. According to Trist (1983, p.269-270), an interorganisational domain is a "system of relations which any single organisation needs to maintain with its transactional environment ... concerned with field-related organisational populations ... [domains] occupy a position in social space between the society as a whole and the single organisation." It starts with the appreciation of the problem or the common purposes and then moves on to cultivating a specific identity, which will be followed by developing a shared agenda. The domain is exposed to influences from different surroundings and organisations involved, and these influences shape its characteristics, leading to the last step which is the evolution of its own structure (Trist, 1983).

Lotia and Hardy (2008) consider the domain level conceptualisation developed by Trist as helpful to understanding the IOC. It starts with the appreciation among stakeholders for a particular problem until a consensus translated into actions and distributed tasks. The domain level is a useful tool to handle a situation that cannot be solved by a single organisation alone (Gray and Hay, 1985). At the core of the development process is analysing both "factors operating in the wider environment" and also the "organisational setting or settings" of members. The aim of this process of pre-assessment is to identify key supportive or inhibitive factors to develop a shared territory (Trist, 1983, p.280). In a similar vein, Gray and Hay (1985) have found that ignoring environmental factors and the dynamics

and politics of the collaborative domain can result in failure of the domain. Accordingly, while the IOC level stands as a unique entity which has its own social space, it influences and influenced by the process and the arrangement's contextual environment.

Among the interesting studies that shows the importance of paying attention to the arrangements level's attributes is the work of Huxham and Vangen (2000b). They found that collaborative complexity, ambiguity, and dynamics affect the collaborative advantage and outcome if there is, for example, ambiguity in the number of the stakeholders involved whereby the number and the name of the members are not explicitly defined and known by others. Complexity of the structure which stems from participating in overlapping arrangements and partnerships was also found as a critical factor impacting on the collaborative advantage. In addition, dynamics and frequent changes of the membership and organisational representatives is also an impact factor. The effects of membership ambiguity, complexity, and dynamics can be seen in the uncertainty and instability of the goals so the slowness of the process is clashes negatively with time devoted to achieve the collaborative agenda. The conclusion offered by the authors is: collaboration is complex and dynamic and has an ambiguous nature which can be overcome by nurturing the collaboration by providing essential resources and support.

Ultimately, the IOC has its own social space. Its settings and structure occupy the area between the inner (organisational) and outer (environmental) contexts. This implies shifting the frequent focus of research from the usual dominant level (organisational level) to a multilevel of analysis to produce a comprehensive analysis to the contextual factors.

2.3.3.3   Institutional level

This is the immediate context which consists of rules, norms, standards, regulations and laws that organise a specific field and is found to be an integral part of any analysis of interorganisational collaboration (Phillips *et al.,* 2000;

DiMaggio and Powell, 1983; Bryson *et al.,* 2006; Gray, 1989; Luna-Reyes *et al.,* 2007). According to Phillips *et al.,* (2000, p.28) the institutional field occupies a "social space" that influences collaboration which, in turn, participates to reproduce a new institutional context. This interaction is explained by DiMaggio and Powell (1983, p. 148) who stated that:

> "*The process of institutional definition, or 'structuration', consists of four parts: an increase in the extent of interaction among organisations in the field; the emergence of sharply defined interorganisational structures of domination and patterns of coalition; an increase in the information load with which organizations in a field must contend; and the development of a mutual awareness among participants in a set of organizations that are involved in a common enterprise*"

However, while the interaction between the institutional forces and factors and IOR is recognised in the literature (Table 2-7), this area of research considered as a premature and underdeveloped area in terms of empirical testing and validating its considerable amount of its theoretical propositions Phillips *et al.,* (2000).

Table 2-7 Institutional level factors

Institutional level	Theoretical studies (T) Empirical studies (E)
Institutional frameworks, norms, regulations, forces and factors	**(T):** Ansell and Gash (2007); Barringer and Harrison (2000); Bryson *et al.,* (2006); Milward (1982); Oliver (1990); Provan *et al.,* (2004); Wood and Gray (1991) **(E):** Dawes and Prefontaine (2003); Fedorowicz *et al.,* (2006); Lawless and Moore(1989); Luna-Reyes *et al.,* (2007)

Provan *et al.,* (2004) find empirically that institutional pressure can be controlled in the public sector by interorganisational networks as they can balance and shape institutional pressures. The research conducted by Provan *et al.,* (2004) was interesting in that it shifts the studies from focusing on how organisations deal with institutional pressures to the interorganisational networks level. However, they assert that the link between interorganisational level and institutional fields needs more investigation and is an unexplored area, as Phillips *et al.,* (2000) acknowledged and claimed earlier by developing theoretical propositions to conceptualise it. In their empirical research in U.S, Canada, and Europe about the fundamental factors and elements that influence collaborative initiatives in the public sector, Dawes and Prefontaine (2003) found that the institutional framework matters. They found that the importance and the need for an institutional framework stems from the idea that:

> *"These initiatives stretch across the boundaries of distinct organisations, they need to establish a new kind of institutional legitimacy. Most often, legitimacy begins with a basis in law or regulation. This is commonly reinforced by the sponsorship of a recognized authority or by formal relationships with key external stakeholders. This formal institutional framework helps these dynamic initiatives weather political transitions and changes in key players. The formal structure also acts as the context for a rich array of complex, informal relationships." (p.42)*

In similar vein, Luna-Reyes *et al.,* (2007) studied the influence of institutional arrangements on collaborative digital government initiatives in the Mexican federal government and found that the regulatory environment, particularly bureaucratic rules influence the way in which such initiatives were delivered. More precisely, they found that public managers consider the bureaucratic atmosphere as the main barrier that slows down and impacts negatively on collaborative arrangements. Accordingly, understanding the contextual map requires considering the institutional impact as well as the organisational and arrangement levels.

2.3.3.4   External and wider environmental level

Factors and forces from the external environment are acknowledged to have an impact on shaping the process of IOR (Table 2-8).   Political, economic and national level aspects such as the national culture are among these factors. To illuminate the extent to which such environmental aspects are real barriers and after collecting data from several cases that represent successful and failed collaborative arrangement cases in the USA, Reilly (2001) found that unpredictable external contextual changes played a vital role in shaping the process of collaboration and introduced a level of uncertainty about the potential outcomes of the collaborations. As an example, he found that the most serious threat to a successful collaboration that was recognised from analysing the cases was a change in the political leadership.

Table 2-8 External level factors

The external/wider environmental factors	Theoretical studies (T) Empirical studies (E)
Global interdependency	**(T):** Gray (1989)
Geographic proximity	**(E):** Boje and Whetten (1981)**(E):** Fried *et al.,* (1998)
Environmental turbulence, complexity, and uncertainty	**(T):** Bryson *et al.,* (2006)**(E):** Mandell (1984) Gray and Wood (1991) Jones *et al.,* (1997); Oliver (1990)
National culture	**(T):** Jones *et al.,* (1997) (E) Reilly (2001)
The target community	**(T):** Lasker *et al.,* (2001): Provan and Milward (2001)
Economical, political forces, external mandate and the outside relevant stakeholders	**(T):** Lasker *et al.,* (2001); Mandell & Keast (2008) O'Toole (1997); Gray (1989) Gray (1985); Oliver (1990) **(E)** Reilly (2001); Provan and Milward (1995); Schroeder (2001)
Environmental resource	**(E):** Provan and Milward (1995)
Local government structure	**(E):** Smith (2009)

Accordingly, Reilly (2001, p. 72) suggested that:

> *"Structuring a process that includes mastering the essential dimensions of a collaborative, should enhance the ability of the actors to weather the host of the sometimes unpredictable variables (i.e., social, economic, political and environmental) that will confront their effort. However, there is no guarantee that accomplishing these tasks will ensure success. Continual adaptation to the changing conditions by a policy entrepreneur can minimize the uncertainties"*

Provan and Milward (1995) found that external contextual factors and forces can play a positive role and can be critical success factors to an interorganisational relationship. Indeed, the differences in effectiveness level between IORs can be explained by the external contextual factors and characteristics as they contend. In this interesting study, one of the main conclusions they offered, based on the results of a study of four comparably sized mental health delivery interorganisational networks, is the idea that the arrangement effectiveness is influenced positively when mechanisms of external control are direct and not fragmented which is considered easier and safer than delegation to a local governmental body. They justified the positive impact of external state control by the shortcut that is offered by centralisation where there is no need for a local intermediary that needs to be monitored and controlled itself.

Contextual factors inform practitioners to have appropriate response. In this globalised and interdependence world, public sector will find it crucial to build a "new administrative capacity" to deal with the growing level of hyper complexity and hyper uncertainty (Farazmand, 2009, p. 1008). Scholars believe that this can be achieved through collaborative and joint efforts in the sector (Johnston, 2010; Krueathep *et al*., 2010; Abonyi and Van Slyke, 2010). Collaboration can be helpful in dealing with the external context influences, however the effectiveness of the role of the collaboration in this regard is dependent on the collaborating organisations' adaptation strategy. Mandell (1984) found that external factors and the dynamic nature of the external environment imply that administrators have to adapt to the dynamic nature of the network through acquiring the necessary skills and attitudes. At the core of this adaptation strategy is linking vertical and

horizontal stakeholders through bargaining and negotiation skills to cultivate commitment within the arrangement to face external changes.

To sum up, it is possible to articulate the importance of the contextual factors and more interestingly the multilevel sources and contexts that produce such factors. Factors are not only produced by the organisational or interorgnisational levels, they stems from four levels (organisational, collaboration, institutional, and external levels). The myopic understanding is more likely to occur if the public policy makers, public management, and researches are not considering these four sources for impacting factors in any analysis unless there are solid theoretical or epistemological justifications for ignoring level(s). The unjustified omissions of any of these contextual levels may result in undermining the role of some key influencing inhibitive or supportive factors and therefore impacting the performance and the process of an IOC arrangement.

2.3.4   Interorganisational collaboration process

Irrespective of the shortcomings in offering empirical processual models to IOC, there are many interesting studies and proposed processual models that seek to delineate the collaborative stages and actions (Table 2-9). Gray (1989, 1985) proposes three stages: First, the problem setting phase where a common vision and an identification of key stakeholders are to be defined clearly. Second, the direction setting phase defines procedures, rules, engagement and building consensus. Finally, the implementation phase is where the shared and agreed principles are transferred into actions. Ring and Van de Ven (1994) propose a process framework to understand the collaborative relationship whereby collaboration starts with negotiations to bridge expectations of members; then commitment to the relationship is established and next is the execution stage where the previous agreement and commitment are developed and translated into actions.

The three stages are linked with a main central and continuous phase: the assessment of collaboration. To build consensus among participants in collaborative arrangements, stages can also include a pre-negotiation phase, a negotiation phase,

50

and an implementation phase (Susskind and Cruikshank, 1987). One question that needs to be asked, however, is whether the theoretical, speculative developed models can offer reliable and valid conclusions without empirical tests. As can be seen from Table 2-9, most of the work being done was literature conceptualisation with few exceptions which necessitate more empirical studies to validate the considerable amount of theoretical processual propositions.

2.3.4.1   Collaborative capacity (CC)

In addition to the stages-oriented definitions to the collaboration, there are other processual related actions, areas, activities and practices which are found to be integral parts of the processual studies as shown in Figure 2-1**.** In the forefront of such collaborative activities is the cultivation of collaborative capacity (Sullivan *et al.,* 2006; Hudson *et al.,* 1999; Provan and Milward, 2001). This is a core processual activity which implies paying attention to this factor in any attempt to study the processual dimension. The literature considers collaborative capacity as an action alongside the collaboration process whereby the collaborative capacity refers to the "level of activity or degree of change a collaborative relationship is able to sustain" (Hudson *et al.,* 1999, p.245). It is the heart of the arrangement, as it is the manifestation of the collaborative competencies and performance of the process towards achieving the collaborative agenda. Accordingly it is influenced by the process and influenced by processual stages, actions, and activities.

The term collaborative capacity was operationalised empirically in a framework developed by Sullivan *et al.,* (2006). Collaborative capacity is taxonomised as strategic capacity which refers to the alignment between the individual and the collective agendas, whereas the governance capacity refers to the structure and the governing framework and how it fulfils the aim of the collaboration in an accountable manner. The operational capacity is the means that are employed to share and activate resources, while the practice capacity is about the availability of skills and capabilities to manage the arrangement. Finally, the community capacity refers to the involvement mechanisms of the target groups.

Table 2-9 Key models and studies in collaboration stages

	Methodology	Process stages						Linear or cyclical	References
		1	2	3	4	5	6		
1.	**Theoretical**	problem setting	direction setting	structuring				Linear	Gray (1985,1989
2.	**Theoretical**	formation	stability	routinisation	extension			Linear	Mandell & Keast (2008)
3.	**Theoretical**	negotiation	commitment	implementation	assessment			cyclical	Ring and Van de Ven (1994)
4.	**Empirical**	identification path	formation	implementation	engagement/maintenance	resolution	evolution	cyclical	Reilly (2001)
5.	**Empirical**	start-up phase	process design phase	consensus building phase	implementation phase			Linear	Straus (1999)
6.	**Empirical**	pre-negotiation phase	negotiation phase	implementation phase				Linear	Susskind and Cruikshank, 1987
7.	**Theoretical**	face-to-face dialogue	Trust-building	commitment to process	shared understanding	intermediate outcomes		cyclical	Ansell and Gash (2007)

Source: developed for the purpose of this research

52

Assessing the strength, capacity, and the performance of the collaboration process is considered among the relatively new areas in collaboration literature. Weber *et al.,* (2007) developed measurements to assess collaborative capacity through vertical (between agencies) and horizontal capacity (with the community or citizens). Weber's *et al.,* (2007) argument relies too heavily on quantitative analysis for the assessment of collaborative capacity. While this study offers new insights on capacity levels and measurements, the nature of the interactive process and the inherited dynamism in the relationship between the process and its context imply epistemological stances that can embrace such dynamic natures via in-depth qualitative methods as used by Sullivan *et al.,* (2006). Also, Thomson and Perry (2006, p.24) identify five key dimensions for measuring and analysing the collaboration process, in which "two are structural dimensions (governing and administering), two are dimensions of social capital (mutuality and norms), and one is an agency dimension (organisational autonomy)".

These five dimensions were later translated and empirically validated in a framework to measure collaboration by Thomson *et al.,* (2009) through a mail questionnaire sent to 1382 directors of public organisations. However, the study would have been more interesting and comprehensive if the authors had included or considered the contextual factors and their effect on such processual dimensions as the literature review in this study previously reveals. And also, previous research would have been more reliable and comprehensive if there were more qualitative insights that illuminate the iterative interplay between the process and the context which was found to be critical when analysing collaborative process and strategies dynamic interaction (Sullivan *et al.,* 2006). Ultimately, there are many activities, procedures and policies that are linked with the process. Collaborative capacity analysis, policies, levels and outcome are considered integral parts of a comprehensive understanding to the process to be achieved.

Figure 2-1 Micro- actions

Greasley *et al.,* **(2008)**
- **Communications strategy or framework.**
- **involvement of key players**

Thomson *et al*., **(2007)**
A framework for measuring collaboration based on measuring five dimensions: governance, administration, mutuality, norms, autonomy

Thomson and Perry (2006)

There are five dimensions that constitute the process of the collaboration in the public sector in which two are structural dimensions (governing and administering), two are dimensions of social capital (mutuality and norms), and one is an agency dimension (organisational autonomy)

Micro-actions

Huxham (2003)
Communication, trust, and commitment,

Huxham and Vangen (2000a)

In the context of this research processes were narrowly defined as the formal and informal instruments, such as committees, workshops, seminars, and telephone, fax, and e-mail use or in general the communications strategy

Margerum (2002)
Acquiring conflict solving skills through training to obtain facilitation, mediation, and communication skills

Source: developed for the purpose of this research

2.3.4.2   How to develop processual studies

The literature with regard to the process dimension is flourishing and thriving with many studies and research being conducted. Such studies help in understanding how the collaboration process might function, however, the problem with such attempts can be seen as follows:

- First, the majority are theoretical attempts, and it is therefore difficult to rely on them until such claims are tested and/or compared with data-driven empirical findings. Accordingly, empirical studies from different contexts, in different circumstances are the proper way in order to accumulate contributions to the knowledge regarding processual factors.

- Second, collaborative capacity is an important aspect that has to be considered if an inclusive and a rigorous examination of the process is intended. This examination, according to Sullivan *et al.,* (2006, p. 292), should consider the dynamic interaction between the capacity and the context and the overall collaborative procedures and should be aware of "the dynamic and fluid nature of collaborative capacity" when analysing its existence, impact, or interaction with other determinants in collaborative arrangements.

- Third, previous attempts have overlooked the role of continuous or ending evaluation stage as a critical step (exceptional to this is the proposed model by Ring and Van de Ven, 1994). Most of the stages-based conceptualisations give high priority to the initial stages, in particular, the pre- and implementation stages while relatively ignoring the evaluation phase, strategies, and policies.

- Fourth, as Table 2-10 demonstrates, it is possible to say that there is a contradiction and an uncertainty in the literature that needs to be solved in terms of the linearity/nonlinearity of the process. Ansell and Gash (2007, p. 558) assert that the process is cyclical in nonlinear interactions and therefore very difficult to represent hypothetically as they did in a "great simplification". The assumed linearity of the process is an underestimation of the role of the dynamic interaction of the process and its surroundings such

as the context. Also, the implication of perceiving the process as a nonlinear process can be seen in the need to maximise the adaptability and flexibility of the design and not relying heavily on pre-planned static strategies. Accordingly, any attempt to provide a process-based analysis, "must take into account the nonlinear and emergent nature of collaboration, suggesting that collaboration evolves as parties interact over time" (Thomson and Perry, 2006, p. 22).

- Fifth, there is a need to understand and define the micro-actions within the process stages and steps as the literature has rarely highlighted them because *"the interactive process of collaboration is least understood" (*Thomson and Perry, 2006, p.21*).*

In light of the above, although there is progress on the previous studies, the literature review reveals an inadequacy in empirical frameworks and models to minimise uncertainty and scepticism about the process dimension. An essential step to be done to develop the field in this respect, it is therefore, the mission of a comprehensive empirical investigation and research.

2.3.5   Content in interorganisational relations

Content refers to the area in which the arrangement takes place or the subject of the collaborative efforts. In this regard, it is reasoned that the collaborations in empirical studies take place in many fields, sectors, and topics which means that this method of solving problems, creating opportunities, and change management strategy is accepted among practitioners, policy makers and different stakeholders in the public sector. The health sector and health issues dominate collaborative studies (e.g. Daley, 2009; Isett and Provan, 2005; Johnsen *et al.,* 1996; Provan and Milward, 1995). This might be due to the sophistication and large amount of stakeholders in health services systems. In addition, there is an emergent body in the literature with regards to collaboration to introduce IT-based initiatives in the public sector context.

Some interesting attempts have been made to understand IOC arrangements in particular areas. Digital government, for example, has received increasing attention to be implemented collaboratively by practitioners, policy makers and academics

(e.g. Dawes and Prefontaine, 2003; Fedorowicz *et al.,* 2006; Gil-Garcia, 2007; O'Toole *et al.,* 1998). Content can vary and can include the introduce of national services (Thomson *et al.,* 2009); implement public policy (Mandell, 1984; O'Toole and Meier; 2004); or advance agriculture programmes (Akinbode and Clark, 1976). Ultimately, the perceived level of collaborative advantages encourages many sectors, disciplines, and public policy makers from different contexts and backgrounds to utilise the opportunity and solve problems through joint efforts and interorganisational structures.

2.4   Literature Gaps and implications

It is very important to articulate clearly the critical points, shortcomings, implications and literature trends with regard to interorganisational collaboration arrangements and networks in the public sector (Figure 2-2). IOCs are complicated and not always manageable and there is a consensuses between scholars about the inevitability of the collaboration and also the inherited difficulty and sophistication of IOC in the public sector (Getha-Taylor *et al.,* 2011; Agranoff, 2006; Bushouse *et al.,* 2010; O'Leary and Van Slyke, 2010) . That is why there is a high rate of failure in interorganisational arrangements (Rod and Paliwoda, 2003). Indeed, it is argued that:

> *"The majority of interorganisational relationships fail. A clearer understanding of the management practices and techniques that facilitate the ongoing success of interorganisational relationships is important to direct research and practice"*
> (Barringer and Harrison, 2000, p.397).

Although there are many theoretical paradigms that have tried to tackle and investigate interorganisational relations, the field lacks a multifaceted framework, paradigm, or lens that can embrace the contextual and processual factors and provide a multilevel of analysis to the phenomenon. Initially, the motives for developing new insights in this field stem from the idea that most of the previous studies have adapted economic perspectives which might help in understanding some aspects of the phenomenon, however, the public sector domain is subject to more socio-political forces and therefore requires socio-political approaches. From strategic management perspective, Brown (2010, p. 212) argues that the there is a need to enrich public sector studies by new insights that are orientated to this domain as he states "we need to harness existing theories from other disciplines to inform strategy practice".

Moreover, what necessitates having a new multilevel insight to the IOC field is the notable over emphasis on organisational level factors, whereas other factors from the interorganisational level, institutional, and external wider environment are acknowledged but have not received the required attention and investigation. As a result, forces, facilitators, inhibitors, factors, and characteristics that impact on the policy under implementation and are embedded in these upper levels are not fully defined and explored in order to map their responsibility and interventions in the process.

Consequently, there is an under-representation and inadequacy of a simultaneous multilevel of analysis to the phenomenon. In the public sector context, contextual factors from different levels shape the process and outcome of interorganisational arrangements. That is why Cropper *et al.,* (2008, p. 724) assert that organisational factors and external factors are equally significant in any analytical paradigm that attempts to study IOC, whereby the proposed explanations or any suggested model "may incorporate both exogenous and endogenous factors" in order to come up with a cohesive understanding of the phenomenon. However, the field of IOC suffers – as found in this literature review- from a partial view of the contextual factors that are associated with the arrangements as Marchington and Vincent (2004, p. 1030-1032) realise :

> *"There has typically been a tendency to treat organisations as homogeneous and cohesive agents whose actions can be reducible to a single behaviour or strategy...(and) there has been a tendency in existing studies to focus on the organization as the principal (and often sole) level of analysis, so ignoring influences both beyond and within the organisation. There are several problems with this. It is assumed that organizations are free to make choices about potential partners without reference to wider institutional or industry/sector norms... (therefore), processes and purposes of organizational exchange can only be fully understood by investigating the interplay of interorganisational relations at a number of different levels, taking into account not only any economic rationale for collaboration but also institutional norms and traditions and the day-to-day behaviour of individual boundary spanning agents "*

Consequently, the implications of this tendency can be seen in the possibility of developing a biased decision-making process that is based only on an organisational level as Figure 2-2 reveals. The author of this study asserts that a comprehensive analysis of the contextual factors should consider the multilevel of contexts involved, as an overemphasis on one or two levels can result in the possible omission of critical factors, enablers, constraints or inhibitors that

determine the success or failure, or undermine the performance of the project. The careful mapping to the contextual levels and factors is significant as "various managerial behaviours influence, and are influenced by, the context in which these interorganisational arrangements play out" (Mandell and Steelman, 2003, p.210). Moreover, implementation through interorganisational arrangements implies an accurate consideration of the whole contextual picture as Cline (2000, p.569) asserts that the analysis of network-based changes has to consider the components of the context, which help in understanding the "strategic interaction of participants in their larger social and political contexts".

Cline therefore, clearly argues that "this has the effect of making contextual analysis more important in implementation research". As has been revealed by the literature, the call for multilevel analysis in interorganisational studies is not a new research proposal, agenda or direction (Boje and Whetten; 1981; Gray and Wood; 1991; Provan and Milward, 1995), however, development in this direction is still embryonic and under-represented in general (Cropper *et al.,* 2008; Cropper and Palmer, 2008; Marchington and Vincent, 2004), especially in the public sector context (Brass *et al.,* 2004). In general, contextual forces, circumstances and factors are found on four contextual levels, the internal, interorganisational, and the institutional and external levels.

Figure 2-2 Gaps and implications

Gaps	Implications
Dominated by economic perspectives in interorganisational studies	- **Not being able to have an accurate identification of the socio-political issues and therefore public sector idiosyncrasies**
Over-reliance on organisational level	- **Deal with organisation as independent and free to make choices without referring to the other contextual forces and therefore developing partial and biased decisions.** - **Interorganisational relations managerial skills need to be redesigned to absorb the interplay between different contextual levels.**
Lack of multilevel analysis that investigates the contextual levels and factors and the relation between different levels	
Insufficient studies highlight the process, stages, micro-process, and the relation between the context and the process	- **Uncertainty level and scepticism about the process inhibit cultivating a mature managerial understanding**

Source: developed for the purpose of this research

60

In terms of the *process* dimension, the literature review reveals a consensus among scholars with regard to the inadequacy in frameworks and models that can minimise the uncertainty and scepticism about the process dimension. To understand better the sources of this scepticism, this research, through its review of the relevant literature finds:

- Most of the work being done in this area is theoretical and literature conceptualisation which needs to be tested empirically.
- There is an uncertainty about the route of the process weather they are linear or cyclical.
- There is a need to understand and define the stages and micro-actions.

It is possible to say that with the uncertainty, the complexity, and the underdeveloped dimensions of IOC which are mentioned clearly by scholars and found by the researcher in this review, organisations might ignore factors and elements that inhibit or facilitate any arrangement. The multidimensional nature of the problem where there are two dimensions of the gap: a myopic view to the role of the contextual levels and factors in impacting the process, and also the uncertainty about the process of IOC requires a multidimensional treatment and understanding. In public policy, researchers are advised recently to adapt and conduct a "macroscopic research" that addresses such multifaceted and multidimensional problems (Raadschelders and Lee, 2011, p.29).

From this literature review, the researcher finds that the appropriate multilevel approach to explore the contextual and processual factors in interorganisational collaborative relations is by applying the contextual CCP framework. Having said that, defining the content, context and process of change might help to define the effects of the inhibitive and supportive factors and simultaneously cultivate a mature understanding of the project being implemented. This premise and others are all perceived by scholars as the main targets of the contextual framework which will be discussed in detail in the next part of the literature review to offer an insight into the main arguments of the CCP framework.

While the next chapter presents the author's focal premise and the underlying assumptions of applying an extended version of the frame. Ultimately, this

research aims to offer a more rigorous empirical investigation of the content, context and the process of IOC in the public sector in developing countries. The investigation is catalysed by findings from the review and also as a response to the call from scholars in the field for more empirical investigations and studies into the aforementioned dimensions in this section. Because the main findings suggest further research be conducted to explore the context and the process dimensions in interorganisational collaborative relations, this research applies the CCP framework which is discussed in detail to understand its theoretical underpinnings. What might be expected from applying it in this context, and how to strengthen it to absorb and help overcoming the aforementioned shortcomings in this section.

2.5 Contextual perspective

The contextual perspective is derived mainly from the word "context". Conceptually, context is defined as the "surrounding associated with phenomena" (Capelli and Sherer, 1991 p.56). These surroundings are critical in determining the success or failure of any organisational change, and this stems from the idea that context can either work as a catalyst for change or as an inhibiting factor that constrains transition to the required behaviour and/or attitude in an organisation (Hughes, 2006; Self *et al.,* 2007; Johns, 2001). Context is also defined as the elements and triggers that are anticipated to impact on the content and process of change (Pichault, 2007; Pettigrew, 1985). Alajoutsijärvi and Tikkanen (2002, p.36) see context as "something we need to know about it in order to properly understand a structure, action or process. It functions as the background, environment, settings, circumstances, conditions, or consequences for something that we wish to understand and explore." De Caluwe and Vermaak (2003, p.80) argue that triggers initiate change because sometimes they represent the "emotional characteristics" that stimulate and cultivate the need for change. Such characteristics and conditions – which can be encapsulated under contextual variables - play a vital role in shaping and labelling change management strategies and approaches.

Conversely, overlooking contextual factors by not having the appropriate diagnostic, analysis and management tools may lead to undermining organisational capabilities that deal with the dynamic nature of change. As Pettigrew *et al.,* (1988, p.303) state: "the neglect of context and of the role of powerful groups within them has produced a situation in which myths abound and are perpetuated about rational problem-solving processes of planning and then in a linear fashion implementing change". Additionally, Wischnevsky (2004) argues that the misalignment between an organisation and its external environmental changes will affect organisational performance and engender "guaranteed organisational failure in the long run" (p.365).

The significance of contextual factors has led to many studies being conducted in order to highlight and analyse the influences, impacts and nature of interactions of contextual forces with organisations. Because, it is argued, even unpredictable

interventions or events can be analysed based on contextual characteristics. As Johns (2001, p.4) argues: "the most compelling illustration of why to pay attention to context resides in its capacity to explain anomalous organizational phenomena". Self *et al.,* (2007, p.214) find that contextual factors label the understanding and 'interpretations' of the content and process of change.

For the purpose of this research, 'contextual perspective', 'CCP framework' and 'contextual framework' are used interchangeably. As presented in Figure 2-3, the content, context and process (CCP) framework encapsulates the contextual perspective which claims to have the ability to investigate in depth the phenomenon of change, the dynamic nature of change, and the interconnectedness of its variables in a non-linear interpretation. Its main premise is based on analysing the interplay between content, context and the process of change. The beginning of this perspective was based initially on the work of Pettigrew (1985, 1987, and 1997), Pettigrew and Whipp (1991); and Pettigrew *et al.,* (1988, 1992) and was developed later by a very few but important studies (Stockdale and Standing, 2006; Stockdale *et al.,* 2006; Stockdale *et al.,* 2008; Serafeimidis and Smithson, 1999; Piotrowicz, 2007; Piotrowicz and Irani, 2008). The initial framework invented by Pettigrew (Figure 2-3) was aimed at developing a contextual diagnostic tool which identifies the content, context and process (CCP) of change by analysing the interconnectedness and interrelation of these three variables.

Figure 2-3 CCP framework adapted from Pettigrew *et al.,* (1988)
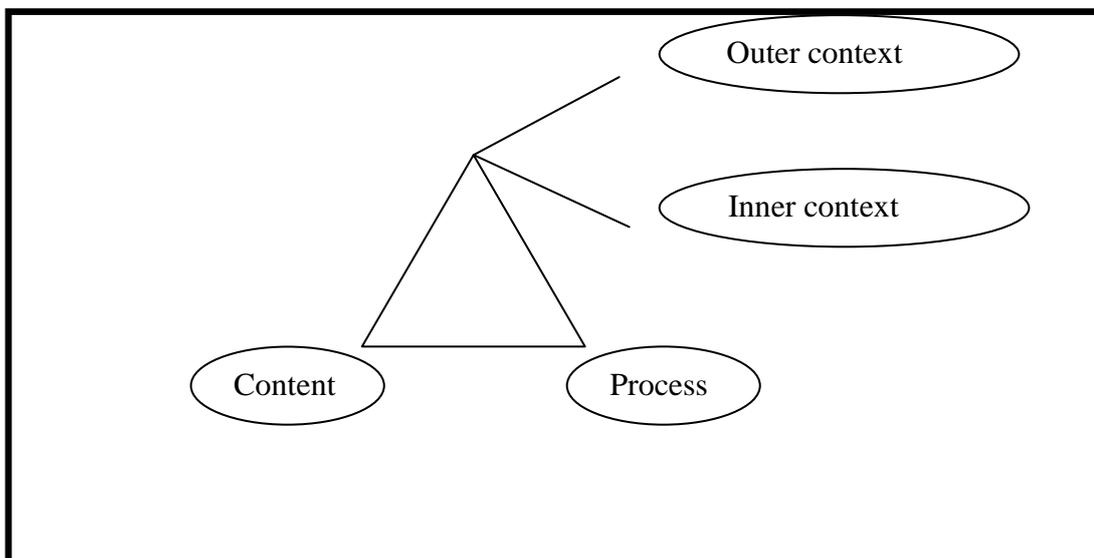
It is apparent from Table 2-10 that the framework is used repeatedly and accepted theoretically and empirically in many areas and research disciplines. The table shows many interesting insights and tendencies in applying the framework. In particular:

- The framework is used mainly in analysing organisational changes and evaluating IS and strategic management studies.

- In the empirical studies it is mostly applied in developed countries with very few attempts to apply it in different contextual backgrounds such as developing countries.

- Interestingly, it is evident that the framework has not been applied in IOC studies where there is more than one inner context or more than one organisation.

- Most of the previous studies used the framework as a background theory rather than focal theory.

- As Table 2-10 indicates, the framework is accepted and applied as an interpretive qualitative paradigm to have an in-depth understanding of the phenomenon.

- Very few attempts applied the framework as a focal theory which has resulted in modifications and extensions to its constructs and variables. The most interesting attempt is the work of Piotrowicz (2007) and Piotrowicz and Irani (2008) who found that the sharp dichotomy of inner/outer was not able to capture the factors in between when evaluating IS in business units of international corporations. they extended the framework by adding the corporate context between the inner and the outer context as the factors which belong to the corporate level cannot be classified as either inner or outer contexts. More discussions about the framework, its evolution, and its epistemological stance are presented in chapters 3 and 4.

Table 2-10 CCP framework in the literature

Author(s)	Subject and topics	Method and Methodology	Research Question and/or Goal	Public/Private	Research contexts	Remarks
Alajoutsijärvi and Tikkanen (2002)	Marketing: customer satisfaction	Qualitative/ action oriented research	Understanding contextual factors that are related to the relationship between supplier and customer	Private	Globally operating companies	The framework used as a data collection taxonomy
Babaheidari (2007)	IS evaluation	Theoretical conceptualisation (Master's thesis)	Reviewing the interpretive approaches to IS evolution to explore the basic philosophical assumptions and key theoretical concepts underpinning such approaches	N/A	N/A	The framework discussed as an interpretive lens in IS evaluation
Brignall and Ballantine (2004)	Accounting	Theoretical conceptualisation	The paper studies the inter-relationships among Strategic Enterprise Management systems, performance measurement and management and organisational change programmes within Pettigrew's "context, content, process" model	N/A	N/A	The framework used as a background to taxonomise the literature
Buchanan (1991)	Project management	Qualitative (diary) and quantitative (survey) methods	How project managers' tasks and roles are influenced by contextual factors	Public/private	Eight project management diaries and 114 participants in a national survey/ UK	The framework was applied and found insufficient to portray contextual factors precisely
Caldwell (2006)	Change and strategic management	A text book that analyses extensively the contextual perspective	Review and appraisal of the contextual framework's contribution/ and evaluation of Pettigrew's conceptualisation of the idea.	N/A	N/A	The book offers a critique to the framework as a change management lens
Cho and *et al.,* (2008)	IS implementation	Qualitative/ case study/ observations of daily work/ interviews/ participation in meetings and seminars/ studies of documents and the IT system/ and continuous	Exploring the effects of contextual dynamics when implementing IS in the healthcare context	public	The implementation of a radiology network system in a Swedish hospital	The simple CCP framework used for analysis purposes

Author(s)	Subject and topics	Method and Methodology	Research Question and/or Goal	Public/Private	Research contexts	Remarks
		informal discussions with the involved project managers and care professionals.				
Constantinides and Barrett (2006)	Organisational change	Qualitative/ longitudinal case study/ semi- structured interview	Examining the interrelationship between the context(s) in which ICTs are introduced/ the process/ and the role of different technological artifacts	Public	Telemedicine system in a healthcare region of Crete/ Greece	The simple CCP framework used for analysis purposes
Devos *et al.*, (2007)	Organisational change	Quantitative/ experimental simulation strategy	To examine the contribution of the content/ context/ and process of organisational transformation to employees' openness to change	Public and private	Data collected through the web site of a general interest/ work-related magazine	The simple CCP framework used for data grouping and taxonomisation
Gutierrez (1995)	Organisational change	Qualitative/ case study/ semi-structured interview and archival documents	To analyse the impact of organisational restructuring on HR	Private	Company originating in US/ works in Brazil	The simple CCP framework used for analysis purposes
Huerta and Sanchez (1999)	IS evaluation	Qualitative/ multi case study/ open questionnaires and archival documents	To define and categorise factors that influence the IS evaluation process	Private	Spanish companies	The simple CCP framework used for analysis purposes
Jayasuriya(1999)	IS management	Qualitative/ case study/ interviews and archival materials.	Understanding factors that impact on the implementation of a large-scale information system	Public	Public health services in Philippines	The simple CCP framework used for analysis purposes
Karyda *et al.*, (2005)	Information system security	Qualitative/ multi case study/ interview and archival documents	To analyse the dynamic nature of the application of security policies and to identify the contextual factors that affect their successful adoption	Governmental organisation/ non-governmental organisation	Two cases from Greece: The Social Security Institute (SSI)/ governmental organisation Centre for the Treatment of Dependent Individuals (CTDI)/ non-governmental organisation	The simple CCP framework used for analysis purposes

Author(s)	Subject and topics	Method and Methodology	Research Question and/or Goal	Public/Private	Research contexts	Remarks
Kautz and Nielsen (2004)	Information system	Qualitative/ case study/action research/interviews and documentation	To understand the implementation of software process improvement (SPI) approaches in organisations	private	European Union	The framework was compared with individualist and structuralist approaches and found more comprehensive. No extension to the framework was proposed
Ketchen *et al.,* (1996)	Strategic management	Quantitative/ questionnaire	To find to what extent the synergy between content/ context and process influences the performance of strategy	Public	A case study from the hospital sector in USA	The framework used as a background to categorise the data to find the interplay between content, context and process
Knight and Pye (2005)	Change management	Qualitative/ longitudinal multi case study/ interview and archival documents	To explore the relationship between interorganisational network changes and learning	Public/private	English health service supply networks	The CCP framework used as framework to collect and analyse data
Peak (2008)	Organisational change	Qualitative/ case study/ interview/ archival documents (PhD thesis)	Exploring contextual factors that impact on organisational change in an academic research library in a public university	Public	USA: University of Virginia Library	The simple CCP framework used for analysis purposes
Pettigrew (1985)	Organisational change analysis	Qualitative/ longitudinal case study/ interviews and archival materials	Analyse strategic change	Private	UK/ Imperial Chemical Industries	The initial conceptualisation and development of the framework
Pettigrew *et al.,* (1988)	Organisational change analysis	Qualitative pilot case study (winter of 1984/85)	Analysing change in the NHS	Public	Three regions of the National Health Service (NHS)	The framework applied in a pilot research
Pettigrew *et al.,* (1992)	Organisational change analysis	Qualitative/ longitudinal case study	Analysing strategic change	Public	The Case of the National Health Service (NHS)	Applied in a longitudinal research
Pichault (2007)	HRM	Qualitative/ multi case study/ action research/ interview/ focus group/	To analyse HRM-based public reforms	Public	Belgian public organisations	Criticises the contextual dichotomy but without offering

Author(s)	Subject and topics	Method and Methodology	Research Question and/or Goal	Public/Private	Research contexts	Remarks
						alternatives
Piotrowicz (2007)	IS evaluation	Qualitative/ multi case study/ structured case/ interviews (PhD thesis)	To develop the CCP framework and validate the framework developed by Stockdale and Standing (2006a)	Private	Business units of global organisations from the high tech IT industry. The case companies are located in Poland	The framework was the focal theory and extended in terms of its contextual dichotomy
Raak *et al.*, (2005)	Partnerships in health care	Qualitative/ interviews and archival documents	Understanding the impact of contextual factors on the decision making process in partnerships	Public	Two Dutch cases of partnerships	The simple CCP framework used for analysis purposes
Roroi *et al.*, (2008)	HRM	Qualitative/ case study	Analysis of public sector reforms in the health sector in terms of the impact of such reforms on HRM activities	Public	Health sector in Papua New Guinea	The simple CCP framework used for analysis purposes
Saritas *et al.*, (2007)	Institutional foresight	Qualitative interviews/ expert panels and Delphi method	To analyse the Technology Foresight Program from a contextualist perspective	Public	Turkey (national technological vision)	The simple CCP framework used for analysis purposes
Self *et al.*, (2007)	Organisational change	Quantitative research/ questionnaire	To investigate the relationship between content/ context process factors and change outcome	Private	Telecommunications company in USA	
Serafeimidis (1999)	IS evaluation	Qualitative/ interviews/ multi case study	To demonstrate the importance of alternative methodological tools to the "functional/technical and/or economic/financial paradigms" in IS evolution.	Private	Insurance organisations in UK	The CCP framework was proposed as an alternative tool
Serafeimidis and Smithson (1996)	IS evaluation	Qualitative/ multi-cases	Analysing information technology (IT) appraisal practices in context	Private	Insurance organisations from UK	History dimension was emphasised
Stockdale and Standing (2006)	IS evaluation	Theoretical conceptualisation	To propose CCP for IS evolution	N/A	N/A	A new theoretical conceptualisation to the CCP framework

Author(s)	Subject and topics	Method and Methodology	Research Question and/or Goal	Public/Private	Research contexts	Remarks
Stockdale et al., (2006)	IS evaluation	Theoretical conceptualisation	To propose an interpretive contextual framework to be applied in the construction industry	N/A	N/A	new theoretical conceptualisation to the CCP framework
Stockdale et al., (2008)	IS evaluation	Theoretical conceptualisation	To propose CCP framework for IS evaluation	N/A	N/A	A new conceptualisation and theoretical underpinnings were added
Symons (1991)	IS evaluation	Literature review	To demonstrate the need for considering content/ context and process of IS evaluation	N/A	N/A	Well-known article in IS evaluation. CCP is proposed as an evaluation tool
Toraskar and Lee (2006)	E-commerce education	Theoretical conceptualisation	Theoretical conceptualisation to develop a contextual model for analysing E-commerce education	N/A	N/A	The framework used as a background theory
Waema and Mwamburi (2009)	IS evaluation	Qualitative / multi cases	To explore the influences of ex ante evaluation in IS project implementation	Public/ private	Public and private universities in Kenya	Using CCP framework designed by Serafeimidis (1997, 1999)
Walker et al., (2008)	Supply chain	Qualitative / longitudinal action research	To analyse the development in supply strategies and related research themes and priorities	Public / private partnership	The collaboration between Centre for Research in Strategic Purchasing and Supply and the UK National Health Service Purchasing and Supply Agency	The simple CCP framework used for analysis purposes
Walsham (1993)	IS	Qualitative/ multi case study/	An interpretive qualitative insight into information systems' content/ process and context	Public and private cases	Two cases from UK and one from a governmental agency in a Third World Country	The framework used as background theory

Source: developed for the purpose of this research

2.5.1   Theoretical underpinnings of the CCP framework

When comparing the CCP perspective with other paradigms, the framework shows interesting conceptualisations and offers important explanations to management field issues. The CCP framework benefits from and goes beyond three main perspectives; the contingency, the rational and political perspective.

Contingency theory: Compared with other change analysis and understanding tools, the framework is believed to be solid and effective in exploring the sophistication and dynamism of change cases. Dawson (1994) argues that the emergence of the contextual perspective has overcome the inadequacies of contingency theories in which the complexity of change is not defined and tackled inclusively. Contingency theory is based on the premise that studying change relies on understanding its surroundings, therefore organisational structure and management approaches depend on the nature of work and the environment in which organisations operate. However, the contingency theory "remains abstract and scholastic and, in effect, views organisation change as essentially an intellectual and technocratic exercise" (Wood, 1979, p.338). Collins (1998) argues that contingency models fail to address many issues connected to managing change in organisations, such as power and politics in the organisational decision-making process. Moreover, the nature of change and the dynamism of its variables have introduced new conditions and circumstances which are different to those of the 1960s and 1970s. Thus, many contingency models can no longer offer solutions and practical bases for managing change (Dawson, 1996).

Rational perspective: Another reason for considering the contextual approach a solid framework to analyse phenomena is put forward by Buchannan (1991). He asserts that rational-linear conceptualisation and analysis have stimulated the emergence of sociological trends that pay attention to the context and process of change rather than the content and controlling aspects only, as linear approaches do. According to Buchanan (1991), the work of the thinker and founder of the contextual framework - Pettigrew- benefits from the advantages of the rational and political analysis of change, and therefore pays attention to the cultural and political factors embedded in change. The rational perspective of understanding the context of change and how to manage change is also a school of thought that offers explanations on change based

on a logical, identifiable, and well-defined process, as well as predetermined context and objectives (Graetz, 2006). Although it provides solutions for the management and control of planned change and logical strategy implementation, it inadequately highlights the dynamism and non-linear type of change. In another words, the rational perspective ignores the tacit process, interconnectedness and "iterative nature of change" (Caldwell, 2006, p.31). Rational perspectives consider context as a predictable and controllable side of strategy. From this stance, it appears that the holistic and ample scope of change is underestimated (Collins, 1998). Rationalists pay insufficient attention to the "complexity of change and the impact that external, unplanned circumstances can have on an organisation. Reality has a way of diverging rather quickly from idealised plans" (Graetz, 2006, p.11).

Political perspective: The political perspective is based on the idea of analysing power distribution and competition between different groups in the context of the decision-making process (Buchanan and Boddy, 1992; Hughes, 2006; Graetz, 2006). Controlling organisational systems and dealing with uncertainty or ambiguity within an organisation leads to eliciting of what might be considered political behaviour, which can be seen in resistance to change, for example (Hughes, 2006). The political perspective pays more attention to the ideological-based process and characteristics of organisational life. Although understanding human and social impacts and influence in the context are very important to analysing change, the problem with the political perspective is its focus, which "tends to view change as an adversarial event where successful organisational change is function of power" (Graetz, 2006, p.15).

Pettigrew attributes the importance of his work to its multi-disciplinary mechanisms and theorisations. He argues that the uniqueness of his framework as a non-linear tool stems from its ability to analyse the performance of current strategies, the ability to embrace multi-dimensional changes, and exploring the interconnectedness between transitional aspects, triggers and stakeholders in order to provide practical solutions to policy makers and implementers (Pettigrew, 1985, 1987). Also, enthused by pursuing a holistic approach that can illuminate the inherent dynamism in organisational change, Pettigrew conceptualises his perspective based on the need to recognise the "continuous interplay between ideas about context of change the process of change and the content of change together with skill in regulating the relations between the three" (Pettigrew, 1992, p.7).

According to Pichault (2007), the main advantage of using the contextualist perspective stems from its theoretical flexibility and openness and its methodological contribution, whereby "different explanatory approaches can be integrated in order to reach an articulated vision of the phenomena observed" (p.268). Ultimately, contextual interpretations aim to cover aspects of context, content and process in such a manner that multilevel analysis is employed to understand the phenomena under research.

For the contextualist, the framework is a method for analysing and evaluating change, not a model for managing it. It emphases building a holistic standpoint in order to examine the nature of change and analyse profoundly the dynamic interaction between change context, content and process (Pettigrew, 1985, 1987; Dawson, 1994). Change content, context and process, with respect to the history of change, are the main sources and bases of this analytical approach, as "it is too narrow to see change just as a rational and linear problem-solving process… explanations of change have to be able to deal with continuity and change, actions and structures, endogenous and exogenous factors, as well as the role of chance and surprise" (Pettigrew, 1987a, p.658).

Compared with the interorganisational perspectives and theories, the framework has many shared denominators with the main perspectives in the field and there is a likely complementarity conceptualisation with some perspectives. For example, institutional theory offers insights into the forces outside organisations and the interorganisational domain or levels. This level of analysis is vitally important, especially when merged in a holistic standpoint such as the CCP contextual framework. It is argued that "institutional theory has tended to focus on field-level dynamics over relatively long periods of time and has spent relatively little time exploring the micro sources of these macro changes" (Lawrence *et al.,* 2002, p. 281). On the other hand, the CCP framework pays sufficient attention to the micro level and macro or external factors and, relatively speaking, ignores the immediate levels such as the institutional context.

The incorporation and the reallocation of the institutional contexts as an intermediate level between the organisational (micro) and the wider environment (macro) contexts might help in exploring more details and adopting a comprehensive stance in terms of the contextual factors surrounding collaborative-based changes. With this in mind, it is important to note that this research takes place within a given new integrative conceptualisation, where contextual and institutional perspectives are brought together to have an inclusive insight into the phenomenon under investigation.

Ultimately, whether it compares with a change management perspective or interorganisational perspectives, the contextual framework benefits from and builds on advantages of many theoretical paradigms and can interactively produce solid insights into the phenomenon being researched. Although, most previous works, models and perspectives can deal with predicted and linear events, they have little to do with the dynamism and complexity of social phenomenon like IOC.

2.5.2   CCP dimensions

2.5.2.1   Context dimension

Pettigrew *et al.,* (1992) argue that "the management of change is likely to be contextually very sensitive" (p.268). Hence, contextual complexity has encouraged Pettigrew to create a multilevel analysis tool to identify adequately the interconnectedness and internal and external factors. In a broad view, context is divided into internal (inner) and external (outer) circumstances and conditions which influence organisational performance (Self *et al.,* 2007; Pettigrew, 1987). Such conditions vary from one situation to another. According to Armenakis and Bedeian (1999, p.295), the contextual dimension

> "*Focuses on forces or conditions existing in the organization's external and internal environments. Two types of conditions form the context in which an organisation functions: external conditions which include such factors as governmental regulations, technological advances, and forces that shape market place competition; internal conditions, which include the degree of specialization or work specificity required by existing technology, level of organisational slack, and experience with previous change*".

However the contribution of Piotrowicz (2007) and Piotrowicz and Irani, (2008) adds a new level of analysis which is the system level between the inner and the outer context. He finds that when evaluating IS in international corporations' business units the complexity of the context was beyond the reach of a classic dichotomy of inner and outer context. New factors emerged that cannot be classified under the inner or outer context. These factors are corporate impact, corporate regulations, organisational culture, IT/IS structure and IT/IS cost allocation model. This empirical and novel contribution was the most important development in the framework as the majority of the research that applied the CCP framework used only the classic and traditional dichotomy of context as inner and outer factors. The sharp distinctions between the inner and outer context which might result in *some cases* in ignoring the *in between factors* is modified by Piotrowicz (2007) and Piotrowicz and Irani (2008) to be the inner, system, and external levels.

In its broadest view, the outer context refers to the national economic, political, and social context. The inner context is the organisational culture, strategy, management process and political process within an organisation (Pettigrew *et al.,* 1988). The duality of contexts stems from the idea that "contexts are shaping and shaped" (Pettigrew, 1997, p.338), which emphasises interconnectedness as a main principle in the contextual framework. Pettigrew *et al.,* (1988) found from his research into the NHS that there is a gap which stems from the analytical treatment of the context. He found that previous organisational studies had ignored the wider national level issues and, in contrast, public policy studies focus on the national level context and neglect organisational characteristics. Ultimately, Pettigrew (1992 *et al.,* p.7) recognised the importance of balancing analysis between internal and external factors. Accordingly he concludes: "perhaps a weakness of much of the generic organisational change literature is an over-reliance on the inner context, which has led to a neglect of wider issues."

For contextualists, the outer, external contexts "include external factors, typically beyond the control of the organization that the organization and its members need to respond to and accommodate." The outer context therefore refers to environmental factors that are out of the control of organisations (Serafeimidis and Smithson, 1996, p.207). In a similar vein, Saritas *et al.,* (2007, p.1378) define the outer context as "macro-scale environments outside the border of the organization, where the organization has limited or no control. Predicted and unpredicted trends, shifts and turbulences lie in the outer context".

Another contextualist who describes almost the same dichotomy to context is Dawson (1996), who argues that the external factors refer to change in competition strategies and levels of national competition, government legislation, social expectations, and technological innovations. On the other hand, he considers internal contextual factors to include human resources, administrative structure, technology, and the products or services of an organisation. Sastry (1997) argues that introducing change will not achieve the required agenda or goals unless the external environment is considered, especially external pressures for change and competition. Ultimately, external and

internal factors depend on the idiosyncrasies of the context or the content of changes that are introduced. From CCP studies, many factors and contextual forces and conditions emerge as influencing and impacting elements, and these are presented in Table 2-12.

Table 2-11 External and internal factors emerging from CCP studies

External factors which frequently appear in CCP studies	Reference(s)	Internal factors which frequently appear in CCP studies	Reference(s)
IT trends and fashions	Saritas *et al.,* 2007 ; Walker *et al.,* 2008 ; Piotrowicz, 2007	Position of project initiator	Walsham, 1993; Piotrowicz, 2007
Power relations within network	Cho and *et al.,* (2007)	Previous experience	Piotrowicz, 2007
Actors' role	Knight and Pye, 2004; Raak *et al.,* 2005	Organisation's strategy	Pettigrew, 1985; Pettigrew *et al.,* 1988; Serafeimidis and Smithson, 1996; Jayasuriya, 1999; Huerta, and Sanchez, 1999; Walker *et al.,* 2008, Pichault, 2007, Roroi *et al.,* 2008; Babaheidari, 2007; Stockdale *et al.,* 2008
Competition	Pettigrew, 1985; Serafeimidis and Smithson, 1996; Huerta, and Sanchez, 1999; Karyda *et al.,* 2005; Walsham, 1993 ; Stockdale *et al.,* 2008; Babaheidari, 2007	Trust in executive management	Devos *et al.,* (2007)
Technological development	Buchanan, 1991; Gutierrez, 1995; Peak, 2008; Stockdale *et al.,* (2008	Stakeholders	Babaheidari, 2007; Stockdale *et al.,* 2008
Environmental pressures	Serafeimidis and Smithson (1996)	Organisational function	Peak (2008)
Markets and market demands	Serafeimidis and Smithson, 1996; Buchanan, 1991; Gutierrez, 1995; Peak, 2008; Stockdale *et al.,* 2008)	Senior management attitude	Walsham (1993)
Decentralisation	Peak (2008)	Changing stakeholder needs, objectives	Serafeimidis and Smithson (1996) Babaheidari (2007)
Social Context	Pettigrew , 1985; Pettigrew *et al.,* 1988; Jayasuriya, 1999; Saritas *et al.,* 2007 ; Walker *et al.,* 2008; Roroi *et al.,* 2008	Trust in the supervisor	Devos *et al.,* (2007)
Sectoral factors	Karyda *et al.,* (2005)Peak (2008) Stockdale *et al.,* (2008)	Measurement difficulties	Piotrowicz (2007)
Globalisation	Stockdale *et al.,* (2008)	Project type	Piotrowicz (2007)
Privatisation	Stockdale *et al.,* (2008)	Perceived organisational support	Self *et al.,* (2007)
National economic situation	Pettigrew, 1985; Pettigrew *et al.,* , 1988 ; Serafeimidis and Smithson , 1996 ; Saritas *et al.,* 2007; Babaheidari, 2007 ; Roroi *et al.,*	Organisational culture	Pettigrew, 1985; Pettigrew *et al.,* 1988; Huerta, and Sanchez, 1999; Walker *et al.,* 2008; Symons, 1991; Roroi *et al.,* 2008, Piotrowicz, 2007; Karyda *et al.,* 2005;

External factors which frequently appear in CCP studies	Reference(s)	Internal factors which frequently appear in CCP studies	Reference(s)
	2008 ; Karyda *et al.,* 2005 ; Peak , 2008 ; Stockdale *et al.,* 2008; Walker *et al.,* 2008		Peak, 2008; Constantinides and Barrett, 2006; Stockdale *et al.,* ; 2008; Babaheidari, 2007
National and local government policy	Serafeimidis and Smithson, 1996; Peak ,2008; Stockdale *et al.,* 2008	Project value	Piotrowicz (2007)
Stakeholders	Peak ,2008; Karyda *et al.,* 2005	Network structure	Knight and Pye (2004)
Political context	Pettigrew , 1985; Pettigrew *et al.,* , 1988; Jayasuriya , 1999; Huerta, and Sanchez , 1999; Saritas *et al.,* 2007 ;Walker *et al.,* 2008 ; Symons , 1991 ; Roroi *et al.,* 2008	Leader-member exchange	Self *et al.,* (2007)
Other organisations (providers, financiers, governments)	Raak *et al.,* (2005)	Network practices and interpretation	Knight and Pye (2004)
Legislation procedures	Raak *et al.,* (2005)	Network continuity	Alajoutsijärvi and Tikkanen (2002)
Business partners	Piotrowicz (2007)	Network complexity	Alajoutsijärvi and Tikkanen (2002)
Business culture	Raak *et al.,* (2005)Piotrowicz (2007 Alajoutsijärvi and Tikkanen (2002)	Network informality	Alajoutsijärvi and Tikkanen (2002)
Supplier availability and expertise	Serafeimidis and Smithson, 1996; Buchanan , 1991; Peak (2008)	Departmental interests	Cho and *et al.,* (2007)
Level of government support	Serafeimidis and Smithson (1996)	Organisational practices	Pettigrew *et al.,* (1988) Raak *et al.,* (2005)
Legal requirements	Karyda *et al.,* 2005; Piotrowicz, 2007	Organisational structure	(Pettigrew, 1985; Pettigrew *et al.,* 1988; Serafeimidis and Smithson,1996; Buchanan,1991; Jayasuriya,1999; Huerta, and Sanchez,1999
Company's situation in the market	Piotrowicz (2007)	Information flow	Symons (1991)
Ecological	Saritas *et al.,* (2007)	Political process	(Pettigrew, 1985; Pettigrew *et al.,* ,1988; Jayasuriya ,1999; Roroi *et al.,* 2008 ; Karyda *et al.,* 2005 ; Stockdale *et al.,* 2008 ; Babaheidari ,2007
Unionisation rate	Gutierrez (1995)	IS infrastructure	Serafeimidis and Smithson (1996)
Government influence	Gutierrez, 1995; Pichault , 2007	IS design	Piotrowicz (2007)
Labour relations	Gutierrez (1995)	HRM	Serafeimidis and Smithson , 1996 ; Gutierrez,1995 ; Raak *et al.,* 2005 ; Pichault,2007

Source: developed for the purpose of this research

2.5.2.2   Content dimension

From the literature reviewed, it is found that collaborative technological-based change in the public sector emerges as an important developing area. Therefore, this research seeks further investigation into the implementation stage of such large-scale, collaborative changes where the content is the digitalisation and technologically based reforms in the public sector in developing countries. In general, the content of change refers to the specific areas of change and/or development. This might be, for example, changes in technology, human resources, products, or services. Pettigrew (1992) argues that the type of change will determine the content of the initiative. For instance, technological or radical change will have evident features and an impact on the content of change

The content dimension investigates the '*WHAT'* side of change (Pettigrew, 1987), in which content is the answer to what is being analysed, investigated or evaluated by the project or initiative. The significance of the content of change is at the core of contextual analysis and managing change studies. It has been recognized in the literature that the most frequent variables and content in change and reform literature are changes in structure, technology, human resources activities, social issues, total quality management, strategic orientation, and organisation-environment fit (Burk and Litwin, 1992; Self *et al.,* 2007).

2.5.2.3   Process dimension

 Processes refer to the actions and methods that are used in the collaboration. They cover the timeframe or the life cycle of the collaboration and they are embedded in contexts (Pettigrew 1997, Raak, 2005). This research is going to define and explore processes that are linked with the implementation step of collaboration. For the contextualist, the process of change is encapsulated in the answer to the question of 'HOW' change is introduced. Process variables and themes include phases and steps, actions, organisational response, and how such transformation is legitimised (Pettigrew, 1987; Armenakis and Bedeian, 1999). The interconnectedness and interaction between the CCP components is a critical dimension to be investigated because "organisational processes are both constrained by features of context such as tradition and technological

commitments and also shape contexts by, for example, preserving or altering technological strategies or corporate cultures" (Pettigrew, 1997, p.341).

2.5.3   Selection rationale of CCP

More justifications for selecting the CCP framework are in the next chapter; however, this research applies the contextual framework in particular for many reasons:

- In the forefront is the alignment between the research problem and the framework's premises. The background theory indicates that the main problem is in understanding the contextual and processual factors associated with the IOC arrangement implementation in the public sector. In the main time, the CCP gives primary attention and indeed its main premise is to explore the contextual and processual factors in social phenomenon. Accordingly, the framework fulfils the research inquiry and embraces the merged concerns from the background theory.

- The framework also provides a multilevel lens that can assure accuracy in exploring the multifaceted nature of IOC arrangements.

- In addition, the frequent use of the framework in different disciplines makes its validity and applicability when applied in this research are more likely because of the frequent validation of its variables and arguments.

- Moreover, the nature of the problem requires a lens that can explore its dynamic nature. This objective is in the main underlying assumptions of the CCP framework.

- The contextual perspective is derived from many theoretical paradigms where the perspective benefits from a broad spectrum of disciplines after a critique synthesisation to overcome previous theories shortcomings.

2.6 Conclusions

Advancing the field of IOC requires appropriate attention be given to the contextual and processual factors that are associated with implementing collaborative arrangements in the public sector. This need for theoretical and empirical efforts in those dimensions is necessary to minimise uncertainties, a high rate of failure, and scepticism among practitioners, policy makers, and public management. There are several conclusions that can be drawn from this chapter that are critically influential in this field.

- First: the primary conclusion is a multidisciplinary literature review in IOC in the public sector context has revealed a gap that stems from the absence of multilevel lenses or frameworks that analyse simultaneously organisational collaboration, institutional and wider, external environmental levels. And also points to a need to clarify the processual stages, micro actions, and the nature of the process. It appears clear that there is still room for development, particularly in defining the likely critical contextual factors from different levels to avoid omission of any associated contextual forces and factors that have to be considered when establishing an IOC in a public sector context. In addition, the level of uncertainty about the stages and the micro-processes within them remain an inhibitive aspect for many organisations when they think of interorganisational arrangements. Therefore, clarifying and defining the contextual and processual factors are found to be significant for further development in the field.

- Second: the use of interorganisational arrangements to share responsibilities or to access new resources is a growing trend in the public sector. However, the underdeveloped nature of contributions so far compared with those in the private sector is a critical literature gap that manifests itself in many ways and is evident in the current research directions and findings. Producing theoretical and

empirical studies in the public sector context is indispensable to the accumulation context-specific knowledge that appreciates its contextual idiosyncrasies. Especially, as it has been found from the background theory that most of the theoretical paradigms in IOC are developed from economic and profit bases and perspectives.

- Multidimensional problems and questions require macroscopic research and investigation. The background theory indicates a need for a lens that explores the contextual and processual issues. As the contextual CCP framework can embrace contextual and processual factors, the research intends to apply a tailored CCP framework that can explore deeply and accurately analyse the phenomena.

- The anticipated outcome from applying an extended CCP framework is to offer new insights to the field that can help policymakers, public managers, collaborating organisations, change agents, and academics in developing a deep understanding of the contextual and processual factors.

The next part of the research is the focal theory which is an explanation of the conceptual framework that derived from the literature review and refined through a pilot stage conducted by the researcher.

3 Chapter three: the CCP framework (focal theory)

3.1 Introduction

The aim of this chapter is to develop a conceptual CCP framework for analysing IOC in public sector contexts. The proposed framework intends to support public policy-makers, public managers and public organisations to explore the contextual and processual factors associated with interorganisational collaborative arrangements. To devise a rigorous formulation to the framework, the proposed CCP framework is derived from two sources: *the review of the relevant literature*, and the *findings from the pilot stage*. The chapter begins with the evolution of the framework and its main development to help clarify the sources of the theoretical assumptions that inspire the development of the proposed framework. In this chapter, the researcher also justifies the need for a framework to analyse IOC in public sector contexts and how the *background theory* leads to the *focal theory*.

Moreover, the chapter identifies the components of the developed framework from both the literature and the pilot stage to be encapsulated in: the multiple contextual levels, non-linear processes which have an impact on and are impacted by the capacity of the arrangement, stakeholders from different levels, the implementation context which embraces the interconnectivity between the CCP components, and finally the outcome. The researcher offers a comparison between the research and previous studies that applied the CCP framework to delineate clearly the stance of this research. Finally, a summary of the main discussed aspects is offered in the end of this chapter.

3.2 Contextual framework evolution

While there are many studies that have tried to apply the CCP framework, the majority of these studies have applied the framework but not added to or changed its dichotomy or components. Consequently, the tool is frequently used but seldom theoretically and empirically developed. However, there are a few exceptional attempts such as the work

of Serafeimidis and Smithson (1999). In this work, the CCP framework was reorganised by emphasising the role of stakeholders and the impact of the history as figure 3-1 shows. The literature used to tease out this new conceptualisation of the CCP framework was from IS evaluation. Although this remapping of the main components of the framework has not produced extensive or radical changes, it does work as a catalyst for rethinking on the importance of stakeholders and their central role in the analysis.

Figure 3-1 CCP framework (Serafeimidis, 1997, p.71 cited in Serafeimidis and Smithson, 1999)
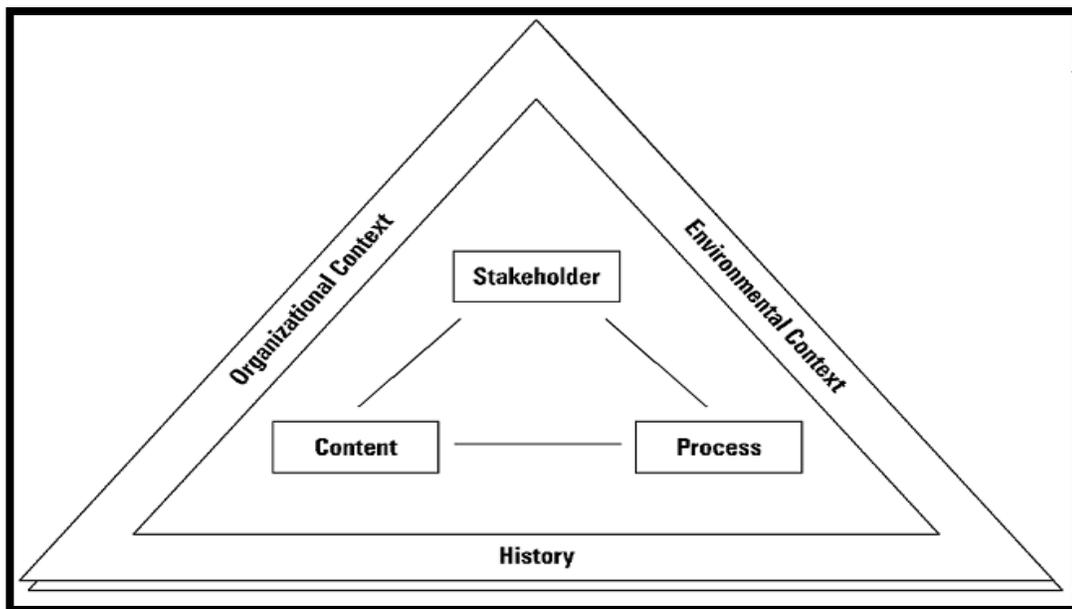
Another attempt is the contribution of Stockdale and Standing, (2006); Stockdale *et al.,* (2006) and Stockdale *et al.,* (2008). As it is presented in Figure 3-2, the CCP framework takes on a more detailed shape and it is proposed theoretically that it might be applied in an interpretive IS evaluation. More details and questions have been added to cover different factors and elements of IS evaluation when applying the CCP framework. Proposed influencing factors from different levels move to include broader factors such as globalisation, and other additional factors such as the industry sector, digitalisation and corporate culture and structure have been incorporated into the external and internal context.

84

Figure 3-2 CCP framework Stockdale and Standing, (2006, p. 1097); Stockdale *et al.*, (2006) and Stockdale *et al.*, (2008)
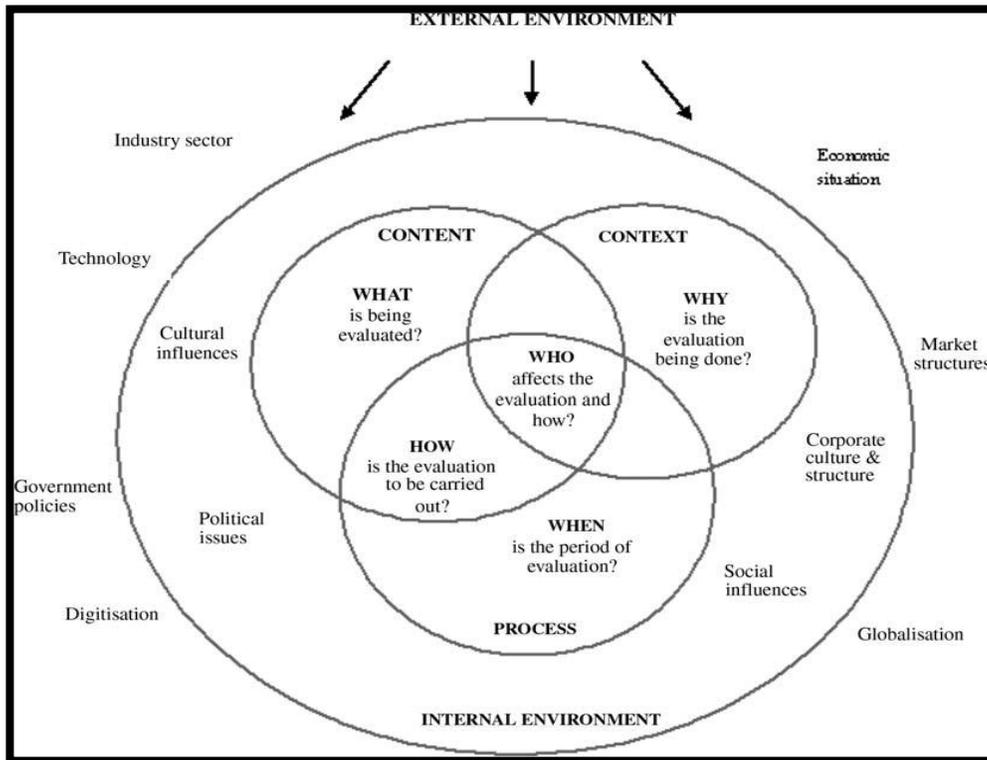
The most important and novel modification in the CCP framework has been achieved through the work of Piotrowicz (2007) and Piotrowicz and Irani (2008). They found that the CCP framework is inadequate when it comes to exploring a sophisticated and a complex context where the boundaries between inner/internal/organisational level and the outer/external/environmental level are not clearly defined and a grey area between the internal and external context might be ignored with its impact factors. They found that in order to understand and capture all the contextual factors that impact on an IS evaluation in an international corporation, a corporate context should be considered. As can be seen from Figure 3-3, the corporate context is a unique extension to the CCP framework, as it leads to an extension of the CCP framework and adds a new level of analysis, which is the system level (corporate level) between the inner and the outer context. This contribution has led to the need for more investigation into the possibilities of other levels in a variety of complex contexts with factors possibly being omitted or ignored. Omission means producing a partial picture of the phenomena, and therefore

inhibitive and/or supportive factors influencing the outcome behind the scenes are not explored.

Figure 3-3 CCP framework (Piotrowicz, 2007, p. 251)
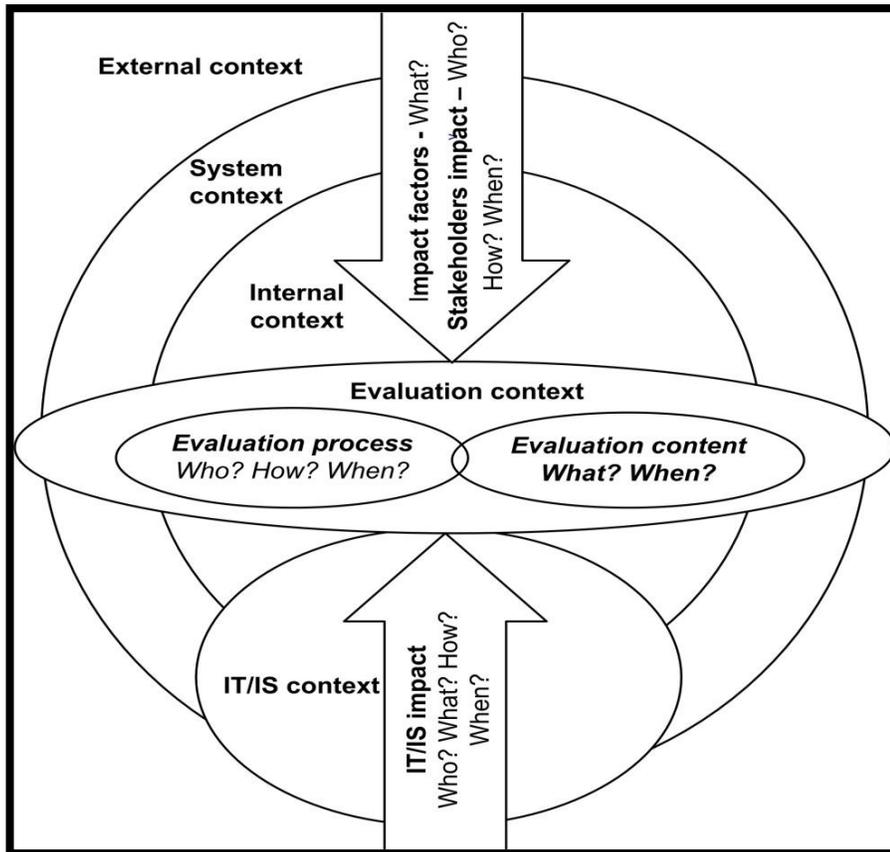
3.3 How background theory leads to the focal theory

This research investigates through interpretative phenomenology how the participants describe the context, content and process of collaborative-based projects as change implementation methods in public sector reforms in Oman. However, in order to keep the research focused and limit the investigation, it is very helpful to have a proposed framework which offers guidelines that embrace the thesis of the research. Inspired by the system-level idea (Piotrowicz, 2007; Piotrowicz and Irani, 2008) but in a public sector context, and by the IOC literature, a new multiple context is proposed. It is important to mention that the sources for developing the framework are:

1- The theoretical findings and assumptions.

2- The pilot stage findings and suggested modifications.

The main premise of this project is: Applying the contextual (CCP) framework as a multilevel of analysis tool to analyse interorganisational collaborative arrangements in the public sector. More precisely, applying the contextual (CCP) framework is to explore and describe the contextual and processual factors that are associated with the implementation of interorganisational collaborative networks in the public sector. To arrive at collaborative advantages, benefits, and outcomes, public managers, policy makers, and different levels of stakeholders need to understand the multidimensional nature, levels, contextual and processual factors that are associated with the collaborative arrangement. Findings in Chapter 2 indicate some underdeveloped areas that lead to applying the CCP framework to accumulate further knowledge in this field.

Figure 3-4 How background theory leads to the focal theory

Background theory

Dominated by economic underlying assumptions and explanations in the IOC field which do not comprehensively delineate public sector idiosyncrasies

Over-reliance on exploring the organisational level outcomes, enablers, and constraints

Lack of a multilevel comprehensive empirically tested lens to analyse the contextual and processual factors and embrace the complexity of IOC phenomenon

Insufficient empirical models that investigate the processual stages and micro-processes, and the nature of the relation between different stages

Applying the CCP framework where context, content, and process are studied simultaneously as interconnected constructs that have their own multilevel structure and micro-levels. The CCP framework therefore appropriate to the exploration of the complexity of IOC phenomenon.

Applying the CCP framework by assuming the process dimension to be consisted from three processual stages, micro-actions, and collaborative capacity.

Focal theory

Applying the CCP framework as a socio-political lens that can embrace openly multifaceted underpinnings associated with the interorganisational collaborations

Applying the CCP framework by assuming the context as nested and embedded levels containing: organisational, collaboration, institutional, and external levels

Source: developed for the purpose of this research

As Figure 3-4 explains, the research is carried out in response to the emerging complexity in managing and understanding IOC in the public sector. The level of interdependency as a pattern to implement policies in the public sector context has increased and has complicated the context of change from change that can be easily delivered through a single public organisation to a multiple-organisation and a network-based implementation. However, despite the theoretical and empirical contributions made so far in understanding this pattern of implementing change in the public sector, difficulties and high rate of failure are reported. Also, after reviewing the relevant literature in Chapter 2, it is found that gaining an understanding of contextual and processual factors in interorganisational arrangements in the public sector is an underdeveloped area because:

1- There is a lack of a multilevel of analysis models and lenses that investigate the contextual levels and enablers/constraints, triggers, and outcomes. As the main stream in previous research has been devoted to exploring organisational level factors with less attention to the wider institutional and environmental factors.

2- Although there are some theoretical paradigms that have tried to offer insights into the interorganisational phenomenon, the narrow focus of such paradigms and the dominant economic underpinnings inhibit the exploration of different levels' characteristics and factors and ignores the aspects likely to impact from the wider contextual levels.

3- There are insufficient empirical studies investigating the process, stages, micro-actions and the relation between the context and the process.

4- There is an over-reliance on exploring organisational level factors such as the outcomes, triggers, constraints and success factors at the expense of exploring the wider environmental factors that can shape the process of the arrangement. In addition, there are few empirical studies that analyse interorganisational arrangements compared with the large body of theoretical conceptualisations,

propositions and theoretical hypotheses that are untested. As an alternative, this thesis, through an in-depth, large-scale empirical investigation and through applying the CCP framework, adopts a holistic standpoint that consider content, process and multilevel contexts of the phenomenon.

3.4 The framework dimensions

3.4.1 The multiple contexts

As Figure 3-5 portrays, the study proposes and tests the argument that when analysing IOC arrangements in the public sector, there are four contextual levels that need to be considered: the organisational context, interorganisational collaborative settings, institutional contexts, and external national or other external contexts. All of these levels have enablers/constraints, forces, and triggers which impact on and are associated with collaborative arrangement in the public sector and consequently should be considered simultaneously. As found from the background theory, it is meaningless to pay attention to one or two levels at the expense of seeing the whole picture of the IOC phenomenon. Contextual factors therefore, are distributed among and can be listed under: the outer or external context, the institutional context, the interorganisational domain or collaboration context, and the inner context. Having said that, defining the impact factors from different levels is suggested to advance the knowledge regarding the multi-levels, enablers, constraints, and the prerequisites of collaborative arrangements and therefore this assumption leads to the first research questions:

Q1: *which factors under organisational, interorganisational collaborative settings, institutional, and external/environmental contexts are associated with the implementation of interorganisational collaborative arrangements?*

Q2: *How do the factors impact the collaboration?*

Figure 3-5 The conceptual CCP framework

EX

INS

IOC

IN

(Implementation context)

What (content)   Who   Why (context)

How (Process)

S1   S2

CC

S3

Outcomes
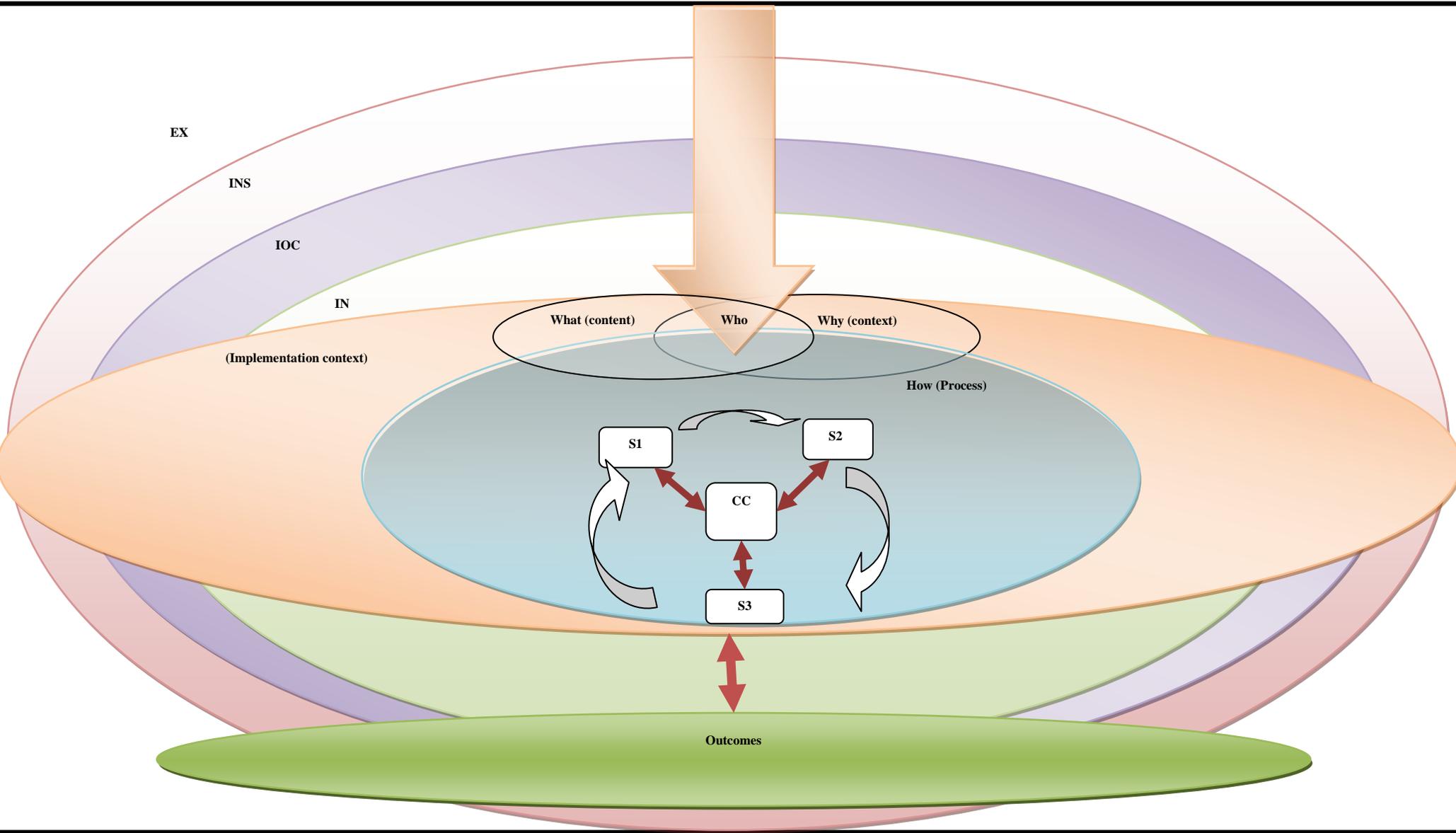
3.4.1.1 The external context (EX)

This refers to the contextual factors whether they are triggers, prerequisites, enablers or constraints that are impact on the arrangement and are situated in the wider external national, international, and environmental spheres. The role of political leaders and national culture in shaping the process is found in the literature (Table 3-1) and confirmed during the pilot stage. Political leaders, political vision, and ideological underpinnings for some political parties can impact on the way in which public policies are implemented. Similarly, national culture influences and is influenced by the macro-culture which is produced by or emerges from being in an IOC (Jones *et al.,* 1997).

3.4.1.2 The institutional context (INS)

The institutional context occupies a lower social sphere between the external level and the organisational and arrangement levels. The boundaries of the institutional level depend on the content of the collaboration and therefore it refers to the project under implementation's sector, regulative framework, laws, and regulators' roles in managing a particular domain. The domain norms, characteristics and values are the source of the institutional forces and factors interventions as facilitative or inhibitive elements. In this research, as Table 3-1 presents, two factors are under the investigation; the public sector, and the technological domain's characteristics and features. Support for these domains is generated from both literature and the pilot stage.

Table 3-1 Contextual levels and sub-factors

Key factor	Sub-factor	Description	References
The external context	*Political context*	Political leadership influences, inclination, and visions which can force or trigger the initiations of IOC. Political environment and leaders can be supportive and/or inhibitive factors.	Lasker *et al.,* (2001); Mandell & Keast (2008) ;O'Toole (1997); Gray (1989); Oliver (1990); Reilly (2001); Provan and Milward (1995); Schroeder (2001)
	National culture	The cultural values, beliefs, norms are enablers or constraints to the arrangement	Jones *et al.,* (1997); Reilly (2001)
The institutional context factors	*Public sector idiosyncrasies*	Refers to the public sector domain's values, norms, bureaucracy, government interventions, and interdependency. Such properties are linked with the process and structure of IOC	Isett and Provan (2005); Hudson *et al.,* (1999), Metcalfe and Richards (1990) ; Huxham and Vangen (2000a)
	The technological context	Technological sphere, infrastructure, regulations, and the role of the regulators are associated with the process when the content is about IT/IS collaborative arrangement	Dawes and Prefontaine, 2003; Fedorowicz *et al.,* 2006, Luna-Reyes *et al.,* 2007
The interorganisational collaboration context	*Shared vision, goals and procedural consensus*	Consensus is an enabler and critical success factor of IOC arrangement. The evidence of the manifestation of this factor can be seen in the articulated consensus about the collaborative vision, objectives and process among the collaborating organisations	Akinbode and Clark (1976) ;Daley (2009); Keast *et al.,* (2004); Wood and Gray (1991); Ansell and Gash (2007) ;Gray (1985); Mandell and Steelman (2003) ;Milward (1982) ;Oliver and Ebers (1998); Fried *et al.,* (1998); Gray and Hay (1986); Morrissey *et al.,* (1994)
	Collaborative image	Refers to the perception and the impression of the members and the external stakeholders about the collaboration.	Emerged from the pilot stage
	Governance and administrative structure	Refers to the membership structure, decision-making process paradigm, hierarchies within the arrangement, and types of committees and implementation groups	Bryson *et al.,* (2006); Mandell & Keast (2008); Mandell and Steelman (2003) ; McGuire (2006); Miles and Snow (1986); Milward (1982); Oliver and Ebers (1998) ; Provan *et al.,* (2007); Brass *et al.,* (2004); Fedorowicz *et al.,* (2006); Fried *et al.,* (1998)
The internal organisational context	*Organisational strategy*	Refers to the overall strategy, responsibilities, goals, and future perspectives. It is found that organisational strategy and goals can be inhibitive or supportive factors. However, they remain essential prerequisites for implementing a collaborative arrangement	Mandell and Steelman, (2003); Thomson *et al.,* (2009); Wood and Gray, (1991); Lasker et al., (2001); Fedorowicz *et al.,* (2006); O'Toole and Montjoy,(1984)
	Organisational culture	Cultural value and perceptions within an organisation play a vital role in facilitating communication and interaction between members	Mandell and Steelman,(2003)
	Organisational position within the arrangement	Convenors, focal organisations, and/or initiators have more power in the group and shape the process of the arrangement	Miles and Snow;(1986); Gray, (1985), Mandell, (1984); Fried *et al.,* (1998)
	Organisational experience	Previous experience in collaborative arrangements or in working with the same members is positively linked with the success of an arrangement	Brass *et al.,* (2004) ;Mandell and Steelman (2003) ;Thomson and Perry (2006); Gil-Garcia (2007)
	Leadership and top management support	Support and understanding are prerequisites and key facilitative factors in IOC	Akinbode and Clark, (1976) ; Brown *et al.,* (1998)
	Perceived organisational individualism limitations	The implication of limited resources, capacities, or capabilities forces organisations to join or establish collaborative arrangements	Hudson *et al.,* (1999)
	Organisational representatives' skills	Skills and professional abilities of the management or employees who participate in an arrangement is an enabler to the implementation	Bryon *et al.,* (2006) ; Sullivan *et al.,* (2006)

Source: developed for the purpose of this research

3.4.1.3 The interorganisational collaboration context (IOC)

Based on the conceptualisation of this context as a unique entity, it occupies a social space between an organisation and the whole social environment. The literature mentions many qualities that are linked with this level of analysis and found influential in managing IOCs. Table 3-1 indicates that the dominant mentioned quality is consensus among members about the collaborative vision, goals, structure and procedures. As was expected before the pilot stage, consensus is positively associated with evolution and the success of the arrangement. In addition, the collaborative structure, stability and dynamic of the collaboration are integral qualities that impact on the arrangement. The collaborative image emerges from the pilot stage where the impression given by the participants and the outer stakeholders was found positively related with the success and the progress of the arrangement.

3.4.1.4 The internal/organisational context (IN)

Many factors have been considered as essential prerequisites if an organisation intends to embark on collaborative efforts. Qualities which belong to this level are well defined in the literature as Tables 2-2, 2-4, 2-5 and 3-1 indicate, because of the considerable number of studies devoted to the organisational and/or the inner factors, forces and requirements. Leadership support, collaborative management skills, a facilitative culture for interacting with others, supported by organisational strategies and goals that offer spaces and legitimise the arrangement are critical success factors. In a similar vein, previous organisational experiences in initiating or joining collaborative efforts, the position of the organisation whether it is the focal body who initiates the arrangement or a stakeholder (primary or secondary), and perceived organisational limitations can all shape the process and the structure of the arrangement as the literature reveals.

3.4.2 The process dimension

Background theory informs us that there is a need to answer this major question: How can the ambiguity associated with the collaborative stages, actions, procedures, and overall processes be reduced? The focal theory in response, offers proposed processual stages presented in Table 3-2, with micro-actions which are both shaped and refined by the pilot stage. From the review to the stages literature, it is found that there is a level of consensus among scholars regarding the initial processual stages such as planning and implementing. However, evaluation and feedback are not clearly articulated, but because the pilot stage indicates its association with the process, therefore it is suggested as a critical stage in the process phase. Accordingly, the proposed stages move in a cyclical, dynamic and non-linear route (Ring and Van de Ven, 1994; Ansell and Gash, 2007; Reilly, 2001) and involve four steps:

- *Stage one (S1): Planning and formation*: This refers to the development of the structure and the governance framework of the arrangement. It deals with cultivating and/or obtaining the internal and external stakeholders' support and therefore legitimisation. This stage is followed by transforming the agreed agenda into implementation actions.

- *Stage two (S2): Implementation stage*: This refers to the execution and operationalisation of the framework and the activation of the implementation agenda. This phase is followed by a review and assessment of the progress of the arrangement.

- *Stage three (S3): The evaluation stage*: This refers to the assessment phase which is an integral part in the process cycle and which encourages rethinking, followed by restructuring, redesigning, or replanning some previously agreed processes.

- *Collaborative capacity (CC)*: based on the findings from the literature review, capacity is an important factor that is generated from the process and also can impact on those processes. Accordingly, there is an interplay and interaction between the strategies, the processes and the collaborative capacity. Collaborative capacity is a central construct comprising capacity levels

according to Sullivan *et al.,* (2006). These are strategic, governance, operation, practice, and community levels, whereby:

- *Strategic*: Refers to the alignment between the collaborative vision, mission, and agenda and organisational purposes.
- *Governance*: The authority and control framework which emphasises accountability
- *Operational*: Operationalisation mechanisms of the shared resources
- *Practice:* Skills and competencies availability.
- *Community*: Involvement of users/citizens/the public and the characteristics of the community in terms of the content of the change require.

Within the three stages, there are important micro-processes and actions to be considered. The process stages and micro-actions within these stages which were mentioned in the theoretical and empirical literature have been refined and reconsidered after the pilot stage and presented in Table 3-2 below. The previous assumptions and the proposed refinements from the pilot stage are developed in the following research questions:

Q3: How is IOC implemented, and what are the stages and the micro-actions within the process steps?

Q4: How does collaborative capacity impact on and is impacted by the process?

Table 3-2 IOC process and micro-actions

Processual stages and nature	Micro-processes	Descriptions and key components	Reference (s)
Planning stage	*Assessing readiness to collaborate by analysing for example, stakeholders' visions and potential input and output*	The need to gain legitimacy from within and outside organisation implies an early assessment of the main requirements and stakeholders' recommendations, perspectives and values	Ansell and Gash (2007), Hudson *et al.,* (1999); Mandell & Keast (2008); Gray (1985); Fedorowicz *et al.,* (2006)
	Negotiation and structuring the arrangement	Developing an agreed structure and framework to operationalise the arrangement. Also, tasks' distribution, administrative procedures are to be articulated clearly	Mandell & Keast (2008); Reilly (2001)
	Alignment	Aligning the organisational and the collective strategic directions and agendas	Sullivan *et al.,* (2006)
		Aligning the arrangement goals and process with the context	Emerged from the pilot stage
Implementation and execution	*Performing and running the arrangement*	Activating the process by facilitating multidimensional communications(formal, informal, permanent, and temporary methods)	Greasley *et al.,* (2008)
		Empowerment of the key actors	Thomson and Perry (2006)
		Building commitment by: - Ensuring the coverage of different stakeholders' interests. - Intermediate outcomes. - Equality in duties and gains.	Ring and Van de Ven (1994); Hudson *et al.,* (1999); Gray (1985); Ansell and Gash (2007)
		Provide training and continuous endorsement to human development needs	Margerum (2002)
		Piloting is a critical step as it informs the participants of the necessary refinements to the framework	Emerged from the pilot stage
Evaluation	*Continuous and multilevel assessment*	Mutual feedback	Fedorowicz *et al.,* (2006)
		Assessing outcomes and achievements at multilevel.	Ring and Van de Ven (1994)

Source: developed for the purpose of this research

3.4.3 The implementation context

As it is presented in Figure 3-5, the refined CCP framework forms the pilot stage and the literature review emphasises the interconnectivity, the multi-levels of outcomes, and the central role of the stakeholders. Based on the findings from the background theory, the interconnectivity between context, content, and processes is likely to be associated with implementing interorganisational collaborative arrangements. The main features of the implementation context (when) as a timeframe as Figure 3-5 shows can be described as follows:

- It embraces the interconnectivity between the content (what is being collaborated), context (why), the process (How), and the stakeholders (who). Proposing this interplay between the context, content, and process is both mentioned in the literature (Sullivan *et al.,* 2006; Keast *et al.,* 2004; Akinbode and Clark, 1976; Daley, 2009) and confirmed by the pilot stage.
- While nested in the wider contextual levels, the implementation context embraces the interaction between the three pillars: context, content, and process, and impacts upon and is impacted by the contextual levels. This is because the implementation is not conducted at the organisational level only but throughout all levels.

Having said that, it is reasonable to ask the following research questions:

Q5: What is involved in the implementation context?

3.4.4 Content

Content is the area in which the collaboration takes place and the core subject of the collaboration. It is the substance that the collaboration intends to deal with. The (what) dimension in this research is the collaborative arrangement content:

- This is conducted in the public sector.
- The core subject is the information and data exchange about the target community and also building skills and knowledge of the target population. The main umbrella of this content is the implementation of digital and technologically-driven reforms in the public sector in developing countries via

98

IOC. Choosing this content is due to the current movement in public sector reforms in developing countries which are mainly driven by technological agendas and aims.

Therefore, and to understand more the content and substance of the subject when reforms are implemented through an IOC, the research question which needs to be asked is:

Q6: What is the area in which collaboration takes place?

3.4.5 Stakeholders

The interaction between the contextual levels is proposed to be top-down where the influence comes from the external levels as portrayed in previous studies (Piotrowicz, 2007; Stockdale and Standing, 2006; Stockdale *et al.,* 2006; Stockdale *et al.,* 2008). Central to this interaction is the role of stakeholders as Piotrowicz (2007) and Piotrowicz and Irani (2008) propose and as the pilot stage confirms. The emerged analytical CCP framework pays attention to the stakeholders (Who) as an integral part in previous CCP studies and collaboration literature. Stakeholders are found at multilevel where each contextual level has its own impacting stakeholders. The focal theory proposes therefore that an understanding of different level requirements is an essential step to be completed in order to ensure commitment, support, and resourcing and information flow.

The author believes that the stakeholders' dimension is a central and key component of the framework because it illuminates the power sources and their distribution within the IOC. Identifying the potential sources of power and its implications are both important steps to ensure that the project being implemented is not going to be resisted, for example, if a powerful group's influences are undermined or not fully recognised. Accordingly, the research question here is:

Q7: Who is involved in the collaboration from inside and outside the case?

3.4.6 The outcome(s)

The outcome(s) of the collaboration can be seen at different levels; organisational, arrangement level, institutional level, and wider external level. The outcome(s) can be tangible, such as costs and financial results, and/or intangible outcomes, such as building information databases, transparency, effectiveness and efficiency in public

services delivery. The evidence from the pilot stage suggests that the outcome is not only an output but simultaneously can trigger changes in the implementation context. Focal theory proposes therefore that the taxonomisation of the potential or the acknowledged outcome to be in the four contextual levels is essential and helpful in mapping different levels' outcomes. It helps, therefore, in analysing what the gaps are between self-interest, collective interests, the targeted population, and different stakeholders pre-assumed benefits. Defining the type of the outcome whether it is financial, non-financial, tangible or intangible can be helpful for the collaboration management in setting in place proper measurements and evaluation schemes. To operationalise this dimension, the study investigates the claimed outcome(s) and benefits of the arrangement by asking:

Q8: What are the outcomes of the collaboration arrangement?

3.5 Conclusions

The primary conclusion and the focal theory is applying an extended and an integrative CCP framework developed from the literature review in interorganisational arrangements and contextual perspective literature, and also from the findings that emerged from the pilot stage. The rationale of applying it stems from the need for multilevel models that can embrace and explore forces, factors, and characteristics that might shape and influence collaboration from different contextual levels and processual stages, thus advancing the understanding of IOC arrangements' process in the public sector. There are some other conclusions that have emerged from this chapter as follows:

- The gaps in the background theory have led to the importance of a multilevel of analysis that considers the wider contextual variables which are in the core functions of the CCP framework.

- The background theory indicates also that the process dimension needs more empirical investigations regarding the stages, micro-actions within stages, and the nature of the process. While, the CCP framework does not offer detail about the IOC process, the author integrates a processual stages model from the literature and collaborative capacity framework (Sullivan *et al.,* 2006) and examined this in the pilot stage. The results were encouraging and were found helpful in understanding the processual stages and the micro-actions within them with the expectation of being rigorously refined after the main fieldwork.

- The theoretical contribution of this study so far stems from the idea that this research is among those few attempts which consider the CCP framework as a focal theory in which extensions and modifications may be tested in a large-scale empirical investigation. Accordingly, the tested and validated framework can advance further applications to the framework in the IOC field and simultaneously help in exploring the contextual and processual issues.

- From an epistemological stance, the contextual perspective as an interpretive analytical approach is a descriptive tool to analyse a particular phenomenon. It is not a tool to measure but to understand and interpret social behaviour. Accordingly, in the next chapter, the interpretive philosophical assumptions of this research are discussed thoroughly to ensure consistency between the theoretical and philosophical underpinnings.

4 Chapter four: Research Methodology (Data theory)

4.1 Introduction

Guided by the research focus of applying the CCP framework to explore the contextual and processual factors in IOC arrangement the data theory is delineated and developed to fulfil this explorative interpretative aim. In this chapter, the methodological dimension of this research and the philosophical and epistemological underpinnings are explained and discussed thoroughly. The chapter starts with defining the research thesis and questions which were formulated following Yin's (2009) proposed taxonomisation, in which case study questions are developed on five levels. The research's main strategy and the overall plan and process of the research are discussed, and then the chapter explains and justifies the ontological and epistemological stances behind the selection of a qualitative paradigm and case study as an enquiry approach. After that, the chapter presents the main criteria, procedures and strategies to ensure the trustworthiness of the research, which are mainly based on generating credibility, confirmability, transferability, and dependability of the research.

Data collection methods are discussed with a clarification of the rationale for choosing each of them. This research uses many research methods, including interviews, document reviews, and archival records. In this section the sampling plan, multiple-case study logic and pilot stage are all presented and discussed. The chapter moves on to discuss the analysis strategy that has been adapted in this research, as the strategy is a combination between the work of Miles and Huberman (1994) and strategies and techniques to analyse case studies proposed by Yin (2009). Finally, the chapter mentions ethical considerations and the limitations of the research, and a summary encapsulates the philosophical stances of the research.

4.2 How focal theory leads to the data theory

4.2.1 Ontological and epistemological justifications

This study analyses collaboration in public sector through applying an interpretative and analytical qualitative-based CCP framework. To ensure the consistency of the research, the research design aligns the ontological, epistemological and methodological stances. Focal theory indicates that a multifaceted CCP model with multilevel contexts and processual stages can develop an in-depth understanding of the dynamic of the contextual and processual factors of interorganisational collaborative arrangements in the public sector. As shown in Figure 4-1, and as explained in the coming sections, moving in this direction requires data theory that can address and embrace the complexity and the dynamic of an IOC phenomenon. In addition, focal theory reveals that an understanding of public sector collaborative arrangements requires an appropriate interpretive and qualitative lens to explore the process, the micro-actions, and the impact of contextual factors. In one sentence, the background theory leads to the focal theory (explained in section 3.3 and figure 3-4) which, in turn, leads to the data theory as it is explained in this section and the coming sections.

From an ontological perspective, this research adopts a social constructionist ontological stance. Constructionist ontology assumes reality as a result of the interaction between actors and their contexts and can only be explored through linguistic traditions and meanings actors use to describe social phenomena (Buchanan and Brymen, 2009). The nature of the research problem where there is a need to understand the process in collaborative arrangement and the interplay and the interaction between the context and the process implies selecting this stance. In additions, the CCP framework as an analytical lens assumes reality as contextually and socially constructed. The framework is validated and extended in this study to *understand* collaborative arrangements rather than *quantifying* significance or causality. Epistemologically, adopting interpretivism stance rather than positivism is derived from the underlying assumptions of the framework. According to Pettigrew *et al.,* (2001, p.699), "change explanations are no longer pared down to the relationships between independent and dependent variables but instead are viewed as an interaction between context and action ... in which subjective interpretations of

actors' perceiving, learning and remembering help shapes process." Pettigrew *et al.,* (2001) intended to offer a holistic, analytical and an interpretive framework, rather than a predictive positivist-based conceptualisation.

Figure 4-1 How focal theory leads to the data theory

Focal theory

> Applying the CCP framework as a socio-political lens that can embrace openly multifaceted underpinnings associated with interorganisational collaborations

> Applying the CCP framework by assuming the context as nested and embedded levels contain: organisational, collaboration, institutional, and external levels

> Applying the CCP framework where context, content, and process are studied simultaneously as interconnected constructs that have their own multilevel structure and micro-levels. The CCP framework therefore appropriate to the exploration of the complexity of IOC phenomenon.

> Applying the CCP framework by assuming the process dimension consists of three processual stages, micro-actions, and collaborative capacity

> Assuming reality as contextually structured and developing an interpretive qualitative research design which can embrace the emergent issues, dynamic interconnectivity, and exploring contextual complexity.

> Prolonged engagement: data collection stage was carried over 20 months to understand the phenomenon in its real-life context carefully and precisely delineate its main characteristics, and applying case study technique to answer *how* related questions.

Data theory

> Employing qualitative methods and purposefully selected multiple case studies to understand different stakeholders' perspectives, and public sector idiosyncrasies.

> Employing Qualitative methods and case study techniques to answer *why, how,* and *who* questions.

Pettigrew *et al.,* stated that (1988, p.306): "we now move from contingency theory to a more subjectivist body of literature where the focus is on group perceptions and processes." The perceptions of actors, experiences, their perspectives, and the meaning they give to events are at the forefront of the contextual perspective priorities. These priorities are the main areas of investigations in qualitative interpretative works (Walsham, 1995; Green and Thorogood, 2008). The exploration of the IOC arrangement in this study adopts this stance following Pettigrew's (1988) idea when he criticised positivistic approaches for not being able to justify and recognise historical and contextual interventions in shaping processual factors. Therefore the expected outcome based on this philosophical stance is a large body of analysis rather than "quick-fix" and correlated predictive mapping for the phenomena under research. Pettigrew (1997, p.344) has asserted that:

> *"Different scholars vary in the degree of formality with which they express the guiding questions for the research. Some choose high formality and wish to specify propositions or hypotheses. My own preference is to step back from that degree of formality but to demand deductive structuring in the form of articulated research themes and questions".*

The analytical interpretive approach offers many useful insights related to the research area under investigation. Walsham (1993) argues that the main benefit of conducting an interpretive qualitative study is an expansion of the understanding of the subject under research, rather than figuring out numbers and percentages about the phenomena. For example, when used as an evaluative tool, the importance of the CCP framework, according to Stockdale *et al.,* (2008), stems from its ability to identify key contextual factors that work as a background to the evaluation. Also, it can help in mapping of shared denominators between different perspectives and stakeholders' opinions:

> *"The CCP framework does not allow for generic solutions, but supports the ability of evaluators to apply the relevant questions to the constructs and to explore the range of influences from the social and political to the cultural"* Stockdale *et al.,* (2008, p.45).

In light of the above, one can conclude that contextualism is not a model to manage phenomena or to offer a structural relational model; it is an analytical framework that helps in understanding social phenomena. In this contextual study, the main philosophical premise of the author is: reality is not objectively founded but socially

constructed and through in-depth interpretative methods rather than breadth methods this study cultivates a rich interpretation of IOC phenomenon. Accordingly, its underlying assumptions, as an interpretative qualitative case study-based investigation, stems from coming with and/or developing a new concept and/or offering rich insights into the phenomena (Walsham, 1995).

4.2.2 Methodological justifications

4.2.2.1 Qualitative paradigm

Applying the CCP framework leads to adopting particular ontological and epistemological stances which, in turn, lead to selecting a particular methodological stance. Accordingly, adopting and utilising a qualitative paradigm was based on many considerations and philosophical assumptions. It is based on (a) the need to foster the alignment between theoretical and philosophical assumptions, (b) maximise the ability of the research design to embrace emergent perspectives in such dynamic and complex social phenomenon, and (c) the nature of the data required in particular the contextual idiosyncrasies. All these considerations are discussed in detail to ensure and demonstrate the coherence and consistency between theoretical and philosophical underpinnings.

4.2.2.1.1 Aligning theoretical and philosophical assumptions

The research applies qualitative research methods to develop a solid and rigorous consistency between the theoretical and philosophical assumptions. To illustrate that, the research applies the CCP framework which is an interpretative-based lens that can generate understanding of the phenomenon and map key contextual and processual factors. Accordingly, choosing a qualitative paradigm is consistent with the main mission of this framework where the intersectional area is the interpretation of the phenomenon under investigation. By doing so, the research then matches its theoretical assumptions with its philosophical and epistemological assumptions. Green and Thorogood (2008, p.30) state that "If you want to understand the perspective of participants, explore the meaning they give to phenomena or observe a process in depth, then a qualitative approach is probably appropriate". This, indeed, matches the ontological perspective of the researcher, who considers social properties and realities as the outcomes of social interaction –in particularly in phenomenon like IOC- which developed through the interaction between individuals

and their contexts rather than perceiving phenomena as something out there and developing objectively and/or independently.

This stance which is a core assumption of the CCP framework stresses the importance of people's interpretations, experiences and the meanings they give to phenomena. Its main target is to *'understand and analyse'* rather than *'measure or quantify'* the impact of contextual and processual factors (Bryman and Bell, 2007). Although, this research relies on the participants' interpretations, it uses a set of questions linked with the purposes of the research to work as 'loose' rather than 'tight' guidelines, thus keeping the research focused and determined while offering space for the emergent issues during the data collection phase (Miles and Huberman, 1994). The qualitative paradigm offers an appreciation of the meanings, language and wording that are used and employed by participants. It pays attention to the context and its interactive and dynamic components in which the reality is believed to be constructed (Pettigrew, 1997).

4.2.2.1.2 Embracing emergent perspectives

Complicated and dynamic phenomena such as social interactive events are not linear and/or predicated incidents (Pettigrew, 1985). This matches the findings from the background and the focal theories where the processes of IOC are defined and found after the pilot stage as cyclical rather than linear stages. Therefore, flexibility to embrace emergent perspectives or address un-predetermined or controlled phenomena cannot be achieved through quantitative paradigms. This is ascribed to the idea that such paradigms are unable to explore the dynamic of the phenomena and cannot also elicit rich interpretations from the participants (Marshall and Rossman, 2007). Indeed, one of the main findings from reviewing the philosophical and epistemological paradigms that are used in previous studies to tackle interorganisational arrangements' issues was the over-reliance on quantitative research at the expense of more in-depth investigations of the phenomenon. Qualitative paradigms can produce deeper understanding of such a social and political dynamic and interactive atmosphere, while quantitative studies with their static approaches can produce broad explanations and illuminate significances of constructs and factors. Having said that, the scarcity of empirical qualitative research – which is set out in the literature review - is one of the main motives

behind this project, as this work intends to contribute to filling this epistemological gap in interorganisational relations' studies.

4.2.2.1.3 Exploring contextual complexity

Qualitative methods are more sensitive than quantitative methods to the context in which phenomena occur (Flick, 2008; Sarantakos, 2005). Accordingly the qualitative research meets the core premise of the CCP framework as it "focuses on contextuality, with an aim of gaining an impression of the context, its logic, its arrangement and its explicit/implicit rules" (Sarantakos, 2005, p.45). Therefore, the appropriateness of the qualitative paradigm for this study stems from its ability to offer detail with regard to the context and process of IOC. Peak (2008, p.100) concludes that "qualitative methods created space to explore the change process as one embedded within a network of widening environment". In a similar vein, Bryman and Bell (2007, p. 418) argue that qualitative research methods are the preferred tool to explore in detail the context and process of the phenomenon under investigation. They state that:

> *"Many qualitative studies provide a detailed account of what goes on in the setting being investigated. Very often qualitative studies seem to be full of apparently trivial details. However, these details are frequently important for the qualitative researcher, because of their significance for their subjects and also because the details provide an account of the context within which people's behaviour take place.... (So) one of the main reasons why qualitative researchers are keen to provide considerable descriptive detail is that they typically emphasise the importance of the contextual understanding of social behaviour"*

A similar conclusion was reached by Miles and Huberman (1994, p. 1) when they considered qualitative research as a "source of well grounded, rich descriptions and explanations of process in identifiable local contexts."

4.2.2.2 Case study methodology

The research applies an exploratory and interpretative case study technique. According to Yin (2009, p. 18), a "case study is an empirical inquiry that investigates a contemporary phenomenon in-depth and within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident". According to Bryman and Bell (2007), while the use of case studies is linked with qualitative research, they see this link and association as inaccurate, as quantitative research also employs case studies. They acknowledge that it is a

common tendency among researchers to use qualitative methods to generate more rigorous and detailed information from a study. In this study, choosing the case study technique is based on several assumptions and considerations: first, to seek an in-depth understanding of the phenomenon; second, to meet the research questions; and third, to investigate and develop a mature understanding about the contextual aspects of the phenomenon.

4.2.2.2.1 Seeking an in-depth understanding

Applying the CCP framework is to produce an in-depth understanding and exploration about the contextual and processual factors of an IOC. Case studies "provide a richness to the description and the analysis of the micro events and the larger social structures that constitute social life" (Orum *et al.,* 1991). For this reason and because of the ability of case studies to investigate complex issues, Stake (1995) argues that it is the appropriate design to elicit detail and intensive information with regard to the research's area of investigation . When it comes to this research, the priority is to conduct a detailed examination of the case and utilise the rich insights into the processual and contextual factors to enhance current understanding of the phenomenon of collaborative-based projects. Case study design can facilitate collecting sufficient information and tackling the study from different angles (Green & Thorogood, 2008).

4.2.2.2.2 Meeting the research enquiries

When the research questions are formulated to answer questions starting with 'How' or 'Why' then it is preferable to use a case study (Yin, 2009). Indeed, for Yin the main criteria to determine whether the case study is the proper technique are derived mainly from the research questions. Accordingly, exploring the process or studying the evolution through 'how', and finding reasons and triggers that are behind the event via 'Why' questions is more associated with the use of case studies. Having said that, and based on the initial questions of this research, building consistency between research elements has inspired this researcher to design its methodology in a manner that considers the data required and its resources. For example, the phenomenon of IOC being researched is a non-linear event where understanding its contextual and processual aspects requires more real-life and field-based investigation which can be done perfectly through the case study technique.

4.2.2.2.3 Exploring contextual specifications

It is argued that:

> *"A case study takes into account the context where social phenomena are constructed and embedded. Such an understanding helps researchers make sense of data without the risk of oversimplifying the social phenomena under investigation"* Huang *et al*., (2003, p. 91).

Unlike other research designs such as experiments or surveys, using a case study pays more attention to contextual factors and characteristics (Yin, 2009; Green & Thorogood, 2008). Orum *et al.,* (1991) pointed out that case studies provide more understanding and analysis of the environment of social phenomenon and its dynamic and continuity. They argued that case studies offer details about different elements that help in defining the sources the forces that shape the process of social events. Case study design is therefore found to be the appropriate way to fulfil the primary focus of this research; the understanding of IOC as social real-life events, as Yin (2009, p.18) clearly states that "such understanding encompassed important contextual conditions"

4.3 Research strategy and design

This research applies a qualitative paradigm, naturalistic study using a multiple case studies from the public sector in Oman as the main approach of enquiry. The researcher therefore perceives reality as something developed through an interaction between different variables in the context. As discussed in section 4-1, this ontological stance leads to the epistemological perspective that assumes interpreting phenomena to understand qualitatively rather than measure such an interaction quantitatively. The main area of the research is IOC in the public sector, in particular, the cases are from technological-driven changes in the public sector. It is found that that an integrative approach based on a multi-disciplinary review of the literature can help in developing an in-depth understanding of the phenomenon being researched. The initial finding from this review was the need to bridge gaps in knowledge in terms of the contextual and processual factors that are associated with the IOC arrangement in the public sector and therefore a need to accumulate theory and practice in this filed. To do so, this research applies the CCP framework and simultaneously validates and modifies this framework. Other components and the main dimensions of the research strategy are encapsulated in Table 4-1 below.

Table 4-1 The research design

Area of study	Interorganisational relations in the public sector
Ontological and epistemological assumptions	Reality is the outcome of the interaction between people and their context rather than developing objectively.
Phenomenon analysed	Change in the public sector limited to interorganisational collaboration in the public sector in Oman
Literature review	Multi-disciplinary and integrative literature synthesisation based on reviewing literature in public policy, strategic and change management, contextual perspective, and interorganisational collaborative arrangements literature.
Theory applied	The content, context, process (CCP) framework (Pettigrew, 1985, Stockdale *et al.,* 2008; Piotrowicz, 2007; Piotrowicz and Irani, 2008)
Type of study	Theory modification and validation
Empirical inquiry approach	Multiple Case studies (Yin, 2009)
Research process	Two stages 1st stage piloting 2nd stage main fieldwork
Sample	Purposeful and snowball sampling
Trustworthiness criteria	Credibility (prolonged engagement, triangulation, peer debriefing, member checks and reflexivity), transferability, confirmability and dependability
Data collection	Multiple sources of evidence: multi-informant semi-structured interviews, documents, archival record, and observation.
Data analysis	Based on a combination of Miles and Huberman's (1994) three steps and Yin's (2009) strategies and analytical techniques to analyse case study data.

4.4   Research process

The research is divided into three main sections and/or steps as shown in Figure 4-2, starting with the main formulation and structuring of the idea and developing the *'what'"* question about the research. The second phase was the data collection stage and the *'how'* part of the study, and finally comes the interpretation, explanation and analysis of the collected data, or the *'why'* side of the phenomenon. The research begins with a literature review of interorganisational arrangements in the public sector.

The researcher decided to study this phenomenon in depth to work out its contextual and processual factors. Consequently, a data collection strategy built on a qualitative paradigm was developed, based on the objective of the research, which is focused on understanding and analysing the phenomenon. The data collection strategy was

divided into a pilot exploratory stage and the main fieldwork. Data analysis and interpretation were conducted as a final stage through applying well-structured strategies based on the work of Miles and Huberman (1994) and Yin (2009).

Figure 4-2 Research process
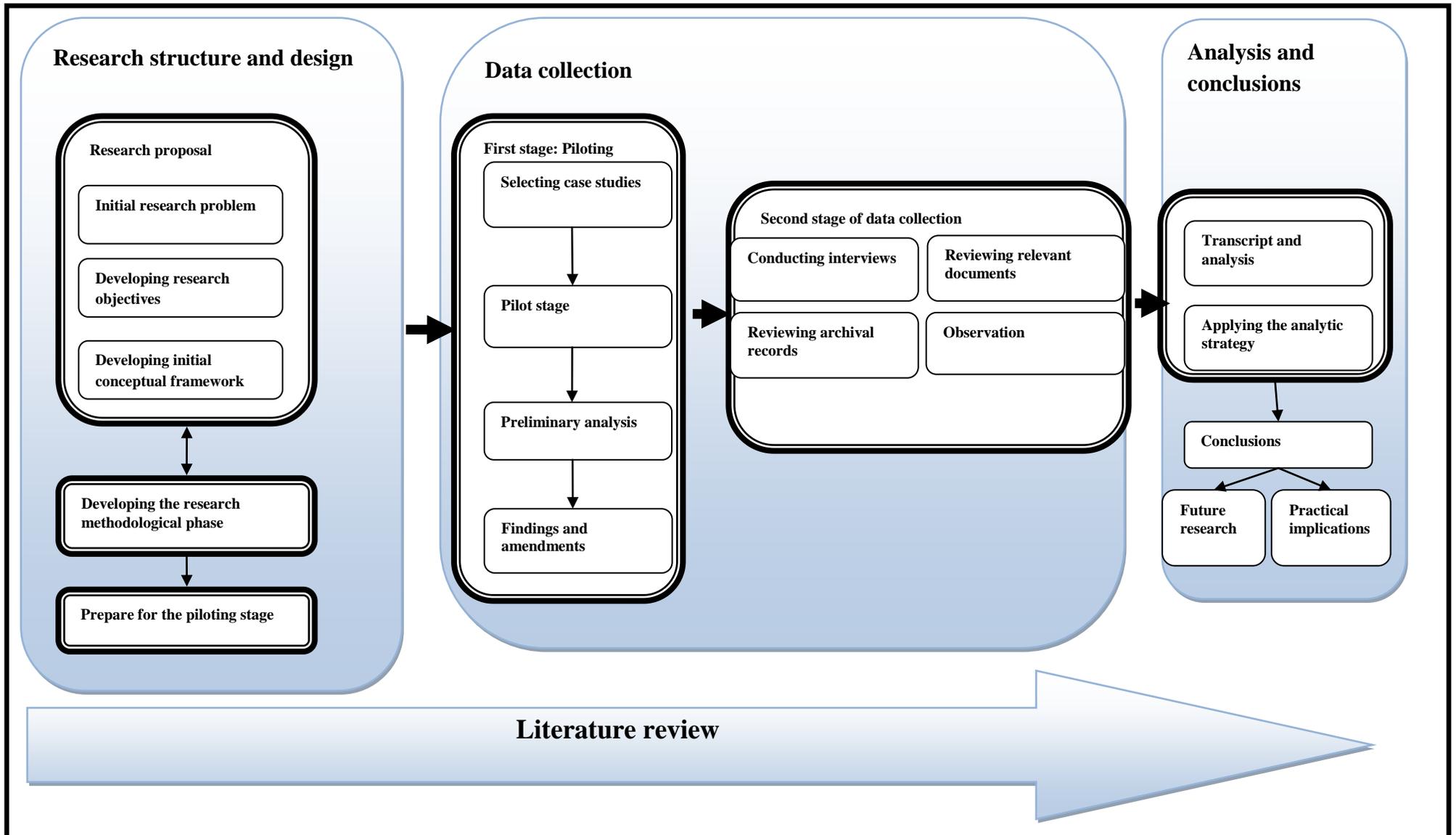
Source: developed for the purpose of this research

4.5 Trustworthiness criteria

According to Lincoln and Guba (1985, p.218-219) "the conventional criteria for trustworthiness are internal validity, external validity, reliability and objectivity". However, when it comes to a naturalistic enquiry, these criteria are replaced with credibility (internal validity), transferability (external validity), dependability (reliability) and confirmability (objectivity). Trustworthiness is therefore about the value of the research, its consistency, underpinnings, and to what extent it deserves attention as a valid and reliable study. In this study, trustworthiness stems from establishing specific techniques and practices as explained in Table 4-2 and elaborated in detail in the following sections.

Table 4-2 Trustworthiness criteria and procedures applied in this study

Trustworthiness criteria (Lincoln and Guba, 1986)	Description of the criteria	Methods and procedures applied in this research
Credibility	Ensuring the accuracy of the research findings and explanations by following canons of valid researches	• Prolonged engagement: data collection stage was carried in almost 20 months to understand the phenomenon in real life and carefully and precisely delineate its main characteristics. • Member checking: participants' validation is applied by confirming after each interview the summary of it and to check their comments and answers. • Peer debriefing: data shared with colleagues after each stage of the research as a technique used by the researcher to open the mind to alternative explanations and perspectives from others and to minimise bias • Comprehensive triangulation through applying: 1- Between method triangulation: semi-structured interviews, observation, documentation and archival record review. 2- Within methods: by combining semantic questions with descriptive questions during the interviews (Flick, 2008). And by applying purposeful and snowball sampling and by collecting data from different managerial levels in the arrangements 3- Theory triangulation: cultivating the theoretical underpinnings of the research based on an integrative conceptualisation to three domains of literature; change management in particularly the contextual perspectives, institutional theory, and interorganisational collaboration literature. 4- Data triangulation: by using multiple case studies.
Transferability	How the findings are transferable and demonstrate external validity	• Using the replication logic by testing the results through multiple case studies (Yin, 2009). • By developing a thick description to the cases and therefore facilitate matching them with other circumstances (Bryman & Bell, 2007, p.413). • Also through the *analytical generalisation* (Yin, 2009) by generalising a particular set of findings to a broader theory or circumstances. In this research the transferability can be seen as a basis for further research using the same theory or framework.
Confirmability	To what extent the findings represent participants' views objectively	• Maintaining a chain of evidence (Yin, 2009). • Reflexivity: by avoiding as much as possible the reactivity and leading response by locating and tracking such interventions during the data collection phase.
Dependability	The reliability of the study by ensuring its consistency and maximising the repeatability of the research	An auditing approach was developed based on: • Case study protocol that covers all the procedures and considerations applied by the researcher in the data collection stage. • Case study database in which the raw data and not only the report of the case study are all available for external review. • Interviews are recorded for iterative process of analysis

Source: developed for the purpose of this research

4.5.1 Credibility

Credibility of qualitative research parallels validity in quantitative research, and it can be achieved by "ensuring that the research is carried out according to the canons of good practice and submitting research findings to the members of the social world who were studied for confirmation that the investigator has correctly understood that social world" (Bryman & Bell, 2007, p.411). The aim can be encapsulated in: (a) maximising findings' credibility, (b) maximising explanations' credibility and (c) ensuring consistency between the theoretical underpinnings, philosophical underpinnings and the conclusion of the research (Janesick, 2000). To ensure the credibility of this research, several techniques were used, including: prolonged engagement, multiple triangulations, peer debriefing, member checks and reflexivity.

4.5.1.1 Prolonged engagement:

The research is conducted over a sufficient time period (20 months) in order to understand the phenomenon in its real-life setting, carefully and precisely delineating its main characteristics. This technique fosters a mutual trust and understanding between the researcher and the participants. One of the main reasons that makes this technique achievable is the existence of a previous relationship between the author and some key participants, which facilitates a prolonged engagement with the participants. Moreover, the experience of the researcher in the upper house in the research department facilitates gaining a deeper understanding of the national contextual factors and characteristics.

4.5.1.2 Triangulation

Triangulation is defined as "the practice of employing several research tools within the same research design … this procedure allows the researcher to view a particular point in research from more than one perspective and hence to enrich knowledge and/or test validity. Triangulation can be applied in all aspects of the research process" (Sarantakos, 2005, p. 145). The basic and common idea about triangulation is to use a combination of methodologies or methods in order to prompt quality in research that cannot be ensured by using only a single practice or method (Flick, 2008; Bryman & Bell, 2007; Maxwell, 2005). Triangulation when doing a case study is very important, as Yin (2009, p.199) argues that "any case study finding or

conclusion is likely to be more convincing and accurate if it is based on several different sources of information". The most commonly used types of triangulation are combining qualitative and quantitative methods, or using more than one source of data such as interviews, focus groups and content analysis. In this study, and based on the contribution of many authors in the area (Flick, 2008; Patton, 2002; Yin, 2009; Green & Thorogood, 2007; Sarantakos, 2005; Sim & Sharp, 1998; Denzin, 1989), comprehensive triangulation (Flick, 2008) or multiple triangulation (Sim & Sharp, 1998) strategy is employed. Inspired by the need to think comprehensively about triangulation strategies, Flick (2008) extends the idea developed initially by Denzin (1989) of using more than one triangulation, and comes with so-called comprehensive triangulation which means a combination of many types of triangulation. According to Flick (2008), triangulation strategies are investigator triangulation; when using more than one researcher or observer, *theory triangulation*; when using more than one theoretical explanation for the same data and/or more than one theory used to back up the research or interpret its findings.

Also, Flick mentions the most common type which is *methodological triangulation,* which he contends to be (a) between methods and/or (b) within methods. Another type is *data triangulation* which is studying the same phenomena at different times, with different participants and in different locations. In addition, *systematic triangulation* of perspectives can also be achieved by using different perspectives such as an interpretative approach (conversation analysis) and a reconstructive approach (interview). Multiple triangulations are the chosen strategy of this study in which many types are applied, including:

- Between methods: generating data through semi-structured interviews, observation, documentation, and archival record review.
- Within methods: combining two strategies within the semi-structured interview. This approach, based on Flick's (2008) suggestion, is employed through the combination of narrative semantic questions and descriptive and argumentative questions. Semantic questions could include: "what is collaboration for you?" or "what do you associate with the word collaboration?" Whereas descriptive questions could include "describe tasks and actions that you have been involved in during the implementation of the project." This approach aims to combine the abstract forms with the more concrete and oriented questions. Moreover, the

research uses sampling triangulation: through purposive sampling and snowball sampling.

- Theory triangulation: cultivating the theoretical underpinnings of the research based on an integrative conceptualisation of different domains of literature: public policy, public administration, change management, contextual perspectives to analyse change, and interorganisational collaboration. Such a multi-disciplinary approach to the idea strengthens the argument of the research and clarifies its significance for many realms and fields. The research in its analysis part brings together the strategy proposed by Miles and Huberman (1994) and Yin (2009), who proposed techniques for case study data analysis.

- Credibility triangulation: one of the main reasons for triangulating is to test and develop the validity of the research (Sarantakos, 2005). Therefore, this study applies many techniques and procedures to ensure the validity and credibility of the research. These techniques are: peer debriefing, member checks and reflexivity, as this triangulation can add value to the research and its findings.

- Data triangulation: by using multiple case studies.

4.5.1.3   Peer debriefing

This is the process of involving colleagues in the research as external reviewers (Lincoln & Guba, 1985). In this research, data sharing with colleagues after each stage of the research was another technique used by the researcher to open the mind to alternative explanations and perspectives from others. Peer debriefing is not only helpful in broadening the interpretation of the data but was also a helpful factor in overcoming biased results and explanations by challenging of the researcher's primary assumptions and premises by a qualified peer debriefer.

4.5.1.4   Member checks

Taking into account the research participants'/informants' comments is another way to achieve credibility in the research, because members' validation is a helpful tool to refine and confirm the collected data before moving further in the project (Bryman & Bell, 2007). This technique gives the researcher the ability to amend, clarify, and expand the understanding of the collected data. In this research, this technique was applied after each interview through summarising the main points mentioned by the participant, then sending a full transcript of the interview for final confirmation.

4.5.2   Transferability

It is argued that the external validity in qualitative research cannot be transferred, practised and argued by the researcher in qualitative research, as it is only the readers who can judge the generalisability of the findings (Lincoln & Guba, 1985). However, the conclusions of the research can offer transferable understanding, themes and meanings that can facilitate the understanding of similar settings (Marshall & Rossman, 1999), and it can be seen in the development of concept, theory generation, drawing of specific implications and contributions to rich insight (Walsham, 1995, p.79). In this research, while there are context-specific idiosyncrasies, the researcher believes that widely applicable and transferable findings can be generated through *thick description* where the research provides details about the case and therefore "provides others with what they refer to as a database for making judgements about the possible transferability of findings to other milieux" (Bryman & Bell, 2007, p.413). Also through analytical *generalisation* (Yin, 2009): while Yin acknowledges the difficulty of generalising from a case study, he asserts that it is possible to generalise a particular set of findings to a broader theory or circumstances. In this research therefore, the analytical generalisation and findings' transferability are based on choosing the contextual framework as a broad theoretical domain in which applying this framework contributes to its further application.

Also, expanding and broadening the opportunity of transferring findings can be seen in the basis of this research where more than one realm significantly contributes to developing its theoretical underpinnings, as it brings together public policy literature, contextual framework literature and interorganisational collaborative literature. To rationalise philosophically and for the reader to assess the transferability of these research findings, the research offers clear and consistent research methods in order to demonstrate and present explicit criteria explaining the logical steps and techniques that are applied to develop a final conclusion and recommendations.

4.5.3   Confirmability

Confirmability is concerned with ensuring that the researcher is aware of maximising the objectivity of the research, and presenting findings that are derived from the data collected and not influenced by the researcher's "personal values and theoretical inclination" (Bryman & Bell, 2007, p.414). To do so, the research, through the

trustworthiness procedures, offers a rigorous flow to enable auditors and any external inspection to track the development of the idea through a chain of evidence (Yin, 2009). The principle of a chain of evidence is to allow the reader of the case study "to follow the derivation of any evidence from initial research questions to the ultimate case study conclusions" (ibid, p.122). Accordingly, the research maintains a chain of evidence by moving from case study questions, case study protocol (linking questions to protocol topics), citations to specific evidentiary sources in the case study database, and finally reaching the case study report. Maintaining a chain of evidence is also done by demonstrating the ability to trace the research by starting from its end back to its initial questions (ibid).

4.5.3.1.1 Reflexivity

Understanding that the researcher is a source of a biased intervention in the process of the research implies a strategy to track such reactivity as it undermines the credibility of the research (Maxwell, 2005). The researcher was aware of avoiding this as much as possible, locating and tracking any interventions and responses during the data collection phase. The aim was to separate of the participant responses from the researcher responses so that data represents real life and participants' experience accurately and precisely.

4.5.4 Dependability

Dependability entails ensuring that trustworthiness criteria, justifications behind the theoretical and philosophical underpinnings, and the process of the research are all consistent, accessible for auditing and can demonstrate the reliability of the research (Guba & Lincoln, 1985; Bryman & Bell, 2007). All the procedures and phases of the research should be documented to ensure that the research is reliable and, if repeated, by following the same procedures will lead to the same findings. To ensure that this research takes account of this dimension, complete records for the process of data collection and analysis are accessible and available in digital format for any further review. Also following Yin's (2009) suggestions in this area, dependability and reliability are maximised by developing a case study protocol that covers all the procedures and considerations applied by the researcher in the data collection stage, and also by creating a case study database in which the raw data and not only the report of the case study are all available for external review "so that in principle, other

investigators can review the evidence directly and not be limited to the written case study reports. In this manner, a case study database markedly increases the reliability of the entire case study" (Yin, 2009, p.199).

4.6 Data collection strategies and procedures

4.6.1 The unit of analysis

Choosing data collection strategies is conditional upon the unit of analysis of the case, and defining the unit of analysis is linked with the nature of the case study. Therefore, the unit might be an individual, an organisation, a programme or an event in which the unit represents the main concern of the case study, whereby this case has to be "a real-life phenomenon, not an abstraction such as a topic, an argument, or even a hypothesis" (Yin, 2009, p.32). To keep the research within feasible limits and in a focused structure it is very important to define the main and the embedded units of analysis, whereby the main unit portrays the initial case study concern and the focal investigated point, while the embedded unit portrays the illustrative example that is used to understand the focal area of the research (Yin, 2009). For this research, the main unit of analysis is an event and/or process of IOC in the public sector. On the other hand, the embedded unit is the experience of collaborative arrangement in the public sector in Oman.

4.6.2 Multiple case study strategy

With regard the number of cases, "one can often generalise on the basis of a single case" (Flyvbjerg, 2006, p. 228). However, in this research, the number of the cases (two cases) is representative because there are very few collaborative projects in the public sector in Oman where the research is conducted. In this regard, the study follows the suggested number of cases recommended by Stuart *et al.,* (2002) who argued that one to three cases are appropriate. The researcher collected data from five public collaborating organisations that are included in the cases to enrich the field which suffers from the dominant of data generated quantitatively from one organisation because of the accessibility constraint.

This research therefore, follows the advice offered by Yin (2009, p. 27) who insists that research questions of case studies with "collaborative nature" need to be answered by the whole collaborating organisations. Yin stated that:

> *"Such questions can be answered only if you collect information directly from the other organisations and not merely form the one you started with. If you complete your study by examining only one organisation, you cannot draw unbiased conclusions about interorgnisational partnership"*

A multiple case study design was chosen for this research as this technique has many advantages for the research findings and conclusions. The rationale for choosing a multiple case study is based on the idea that "the evidence from multiple-cases is often considered more compelling, and the overall study is therefore regarded as being more robust" (Yin, 2009, p.53). In this research, the idea of replication is adopted in which multiple case studies were employed. The idea of replication is based on the logic of experiments where a single experiment does not lead to an important result, but its findings can then be replicated by conducting more experiments (Yin, 2009). Accordingly, cases were chosen to support general findings and outcomes by conducting them one after another, and finally through cross-case synthesisation, a conclusion was developed.

4.6.3 Purposive sampling for sites

The rationale for choosing purposive sampling in nominating sites and for studying and choosing specific individuals or sources for data was to keep the research concentrated and focused on the main unit of analysis (Lincoln & Guba, 1985). The selection of the sites and cases was a purpose-based selection as the research intention was to study a specific event and process with the characteristics of being: public sector initiatives, representing interorganisational collaborative arrangements, and in the implementation and execution phase. Purposive sampling as a non-probability sample was used based on the idea that this type of sampling is the most appropriate method when doing case studies (Saunders *et al.,* 2009). As the research investigates only collaborative arrangements in the public sector, the population is therefore small and when the population sample is small or to ensure a high representation of sampling, the purposive strategy is preferable (Maxwell, 2005).

4.6.4   Purposive sampling for participants

As the main data sources are interviews, identifying who will be interviewed and justifying the selection of the interviews are critical steps and an integral part of the case study protocol. Because the unit of analysis in this study is the 'collaboration' rather than an organisation, therefore, the focal point is the process of the collaboration and its contextual factors (enablers, constraints, and forces). Accordingly, priority was given to the 'core people' (Seitanidi and Crane, 2009) involved in the planning, governance, administering the collaborative efforts, and who will contribute to enhance understanding of the whole process of the arrangement itself and found mainly, from the pilot stage, in the steering committees as organisational representatives.

 Access to the data was through contacting the primary participants in the cases, who are from the middle and top management levels, and who are previous private contacts of the researcher. Accessibility to the data initially was based on a purposive sampling and selection of the participants, especially key informant participants. Accessibility then gradually extended to be collected from both the initial and primary participants and through additional recommended relevant participants. As presented in Table 4-3, and based on the pilot stage findings, the core people and main participants were found to be from: leadership and top management such as under secretaries (UNS); Directors General (DG); Deputy Director General (DDG); Head of department (HD); Head of section (HS); Specialist (SP); and in general, people recommended by the interviewees.

From the pilot stage, it was found that the key informants were the directors general who are responsible for designing and administering the process of collaboration. This group of informants were the initial source for data in the following stages of the research. However, and regardless of their position within the hierarchy of the collaboration and because the management of collaboration was a priority to be investigated and explored, the constant criteria across cases was "who is involved from the organisation in the management of the arrangement of the joint efforts?" rather than "what is their position?"

Table 4-3 Interviews: levels, types, and conducting stages

Participants number	Positions	Gender		Stage of the research		Type of interview		Number of interviews	Cases	
		M	F	Pilot	Main	Face-to-face	Phone		C1	C2
1.	Undersecretary	✓			✓	✓		1	✓	
2.	Undersecretary	✓			✓	✓		1		✓
3.	CEO	✓		✓	✓	✓		2		✓
4.	Director general		✓		✓	✓		1	✓	
5.	Director general	✓		✓		✓		1	✓	
6.	Director general	✓		✓		✓		1	✓	
7.	Director general	✓			✓	✓		1	✓	
8.	Director general	✓			✓	✓		1		✓
9.	Director general	✓			✓		✓	1		✓
10.	Director general	✓			✓	✓		1		✓
11.	Project manager	✓		✓	✓		✓	2		✓
12.	Deputy DG	✓		✓		✓		1	✓	
13.	Deputy DG		✓	✓			✓	1	✓	
14.	Deputy DG	✓			✓	✓		1	✓	
15.	Deputy DG	✓			✓	✓		1		✓
16.	Deputy DG	✓		✓		✓		1	✓	
17.	Head of department		✓	✓		✓		1		✓
18.	Head of department	✓		✓		✓		1		✓
19.	Head of department	✓		✓			✓	1	✓	
20.	Deputy HD		✓			✓		1	✓	
21.	Specialist		✓		✓	✓		1	✓	
22.	Others	✓		✓		✓		1		✓
23.	Others	✓			✓	✓		1		✓
24.	Others	✓		✓		✓		1	✓	
25.	Others	✓		✓		✓		1		✓
Total Number		**20**	**5**	**13**	**13**	**21**	**4**	**27**	**13**	**12**

4.6.5 Snowball sampling

Although purposive sampling is directed towards those individuals most directly involved, nevertheless it might ignore some key informants by only recognising a limited population. To overcome this omission, this study combines purposive sampling with snowball sampling. Snowball sampling "is commonly used when it is difficult to identify members of the desired population" (Saunders *et al.*, 2009, p.147). In this study this type of sampling is used to cover all participants that are involved directly in the case but were not recognised by the researcher, however they were recommended by the initial and main participants. This technique is operationalised through asking initial key participants to identify further new participants, and then

asking these new participants to recommend or identify other informants who can enrich the investigation or give useful information on the topic.

4.6.6 Panel of experts and pilot test

After developing an initial conceptual framework and initial data collection methodology and developing interview questions, a panel of experts was used to judge and evaluate these questions. Building on the feedback collected from this step, the researcher found that a pilot test can help in strengthening the research process and outcome in many dimensions, so the researcher decided to use this technique. The pilot test was a helpful tool to refine the conceptual model and key literature themes which guide the research. Also, piloting "provides interviewers with some experience of using it and can infuse them with a greater sense of confidence" (Bryman & Bell, 2007, p.274). In addition, interview questions might be changed as a result of the pilot stage, as some questions might be perceived as inappropriate which make respondents uncomfortable during the interview. In this study, piloting inspired the researcher to devise a new set of questions that emerged during this stage which proved to be helpful in generating data. Ultimately, the pilot study helped in modifying and confirming prejudgments and preconceptions.

4.7 Data collection methods

4.7.1 Document review

According to Yin (2009, p.103), "because of their overall value, documents play an explicit role in any data collection in doing case studies. Systematic searches for relevant documents are important in any data collection plan". There were many types of documents which were found to be helpful and interesting for this study and added value to its data collection phase. The documents reviewed were published interviews with key informants, annual reports, consultation reports, newspaper and journal articles, and written reports of events. The researcher was aware of the initial aims and objectives of those documents reviewed, as reviewing documents without recognising and considering their purpose might result in collecting and relying on irrelevant data (Yin, 2009).

4.7.2 Archival records

Archival records are another type of data source used in this study, especially national records and statistical data produced by the government, and organisational budgets

and previous surveys conducted by the organisations. The evidence of the archival records collectively with other employed methods is very important to maximise sources and types of data. However, using archival records in this study was not done without appreciating their initial aims and producers. Taking Yin's (2009, p. 106) advice, he warns the researcher to be careful "to ascertain the conditions under which it was produced as well as its accuracy. Sometimes, the archival records can be highly quantitative, but numbers alone should not automatically be considered a sign of accuracy".

4.7.3 Semi-structured interviews

A total of 27 semi-structured interviews were conducted with the participants from different levels (procedures before, during and after the interviews are detailed in Appendix A). Each lasting on average 50 minutes and were tape recorded, and participants' validations after each interview were applied to ensure the confirmability of the findings (Lincoln and Guba, 1986). For this research, collecting data through interviews portrays the ontological and epistemological stance of the researcher and therefore serves the overall consistency and coherence of the research structure. From an ontological stance, participants' experience, understanding and interpretations are the components of social reality, therefore exploring and describing such dimensions is the proper way to decode and understand social reality. In addition, relying on interviews matches the epistemological perspective of the researcher where generating data or accessing people's experiences and understanding can be cultivated through interactive approaches that allow sufficient space for the flow of participants' expressions and interpretations. In this study, analysing contextual factors implies choosing methods that have the ability and the capacity to extract comprehensively the dynamics and complexity of the phenomenon. This ability can be seen in selecting the primary data collection method, which is the interview.

Flexibility of interviews - in particular, the semi-structured which is used in this research - in absorbing and embracing emergent issues while keeping the research focused is the main reason behind choosing this technique. Also, it offers a chance to study non-verbal behaviour during the interview which means covering a broad area of investigation and collecting sufficient data about a phenomenon (Sarantakos, 2005). When compared with structured interviews and questionnaires, a semi-

structured interview is not designed in a tight and standardised format where there is no interaction between the researcher and the interviewee, and therefore, complexities and dynamics of the phenomenon cannot be explored or defined properly (Mason, 2002).

Moreover, choosing interviews was based on the need to overcome any kind of misunderstanding by participants: "such an option is very valuable and not available in other data collection, such as questionnaires" (Sarantakos, 2005, p.285).

4.7.3.1 Formulating interview questions

As this research intends to explore and describe contextual factors, interviews and qualitative paradigms and in general treat knowledge as situational and an

> *"interview is just as much a social situation as is any other interaction ... if your view is that knowledge and evidence are contextual, situational, and interactional, then you will wish to ensure that the interview itself is as contextual as possible, in the sense that it draws upon or 'conjures up', as fully as possible, the social experience or processes which you are interested in exploring" (Mason, 2002, p.64).*

Accordingly, questions were formulated to elicit data regarding the contextual and processual issues through narrative and general questions to elicit and consequently embrace all emergent issues to generate "a fairer and fuller representation of the interviewees' perspectives" (Mason, 2002, p.66). The main themes and components that have tailored the formulation of the interview questions were derived mainly from the proposed CCP framework. These include:

- ❖ Contextual levels and factors that are associated with the phenomenon:
  - o External level (e.g. political, social, economic and cultural factors).
  - o Institutional level (e.g. regulative frameworks, technological environment and public sector environment).
  - o Interorganisational collaborative level (e.g. settings and structures).
  - o Internal level (e.g. organisational strategy, structure, and culture).
- ❖ Process of collaboration (events, policies, timeframes and overall strategies).
- ❖ Stakeholders (internal and external).
- ❖ Outcome

In addition, interview questions were linked with the level of case study questions proposed by Yin (2009). Accordingly, questions consider simultaneously the level of

question and the type, themes and concept covered by the case study questions. An example of an interview question that fulfils a level 1 question's requirements is:

Why did your organisation become a member of this collaboration?

Whereas, questions that serve level 2 enquiries can be seen in these examples:

What forces within the technological environment have enabled this collaborative arrangement?

And

How has this collaborative-based project been implemented?

Interviews are prepared and conducted with reference to a protocol (see Appendix A) initiated to fulfil this task. The protocol gives an overview about the cases, field procedures, research questions and the format of data presentation. It also enlists interview questions that are developed from the literature and/or have been applied by several contextual researches. The questions are then evaluated by a panel of experts to explore any recommended modifications or amendments, and then it is evaluated through the pilot stage to examine its ability to generate data and to explore and forecast participants' reaction, acceptance and response towards the interview questions. Both the panel of experts and those piloting were helpful in shaping and developing the sensitivity of the interview in generating and eliciting data from the participants.

As explained in detail in the protocol, there are many procedures and practices that work as a guideline to the interview before, during and after the interview. The researcher defines explicitly in the protocol the ethical considerations and the cultural issues that have been taken into account as critical dimensions of the research authenticity, reliability and creditability.

4.7.4 Observation

Motivated by the need to observe and study the working environment, the atmosphere of communication between partners, and the interaction means and rhythm, the author applies observation technique as a method to collect data. The author visited sites equipped with a notebook and recorder, to describe accurately the working environment. Observation was unstructured (Brymen and Bell, 2007) to cover many emerged actions and not to be limited to particular settings in the social process. The observation of participants was found a useful means of collecting data about the interaction and the communication between parties. For example, some key

informants used their telephone directly with colleagues from collaborating organisations to facilitate accessibility and arrange meetings with the researcher. This example indicates how the formal interaction and communication and how interpersonal linkages and communication are rooted in the arrangement and fostered by the participants. Another example was the logo of the project in one of the cases which was placed in a very visible and central place in the office of one of the key informants who mentioned to the author that the logo has to be there to keep us focusing and remembering our objectives and goals whenever we meet with our partners. Ultimately, the observation technique was applied in this research to maximise its triangulation strategy which results eventually in enriching the collected data and enhancing the research reliability and validity.

4.8   Data analysis

Yin (2009) argues that research based on a case study should articulate clearly its general analysis strategy and analytical techniques. Such strategy works as a mechanism and system that offers criteria to the data analysis stage. As Figure 4-3 presents, and based on recommendations and strategies developed by Miles and Huberman (1994) and Yin (2009), this study therefore has built its own analysis plan and data processing practices. According to Miles and Huberman (1994, p. 10), analysing qualitative data consists "of three concurrent flows of activity: data reduction, data display and conclusion drawing/verification". These general guidelines apply in this research by first using Miles and Huberman's (1994) ideas as a general strategy, combined with Yin's (2009) advice in analysing the case study (Figure 4-3).

Figure 4-3 Data analysis strategy, techniques and steps

Authors	Data analysis process		
Miles and Huberman (1994)	Data reduction → Data display → Verification		Within and cross case analysis and synthesisation Revisions and discussions Final conclusions
Yin (2009)	**Research framework and case questions**		
Strategies	Relying on conceptual model, research questions and the data reduction, display, and verification strategy		
Techniques	Pattern matching, thematic and conceptually clustered matrix, event flow network, and conceptual-based coding		

Source: developed for the purpose of this research

4.8.1 Data reduction

The data reduction is "the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions" (Miles & Huberman, 1994, p.10). This step starts during the data collection, transcription and coding stages. The coding schemes and categories were based initially on the conceptual framework themes and sub-themes. This approach was indeed helpful for the data reduction stage, in particular, as it directs the efforts of the analysis towards the research questions and objectives. According to Miles & Huberman (1994, p.11) "qualitative data can be reduced and transformed in many ways: through selection, through summary or paraphrase, through being subsumed in a large pattern and so on."

To operationalise this step, the researcher uses the framework of that being applied in the research in two ways:

First: to reduce the literature investigation, the review was based on the main components of the CCP framework. This strategy was very helpful in focusing the research and developing its theoretical underpinnings, because "data reduction occurs continuously throughout the life of any qualitatively oriented project" (ibid, p.10).

Second: applying the framework as a main guideline to the data reduction by relying on its main variables and concepts. This matches the idea of Yin (2009) and simultaneously fulfils the task of data reduction through using theory and having a clear research design as a means to collect and analyse qualitative data. This is an appropriate strategy as Yin (2009, p.36) states that "the complete research design will provide surprisingly strong guidance in determining what data to collect and the strategies for analysing the data is an essential step when doing case studies". Data was coded (see Appendix A) based on the conceptual framework because "conceptual frameworks and research questions are the best defense against overload" (Miles & Huberman, 1994, p. 55). This technique of the conceptual thematic analysis was facilitated by the existence of predefined themes generated from the literature review and the pilot stage and encapsulated in the conceptual framework. A new set of themes was recognised, and therefore this emergent theme through iterative recoding

and analysis helps in cultivating patterns of data which form the initial basis for the research findings.

4.8.2   Data display

As a second important activity, data display means transferring the reduced data into a more meaningful categorisation. It is an "organised, compressed assembly of information that permits conclusion drawing and action" (Miles & Huberman, 1994, p.11). This tight reorganisation of the data facilitates verifying the research conclusions and findings. In this research, Yin's (2009) perspective of having case study questions facilitates displaying data into predefined categories that are encapsulated in such questions and consequently, produced detailed taxonomies encompassing the emergent themes and patterns.

The answers to these questions thereafter were displayed and developed into a *thematic and conceptually clustered matrix* within- and cross-cases for the contextual levels and factors, and *event flow network* for the process dimension (for more details see Miles and Huberman, 1994).   Iterative and cyclical analysis stages were conducted between the ʼ*display formats'* and the ʼ*analytic text'* to figure out any relations, comparisons, or any suggested reanalysis suggestions (Miles and Huberman, 1994, p. 101). Data display is therefore another stage of finding relations and patterns between data, but guided this time tightly by case study questions and purposes the answers (chapter 5) were encapsulated into:

- First order evidences.
- Second order themes
- Aggregate dimensions

Compared with the data reduction stage, the data in that stage were summarised and paraphrased in accordance with the whole picture of the conceptual framework, whereas in this stage, research questions sharpen this reduction and try to verify and understand the investigated relationships and links that are addressed or predicted clearly by the case study questions.

4.8.3   Conclusion drawing/verification

At this stage, reaching conclusions through explanations, finding causality, or generating propositions is not the final target because a "competent researcher holds these conclusions lightly, maintaining openness and scepticism, but the conclusions

are still there, inchoate and vague at first, then increasingly explicit and grounded" (Miles & Huberman, 1994, p.11). As the general strategy used in this research for data analysis is based on a conceptual model that predicts specific assumptions and/or explanations, at this stage of interpreting data, pattern matching is an appropriate technique to use (Saunders *et al.,* 2009; Yin, 2009).

According to Yin (2009, p.136), pattern matching logic is based on comparing the theoretical or predicted patterns with the empirical or emerged patterns and therefore "if the patterns coincide, the result can help a case study to strengthen its internal validity". For Yin, pattern matching is a preferred analytical technique "as long as the predicted pattern of specific variables is defined prior to data collection" (p.137). Conclusions, therefore, are derived from matching theoretical predictions with empirical findings. To validate the CCP framework extensions, and following Miles and Huberman's (1994, p. 262) advice, several micro-actions were taken to examine the *conceptual/theoretical coherence*. These micro-actions were "establishing the discrete findings, relating the findings to each other, naming the pattern, and identifying a corresponding construct"

4.8.4   Within- and cross-case analysis

  The analysis considers and recognises the importance of within-case analysis and cross-case analysis as a strategy to define the most emphasised patterns (Eisenhardt (1989). Within-case analysis refers to the analysis of the individual case with a comparison with the research's theory and frame of reference while the cross-case analysis refers to a cross-case synthesisation to find similarities and strengthen understanding through such cross-case comparisons (Yin, 2009; Miles and Huberman, 1994). In this research, within-case analysis is operationalised through seeking answers to the level 2 questions as this level is concerned with the analysis of the individual case with reference to theoretical findings. On the other hand, cross-case analysis is operationalised through seeking answers to the level 3 questions as these questions investigate cross-case findings and compare such findings with the theory applied in the research.

4.9   Ethical considerations

One of the main ethical issues which the researcher anticipates stems from the position and the nature of the organisation that the researcher belongs to. As the researcher works in the upper house it is possible to encounter a kind of formality and difficulty in convincing people to participate in the research, or alternatively, the researcher might find the opposite, when people think that it is an obligation to collaborate with the researcher. From the experience of the researcher, researchers who represent parliamentary bodies sometimes face such misunderstanding of the nature and the aim of the research, and therefore participate with fear, unwillingness, a feeling of compulsion or simply a reluctance to participate. To overcome this problem ethically, the researcher follows these practices and procedures:

- The researcher received confirmation of meeting BBS and university ethical requirements.
- The researcher requested and received a letter from the Ministry of Higher Education/Oman giving confirmation that the data collection is conducted as a stage of a PhD project and the latter would be presented to the participants.
- The researcher received confirmation of meeting Ministry of Education/Oman ethical requirements and therefore gaining access to its representatives.
- Explaining as fully as possible to the participants the aim, the nature of the research, who is undertaking it, why it is being carried out, the possible consequences, and finally how and where it will be disseminated.
- Participants are informed that participation is not compulsory so they can refuse to continue whenever they want.
- Utilising previous relationships between the researcher and key participants to clearly explain the aim of the research to other participants and their rights before, during and after participation.
- To ensure privacy and confidentiality, the participants are informed that the tape-recording will be destroyed after they check and review their transcripts.

Moreover, the researcher was aware of the ethical considerations during the analysis of the data obtained. This awareness can be seen in the obvious attempt to maintain the objectivity of the research by considering all the generated data and not being selective during this stage. Also, organisations were given the right to appear by name and to be identified or not.

4.10 Conclusions

In this chapter, the researcher has explained in detail the philosophical underpinnings of the research and the justification for its selection. The primary conclusion is the qualitative paradigm was found applicable because it matches the researcher's ontological and epistemological stances. It embraces emergent issues, and it is perceived as a sensitive paradigm when analysing or defining contextual factors. Several conclusions also can be derived from the chapter as follows:

- Consistency of the research design is an issue to be dealt with and considered during the early stages of the research. To illustrate, the researcher should explicitly articulate the nature of the research problem to determine the ontological stance which will lead to the epistemological and methodological stances. In this study, the nature of the problem indicates insufficiency in understanding the contextual and processual factors in IOC. This implies analysing and exploring the contextual characteristics, factors and forces which implies, in turn, considering reality not as an objective, but rather subjected to its contexts and actors' interpretations.

- Researchers should be aware that qualitative paradigms are more applicable tools to develop an in-depth understanding of contextual and processual related problems and enquires. Because qualitative design is more sensitive to context, flexible to embracing emerging new themes, and able to track and describe the dynamic nature of the process and contextual forces.

- Ethical considerations are found to be essential, particularly if the researcher is perceived by the participant as belonging to a sensitive governmental body such the upper house as is the case in this study where the researcher applied for and received several official ethical considerations approvals.

- The trustworthiness strategies and criteria which were explained above and the operationalisation procedures and techniques which are also presented in this chapter are found to be interlinked and foster solidity, coherence, reliability and validity of the research.

The coming chapter in this research is the fieldwork findings from different sources and methods, where the data is presented and organised based on the data analysis and interpretation techniques that are discussed in this chapter.

5 Chapter five: Case Studies Analysis and Preliminary Findings

5.1 Introduction

In this chapter, the findings are derived from the interviews, document review, archival records, and the observations. The raw data thereafter will be narrowed down by applying several techniques as was explained in detail in chapter 4. This chapter describes the findings and offers a preliminary analysis of the research empirical data that are used to validate and examine the emerged CCP framework from the literature and the pilot stage. To do so, the fieldwork findings were categorised based on the CCP framework main construct; the context, content, and process. Findings were also coded in accordance with the sub-units and themes that are linked and found relevant to the key concepts. The sub-constructs and themes cover:

- The contextual levels cover: factors under organisational, interorganisational collaborative settings; institutional and external/environmental contexts are associated with the implementation of interorganisational collaborative arrangements. Additionally, stakeholders embedded and/or found influential in each level are covered.

- The processual factors and stages.

- The manifestation of the collaborative capacity procedures and policies.

- The outcome.

To offer a rigorous examination of the findings, a cross-case comparison and analysis is also presented to extract the more emphasised patterns, key themes, and concepts. Each case is presented with an introduction that gives an overview and background about the case, its key collaborators and partners, the main goals and objectives, and the core content or substance of the case. The data collected from the case will then be presented in a similar coding which is based mainly on the CCP framework

dimensions. Data also suggest adding new emerged construct and factors, therefore an iterative and flexible analysis of the data was adopted to embrace any suggested themes or patterns. The outcome of the initial and preliminary analysis of the cases suggests some modifications to the framework, and such changes are presented and discussed comprehensively in the next chapter.

5.2 Case no 1 (C1):

5.2.1 Background and overview

This case is about the collaboration between the Ministry of Higher Education (MoHE) and the Ministry of Education (MoE) in terms of managing and facilitating students' applications to higher education. The main assigned responsibilities of the MoHE are to:

- Implement the proved higher education policies to meet the social, economical and scientific development requirements, and suggest policies to fulfil this task.
- Supervise higher education institutes (HEIs) and encourage scientific researches.
- Arrange and manage the applications for higher education in Oman.
- Work jointly with other HEIs and other related private and public bodies to ensure a successful implementation of the higher education policy in Oman.

 The MoE, on the other hand, seeks to:

- Study and propose educational policy for school education.
- Develop educational programmes in accordance with the philosophy of education and national objectives in the scope of the policy of the State.
- Disseminate basic school education and post-basic education according to the principle of equal educational opportunities for all citizens in all governorates and regions of the Sultanate.
- Anchor the foundations and the general criteria for the development of the various elements of school curricula, taking into account the different connectivity and integration between them in various stages of schooling.
- Manage various types of school systems and establishments, and provide all the requirements to ensure their continuity and efficiency.
- Work to ensure the support of all sectors of society to the development of education programmes. (MoE, 2010)

The collaboration between the ministries has experienced a significant shift after the establishment of the Higher Education Admission Centre (HEAC) in 2005. The HEAC is responsible for applications for HEIs from students who have finished high school or equivalent. The project's main goal is to transfer the previous manual applications to an online process. An electronic system allocates places to students in their preferred institutions and programmes according to their results in an accurate, fair and transparent way (HEAC, 2010). The Royal Decree (RD) No. 104/2005 established the HEAC, whereby the main task is "to regulate admission of general certificate students at higher education institutions according to their wishes and marks obtained and the admission terms specified by the aforementioned institutions" (HEAC, 2010). Structural changes are introduced as a result of this collaboration, and among them is the National Career Guidance Centre (NCGC) in the MoE which was established in 2008. The NCGC prepares students to apply via the HEAC, and before that assists them in acquiring the required skills to be self-directed.

Many structural changes have been done to NCGC in order to facilitate the work of the HEAC, in particular, in meeting the students' wishes and the national level strategies with regard to the workforces and human resource development. The centre works jointly with the HEAC to train 1173 career guidance specialists. Committees from both sides are delegated to carry out its daily process and to offer feedback for future planning and assessment. In addition, mutual benefits are claimed by both ministries particularly in enhancing public services delivery through partnership and collaborative arrangements. The sources for the data are mainly from the interviews with director generals from both ministries, people in the steering committee, participants from the NCGC and HEAC, and interviewees in the operational levels. In addition, data are collected from documentation and archival records.

5.3 The contextual levels and factors

5.3.1 The internal/organisational level

5.3.1.1 Organisational strategy

The evidence mapping of this level as presented in Figure 5-1 shows many contextual impacting factors that are associated with the collaboration. Of high priority to the MoHE is effective management of the higher education application process. Accordingly, and before moving into the HEAC project, the need for the centre and therefore for collaborative and joint work with the MoE emerged from the persistent problem of the previous application system. The students were required to travel to get seats in HEIs and apply manually by submitting a paper-based application.

> *"Those students who were not accepted in one institution had to withdraw their documents including the original General Certificate Examination results, and go and apply to another institution and wait, it was not an easy job at all." (DG)*

Hence, the initiative was initially triggered by the need to minimise efforts, times, and human errors in the manual applications, and therefore maximise the reliability of the process. For the MoHE, it was the way to demonstrate efficiency and transparency of the process. By moving into digitalising the process, a student can understand why he/she could or could not secure a place in HEIs. The idea will unify all the application procedures in the HEIs, and it means saving time and effort for all stakeholders:

- Students: they will not need to travel and apply manually to the HEIs as they can do it online.

- HEIs: will save time and effort through an online application since "HEIs also suffered from this because their employees have to receive thousands of applications, and process them manually." (DG)

- MoE: who were suffering from the "admission process since every student was required to get a hard copy of his results from the ministry which resulted in severe stress because of the long queues." (DG)

Accordingly, after implementing the project, the ministry sees the benefits of its strategy in many dimensions, such as reducing the cost and time, and minimising human intervention and errors.

Figure 5-1 Organisational level evidence mapping

First-order evidences

- MoHE wants to change/improve the application process to save time and effort.
- Standardising the process is a strategic goal the ministry aims to achieve.
- MoE wants to avoid severe stress, effort and time from students' demands for the results.

- Facilitating the communication by empowerment and formal and informal use of means.
- The articulated support from top management and leadership.
- Systematic marketing campaigns, training and workshops to cultivate an internal

- HEAC belongs to the MoHE, however, it is independent financially and administratively, and has been empowered to process and communicate with stakeholders without referring to the MoHE except when necessary.
- The NGCC is empowered to do so without referring to the MoE except when necessary.

- Both ministries have previous experience in working in collaborative arrangements and in working with each other, which is found to be helpful in this project.

- Top management support and understanding from both ministries is repeatedly mentioned by the interviewee.

- The inevitable complementarity stems from the need for MoE databases and information about students.

- Understanding the role of the focal organisation within the arrangement facilitates distributing roles and tasks, and clarifying the substance of the project from the early stages.

- The benefits experienced by different levels of stakeholders encouraged the collaborating organisations to sustain and improve the arrangement.

Second-order themes

The organisational strategy

Organisational culture

Organisational structure

Organisational experience

Leadership and top management support

Perceived organisational individualism limitations

Organisational position within the arrangement

Participants' willingness to continue

Aggregate dimensions

Internal level

142

Source: derived from the empirical data

5.3.1.2 Organisational culture

Working jointly with its stakeholders where many confidential data will be exchanged, and implementing an electronic system, implied that the MoHE analysed the possible inhibitive and supportive factors that are linked with the process. For the MoHE, and to be able to activate and implement such ambitious project, there was a need to analyse the internal possible attitudes, reactions, and supportive and/or inhibitive beliefs and thoughts about the arrangement. The aim was to draw a clear picture and a rigorous assessment of the internal acceptance of the idea. Although it matches the organisational strategy for facilitating the application procedures, this was not enough to convince some key internal stakeholders:

> "*a group of employees in the MoHE has rejected the initiative mainly because they were afraid of any system that is new, electronic, and modern and thought that they might not be able to cope with it.*" (DG)

Afterwards, and through systematic marketing campaigns, training, and workshops, the internal atmosphere turned to include advocates of the idea and build internal consensus. To promote an encouraging culture in the level of the HEAC itself, management creates a flexible climate, so people who are in charge of the daily communication with partners and collaborators can contact and accomplish tasks as quickly as necessary without referring to a "chain of official processes to take permissions to do many tasks" (DG). According to the participants, the beliefs among the employees on the need and the importance of the arrangement which were fostered by series of activities have resulted in, eventually, unifying the support and enthusiasm to implement the project.

5.3.1.3 Organisational structure

Linked with the cultural dimension in terms of creating a flexible communication atmosphere, interviewees from the MoHE mentioned the importance of the organisational structure that facilitates the collaboration with the MoE. Although the HEAC belongs to the MoHE, the centre is independent financially and administratively. This means a high level of empowerment to the centre and ability to perform, interact, and communicate with the MoHE partners in more flexible and productive ways. The participants feel that this ability to minimise the implication of a bureaucratic atmosphere, especially in communicating with the MoE, is attributable to

143

the organisational structure, which allows them to make decisions without referring every time to the management in the ministry.

5.3.1.4 Organisational experience

The history and experience of working together for several participants are key success factors; the long relationship built through previous work demands was perceived as a critical factor facilitating the current project between the two ministries. Because of such previous experience:

> *"We came to the level that many tasks which [were] previously time-consuming now become easier and faster because we know exactly the person who we need to talk with. The shared campaigns to increase the awareness of school principals, teachers and students about the system has resulted in an informal and flexible way of communication." (HD)*

Experience is divided into two categories according to the participants: experience in general communication with this partners, and experience of previous collaborative arrangements with different partners.

5.3.1.5 Top management support

Leadership and top management support is considered as a vital factor that helps participants to implement the project agenda. So

> *"being close to the top management was fundamental in getting things done. For example, the unlimited support from the Minister was essential in moving forward stage by stage until we reached where we are now." (DG)*

Top management support and understanding from both ministries is repeatedly mentioned by the interviewee. The researcher finds people in leadership and the top management level from the ministries emphasising the importance of implementing the project collaboratively, as they claim for example:

> *"The success of the project is a shared responsibility as this direction of offering advanced services and moving towards the digital environment is a priority to the Omani government. His Majesty the Sultan, urge the governmental bodies to work altogether to fulfil this aim."* (CEO)

The emerged willingness to continue and supportive views to the idea were perceived as an outcome of initially the convincing proposal developed by the ministry, and for the periodic achievements witnessed, especially with regard to saving time and costs.

5.3.1.6 Perceived organisational individualism limitations

The need for a partner to accomplish this project has led the MoHE to think directly of the complementarity implications that stem from working with the MoE. This need is not only because both deal with students' issues, it is also because of the limitation of the individual organisation's resources. In particularly, information and data about students, and facilities to manage the project (e.g. conducting awareness campaigns) in the field are seen by the interviewee in the forefront of the admitted motives to collaborate with the MoE. In addition, insufficient staff in the MoHE compared with the huge number of employees in the MoE that can provide human assets had encouraged the movement towards the joint initiation of the project.

5.3.1.7 Organisational position within the arrangement

Being the focal organisation, the MoHE, which leads this collaboration, makes additional efforts to bring success to the arrangement. While this role for the initiator might be predictable, the nature and substance of such tasks are not. However, participants clarify the role of the initiator or the focal organisation in the arrangement to be a multidimensional task. This task includes earlier assessment of the resources, requirements, and the potential outcome. It includes also embracing different stakeholders' views, as the ministry did with the HEIs before moving forward in the project. For the MoHE, a key participant mentioned that an internal team (in the organisational level) conducted an analysis and investigation into what is needed to come up with an idea that matches the Omani culture and can solve the problem, and also what might be the role of the key partner (MoE) in this project. Such an assessment helped the ministry to develop a convincing proposal. This indicates that the role of the MoHE was vital in accelerating and producing an acceptable proposal.

5.3.1.8 Participant willingness to continue

Repeatedly, during the interviews participants from both ministries emphasised the need to continue the project and the arrangement. The articulation of the need and the willingness to continue the arrangement stems from many reasons; in the forefront of these triggers are the experienced outcomes and benefits in many levels and directions. For the MoE interviewee, the willingness to continue the arrangement and sustain the collaboration attributed to the benefits returned to the students, whereby they do not need to spend time applying for higher education opportunities, and also

145

the ministry benefited from the project in terms of developing the educational curricula. To illustrate this point, the ministry benefits from feedback from the MoHE about the allocation of students and their application preferences in developing its strategy, and assists students to cultivate a mature understanding of the next step through the NCGC. On the other hand, the MoHE interviewee sees this arrangement as an inevitable relation because the MoE is the only source for the information, and because the MoHE has to continue its development strategic plans aimed at changing the application process from manual to electronic procedures. After realising the benefits of the process in unifying the admission centres' process and in minimising the possible human errors, the ministry and its stakeholders are agreed on the need to develop this project further and therefore the arrangement with the MoE.

5.3.2   Interorganisational collaboration level

5.3.2.1   Shared vision

As Figure 5-2 explains, common ground and consensus about the core values and goals of the arrangement are considered by the interviewees as vital characteristics and factors to "make strong bases and build a productive relation" (DDG). Repeatedly, participants emphasise the consistency and the agreement between their individual and collective interests. Both parties are looking for efficient services to the students, parents and the community in general. Such shared territory and common interests have facilitated an important quick start to the project because of the shared denominators between them more than the conflicts in interests and objectives.

5.3.2.2   Governance and administrative structure

Findings suggest that a collaboration structure is critical in implementing the project and simultaneously its sustainability. There are some obvious characteristics labelling this structure and found to be related to the overall performance of the collaboration. Informants stress the role of a clear framework that organises the collaborative missions and procedures in guiding the project towards achieving its objectives and goals. There were two types of committees to govern the collaboration and to administer the decision-making process: the steering permanent and temporary committees. The first one is the main committee which is setting up and implementing the programme and also managing the project. It consists of undersecretaries and mostly DGs from both organisations. On the other hand, the other committee is to

deal with the emergent and unusual or irregular issues, and meetings depend on the activity or the nature of the problem. For example,

> *"After the swine flu, there were several meetings between the HEAC and the examination department in the MoE because the examinations were postponed and therefore the rest of the process impacted such as the postponed of the pilot allocation to students which we used to conduct to develop initial indicators about the students future plans.(Consultant)*

The aim, as the interviewee stressed, is to ensure the flexibility of the structure; the collaborators developed this adaptable structure whereby the emerged cases are to be embraced in a responsive structure. Responsiveness of the structure is based on having clear guidelines and a system that can deal with the collaboration dynamism. Dynamism in the structure refers to the changes in the goals, objectives, and memberships or even organisational representatives in the arrangement (Huxham and Vangen, 2000b). The movement of some key individuals from the steering committees was reported as an impacting factor on the organisational level. The withdrawal of the previous designer and project manager to the HEAC, and some experts from the MoHE to other governmental and private sector bodies was considered as a real change that forced the MoHE to retrain new substitutes, redesign the incentive schemes for those who work in the HEAC, and rotate some of its jobs to deal with this employee turnover. Although in response this movement catalyses change in the MoHE, however, a key interviewee from the MoE said that:

> *"The move of (X) from the MoHE is not a big problem for the joint works between us because we have a clear framework and system in working together whereby such changes can be dealt with properly."(DDG)*

Such understanding of the need to have an adaptable framework in which the dynamics within the arrangement are well embraced is an interesting finding; not only is this manifested in the movement of an interesting figure, but also changes in goals, directions or procedures are also understood in this arrangement. When a new HEI is established or a new national career agenda introduced, such changes are translated in a school curriculum - Career Guidance Curriculum (CGC) for secondary school students - devoted to facilitate choosing a proper higher education direction, and also embracing any changes in the procedures. It means that the changes in the environment have been addressed and considered, but it means also that the changes in one collaborator's procedures (new HEIs) might cause changes in the other collaborator's process (the content of the Career Guidance Curriculum).

5.3.2.3 Collaborative ownership

Although there is an unstructured formula to the ownership of the collaborative project, participants from both sides articulated that they own rights and have responsibilities as an indication of a shared ownership to the project. A DG from the MoHE states that "it is true that we came [up] with this idea, however we explained to the MoE that the project belongs to our collective entity, [and] we believe that this helped more in achieving successful involvement and commitment from our main stakeholder". Therefore, operating the project and gaining outcomes from it is not the MoHE's only concern; it is the shared formula that promotes collaborative ownership to own and operate the implemented project.

Figure 5-2 C1 arrangement level evidence mapping

First-order evidences

- The shared values, understanding, and consensus about the objective of the project between the MoE and MoHE representatives are repeatedly mentioned as an important start to the project that fostered further progress and evolution of the arrangement.

- The governance structure consisted of two types of committees to govern the collaboration and to administer the decision-making process, and developed the permanent steering committee headed by USs from both ministries, and temporary committees promoted clarity and flexibility in the implementation design.
- Changes in the governance and membership structure are understood to have impact on the arrangement, however the institutionalisation of the process is seen as the panacea to avoid any negative impacts from such changes.

- Having a clear ownership structure is an important issue mentioned by the participant by referring frequently to the rights and duties, the circulated benefits, and the stakeholders' requirements consideration. This clarity developed, although it was not formally or contact-based, however, it is evident as an important factor associated positively with the process.

Second-order themes

Shared vision

Governance structure

Owenrship structure

Aggregate dimensions

Arrangement level

Source: derived from the empirical data

149

5.3.3   Institutional context

5.3.3.1   The technological and telecommunication infrastructure

As Figure 5-3 presents, the information and communication technology infrastructure is repeatedly mentioned during the interviews as a main barrier to implementing the project, especially in the initial stages of the project. Participants from both ministries insist on the role of the ITA as a regulator, and the body that is responsible for implementing the eOman strategy. However, the role of the ITA, from the point of view of the participants, is not enough to deal with the infrastructure, as collective efforts are required. Many suggestions and notes were raised by the interviewees, such as the liberalisation of the telecommunication sector, which has to be accelerated in order to maximise the competition. This competition will result in enhancing the quality and quantity of the services (only two internet providers). Accordingly, the intervention of the Telecommunications Regulatory Authority (TRA) is considered as the primary role in leading and enforcing a regulative framework that can accelerate the liberalisation movement.

Although there is a need to enhance and develop the infrastructure, some solutions to overcome the institutional difficulties were applied. For example, one of the main barriers encountered by the project was the geographical characteristics whereby implementing such a system required overcoming any inability of the students to access the internet. Some schools were in isolated areas, or far from services, which implies creating solutions to this barrier to be able to have internet services. Collaborators intended to urge for private sector intervention, in particularly the internet operators in Oman; Nawras and Oman mobile. The two companies helped the collaborators by providing wireless internet and modems to support the implementation and the operation of the HEAC.

5.3.3.2   The public sector environment

In addition, as Figure 5-3 presents, recognition of the public sector idiosyncrasies is another factor mentioned at the institutional level; participants mentioned the public sector context and atmosphere. The most repeated barrier is bureaucracy and its impact on the level of communication between parties involved in the projects.

Although it is considered as a constraint to the collaborative process, especially at the initial stage, participants mentioned many ways to minimise the impact of the bureaucracy, and among those were:

> "*I think that the interpersonal relationships which I have developed with the people there help a lot.*" (HD)

> "*The framework of the policy implementation gives opportunities for informal communication and therefore flexible interaction with them (the collaborator).*" (Consultant)

> "*We have delegated our staff to carry out daily tasks that are related to the project without spending more time seeking official permission from us, unless there is a need for us to be involved.*" (DG)

The researcher observed while conducting the interviews that there is an informal communication between collaborators. Participants used phones several times to call other organisational staff, to discuss issues related to the system or sometimes to arrange for the researcher to meet participants from their partners.

Figure 5-3 C1 Institutional level evidence mapping

First-order evidences

- The inadequate ICT infrastructure in the initial stages is associated with the implementation throughout its process and mentioned by the participants from MoE and MoHE.
- The role of the key players in this level is found to be vital, such as the role of the ITA, TRA, and the mobile companies in facilitating the arrangement's process.

- The participants are aware of the implication of the bureaucratic atmosphere, and they repeatedly emphasise the role of the communication paradigm that facilitates the implementation process.
- Informality of the communication was observed during the visits to the sites when participants used phones several times to call other organisational staff.

- A key motive behind the movement towards the implementation of the collaborative arrangement is the need to standardise the process of higher education opportunities.
- The standardisation has resulted in unifying the procedures of HEIs in the Sultanate and aligned strategies with the MoHE procedures.

Second-order themes

The technological and telecommunication infrastructure

Public sector environment

Standardisation

Aggregate dimensions

Institutional level

Source: derived from the empirical data

5.3.3.3 Standardisation

Implementing the project was triggered by the need to standardise the application process, whereby similar procedures, applications, and codes as used in allocating students to HEIs are to be used. Standardisation was not an easy task to be achieved, as interviewees expressed, because it requires that many HEIs have to reengineer the previous procedures to fit with the HEAC requirements. However, the aim, which was reducing the implication of possible duplications or even contradictions in the student application procedures, have resulted, according to a key informant, in increasing the willingness to embrace these changes which were aligned and matched in all the HEIs.

5.3.4 External level

5.3.4.1 The political will

The external level evidence mapping in Figure 5-4 indicates that the macroenvironment or the external level of the public sector in Oman experiences digitalisation movement, which manifests in the initiation of the eOman strategy to transfer the society to a knowledge-based atmosphere. The Sultan of Oman has urged governmental bodies to accelerate the process towards implementing more e-initiatives and e-based transformation.

> *"We have accorded our attention to finding a national strategy to develop the skills and abilities of citizens in this domain with the aim of further developing e-government services. We call upon all government institutions to speedily enhance their performance, and to facilitate their services, by applying digital technology in order to usher the Sultanate into the constantly evolving spheres for applying knowledge." (The Sultan's speech during the annual session of the Council of Oman, 2008)*

Therefore, several informants described the project as a result of the leaders' stances and perspectives to transfer the public sector and to introduce changes that help in "embracing the implication of the technological advancement" as described by one of the key informants.

5.3.4.2 International recognition

Moving towards the electronic application by establishing the HEAC received an international award, the World Summit Award (WSA), as the best electronic product

in 2007. WAS is an international initiative under the umbrella of the United Nations aims to encourage and support information society initiatives. Among 650 electronic products, from 160 different countries, 32 experts evaluated the submitted projects and WSA decided that the project deserved to be the best product. Key informants consider this award as a vital achievement that helped the collaborators in many ways. It is perceived as an indicator that the project is contributing to the development of the society, particularly in bridging the digital divide. The project helped in gaining more supporters and minimising any resistance or reluctance to accept this change among the targeted groups.

Figure 5-4 C1 external level evidence mapping

First-order evidences

- In the national level, the political leadership urged the public sector to collaborate in order to reform the sector and provide efficient and effective delivery to the services.
- The sector receives continued support from the Sultan in order to maintain its motives and attitude towards reforms and changes.
- Participants refer to the political will and support frequently during interviews.

- HEAC received an international award, the World Summit Award (WSA), as the best electronic product in 2007. The award was perceived by the stakeholders as an indicator of the success of the arrangement in providing public goods and in enhancing the commitment to the initiative.

Second-order themes

Political will

International recognition

Aggregate dimensions

External level

Source: derived from the empirical data

5.4 Content

Content is the area of collaboration, and the subject that labels the partnership strategy. In this study, the content was the exchange of information and data and IT/IS skills. The majority of the informants have stressed that exchanging information and data is the core of the collaborative efforts, as "data about the students' transcripts, information, and choices is our main asset and our communication is based mainly on the daily exchange of relevant information" (DDG). Additionally, the case indicates that the content might be also beyond sharing or exchanging information, as it includes developing skills and offering training between members of the collaboration. The MoHE provides training, workshops, and seminars to the career guidance specialists from the MoE. These workshops are to enhance the specialists' skills, knowledge, and information that are relevant to the e-admission procedures and process. Workshops cover, for example, issues related to the new procedures, new HEIs, and enhancing target groups' (e.g. students and parents) awareness.

The content of the collaboration also covers collecting the important feedback from different stakeholders. Feedback is considered as an integral part of the collaboration because it is more than sharing raw data, it "reflects the progress of the project and helps in shaping our strategy" (DG). Interestingly, informants find that the content of the collaboration evolves over time when new areas of collaboration emerge as the project grows. This is not only because of the requirements of each stage of the project, but also because of the experience of working together, which stimulates and creates opportunities for more collaborative arrangements. For example, the collaboration in this case was based on exchanging the relevant information, then building skills and competencies, thereafter, cultivating a culture of digital environment and electronic application.

5.5   The Process dimension

5.5.1   Planning and formulating the arrangement

The frequently mentioned actions and steps by the interviewees are the early involvement, negotiation and communication with the key internal and external stakeholders. The aims were to figure out resource availability, willingness to collaborate, and to gain legitimacy to collaborative arrangements. The need for legitimacy, therefore, plays a vital role in processing interorganisational relations in this context. At this stage also, the project under implementation was discussed in accordance to the MoHE strategy first of all, and key questions were addressed such as: does the project contribute to the organisational efficiency and effectiveness? To what extent is the collaborative implementation going to impact the organisational autonomy, for example is there any need to exchange secret information? This step therefore is an internal assessment and evaluation, and gaining internal legitimacy. Participants argue that top management support and understanding to move from paper-based to electronic-based applications is considered as a cornerstone to push the project further. Cultivating external legitimacy is important too, which is why collaborators insist on the perception of HEIs, support, and understanding.

Choosing partners was based on the resources and complementarity logic. MoHE found that in order to implement the project of HEAC, it has to work jointly with the MoE to get authentic and accurate information. As a result, there was not a long gap of time between reaching internal consensus about the proposal and setting with the external stakeholders. Discussing the possible shared and collective interests and individual interests, and identifying any conflict in the goals, are key actions to reach the external consensus. Once shared denominators appear, and a provisional acceptance is achieved, the dialogue extends to operationalise the agenda through developing a set of rules and principles. Accordingly, this phase covers the discussion, formulation of the agreed principles, and design of the rules and future steps through formal and/or informal agreement. In this phase:

> *"We discussed with the Ministry of Education our proposed framework, which includes the potential procedures, requirements and anticipated outcomes. The main aim was to find out what is available and what is needed before implementing the project. For example, they told us about the potential resistance from the parents or schools to using the system, and we came up with a solution based mainly on conducting awareness campaigns*

and starting with a pilot stage that proposes the system as a choice, but not a compulsory replacement for the paper-based applications." (DG)

This phase is concerned with building shared vision and mission, so:

"When we have for example meetings with them, we don't spend more time discussing irrelevant issues as everything is defined, and tasks are articulated clearly. I believe that such clear guidelines help in minimising inconsistency and clashes between our organisational and overall goals." (DG)

As mentioned earlier, in some circumstances, collaborators found it necessary to offer training when required by the collaborator. The MoHE provided workshops and training for the MoE employees (particularly the career guidance specialists) with regard to the potential processual and technical issues. Before moving forward in the collaboration, aligning the procedures, definitions, and policies is considered as a vital action. There should be alignment between the organisational objectives and strategies and the collaborative objectives and strategies. For example, the MoHE finds that there is a need to introduce training and development programmes to its strategic training agenda to match the required skills and knowledge emerged from being in this collaborative project.

Key informants mentioned that they have been sent to official visits, workshops and courses in and outside the country in order to develop their understanding and skills about such projects. Interpersonal skills were key contents of many designed programmes. Accordingly, and through several workshops and training activities, the employees receive training on communication skills, analysing feedback, and conducting awareness campaigns jointly with the MoE staff. Ultimately, at this stage the outcome is to negotiate, formulate and design the collaboration rule, and in a way that ensures consensus about the collaboration process and structure, as well as building competencies to implement the project.

5.5.2   Second stage: the implementation and execution stage

The collaboration starts with implementing a pilot stage to examine the adoptability of the collaborative structure and to assess the response of the members, stakeholders and end users with regard to the new changes. As discussed in the collaboration structure, two types of committees were initiated to handle and administer the implementation stage: the permanent, headed by the US, to set the main and generic agenda and assess the overall performance, and the temporary, consisting of DGs, DDGs, or HDs, to embrace the daily changes and to make quick decisions as required.

"The long experience of working within such committees with MoHE has led to expand areas of interests and therefore in producing more agreed initiatives such as the HEAC and further collaborations."(DDG)

Informal and formal communications were also mentioned repeatedly during the interviews, where participants consider these flexible communication channels as an important characteristic that facilitates implementation of collaboration. Involving stakeholders is a key factor not only during the initial stage, but extending throughout the whole collaboration process. In addition, building mutual commitments to the collaboration and cultivating interpersonal interactions are also considered part of this stage. This commitment is manifested in making the required resources available to the project. For example, MoE committed to offer data, schools, labs, and, most importantly, human resources; MoHE offers funds, administrative and most of the other operating costs. At this stage, funding the emerged collaborative initiatives is a critical step to be considered.

5.5.3   Third stage: assessment and evaluation

Most of the participants involved in the collaboration share the idea that the initial outputs and outcome from the collaboration have encouraged members to sustain this arrangement and adopt an evaluation mechanism. The strategy which has been adapted to evaluate the process and generally the performance of the project consists of these outlines:

- Organisational levels: in the HEAC and the MoHE in general.

- Collaboration level: between the two ministries.

- Stakeholders from the educational sector (institutional level): through official letters to the main stakeholders (mainly HEIs) to get their feedback every year, as a key informant argues "when we involve the students or our stakeholders in our evaluation, they feel that they are an integral part in this project." (DG)

- External level and wider community: through (a) an annual gathering and workshops in February every year to analyse and evaluate the programme and get feedback from our main stakeholders. For example, 360 attendees from different sectors attended this year (2010). The data collected from the gathering are classified into categories such as financial, technical, or procedural, in order to deal with them as appropriate, and; (b) by

159

evaluating target group level via an online form for feedback to be filled in by students.

Participants highlight the importance of the formal and informal feedback about the progress and outcome of the process, as the feedback "gave us the opportunity to modify our plans and assess our actions" (DDG). It can be derived from the strategy that evaluating the collaboration was based on examining its impact on individual members and whether or not organisational goals were achieved, as well as at the level of the collaboration itself, in terms of achieving its goals, making it productive, and increasing its capacity to deliver changes. In addition, at the level of large community and target groups, to ensure that the project matches well with the community characteristics and requirements. Therefore, evaluation extends not only to achieving organisational and collaboration objectives, but also includes assessing the effectiveness in achieving the targeted community goals. As the case indicates, the targeted groups were students, parents, schools and higher education institutions, whereby the evaluation was based on all of these groups' feedback, and assessing their interaction and participation in the project.

5.5.4   Fourth stage: learning and reflection

Learning from an IOC experience is seen by participants as an integral part of the collaboration cycle because "the outcome of our continued evolution is translated in changes to the programme or the way that we conduct our project" (DG). Learning is reflected in gaining new skills and knowledge or developing organisational strategies, for example, the collaborative project:

> *"Offers statistical information and feedback about the students,*
> *it helps therefore the NCGC to benefit from this information in*
> *particularly in planning and evaluating the current*
> *orientations." (Consultant)*

The feedback is reflected in modifying the running procedures and settings; MoHE uses it to offer workshops and training to its employees to be able to enhance students' and parents' awareness and understanding of the new system. However, such a strategy was replaced with just training staff from MoE as they concluded that people (teachers and career guidance specialists) from the same environment are more capable of dealing with students and parents. Building organisational experience with regard to how collaborative arrangements might be conducted successfully was reflected in many ways. Learning from the collaboration is therefore an integral step

as it reflects the progress of the project, and to what extent the collaborators can build on the received feedback from different stages, levels or stakeholders.

5.5.5 Collaborative capacity

Many activities and processual actions and strategies indicate the level of attention paid by the collaborators to maximise the performance and strengthen the arrangement, and build the overall capacity to collaborate. Figure 5-5 portrays the evidences which are data-driven, followed by the emerged themes and concepts which lead eventually to the aggregate dimensions related to promoting collaborative capacity. For example, empirical evidence shows how strategic capacity was fostered by aligning the agenda and collaborative strategies with the contextual levels, when the collaborators conducted a pilot stage to find what did and did not fit with the society and the target groups. Moreover, and to ensure that the required skills for implementing the project are available, the collaborators offered training, workshops and seminars to build skills and abilities for those who carry the arrangement tasks from the MoE and the MoHE. There was a special training content devoted to those who are working in the NCGC. Figure 5-5 offers more detail of the techniques, activities and policies applied by the parties and contributing to cultivating collaborative capacity in this arrangement.

Figure 5-5 C1 collaborative capacity levels

First-order evidences	Second -order concepts/themes	Aggregate dimensions
To be aligned with the context, the established HEAC was designed after pre implementation assessment to embrace the cultural, societal and target group requirements and characteristics. Training contents in MoHE were aligned with the new training needs especially in providing communications, interpersonal, and technical skills to conduct the daily tasks of the project.	The alignment of collaboration mission and vision with organisational agenda or with the context	**Strategic capacity**
There was not a traditional written law that discuss explicitly the accountability, however a loose and flexible framework to govern the collaboration is acknowledged and mentioned repeatedly during the interviews. In addition, the role of the steering committee was frequently mentioned as a beacon that guides the process and keep it within the agreed route.	The authority and control framework which emphasises accountability	**Governance capacity**
Meetings' drafts indicate clear agenda to utilise resources, so data and Information considered as a mutual asset to the collaborator. Also, providing the human resources from the MoE; the funds and training from the MoHE is recognised and in the core of the implementation strategy.	Operationalisation mechanisms to the shared resources	**Operational capacity**
Acquiring and developing the required skills and competencies is in the forefront of the collaborators agenda. Both have paid training and development the required attention and support. .	Skills and competencies availability	**Practice capacity**

First-order evidences

Involving the end users in the collaborative efforts was done by conducting a pilot stage to gain feedback from the users. The target group (the student), parents, and different stakeholders also contribute in systematically assessing the performance of the project.

Also, key informants argue that because the target group (students) are mainly able to use technological services and understand how to use online facilities they (informants) are motivated to implement the projects.

Flexible structure through permanent and temporary committees to embrace any changes. Empowerment to the core operational level people to undertake daily tasks.

Informants from both sides insist on the importance of continuing the collaboration because it has resulted in many advantages that outweigh the organisational efforts if the implementation was by a single organisation. Accordingly the outcome and the productivity of the arrangement is triggering and catalysing the continuity and sustainability of the arrangement.

Using informal and formal means of interaction. The repeated emphasis on the prolonged engagement and interpersonal relations between individuals.

Second-order concepts/themes

Involvement of users/citizens/the public and the characteristics of the community in terms of the content of the change required

Strategies applied to maximise the responsiveness to the dynamic contextual or processual changes

The demonstration of the need to continue in the collaborative efforts

Reducing the cost of interaction by being more familiar with the process

Aggregate dimensions

Community capacity

Adaptability Capacity

Sustainability capacity

Institutionalisation capacity

164

Source: derived from the empirical data

5.6 The outcomes

Participants mentioned many types and levels when asked about the benefits, impacts, and the outcomes of the arrangement. For example, the tangible, repeatedly mentioned, outcome is cutting cost, and reducing the exploitation of internal resources and funds. Moving from paper-based services to electronic and digital services positively reduced the cost and budgets that used to be allocated to the manual process. Intangible benefits are manifested in saving time, effective and efficient public service delivery, and transparent procedures for all applicants. By moving towards the online application, and after unifying the admission centres, the project achieved many noticeable impacts among them, which is encouraging some key stakeholders such as the students and their families to acquire IT/IS skills which enhances e-awareness among the target community and the whole society.

5.7 Case no 2 (C2)

5.7.1 Background and overview

In order to develop ICT skills and increasing ICT awareness among civil service employees, the government launched in 2008 an ambitious collaborative-based training programme. The IT training programme, the Government IT Training and Certification (GITTC) for the civil servants in Oman, is one of the large scale projects that are introduced to build the capacity of the public sector to absorb the so-called "eOman" initiative. The main aim is to train and certify all civil service employees (about 93,500) with an internationally recognised digital literacy certification. Also, the project intends to:

- Improve the skills and performance of civil servants.
- Empower civil servants under the Ministry of Civil Services with ICT knowledge and skills to enable delivery of public sector e-services.
- Give an equal opportunity for training for all civil servants.
- Help ITA utilise GITTC findings relating to infrastructure, processes, scheduling and observations for other training programmes.

The programme is governed and introduced through a collaborative-based strategy between the ITA, the Ministry of Civil Services (MoCSs) and the MoE. The certification and training content are based on a contract between the ITA and Certiport Inc, while the overall supervision of the project is shared between the two ministries and the ITA. In the case of Oman, the ITA is an independent body established in 2006 with the vision of transferring the country to a better utilisation of ICT, guided by the primary goal which is to implement the eOman strategy. To do so, the ITA mission therefore consists of several initiatives that are oriented towards developing ICT structure, establishing platforms for digitalising Oman, and ensuring the capacity of the community to move forward by acquiring the needed skills and competencies. To operationalise its visions and mission, the ITA is responsible for:

- Taking necessary actions to achieve co-operation & co-ordination between state administrative apparatus units, the private sector, and the ITA, with regard to IT projects for the benefit of citizens and investors.

- Provide consultancy and other services to State administrative apparatus units in the field of information technology. Embark on setting up and implementation of information technology awareness programmes to ensure publicity of use of electronic government services to realise the objectives of the digital Oman society.

- Follow-up and evaluation of the human resources plans and training of employees in the field of information technology for the purpose of developing skill and competence.

- Design and develop the regulatory procedures and appropriate measures in the field of information technology to ensure its implementation by State administrative apparatus units.

The project, therefore, has a large number of stakeholders; the key stakeholders are the ITA, MoCSs, and the MoE, and the focal organisation which initiated this project is the ITA.

5.8 The contextual levels and factors

5.8.1 The internal/organisational level

5.8.1.1 Organisational strategy

For the collaborators, participating in the arrangement is part of their organisational strategies and goals. C2 organisational level evidence mapping in Figure 5-7 shows that the ITA interviewees believe that the project matches with its strategic direction to prepare the community for the implications of the digitalisation strategy, or eOman initiative. The project belongs to a bundle of similar initiatives to build up skills and awareness of the public; these include, for example: establishing Community Knowledge Centres (CKC) to train the community; providing specialised training in IT; developing a National Strategy for Training and Development; providing affordable PCs; and establishing internet services with high speed and capacity. For the MoE, acquiring such IT/IS skills means participating in developing its human resources - who account for 40,000 of the aggregate targeted number of 93,500 -

which will result in the ability to embrace any technological-enabled changes in the educational sector. The MoE is implementing another project which is the Educational Portal (EP). The project is considered as a shift from the previous paper-based and traditional educational services and communication, to more advanced and digitalised methods. It also helps in organising and observing the administrative work and making it very organised through a number of systems, such as electronic requests and document archive, learning manager system (LMS), chatting services, short message services, interactive voice response (IVR), sending faxes electronically, and mobile services. Having said that, the GITTC is seen as a critical step to develop and acquire the relevant and necessary competencies to be able to utilise and benefit from the EP. Accordingly, participation in the arrangement is triggered by the strategic intent to have a skilled human asset. For the third partner, the MoCS, the programme contributes to its objectives and mission in terms of developing and evaluating policies that are devoted to the civil service employees. The GITTC needs its partnership for many reasons; at the forefront of them is the accurate data and statistical background of the civil service employees. It is possible to say the collaborators are interested in the programme because it fulfils organisational strategic directions and orientations.

5.8.1.2 Leadership support

C2 organisational level evidence mapping indicates that the interviewees stress that a very important ingredient of success is the leadership and top management support. Such understanding and recognition of the outcome that the collaboration can bring makes top management pursue the possible ways to ensure the success of the project, as US argues:

> *"This project is not for our organisations; it is indeed for the whole country and therefore it is an obligation to have a real input in the project to benefit from it. We all share the idea of building and developing human resources at the national level. So we do our best to see the Omani people are not behind the ICT development and progression"*

Key informants highlighted the role of top management and leadership support as a focal motive and an integral part of the project. He describes working with organisations and partners who experience encouragement from their leaders and management as a key success factor because it facilitates exchanging information and experience and promotes a flexible atmosphere within the relation.

5.8.1.3　Organisational position within the arrangement

The position of the ITA as a focal organisation is associated and linked positively with the performance and process of the collaboration as the interviewees mentioned. This stems from the idea that the position of the ITA gives the collaboration legitimacy because of the national mission that has been assigned to the ITA as the main body responsible for digitalising Oman. Benefits of having the ITA in the arrangement as a focal organisation can be seen in many dimensions, such as the competencies and the knowledge workers in the ITA who were helpful throughout the process of the project. The manifestation of these competencies was for example, in selecting outsources, preparing a solid proposal because of the experience and knowledge in the field, and leading the awareness campaigns. Ultimately, for the participants working with and sometimes under the supervision of the ITA was a critical success factor that facilitated the accomplishment of the project tasks and objectives.

5.8.1.4　Perceived organisational individualism limitations

The recognition that the ITA, in order to implement such large scale initiatives, has to work jointly with other key stakeholders was considered as a real motive to select the MoE and the MoSCs in this project. The inevitable complementarity in this project stems from the need for external resources. The ITA lacks the required numbers of human resources that can deliver the project in the whole country, whereas the MoE has the resources, competencies, and locations which can help in implementing such a project. A key informant from the ITA asserted that the project without the participation of the MoE was not possible, as it played a vital role in the establishment of the project, not only because of its resources, but also because of the number of employees, which occupies the largest amount of the targeted population. Accordingly, this helps in marketing the project faster among civil service employees and saves time and effort spent in awareness campaigns, since the MoE has conducted such campaigns individually. Ultimately, the perceived limitation of the focal organisation triggers the ITA to lunch the project jointly with the MoE and MoSCs.

Figure 5-6 C2 Organisational level evidence mapping

First-order evidences

- The implementation of the GITTC is perceived by the MoE as a critical step to develop and acquire the relevant and needed competencies to meet the strategic goals of the ministry which aim to digitalise the educational system.
- For the MoSCs also the programme meets its strategic objective to enhance the productivity of the civil service employees.
- For the ITA it develops e-awareness and helps with bridging the digital divide.

- Top management support is found to be a key enabler that is considered by the participants in the forefront of the motives and incentives to carry out the daily processual issues, as it fosters an encouraging atmosphere within the collaborating organisations.

- For the participants, position of the ITA as the initiator gives the collaboration legitimacy because of the national mission that has been assigned to the ITA as the main body responsible for digitalising Oman.

- Lack of human resources quantity and quality triggers the movement towards involving the MoE as they also have the locations required for this project.

Second-order themes

Organisational strategy

Top management support

Organisational position within the arrangement

Perceived organisational individualism limitations

Aggregate dimensions

Organisational level

Source: derived from the empirical data

170

5.8.2 Interorganisational collaboration level

5.8.2.1 Shared vision

Reaching consensus about the arrangement, its objectives, resources and potential outcome were obvious characteristics repeatedly mentioned by the interviewees. C2 arrangement level evidences mapping in Figure 5-7 presents that the shared understanding of the value of the project and the importance of bridging the digital divide in Omani society are considered as beacons that lead the discussions, in particular in the early stages of the arrangement. A key informant considers building a shared understanding from the beginning of the project as the most critical factor because it helps in facilitating the distribution of tasks and responsibilities among the collaborators. The shared vision is influenced by the idea that the returns of the project involve training of the MoE and MoCS employees, and therefore there is a positive relation and link between the contextual factors and characteristics and the outcome.

5.8.2.2 Collaborative culture

The importance of the atmosphere between the collaborators was repeatedly mentioned during the interviews. One key informant said that "the people we are working with from different parties are enthusiastic to accomplish tasks and manage successfully the project until the end". The willingness as shared belief and attitudes of the collaboration members are considered as supportive factors by the interviewees. While it is stressed by the participants, especially interviewees from top management, it seems to be that there is a need for a more communicative atmosphere, as it is found that people in technical committees feel that they do the most difficult part of the project, and the communication with the main committee is not straightforward, particularly the participants from the MoE, as an HD expressed that

> *"While the workload is more evident in our tasks because we train people and prepare centres with the ministry equipments, but we find it difficult to communicate our feedback with regard to the process of the programme and its general requirements."*

Communication difficulties were considered as main barriers, while interviewees expressed their willingness to have more input and spend more effort on achieving the programme's goals. Communicating with 300 teams all over the country with the

required speed and amount of information is considered a real challenge, as expressed by key informants.

5.8.2.3 Ownership of the collaboration

C2 arrangement level evidences mapping in Figure 5-7 indicates that it is an agreed perception with regard to rights and benefits of the project where the collaboration is seen by the collaborators as an entity that belongs to them, whereby they have possession of its input and output. Perceiving the collaboration from this stance means a clear paradigm to the ownership of the collaboration, as is confirmed by one key top management participant, who said that "we have tried to ensure that each partner receives a return from being in this collective effort". The reciprocal formula which labels the overall understanding of the arrangement has resulted in mutual acknowledged gains for all parties. Individual organisational outcomes have strengthened the feeling of the owners that the project belongs to them, and have the right to modify its agenda to fulfil organisational strategy. However, the shared aim, which is acquiring and building digital literacy skills, also provides a solid territory for the collaborators, and therefore the common goal outweighs the individual one.

Figure 5-7 C2 arrangement level evidences mapping

First-order evidences

- For all the key stakeholders interviewed in this study, the consensus about the arrangement, its objectives, resources and potential outcome were obvious characteristics repeatedly mentioned. Reaching shared understanding about the potential of the project is seen as a motive to commit themselves to support the project. The agenda is clear and developed jointly.

- An atmosphere of encouragement and facilitating communication between partners is recognised and seen as a key enabler to the implementation. Although participants consider it as a key facilitative factor, the consensus about its presence is not achieved yet.

- One quotation says "we have tried to ensure that each partner receives a return from being in this collective effort". Being in the same level of concern about the project as it moves in the same territory – digital literacy - has fostered an informal ownership structure which stems from the feeling of the possession of the project among all partners.

- There is a permanent steering committee headed by the CEO of the ITA, and consists of: four DGs from the MoE, one DG from the MoCS, four from the top management levels from the ITA, and the CEO and PM from the company.
- There are 300 teams to run the project, and task distribution between the strategic and the operational levels is based on the specialisation area; the ITA was asked to choose the outsourcers for the training content because they have the specialists who can judge the offers.

- The impression about the arrangement among the key primary stakeholders, the secondary partners, and the target community has a positive impact in yielding enthusiastic participation, commitment, and perceptions.

Second-order themes

Shared vision

Collaborative culture

Ownership of the collaboration

Governance structure

Collaborative image

Aggregate dimensions

Arrangement level

Source: derived from the empirical data

173

5.8.2.4 Governance structure

The structure of the arrangement is perceived among those influential factors that have an effect on the process of the programme. There is a permanent steering committee headed by the CEO of the ITA, which consists of: four DGs from the MoE, one DG from the MoCS, four from the top management levels from the ITA, and the CEO and PM from the company. In addition to this strategic level of managing the project, there are 300 teams covering the entire Sultanate under the supervision and management of the PM, who together with his team is the real link between the strategic and operational levels. What might be an interesting characteristic of the structure in this case is the obvious pursuit of internal dynamism whereby tasks are assigned systematically to each partner to ensure a smooth implementation process and interactive collaborative structure with different stages' requirements. To illustrate this procedure, collaborators decided from the beginning that the supervision responsibilities are to be assigned to the ITA, and the human side is the responsibility of the MoE. Such clear structural arrangements facilitate the implementation as there are no duplications and/or clashes in each responsibility, and resulted in clear tracks to be followed up by the permanent committee which consists of representatives from the high levels of each organisation. According to the interviewees, the involvement and strength of the partnership and collaborative structure can be seen in the level of representation, whereby one can work on behalf of other partners. For example, the ITA was given the task of choosing the proper training content and also of identifying the company which will carry out the outsourced task (preparing the trainers, certificating, and providing the required technical support). Accordingly, the ITA is engaged in this task on behalf of the other collaborators, and on the other hand, MoE carries out the daily supervision of the training centres on behalf of the other parties.

5.8.2.5 Collaborative image

A positive impression regarding the collaboration from its members was mentioned during the interviews as an internal, or participants', image, and was found positively associated with the process, as C2 arrangement level evidences mapping indicates in Figure 5-7. An interviewee expressed working with the ITA as a distinct collaboration

because it portrays working with the body which was initiated to implement the eOman strategy, and therefore they consider working with the ITA as a helpful and interesting experience which will add value to their employment history. In particular, interviewees from the MoE see this collaboration as a distinct experience for them because they plan, implement, and manage a project at the national level, which means broadening and expanding their capabilities and learning outcomes. Collaboration in this national project also – as the interviewees found from their interaction with the civil services ministries – is perceived by the stakeholders as an interesting effort which will result in expanding their organisational capacities to embrace the digitalisation movements in the Sultanate. It also helps them in implementing and diversifying their strategic training plans, because they will receive training for their employees without costing them anything, as this training is offered by external providers for free. Triggered by this impression, some of these ministries, in order to encourage the full attendance of their employees, accepted implementing the programme during the daytime instead of in the evening. They devoted time and daily training hours, and grouped their staff to ensure business, and the daily tasks of providing civil services, were not interrupted. In addition, and as an implication of this positive image, some of the trained employees were given an extra salary for one month for accomplishing the training task, and on one occasion the employees were given their certificates by the undersecretary of the ministry as an indication of the importance of the project to the individual and the organisation.

5.8.3   Institutional level

5.8.3.1   Institutional demands

C2 institutional level evidences mapping indicates in Figure 5-8 that key informants stress the importance of the project in cultivating an institutional environment by implementing this project, for example, a key participant contended that:

> *"We have a problem with the private sector in Oman, in particularly [the] IT/IS sector, in terms of convincing them for more investment in this sector in Oman. Because they claim that the demand will not be encouraging to do so as there is a need for many institutional reforms such as the availability of consumers' awareness and market capacity. We think that by implementing GITTC as a large scale project it will help in building and cultivating investment incentives by targeting civil services employee as this will result in enhancing the public e-awareness and therefore consumer demands."*

The collaborators, in order to ensure that they are building the e-society capacity through having qualified human capital, made it a key principle and condition with

the outsourced company to train Omani people to hold globally-recognised certificates to become professional in this field. According to a key interviewee, he attributes this condition to "ensure that knowledge is transferred to our community". The result is seen in that many Omani trainers now hold world-standard certificates and work as trainers in the project, and also these certificates help them to continue their professional routes in IT/IS fields. Ultimately, institutional reforms are motives and targets at the same time for the collaborators in order to encourage more private sector investments and initiatives in this arena.

Figure 5-8 C2 institutional level evidences mapping

First-order evidences

- A key quotation is "we have a problem with the private sector in Oman in particularly [the] IT/IS sector, in terms of convincing them for more investment in this sector in Oman". In order to build institutional demands and investment in IT/IS sector, collaborators believe that the project would accomplish this tasks and it is the proper response to these needs.

- The need to achieve a standard level of digital literacy motivates collaborating organisations to approve the IC³ programme as a standard level to be reached by the civil service employees. The IC³ programme as the content of the arrangement would be the important shared programme to encourage more IT-enabled changes in the public sector.

Second-order themes

Institutional demands

Standardisation

Aggregate dimensions

Institutional level

Source: derived from the empirical data

177

5.8.3.2 Standardisation

Motivated by the need to have a standard IT/IS certificate in the public sector, the collaborators and their stakeholders from the government bodies considered the IC³ programme as a standard level to be reached by civil service employees. While it is a world standard recognised certificate, the fulfilment of this large-scale programme and this world standard e-literacy, collaboration in this context was seen as a mean to achieve this aim, and simultaneously standardisation is perceived as a motive from which the collaboration derived its legitimacy and existence. That is why participants considered this motive as a vital component of the discussion agenda in the early stages to convince different stakeholders to take part in this programme.

5.8.4 External level

5.8.4.1 National culture

Interviewees consider the national culture as a real challenge to the implementation of the project as C2 external level evidences mapping presents in 5-9. This challenge stems from the conservative nature of the society, which manifests in many processual stages of the project. For example, female trainees in some training centres are found reluctant to be trained with males, or even with females but by a male trainer, as this is against the dominant cultural conservative values. For many of them, this is against their beliefs and also will not be acceptable by their families and society even if they agreed to participate in the project. The result of such reluctance, according to a key informant, has been seen in many training centres which were closed until female trainers were available. These cultural idiosyncrasies manifest also in impacting a communication strategy that is developed by the collaborators in order to accelerate the process and ensure quick services and communication. For example, SMS services were introduced to expedite communication with the trainees and inform them with the latest news about their programme. However, many of the female trainees refused to offer their mobile numbers to the teams in their areas, or they provided their parents' or husbands' numbers. For the collaborators, these are implications of the cultural values and target groups' characteristics and beliefs, which have to considered, although it works as challenges and inhibitive factors to an ideal implementation of the project.

5.8.4.2 Political vision

The project is supported by the political leadership and it is frequently mentioned during the interviews that the political vision in transferring Oman to a knowledge-based society is seen as the beacon for implementing the project. Accordingly:

> *"Our vision as a team from different organisations is derived from His Majesty the Sultan to implement more electronic initiatives and take the Sultanate to a new era of modern public services." (CEO)*

The political will then has its impact on the implementation of the GITTC, as this project will result not only in building the human capital as the leader of the country wishes, but also it provides an internationally recognised digital literacy certification to all civil service employees, which means meeting world standards in IT certifications.

Figure 5-9 C2 external level evidences mapping

First-order evidences

- In some cases, female trainees are found reluctant to be trained by males or to exchange their mobiles with the organisers because of the conservative nature of the culture. The implications of such cultural idiosyncrasies were seen in that many training centres were closed until female trainers were available.

- A key quotation says "Our vision as a team from different organisations is derived from His Majesty the Sultan to implement more electronic initiatives and take the Sultanate to a new era of modern public services". The implementation of the GITTC is a response therefore to the political leadership's vision, and will transfer the country to the digital era.

Second-order themes

National culture

Political vision

Aggregate dimensions

External level

Source: derived from the empirical data

5.9 Content

The content of the collaboration is mainly the training programme. For the collaboration partners, the task of identifying the suitable training content was assigned to the ITA. The ITA conducted a pilot stage whereby two digital literacy programmes were provided to a sample of the Omani civil service employees. Thereafter, the IC³ programme which was developed by US-based Certiport was found more appropriate. The company will provide learning and certification to the trainers, who will continue doing the job, and the certificates are to be issued after passing IC³ exams that are developed by the company. The core content of the IC³ programme is the key basics of knowledge and skills in computing and the use of the internet. As a globally recognised standard for digital literacy, the collaborators aim to standardise the level of the civil service employee, which will result in building human resources that can absorb the technological advancements and add value to the local labour market. Commenting on choosing this content to be for the training agenda, the CEOs in ITA said (Times of Oman, 2010):

> *"The intent of this agreement with Certiport is at the very heart of His Majesty Sultan Qaboos bin Said's directive to empower Omani people with technology skills that provide a firm economic footing in the face of globalisation and reach out to serve the public through modern means."*

The content of the programme consists of the IC³ as a main curriculum for training, however, the MoE as a key partner in the project provides its resources such as schools, computer labs, and locations for training purposes, and teachers who were trained to be IC³ certified trainers. The result of the initial stages is that many trained employees have become IC³ Authorized Instructors and Certified Professional Instructors. The current situation is those trained and certified teachers are training the civil service employees from different ministries in the country.

It is possible to say that the content of the collaboration in this context takes many forms; informational, developmental, physical, human, and practice-related content. The former refers to collaborator-exchanged information with regard to civil services employees (mainly from the MoCS), and information about the trainers and trainees (mainly from the MoE and ITA). Such information, for example the number of each government organisation's employees, or the number of trainees who finished the

courses considered as a vital ingredient of the daily work between the collaborators. The developmental part of the content refers to the skills, knowledge, attitude and awareness that the partners would like to achieve from GITTC. Accordingly, it is important to note the developmental content where the cumulative learning from the collaboration is an asset before it evolves to be an outcome. As interviewees express, this is the main shared aim which brings these parties into a joint and collaborative arrangement. Content also encompasses physical components such as schools and computer labs, and also human assets are influential in this project whereby in different stages and from different levels, representatives from the MoE, MoCS, and the ITA were provided to meet the required workforces to undertake the project. The practice-related content refers to the tasks that are assigned to each partner. The implementation of such a large-scale project requires a clear identification to the individual tasks and responsibilities. As mentioned earlier, the ITA main tasks were related to the technical and main supervision process, which is why the project manager is from the ITA. Whereas the MoCS offers the data and information about the trainee, and the MoE participates in this arrangement by providing the trainers and preparing locations to carry out the implementation of the GITTC.

5.10 The process dimension

5.10.1 Planning and formulating the arrangement

In the case of implementing GITTC, the process starts with the identification of the potential and likely key stakeholders. The ITA as the initiator and the focal organisation in this arrangement found that the MoE and MoSC are the key stakeholders to implement the project. Partners started by formulating a shared vision about the project and its main goals. Building the civil service employee awareness, skills, and digital literacy – or, in other words, the human capital development – was the main motive intersectioned and found to be communal in the three agendas (MoE, MoSC, and ITA). The three partners agreed on the first essential steps which were an evaluation of the digital literacy level, resources required, and the proper training content. Also, mapping the possible stakeholders' requirements and potential support from such governmental bodies (43 organisations) as mainly provide civil services to the community. The discussion in this stage was mainly to develop a clear plan about what the collaborators want to achieve, how they can achieve it, what are the available/unavailable resources, and the timeframe to implement the project. These

critical issues in the discussion led to a set of rules to guide the arrangements. The operationalisation of this framework resulted in a pilot stage launched in 2008 to figure out the depth and breadth of the problem, and to tailor afterward the proper programme or certificates. Therefore, translating the agreed rules and governance mechanism into actions indicated that the GITTC is now on its way to being delivered in a large-scale implementation process.

5.10.2 Execution and implementation

Through formal and informal agreed rules, the project started with the first group, who were 400 civil service employees from the Ministry of Interior, the Ministry of Justice, the Ministry of Health, and the Ministry of Regional Municipalities and Water Resources. For the collaborators, this first stage and the pilot stage were very critical, because they helped in identifying not only the level of digital literacy, but also in examining the paradigm and the collaboration framework, its means, possible constraints and supportive factors, and the overall governance structure. During the first phase, trainees came from the Governorate of Muscat (1131 trainees), the Batinah region (1966 employees) and the Eastern Region (224 employee), and the total number of staff who were trained during this phase was 3321 employees. The aim of moving from concentrating on one region was mainly a strategic goal for the collaborators to cultivate public awareness in more than one geographical domain. This step is to help building acceptance and minimising any resistance to this change, because the trained people demonstrated the usefulness of the programme and therefore enhanced the enthusiasm of the coming groups. The process of the nomination of the employee to attend the training starts from the MoCS, who communicate and interact with the other government institutions to nominate an employee from a particular region. The employee is initially tested to determine the level of computer skills, and then they can join the centre which is nearest to the area of residence or work, carrying out the training programme in Arabic and English. Collaborators, in order to involve and encourage participants, offered them more than a choice of which centre they would like to attend, but also the language (Arabic or English) of the training. Training takes a maximum of three and a half months, which depends on the level obtained in the placement test. There are four levels found in the training period: foundation, up to 14 weeks; elementary, 12 weeks; intermediate, nine weeks; and advanced level, four weeks. The trainee has to attend four days a week

from Saturday to Tuesday, with three hours per day during the evening, and this is to be decided by the employers themselves after arranging and agreeing with the collaborators. The flexibility of the administrative rules can be seen in the devolved responsibilities of arranging the training with the trainers, taking into account the school near the residence of the trainee. The group can agree with the teacher to determine the timeframe of the training. However, there are two issues to be considered: the first one is ensuring that the timeframe for the sessions will not conflict with working times, and the second is ensuring that the daily training period will consider the payer's times. This indicates that the collaborators are aware of the role of the national culture implications and idiosyncrasies.

The implementation stage produced outcomes such as building internal commitment among the collaborators to the project. For example, the growing e-awareness between the employee and the growing numbers of the trained and trainers resulted in incrementally increasing the willingness between the collaborators, and between the collaborators and other stakeholders, to offer resources and support to the project.

5.10.3 Evaluation stage

In order to understand how collaborative evaluation is conducted, interviewees were asked about the formal and informal ways of evaluation and general techniques used to follow up the process. According to the PM, the project design facilitates sending and communicating the feedback through:

- After each training session, there is an overall report developed by the area team in order to be discussed during the permanent steering committee.

- There are Certified Professional Inspectors (CPIs) who develop feedback about the progress of the training in each zone and provide that to the PM.

- The company has its procedures to evaluate and assess the progress through reports required from the trainers.

- An email address devoted to evaluation, feedback, comments or any issues related to the process, which anyone can use.

Regardless of the above-mentioned means of evaluation, participants raise issues related to the vagueness of the evaluation process, whereby the reliance on formal

assessment should have been considered more in this case to ensure more accountability in the GITTC implementation strategy. Interviewees stress this point, because they feel that the evaluation strategy has obvious shortcomings in terms of developing a rigorous scrutinisation and critical inspection. For example, there is no systematic or adapted application form that is designed and tuned particularly to comprehensively collect perceptions, attitudes, and feedback from the field. Interviewees claimed that such an application might help more in developing a consistent evaluation rather than the random, arbitrary, and subjective evaluation.

The issue of accountability is in the forefront of the discussion with the interviewees, whereby a clear framework to harness the process with accountability procedures through incentives, penalties, or laws is essential, in order to ensure that all the stakeholders are involved in the evaluation process, and also to ensure that all are committed to the collaboration agenda and formally or informally agreed agendas and actions. According to the interviewee, the project involves a considerable amount of the civil service employees, and also an outsourced part of the project where many interviewees considered it an unclear task:

> *"The role of the company for us is ambiguous and not clear. The outsourced tasks were training the trainers, organising the exams, and issuing the certificates. In fact, the primary task to train the trainers is no more conducted by the company as the trainers – who were trainees – currently do this task and therefore the role of the company is not deserving this amount of spending." (HD)*

The author found in a draft of feedback sent to the permanent committee an indication of a need for more accountability procedures, as the draft contains many recognised procedure gaps which interviewees attribute to insufficient contractual or formal agreement with the company who designed the project, or even in the psychological contract with the employee. For example, heads of training centres complain of:

- When comments are sent to the company about technical, procedural, or operational problems, the usual response is "this is not our task or job; contact the implementers (the collaborators)".

- Some of the trainees leave and do not continue the training because there is no regulation, law, or charges that make the training a mandatory task.

- There is a need to have a clear follow-up procedure whereby the heads of training centres are to be more involved and recognised.

Ultimately, what interviewees stress is that the evaluation process requires more accountability enforcement procedures by using formal assessment, such as a designed application form or formal meetings with the people in the field. This might help in providing both top-down inspection and evaluation, and also bottom-up scrutinisation and involvement. Also, the evaluation process is subject to the uncertainty of the boundary between the role of the company and the collaborators in current and future stages of the project. Therefore, clarifying to whom the people in the field should send technical, procedural, operational or any other comments is considered a priority in order to cultivate a solid and valid evaluation.

5.10.4 Learning and reflection

There are many data-driven decisions and procedures manifested in the changes and modifications to the programme. It is also a demonstration of the echo of the progress of the project at different levels (e.g. individual, organisational, and institutional) whereby new skills and experiences are cumulatively added to the participants. The most obvious example of the learning and reflection stage is the movement in some cases from evening training towards morning times. Collaborators, from their experience and from the data generated from the field, found that to solve the problem of the individual commitment to the training programme it is better to conduct it in the daytime.

Attempts were made with some civil service organisations, and the result encouraged both the GITTC implementers and stakeholders to go in this direction. The notable level of attendance, the obvious follow-up from the stakeholders, and the reasonable number of the trainees finishing the courses at each time, were among the most important results of moving into morning training. In addition, learning is seen in the enhancement of the collaborative capacity through increasing the number of trainers, holders of professional certificates, and in general the specialised human capital. This human asset is initially promoted and generated from trainees who become trainers, or in other words who transfer and reflect their training outcome and experience into a new set of e-skills and abilities, enabling them to become trainers for their colleagues.

To promote a learning environment, learning was rewarded and encouraged as the participants expressed on many occasions during the interviews. These rewards take many forms: extra salaries, celebrating officially the completion of the training, or sending letters of appreciation and thanks. Interviewees also mentioned that for some of them it is not a new experience to deal with their partners, however working with partners in such a large-scale project has resulted in building their knowledge and skills in how to plan and manage a national-level joint initiative with multiple parties involved. In addition, another example is from assessing the trainee in the initial stages, which were conducted online via the company website. This procedure is changed through devolving the assessment to the trainers themselves. This shift has been considered as an outcome of the re-appraisal of the previous ways, because they found some technical faults, and also the trainers can do the assessment more accurately as they know the actual levels of their trainees. Moreover, a key informant indicated the lesson learned from dealing with organisations with large numbers of employees.

He mentioned that the collaborators introduced a new initiative, which is conducting awareness campaigns alongside organisation festivals, parties or periodical and annual occasions. Such campaigns are to overcome the problem of marketing the project in larger organisations. The final example of the learning-driven decisions is the movement towards integrating the GITTC initiatives with stakeholders' human resources development strategic planning. The MoSC as a key partner in this collaboration necessitated that the governmental civil service providers incorporate the training of nominated employees for the GITTC into their internal strategic plans. This means overcoming problems of making the training mandatory to ensure the commitment to the training, because it was found that if attending the training was mandatory then the employee would have to be paid for the extra time obligation, and this would be very costly. However, by integrating the training with internal training plans, it becomes part of the individual development strategy which contributes to his/her overall contractual obligation.

5.10.5 Collaborative capacity

Promoting capacity and expanding the likely outcomes and collaborative advantage are top priorities for the collaborators. Accordingly, a bundle of policies and activities

has been applied throughout the preparation and implementation of the project. Evidence shows in C2 collaborative capacity levels in Figure 5-10, that the project was implemented after an obvious effort to involve and consider different actors' concerns and requirements, and not only meeting the internal needs for the key stakeholders, but also embracing societal idiosyncrasies by conducting a pilot stage. This alignment, whether it is internally for the participant goals and agendas, or externally between the proposed framework and its context, indicates that the collaborators have a strategic awareness and understanding which resulted in embracing and matching the internal and external needs before the project is in the field. Another example is the operationalisation of the use of the shared resources, as it was agreed that human resources and locations are offered by MoE, data and information are offered by MoSC, and funds, technical issues and supervision issues by the ITA. Other levels of the collaborative capacity and how they manifest in the case are mentioned in the following Figure.

Figure 5-10 C2 collaborative capacity levels

First-order evidences	Second-order concepts/themes	Aggregate dimensions
All three parties involved in this collaboration have a top priority to be achieved: the digital literacy enhancement among civil service employees. This strategic direction consists of the collaborative strategic vision which steers the overall collaborative arrangement. To be aligned with the target community characteristics, the GITTC was implemented after a pilot stage to identify target group requirements.	The alignment of collaboration mission and vision with organisational agenda or with the context	**Strategic capacity**
There is a signed agreement between the parties to clarify the rights and responsibilities in the collaboration. The project is agreed to be supervised by the ITA, and the permanent committee which is headed by the CIO of ITA consists of top management representatives from the MoE and MoSC, to ensure the highest scrutiny and follow-up from different partners.	The authority and control framework which emphasises accountability	**Governance capacity**
As mentioned in the content section, there is a clear framework to operationalise the use of different resources. The framework specifies the individual participant's contribution as follows: ➢ Human and location: MoE. ➢ Data and information: MoSC. ➢ Funds, technical issues and supervision issues: ITA.	Operationalisation mechanisms to the shared resources	**Operational capacity**
To acquire the required skills and competencies that are relevant to the GITTC agenda, a cultivation strategy of quantity and quality of the needed skills has been developed in the forefront of the collaborators' agenda. To do so, considerable numbers of the trainees have been awarded certificates as IC³ Authorized Instructors and Certified Professional Instructors. The programme is run currently by people who were trainees and became professional trainers.	Skills and competencies availability	**Practice capacity**

First-order evidences	Second-order concepts/themes	Aggregate dimensions
Target group is involved pre-implementation, through the pilot stage, and during the implementation through a systematic bottom-up evaluation.	Involvement of users/citizens/the public and the characteristics of the community in terms of the content of the change required	**Community capacity**
Flexible structure through permanent and temporary committees to embrace any changes. Using formal and informal communication channels. Empowerment of the core operational level people to undertake daily tasks.	Strategies applied to maximise the responsiveness to the dynamic contextual or processual changes	**Adaptability Capacity**
Mobilising collaborative advantages through a clear ownership paradigm. Fine-tuning and maintenance procedures.	The demonstration of the need to continue in the collaborative efforts	**Sustainability capacity**

Source: derived from the empirical data

190

5.11 Outcome

For the MoE, the collaboration means it is building its internal capacity to embrace the digital changes in the Omani society by acquiring the trained and competent human asset. For the MoCS, participants see this collaboration as a step forward, which is anticipated to promote an e-awareness, and therefore facilitate implementing electronic initiatives that target the civil service employees. In addition, it means bridging the digital divide within the Omani society and therefore strengthening the intangible infrastructure (the human dimension) as the ITA participants claim. Accordingly, the benefits from the collaboration extend to reach different actors' and stakeholders' concerns and gaols. Vertically, the impact and the outcome extend from the organisational level where each participant has benefited from the arrangement to the arrangement level by achieving the collaboration goals, and cultivating acceptance to its agenda and process among targeted communities. The collaboration in this case has resulted in maximising public sector employees' awareness and capabilities and therefore, according to the interviewees, enhancing the effectiveness of this sector. This level of institutional impact was not the end of the story; there is also the potential influence in bridging the digital divide at the national level. Ultimately, the outcome of the collaboration is distributed to reach different levels and contextual dimensions, as the evidence shows.

5.12 Cross-case comparison

Understanding the similarities and differences between cases helps in drawing patterns and the most emphasised aspects in collaborative arrangement in the public sector. This section follows techniques proposed by scholars in case study analysis (Eisenhardt, 1989; Miles and Huberman, 1994; Yin, 2009) as discussed in chapter 4, where data are analysed against particular lens to develop a structured analysis. To do so, the comparison is based on the CCP framework components, in particular its main constructs: context, content, and process. The emergent concepts, themes, and factors are also considered in this section. The aim of this comparative analysis is to delineate and highlight the key dominant contextual factors under each level, and also the frequently mentioned processual and micro-processual actions and activities within the implementation stages. While there are many similarities and shared denominators between the cases, there are also some case-specific factors presented with justifications and reasoning to find the logic behind such differences.

5.12.1   Main features

As explained in Table 5-1, both cases represent the current movement to digitalise the public sector in Oman through technological-enabled initiatives. Both cases also have a large population of stakeholders which means that the difficulty in fulfilling different parties' goals has forced the initiator or the focal organisation in each case to prefer the collaborative rather than the individual implementation of the projects. It appears from the data that the cases rely heavily on top management level to steer the initiatives. DGs from different organisations occupy the majority of the membership in the collaborative management committees. This reliance on top management in leading the arrangement indicates the level of commitment among the key stakeholders to the arrangement and the willingness among them to successfully implement the arrangement.

5.12.2   Comparison against CCP components

5.12.2.1   External level

In this section the contextual factors from different levels are presented and discussed as Table 5-1 shows. In both cases and as a shared pattern, the influence of the political context and in particular the political leaders' vision, is evident, and has been

considered as a trigger for more collaborative arrangements. Different parties see the Sultan's encouragements to the sector to work jointly together in moving forward when digitalising the government process as significant motives that legitimise the initiation of collaborative arrangements. As an inhibitive factor, in C2 the national cultural characteristics intervene in the implementation and the process of the collaboration, such as the conservative nature of the society which causes resistance to participation in the project. Whereas the international recognition of the project in C1 is perceived as a supportive factor which indicates that the type of the collaborative project under implementation is an influential aspect, and interrelated with the contextual factors. For example, the project in C2 implies involving and training women by males, which was perceived in some areas as an action against the culture. Accordingly, implementers need to diagnose and analyse the relationship between the content and the context in which the project will take place.

Table 5-1 Cross-case comparisons

Cases / Dimensions		Case study 1				Case study 2				Emphasised features and factors
Collaborating organisations		Ministry of Higher Education (MoHE) and the Ministry of Education (MoE)				Ministry of Civil Services (MoCSs), Ministry of Education (MoE), and the Information and Technology Authority (ITA)				✘
Domain	**General**	Public sector				Public sector				✔
	Specifically	Educational sector and				Civil service sector				✘
The main driver for implementation		The digitalisation movement of public sector				The digitalisation movement of public sector				✔
Key-content of projects		Technological-enabled changes				Technological-enabled changes				✔
Year of establishment		2004				2008				✘
The target groups		Students in high schools/ higher education institutions				Civil service employees				✘
Shared stakeholders in both cases		The ITA, MoE, citizens				The ITA, MoE, citizens				✔
Focal organisations		The MoHE				The ITA				✘
Organisational representatives		Mainly from the DGs				Mainly from the DGs				✔
Membership dynamism		Changes are on the secondary members or stakeholders (e.g. HEIs) but not on the key partners level				No changes on both levels				✘
Influence of contextual factors	**Levels / Factors**	**EX**	**INS**	**IOC**	**IN**	**EX**	**INS**	**IOC**	**IN**	
	National culture	✘	✘	✘	✘	✔	✘	✘	✘	✘
	Organisational structure	✘	✘	✘	✔	✘	✘	✘	✘	✘
	International recognition	✔	✘	✘	✘	✘	✘	✘	✘	✘
	The technological and telecommunication infrastructure	✘	✔	✘	✘	✘	✘	✘	✘	✘
	Perceived organisational individualism	✘	✘	✘	✔	✘	✘	✘	✔	✔

Cases / Dimensions		Case study 1				Case study 2				Emphasised features and factors
Influence of contextual factors	limitations									
	Standardisation	✗	✓	✗	✗	✗	✓	✗	✗	✓
	Institutional demands	✗	✗	✗	✗	✗	✓	✗	✗	✗
	The public sector environment	✗	✓	✗	✗	✗	✗	✗	✗	✗
	Organisational position within the arrangement	✗	✗	✗	✓	✗	✗	✗	✓	✓
	Governance and administrative structure	✗	✗	✓	✗	✗	✗	✓	✗	✓
	Organisational experience	✗	✗	✗	✓	✗	✗	✗	✗	✗
	Leadership and top management support	✗	✗	✗	✓	✗	✗	✗	✓	✓
	Shared vision	✗	✗	✓	✗	✗	✗	✓	✗	✗
	Collaborative culture	✗	✗	✗	✗	✗	✗	✓	✗	✗
	Ownership of the collaboration	✗	✗	✓	✗	✗	✗	✓	✗	✓
	Collaborative image	✗	✗	✗	✗	✗	✗	✓	✗	✗
	Political context characterisitcs and inclinations	✓	✗	✗	✗	✓	✗	✗	✗	✓
	Organisational strategy	✗	✗	✗	✓	✗	✗	✗	✓	✓
	Organisational culture	✗	✗	✗	✓	✗	✗	✗	✗	✗
	Organisational position within the arrangement	✗	✗	✗	✓	✗	✗	✗	✓	✓
	Organisational structure	✗	✗	✗	✓	✗	✗	✗	✗	✗
	Organisational experience	✗	✗	✗	✓	✗	✗	✗	✗	✗
	Leadership and top management support	✗	✗	✗	✓	✗	✗	✗	✓	✓
	Participant willingness to continue	✗	✗	✗	✓	✗	✗	✗	✗	✗

Source: derived from the empirical data

5.12.2.2 Institutional level

It is noticeable that the standardisation factor triggers and motivates both arrangements, and was a critical factor to convince different stakeholders about the potential benefits and advantages of a standardised process (C1) and standardised content (C2). As Table 5-1 shows, while both cases cover or are implemented in the national level, whereby the whole country and a considerable amount of stakeholders are involved, the technological infrastructure appears to be a barrier in C1 only. This might be due to the fact that in C2 the collaborators' target group are the employees, whereas in C1 the target group are the students and HEIs. To illustrate more, for the collaborators in C2 it was possible to overcome the technological infrastructure limitation by opining that training centres as the target group is less than the C1 target group, where some students would not be able to access the services. In C2, embracing and dealing with the institutional demands and institutional stakeholders' involvement mediate the implementation of the collaborative agenda. This is because of the implications of the national economic strategy to attract and cultivate more investment in general, and in the e-sector in particular, by having qualified and e-skilled human resources. Accordingly, responding to the institutional demands for example has triggered the initiation of the arrangement in the C2.

5.12.2.3 Interorganisational collaboration level

In the level of the arrangement itself, both cases indicate the significance of the governance and administrative structure, and the understanding of the mobilised ownership of the collaboration. The emphasis on the structure and the governance paradigm was likely to be a shared denominator because of the role that the structure and rules play in fulfilling any arrangements' goals. Regardless of the ways of managing the arrangement, the decision-making process, executing daily actions, the level of delegations, and other organisational settings and procedures are found to label the collaboration, and influence positively or negatively different stages of the arrangement in both cases. In both cases also, the awareness and the mobilisation of the ownership of the arrangement among the participants was perceived as a critical success factor to be considered. In addition to the importance of the collaboration image (C1) and culture (C2), the image of the arrangement internally (among the collaborators) and externally (among the wider stakeholders and target communities)

indicates an interesting factor needing to be studied further in interorganisational studies. The findings show the importance of the image of the arrangement in encouraging and motivating the participants and the target communities to be more committed to the arrangement as it is found in C2. This success factor, which belongs to the arrangement level's characteristics, features, and factors, proves to be influential in enhancing the legitimacy of the arrangement as it has been found in this study.

5.12.2.4 Internal level

Both cases indicate that the collaborative projects which fulfil organisational goals are perceived as strategic choices and directions. The availability of such primarily supportive principles and coverage by the organisational strategy is fundamental in enabling the collaboration. Accordingly, communicating organisational strategy and vision to the stakeholders, and clarifying in which ways the project supports and will be supported by the organisational strategy, work therefore as an umbrella to legitimise the transition towards IOCs, as for example C1 evidently reveals. Both parties, the MoHE and the MoE, were enthusiastic about the implementation because it matches their internal goals. In addition, as focal organisations or the bodies who initiate and propose the idea, the MoHE (C1) and the ITA (C2) took on the responsibility of contacting, convincing, and arranging with HEIs and other stakeholders (C1) and with MoE and MoCSs (C2). These extra efforts can be considered as requirements that the focal organisation has to fulfil in order to bring to the collaborations its primarily partners by offering a well-structured proposal for the collaborative efforts. Among the main internal triggers to establish the collaborative arrangement in both cases is the recognition of the limitation of the individual capabilities compared with the potential of collective efforts. Both cases recognise the need to involve parties and utilise external resources, abilities, acquire data and information, and other complementarity-driven objectives. Although there are in some cases idiosyncratic factors such as organisational culture and representatives' skills, the willingness to sustain the collaboration (C1) however is an indication of an interesting quality. Because most of the other qualities and factors are found to be important pre-implementing the collaborative project, whereas this factor is found to be influential during the implementation and post-implementing the project, this means new factors emerge and need to be recognised and assessed to fulfil the collaborative agenda.

5.12.3 Stakeholders' levels

Part of the contextual analysis is the understanding of the 'who' element or the stakeholders who impact and influence the collaboration process. Empirical data showed that the stakeholders are distributed throughout the contextual levels, starting from the organisational level (e.g. different organisational departments) to the external contextual level (e.g. international organisations). Identifying and understanding the requirements, and involving those stakeholders, are critically influencing the outcome of the collaboration. In C2, the GITTC is considered as an ambitious project which covers almost 43 organisations with 93 thousand civil service employees. However, the institutional domain stakeholders, such as government ministries, report some difficulties and shortcomings in the implementation. For example, in an interview with top management from the Ministry of Health, the interviewee complained about the level of suitability of the school rooms in offering a training environment. And he mentioned the insufficient trainers – in the early stages – who can provide training in English language (Alwatan, 2008). The collaborators, indeed, have tried to use, as much as possible, the computer labs, but there are some cases where there is a lack of such labs, therefore forcing the implementers to use the schools' normal rooms. However, such a complaint indicates the importance of involving different stakeholders in every step to ensure that their requirements are considered. The Ministry of Health, for example, relies heavily on the English language in its procedures, and they found that the programme did not tune or tailor the initial stage to meet such a priority to the ministry, whereby its employees have to take the English copy of the training. Ultimately, the stakeholders' assessment involves analysing a potential stakeholder's requirement, and developing strategies for accommodating all stakeholders' collaborative management styles and management philosophies, in particular for the key stakeholders or partners.

5.12.4 The process dimension

During the planning stage, choosing partners in both cases was based on the interests in the idea as a common area of interest between them. For C2 it was a predictable choice for the MoHE to work with the MoE to accomplish the task of initiating the HEAC, because it is the only source for student information and data. Similarly, the ITA found that the MoE and MoSC are the key stakeholders to implement the project.

198

The importance of reaching consensus during the formulation stage is recognised in both cases, and the need for a pilot stage was an integral part of the initial stages to examine the agreed and designed implementation framework. During the execution stage, cases see the role of the skilled and empowered human resources as a vital processual quality. Implementing the collaborative projects necessitates clear communication paradigms in both cases. These paradigms are considered as an important set of rules to facilitate implementing different stages, therefore, formal and informal means were used to communicate between collaborators. Both cases also agreed that the assessment of the collaboration has to cover the achievement of the individual participant's goals and objectives, and also the collective or the arrangement level's goals. It has also to cover the target community and wider stakeholders' interests.

In an indication of the cyclical nature of the process, cases point out that the process contains a learning and reflection stage which means rethinking the arrangement's content and/or process and inserting new rules, settings, and procedures accordingly. Linked to the process dimension is the building of the collaborative capacity, whereby cross-case evidence shows how, for example, the collaborators in C2 worked to align (strategic capacity) the training programme with the target community characteristics, and that is why the GITTC was implemented after a pilot stage to embrace the target group's requirements. The manifestation of the collaborative capacity-driven process in C1 can also be seen in many similar capacity levels. However, in C1, because of the previous collaboration experience with the same collaborator, an institutionalisation capacity process was identified such as the emphasis on the prolonged engagement and interpersonal relations between individuals which resulted in reducing communication and interaction costs and time.

5.12.5 The content

While in C2 the content of the collaboration was mainly the training programme (the delivery of the IC³ programme), the main content of the collaboration in C1 was the information and student data (the data required for application for HEIs via the HEAC). The difference between both contents can be seen in the idea that the former is developmental content which places more emphasis on developing the target community skills and knowledge. Whereas in the second case, the content is informational, which emphasises more the exchange of data and information. In

addition to the main content the arrangements were initiated for, there are other minor contents that are reported, such as the physical; when the collaborators (C2) utilise the MoE sources and schools and laboratories. Irrespective of the differences in the core and minor contents in both cases, the substances of the collaboration are mainly driven by the movement towards the enhancement of digital literacy, e-awareness, and more efficient and effective governmental services.

5.12.6 The outcome

Participants from both cases consider the arrangements as productive methods that enhance the services and have saved time, costs, and efforts over the projects being conducted individually. As presented in Table 5-2, there are many shared claimed benefits and outcomes that are stated by the participants, and these include for example: allowing participants (in particular stakeholders) to access external resources through collaboration; enhancing public awareness regarding digitalisation strategy; expanding organisational experience in collaborative arrangements; and producing new institutional norms and characteristics. Both cases proved that the benefits are distributed into the contextual levels: organisational level, such as expanding organisational experience in collaborative arrangement, and collaboration level, such as increasing collaborative learning in the level of the network itself. In addition, the impact is also in the institutional level by creating and promoting new institutional norms and values. For example, in C2 the collaboration has resulted in encouraging the public sector to accelerate its digitalisation plans, and encouraging the ITA to work with public sector bodies to implement new standardisation rules to govern the e-initiatives, as the skilled human assets no longer stand as a barrier against such projects. Moreover, the impact is extended to the wider environmental levels, for example enhancing public e-awareness and bridging the digital divide.

Table 5-2 the outcomes of the IOC

The outcomes	The cases		EX: external level INS: institutional level IOR: interorganisational relation level IN: inner context			
	Case 1	Case 2	EX	INS	IOR	IN
Accessing external resources through collaboration	✦	✦				✦
Achieving partnership synergy between collaborators	✦				✦	
Bridging the digital divide in the Omani society		✦	✦			
Building public awareness	✦	✦	✦			
Building community capacity and awareness to embrace changes	✦	✦	✦			
Creating positive public perception about the transparent process to the application	✦		✦			
Creating public value	✦		✦			
Developing accurate data and information about the applicants	✦			✦		
Developing innovative strategies	✦					✦
Eliminating and save time through an online application	✦			✦		
Eliminating problems with the civil service employees related to the digital literacy level		✦		✦		
Eliminating problems with the target groups	✦			✦		
Eliminating queues in the MoHE and MoE	✦				✦	
Enhancing organisational capacity to daily exchange information with partners	✦					✦
Enhancing public awareness regarding digitalisation strategy	✦	✦	✦			
Expanding organisational experience in collaborative arrangement	✦	✦				✦
Improving collaborative arrangements with HEIs	✦			✦		
Improving collaborative arrangements with public sector organisations		✦		✦		
Improving organisational monitoring to the application process	✦					✦
Improving student allocation processing	✦					
Improving civil services' employees computing skills.		✦				
Improving information sharing about students between the collaborators and HEIs	✦			✦	✦	
Improving information sharing between the collaborators and other governmental bodies		✦		✦	✦	

The outcomes	The cases		EX: external level INS: institutional level IOR: interorganisational relation level IN: inner context			
	Case 1	Case 2	EX	INS	IOR	IN
Increasing collaborative learning	✦	✦			✦	
Increasing collaborative advantage	✦				✦	
Unifying all admissions and HEIs application procedures	✦			✦		
Social equity where all students can apply through the system	✦		✦			
Saving time through the joint collaborative structure		✦		✦		
Reducing human errors in the manual applications	✦					✦
Reducing costs stemming from paper-based application	✦			✦		✦
Reducing travelling costs	✦		✦			
Reducing cost of manual mistakes	✦			✦		
Reducing workload through an online process		✦		✦	✦	✦
Reducing workload and number of staff to do the job	✦			✦	✦	✦
Promoting teachers' learning and skills development		✦				✦
Promoting students' learning and skills development	✦		✦			
Overcoming geographical barriers	✦			✦		
New institutional norms and characteristics	✦	✦		✦		
Minimising costs associated with the individual implementation to the GITTC		✦			✦	
Minimising costs associated with the implementation of the project	✦				✦	
Meeting the global demands for ICT skills		✦	✦			
Increasing staff interpersonal skills	✦			✦	✦	✦
Increasing public services efficiency		✦		✦		
Increasing applications efficiency	✦			✦		

Source: derived from the empirical data

5.13 Conclusion

The chapter presented research findings from two cases from the public sector in Oman using collaborative arrangements to introduce changes in the sector. The findings were presented in accordance with the conceptual CCP framework concepts and themes. For each case, the background gives an overview about the case and its substance, content, and historical background. Thereafter, findings are coded under the contextual and processual levels, and factors and the research questions safeguard the analysis to be focused on the research limit and objectives. A comparative analysis of the cases offers an explanation of the main patterns, themes, and case-specific elements, and also to understand the phenomenon from different angles. It is found that:

- The proposed framework is able to capture as a lens the contextual factors and the anticipated processual factors associated with the implementation of interorganisational collaborative arrangements in the public sector in the case studies.

- Many factors and new themes have emerged from the cases, confirming simultaneously the usefulness of the proposed framework to analyse the collaborative arrangements and also the need for more exploration and analysis of this area in future studies.

- Fieldwork evidence from both cases showed that the CCP framework to analyse and explore the collaborative arrangements can assist public policy-makers and public managers involved in interorganisational efforts by offering a multifaceted stance, so decision-makers can anticipate and predict the associated contextual and processual levels and factors and prepare their proposals accordingly. It helps them also to prepare specific techniques to measure the potential outcomes, as the cases showed that the outcome is not organisational only, but multi-levelled, and it has many features such as tangible, intangible, strategic, operational and tactical levels, as the next chapter will discuss thoroughly.

- Being successful cases that are recognised and awarded internally and globally, many shared success factors were considered as vital components, ingredients, and parameters in any success algorithm, such as the political will and support, involving different levels of stakeholders, aligning the individual interests and objectives with the collaborative agenda and with the context, and top management support and understanding.

- The cases proved that the processual stages move in an iterative and cyclical shape, whereby the learning and reflection continuously changes and amends the process of the arrangement and renews its agenda.

- There are several techniques and strategies that are used by the cases and contribute in cultivating collaborative capacity, which demonstrates multidimensional processual procedures aimed at ensuring that the arrangement meets its objectives.

- The outcome of the arrangements in both cases is distributed to exist in the different contextual levels. However, the institutional and external levels' outcomes and claimed benefits outnumber the organisational level because of the large number of stakeholders from both institutional (HEIs, public sector organisations) and external levels (students, employees, international investors).

6 Chapter six: revision, discussion, and validation of CCP framework

6.1 Introduction

While the previous chapter presents data gathered from the cases, and organised based on the key themes in the CCP framework, this chapter discusses the findings from the cases based on the previous literature, and interprets and offers possible explanations and implications of the empirical evidences. The chapter revises the conceptual framework to identify the key amendments and modifications that emerged from the empirical investigation. Revision starts with the contextual dichotomy in the CCP framework and offers a reappraisal of its dimensions to strengthen it to be able to analyse collaborative arrangements in the public sector.

The main revised areas in this dimension cover the contextual levels, the sub-factors under each level, and the nature of interaction between different levels. Revision also extends the process dimension in terms of the processual stages, micro-actions and process, the nature and the route of the process, and the collaborative capacity levels and indicators. Taxonomy to review and analyse the aimed/potential outcome has emerged from the empirical data, and the implications of applying it are discussed. The chapter ends with illuminating the key learned lessons and recommendations from the cases to inform both academics and practitioners how to adopt a multifaceted stance when addressing or conducting collaboration in the public sector.

6.2 Revised conceptual CCP framework

The focal premise of this research is applying the CCP framework to explore the contextual and processual factors that are associated with the interorganisational collaborative relations in the public sector. The background theory (Chapter 2) reveals the lack of a multifaceted framework to explore in-depth the contextual and processual factors that are associated with the collaborative arrangements in the public sector. In addition, the focal theory (Chapter 3) proposes that applying an extended CCP framework can offer a lens to explore such factors. The empirical findings show that the focal thesis of this study is consistent with the evidences, and

therefore the modified CCP framework is confirmed to be a useful tool to analyse and explore the phenomenon. In particular, the empirical data reveals that the modified and validated CCP framework, as presented in Figure 6-1, was adaptable and adjustable to explore the contextual and processual factors that are associated with the interorganisational collaborative arrangements in the public sector in Oman. The framework was found compatible to understand the multifaceted nature of the IOC in the public sector in Oman in terms of the contextual determinants, the processual stages, the content, and the outcomes of the phenomenon. While context-specific implies acknowledging the particularities and idiosyncrasies of the case study findings in this research, there are however many *transferable* aspects, findings, and/or themes (which will be mentioned throughout the discussion and the conclusions chapter) that can promote understanding of the IOC. In particular, the findings might help when applying the contextual CCP framework or analysing IOC in similar contextual characteristics. The revised framework has many changes and modifications and therefore implications:

- While the four levels proposed in the conceptual model are confirmed, there are also sub-factors which are confirmed, validated, and generated from the empirical data for the first time. The relationship between different contextual levels was not addressed systematically and explicitly in previous research, whereas this study illuminates this relationship and its characteristics, as will be discussed.
- A new stage and micro-process emerged from the study, and the relationship between the contexts, process and collaborative capacity is discussed and highlighted, based on the evidence derived from the cases.
- A set of managerial skills and competencies emerged from the data that were repeatedly found crucial in accomplishing collaborative tasks.
- A new taxonomy to review and analyse the outcome was validated during the analysis, with new implications and lessons also drawn from these new insights.
- Stakeholders are found to be distributed in four contextual levels, where this proposed contextual grouping to the stakeholders facilitates identifying and mapping different roles from different stakeholders.

Figure 6-1 The revised CCP framework

EX

INS

IOC

IN

(Implementation context)

Bidirectional Interaction

What (content)

Who

Why (context)

How
(process)

S4

S1

CC

S3

S2

Outcomes
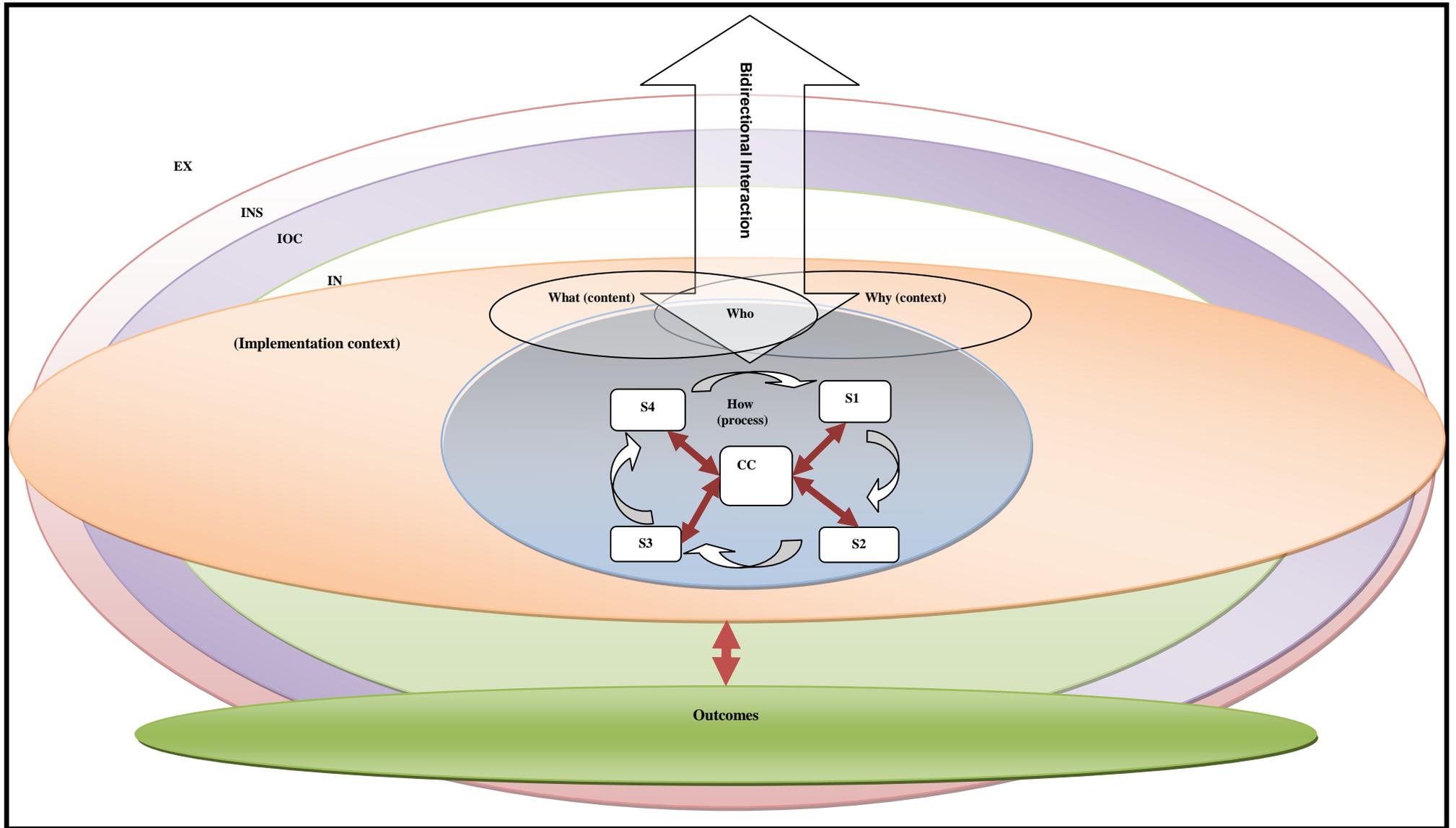
Source: derived from the empirical data

6.2.1 The contextual levels: revision and reappraisal

6.2.1.1 The complex context

This research builds on the empirically derived contribution of Piotrowicz (2007) and Piotrowicz and Irani (2008), who add the system level, which refers to the corporate context as an in-between level with its own factors between the internal and external levels when evaluating IS in international corporations. Regardless of the sub-factors, which are highly idiosyncratic, and can vary according to the topic under research, most importantly the contribution of Piotrowicz (2007) and Piotrowicz and Irani (2008) shows that the initial dichotomy proposed by Pettigrew (1985), Stockdal and Standing (2006); and Stockdale *et al.,* (2006), and used repeatedly, of the inner and outer context, is insufficient and limited when complex contexts are under investigation. Complex context refers to the cases and contexts where the internal and external dichotomy can not describe and explore the contextual factors accurately because it is difficult to group factors under internal/inner or external/outer context. This might include the business units in international corporations (Piotrowicz, 2007; Piotrowicz and Irani, 2008) virtual organisations and interorgnisational collaborative arrangements where more levels of analysis are needed to embrace different levels factors.

As presented in Figure 6-1, and adding to what might be considered as another complex context, this research found that IOC arrangements are in a similar vein that the classic sharp dichotomy: inner/outer requires an extended version and restructuring to cover the *meso/system or the in-between* factors. Having said that, this research extends the contextual CCP framework with regard to the context dimension, but this time in the public sector sphere, in the domain of IOC field, and in the developing countries' context. Inspired by the system context (Piotrowicz, 2007; Piotrowicz and Irani, 2008), the literature in IOC, and by the empirical findings, the emerged framework proposes, validates and extends previous CCP framework studies in terms of number of contexts and the relation between them, as is discussed in the following sections.

6.2.1.2 Multiple contexts

The limitation of not being able to accurately describe the interaction, interrelationship, and the intersectional area between contexts in the classic contextual dichotomy proposed by Pettigrew (inner/outer) was claimed in the literature (Caldwell, 2006). However without offering empirical alternative solutions to this problem until the work of Piotrowicz (2007) and Piotrowicz and Irani (2008). In the *public sector* and when the phenomenon is *IOC*, the validated extension to this work is seen in the new re-design to the contextual levels, whereby the corporate context or the intermediate levels are replaced with two contexts that occupy the social space between the inner/micro/organisational and the outer/macro/wider environmental levels, and those are:

- *The arrangement context*: refers to the arrangement level, its structure, settings, values, ownership, goals, culture, and other factors which are not under the control of one member only, but are shared.
- *The institutional context*: refers to the domain rules, institutional values, norms, stakeholders, and other characteristics and determinants of the domain that an organisation belongs to, such as the public sector in this study.

The progress in offering a multilevel lens is also an empirical and data-based response to the call for multilevel of analysis in interorganisational studies (Brass *et al.,* 2004; Cropper and Palmer, 2008; Marchington and Vincent, 2004; Aldrich, 1976; Boje and Whetten, 1981; Gray and Wood, 1991; Provan and Milward, 1995). If a comprehensive view of the contextual factors is to be generated, accordingly, analysing IOC in the public sector therefore requires treating the context as four important levels with their own factors, forces, and characteristics. This implies not relying heavily on the organisational level as the main tendency in the previous literature dose, because the wider external factors are also impacting and enabling or constraining the arrangement. In addition, the research reveals that not only are the levels and factors vital in drawing precise views about the arrangements, but also the type and patterns of interaction between different levels can have important implications, as the next section shows.

6.2.1.3 Bidirectional interaction

Previous literature asserted that institutional structure emerges from the interaction between organisations in the domain field (DiMaggio and Powell, 1983; Bryson *et al.,* 2006). However, there is a lack of studies that explicitly shift the examination of the relation from organisational-institutional levels to the interorganisational arrangement-institutional levels - with few exceptional researches, e.g. Provan *et al.* (2004) - or examining the possible interactive relation between the different levels and the direction of the interaction. The relation between the contextual levels in this research is found both through top-down and bottom-up interactive relations. This interaction is due to the interaction between different stakeholders' levels and factors, as will be discussed later in this chapter.

The manifestations of the *top-down* impact can be seen in many ways; as Figure 6-2 presents this interaction where the triggers and external drivers that catalyse initiating the arrangements, such as the political will and vision of the leaders. On the other hand, the reproduced institutional structure from the interaction between organisations is associated positively with external national and international level legitimacy and support cultivation as a *bottom-up* effect. These findings imply that the interaction between the contextual levels is not only top-down as the previous CCP studies believed (Stockdale and Standing, 2006; Piotrowicz, 2007; Piotrowicz and Irani, 2008; Stockdale *et al.,* 2006; Stockdale *et al.,* 2008), but is bidirectional. When applying the contextual CCP framework, a bidirectional relation exists between the contextual levels, where levels therefore shape and are shaped or influenced by other levels; Figure 6-2 shows this bidirectional interaction manifestation.

Figure 6-2 The bidirectional relation between contextual levels

Top-down

Top-down interaction
- The triggers and external drivers that catalyse initiating the arrangements, such as the political will and vision of the leaders.

- The institutional framework which shapes the structure, goals, and the process of the arrangement.

- The arrangement structure implies aligning some organisational level strategies to fulfil the arrangements' objectives.

External level

Institutional level

Collaboration level

Organisational level

Bottom-up interaction
- The arrangement shapes the institutional norms, regulations, and structure.

- The organisational culture influences the process in terms of facilitating or inhibiting the mutual interaction and the communication framework.

- The produced institutional structure is associated positively with external national and international level legitimacy and support cultivation.

Bottom-up

Source: derived from the empirical data

211

Ultimately, there was a grey area between the outer and inner context, as the previous dichotomy was unable to satisfactorily identify the interrelationship area between the outer and the inner context, and therefore was unable to address idiosyncrasies and characteristics of complex and multilevel contexts. The grey area mentioned here is the internal/external level or the meso level, and it is more evident in a complex context where adding a new level of analysis is important to define the contextual factors accurately. Piotrowicz (2007) and Piotrowicz and Irani (2008) explain and extend the CCP framework in the private sector domain by adding the system level, which refers to the corporate context. While this research, through empirical investigation in the public sector domain, has extended the work of Piotrowicz and in general the CCP framework by adding the collaboration and the institutional levels, and also by elucidating the nature of the relation between the levels.

6.2.2 Revision to the sub-factors in the contextual levels (what and why)

As presented in Table 6-1, there are many contextual factors that are found empirically to be associated with the collaborative arrangement in the case studies, some of which were discussed and mentioned in the theoretical and previous empirical studies in the literature. In this revision, therefore, an attempt has been made in the coming section to validate and confirm, and also introduce new contextual factors. Such factors are discussed to find their relevance to the previous literature and to extract the possible implications theoretically and managerially. Across cases, there are sub-contextual factors which might be inhibitive, supportive, triggers, essential requirements to establish an arrangement, and drivers.

Table 6-1 Contextual levels and factors

CONTEXTUAL LEVELS AND FACTORS	The nature of the impact/influence of the factor	Case 1	Case 2	References
External level				
NATIONAL CULTURE	The dominant cultural conservative values are reported as a barrier to the implementation		✦	Jones *et al* (1997); Reilly (2001)
POLITICAL CONTEXT CHARACTERISITCS AND INCLINATIONS	The political will and desire to transform the public sector to digital services and utilise IT/IS applications is perceived as a main trigger and motive to establish the arrangements	✦	✦	Lasker *et al*. (2001); Mandell & Keast (2008); O'Toole (1997); Gray (1989); Gray (1985); Oliver (1990); Reilly (2001); Provan and Milward (1995); Schroeder (2001)
INTERNATIONAL RECOGNITION	The international award to the project was considered as a supportive factor that enhances the legitimacy and acceptance of the project	✦		Not mentioned in the literature
Institutional level				
THE TECHNOLOGICAL AND TELECOMMUNICATION INFRASTRUCTURE	It is perceived as an essential requirement whereby the challenge of not having a solid infrastructure impacting the speed and the quality of the implementation	✦		Dawes and Prefontaine (2003); Fedorowicz *et al.* (2006); Luna-Reyes *et al.* (2007)
STANDARDISATION	One of the most emphasised motives and drivers to implement the projects is to deliver the standardised process and procedures	✦	✦	Provan et al (2004)
INSTITUTIONAL DEMANDS	The need to satisfy and to meet the institutional demands, particularly investment in the IT sector, was a key institutional driver to the initiation of the collaborative arrangement		✦	Phillips et al (2000) Provan et al (2004)
THE PUBLIC SECTOR ENVIRONMENT	The bureaucracy in some cases was found to be slowing down the implementation process	✦		Isett and Provan (2005); Hudson *et al.* (1999), Metcalfe and Richards (1990); Huxham and Vangen (2000a)
Interorgaisational collaboration context				
SHARED VISION	The shared vision and consensus are perceived as essential requirements and enablers to the successful collaboration	✦	✦	Akinbode and Clark (1976); Daley (2009); Keast et al. (2004); Wood and Gray (1991); Ansell and Gash (2007); Gray (1985); Mandell and Steelman (2003); Milward (1982); Oliver and

CONTEXTUAL LEVELS AND FACTORS	The nature of the impact/influence of the factor	Case 1	Case 2	References
				Ebers (1998); Fried *et al.* (1998); Gray and Hay (1986); Morrissey *et al.* (1994)
COLLABORATIVE CULTURE	In the empirical evidence, the encouraging and supportive culture within the arrangement is recognised as a facilitative atmosphere and therefore success factor.		✦	Not mentioned in the literature
OWNERSHIP OF THE COLLABORATION	The framework for distributing rights and duties and the ownership structure of the achievement are considered as enablers and supportive factors whenever the structure is accepted and approved by the collaborators	✦	✦	Hudson *et al.* (1999)
COLLABORATIVE IMAGE	The perception about the collaboration internally (among the participants), and externally (among the target communities and stakeholders) was found to be a supportive factor that promotes sustainability and success to the collaboration		✦	Not mentioned in the literature
GOVERNANCE AND ADMINISTRATIVE STRUCTURE	Decision-making process paradigm combines two types of management committee: the steering permanent and the delegated temporary committees. This structure allows for a flexible decision-making process and therefore enables the collaborative process to be adaptable, cultivating responsiveness in the implementation paradigm.	✦	✦	Bryson *et al.* (2006); Mandell and Keast (2008); Mandell and Steelman (2003); McGuire (2006); Miles and Snow (1986); Milward (1982); Oliver and Ebers (1998); Provan *et al.* (2007) ; Brass *et al.* (2004); Fedorowicz *et al.* (2006); Fried *et al.* (1998); Johnsen *et al.* (1996); Keast *et al.* (2004); Mandell (1984); Morrissey *et al.* (1994); O'Toole and Montjoy (1984)
Internal factors				
ORGANISATIONAL STRATEGY	The consistency between organisational strategy and goals and the collaborative agenda is a critical success factor.	✦	✦	Mandell and Steelman (2003); Thomson *et al.* (2009); Wood and Gray (1991); Lasker *et al.* (2001); Fedorowicz *et al.* (2006); O'Toole and Montjoy (1984)
ORGANISATIONAL CULTURE	Internal culture which facilitates the communication with partners without chain of official permissions is an enabler, as the empirical data reveals.	✦		Mandell and Steelman (2003)

CONTEXTUAL LEVELS AND FACTORS	The nature of the impact/influence of the factor	Case 1	Case 2	References
ORGANISATIONAL POSITION WITHIN THE ARRANGEMENT	Being a focal organisation means extra efforts, particularly the critical role in developing a convincing proposal to cultivate acceptance among stakeholders, accordingly understanding this role is an essential starting point for any arrangement.	✦	✦	Miles and Snow (1986); Gray (1985); Mandell (1984); Fried *et al.* (1998)
ORGANISATIONAL STRUCTURE	The level of empowerment and decentralisation in the decision-making process allows the HEAC to work directly with MoE without referring often to the MoHE. This structure of governance was helpful in processing the project.	✦		Luna-Reyes *et al.* (2007)
ORGANISATIONAL EXPERIENCE	From the empirical data, the previous experience in collaborative arrangements, particularly with the same partner(s) or in collaborative arrangements, is considered as a supportive factor that impact positively on the collaboration process.	✦		Brass *et al.* (2004); Mandell and Steelman (2003); Thomson and Perry (2006)**;** Gil-Garcia (2007)
LEADERSHIP AND TOP MANAGEMENT SUPPORT	One of the most emphasised success factors is the understanding and support of the leadership and management in the organisational level.	✦	✦	Akinbode and Clark (1976); Brown *et al.* (1998)
PERCEIVED ORGANISATIONAL INDIVIDUALISM LIMITATIONS	From the cases, this factor was perceived as a trigger fostering organisations to work jointly.	✦	✦	Hudson *et al.* (1999)
PARTICIPANT WILLINGNESS TO CONTINUE	Articulating the perceived need to continue the arrangement was a supportive element to foster commitment to the collaboration process and agenda.	✦		Cropper (1996)

Source: derived from the empirical data

6.2.2.1 Internal factors

6.2.2.1.1 Organisational strategy

Previous researches have shown that organisational strategy (e.g. Mandell and Steelman, 2003; Thomson *et al.,* 2009; Wood and Gray, 1991; Lasker *et al.,* 2001; Fedorowicz *et al.,* 2006; O'Toole and Montjoy, 1984) is an impacting factor when building IOCs.

As presented in Table 6-1, in both cases the role of the organisational strategy in shaping or impacting the arrangement concurs with the previous literature in terms of the role of the individual organisational goals and common or collective goals. For example, the establishment of the HEAC as a collaborative initiative was supported by the organisational strategic goals to facilitate the application process, and afterwards, the project resulted in many strategic, tactical and operational achievements and outcomes. Also, the overall commonalities in organisational goals in different internal strategies were found helpful in convincing stakeholders and therefore facilitating the implementation. Accordingly, these findings support the idea that clarifying the individual (organisational) goals and purposes from being in an IOC, and how they relate to or are covered by the organisational strategy, is critical in convincing the internal stakeholders, while enlightening the shared denominators between common strategies and membership goals is a critical factor to bring about the required changes and convincing the external stakeholders (Mandell and Steelman, 2003).

6.2.2.1.2 Organisational culture

This study validates the proposition developed theoretically by Mandell and Steelman (2003) with regard to the importance of cultivating an encouraging internal (organisational) environment for fruitful interaction between members. The empirical data reported that the willingness to share information with partners in the collaboration reflects the support and understanding of each partners' leadership and top management who cultivated a new shared values and assumptions about working in the arrangements and allow their organisational representatives to share and exchange information relevant to the process. This attitude indicates a clear manifestation to the organisational culture flexible norms and values. In addition, the perception about the communication atmosphere is a vital component of the culture

within organisations. As reported from the empirical findings, accelerating the decision-making process within the organisation itself to accomplish collaborative-related tasks is associated with creating positive atmosphere, as the bureaucratic implications are relatively minimised. The outcome of such an inner flexible and supportive culture can be seen as in case 1 in the quick response and therefore dynamic interactive process with partners. Positive beliefs about and perceptions of the culture can be assured if those who represent their organisations feel that they are empowered and delegated to make decisions without referring to a chain of official permissions and procedures. Consistent with the literature, findings suggest that the perception and assumptions of individuals about their roles, and the afforded authority are critical, and have to be examined to ensure the success of the arrangement, as Greasley *et al.* (2008) found.

6.2.2.1.3 Organisational position within the arrangement

The position of an organisation within the arrangement is critical in determining many procedural and structural issues (Miles and Snow, 1986; Gray, 1985; Mandell, 1984; Fried *et al.,* 1998). Collaborations involve many commitments and liabilities, such as time, cost, effort and others. Therefore, the collaboration brokers or the main convenor have to understand the importance of an early preparation for a solid convincing collaboration paradigm. As mentioned by the literature (Miles and Snow, 1986), and as presented in Table 6-1, the MoHE in case 1 and the ITA in case 2 have emphasised the important leading role of the brokers and focal organisations in getting things done through enhancing the potential stakeholders' awareness with regard to the anticipated outcomes, and added values for the collaboration.

6.2.2.1.4 Organisational experience in collaboration

The previous history and experience of working together is recognised frequently in the literature and reported in this study. Empirical data reveals that the previous experience can be seen in:

- Previous organisational experience and long engagement between two parties in general (e.g. the long relationship between MoE and MoHE).

- Previous organisational experience in collaborative arrangements (e.g. the ITA).

-   Previous organisational experience between the same parties in collaborative arrangements (e.g. the previous relationship between the MoE and the ITA in the implementation of the Educational Portal).

The ongoing interaction between parties is a helpful factor in developing a mutual understanding and trust that members feel toward each other (Mandell and Steelman, 2003). The empirical findings confirmed the idea that previous experience and history of collaborative arrangements help organisations to familiarise the process of the collaboration and reduce the cost of being new to each other or new in collaborative arrangements (Brass *et al.,* 2004).

6.2.2.1.5 Leadership and top management support

Leadership willingness, support, understanding, and commitment are all revealed by the study as important features in order to achieve the individual and collective goals. In both cases, the role of the leadership was a critical factor in implementing the projects. In particular, the commitment to the collaborative arrangements from top levels is found, as expected and as mentioned in the literature (Brown *et al.,* 1998), an important factor associated with the implementation process. Accordingly, leaders and public management whose organisations are engaged in collaborative arrangements should understand that their commitment is an essential condition to the success of the arrangement. The effective role of the leadership and top management can be seen as data revealed in open communication, empowering others, and supporting, in ongoing manner, the process of collaboration.

6.2.2.1.6 Perceived organisational individualism limitations

As presented in Table 6-1, the empirical evidences have shown that the perceived need for collective efforts and joint structure to accomplish a task that cannot be implemented individually is a significant trigger. Collaboration "is based on the simple adage that two heads are better than one" (Gray, 1989, p.5) and therefore the implication of this perceived reality is in understanding the importance of earlier mapping of individual organisational resources and capabilities to maximise the benefit of the complementarity between the collaborators and avoid any duplication in the process. Hudson *et al.* (1999) argued that the public sector is more interested than the private sector in interorganisational collaborative arrangements because of the high level of interdependency, however a careful operationalisation to this contention is required because it might result, according to Hudson *et al.,* (1999) in an *optimistic* collaborative arrangement based on the presumption of *rationality* that the collaboration will bring positive results. To push the literature and knowledge further in this regard, empirical data suggests realistic paradigms for collaboration should be developed based on (a) mapping carefully individual and collective resources, (b) identifying individual and collective tasks, and (c) evaluating continually the progress of the project to examine the presumed and anticipated advantages.

6.2.2.1.7 Participant willingness to continue

As a main trigger in the initiation stage the need for collaborations is transferred into another important aspect and success factor; the willingness to maintain and carry on the arrangement. Commitment for sustaining the an arrangement can be an indicator for the positive outcome and advantages of being in this relation (Cropper, 1996). According to the empirical evidences derived from the analysis, the outcome of the relation has encouraged parties to continue the collaborative efforts and to be more committed to its process. Confirming what the previous literature found, the willingness which was articulated clearly during the interviews can be considered as a measurement of the productivity of the arrangement.

However, this is not an absolute idea, because sustaining the arrangement is conditional upon achieving the arrangements' goals, which might not require further collaboration, or giving up the arrangement because the task has been done. Additionally, sustainability might be an inevitable choice when the partner is the only source for a particular collaboration content (e.g. in case 1 the MoE is the only source for student information). However, when willingness to sustain the relation is attributed by the collaborators to the collaborative advantages and positive outcomes that trigger such willingness, it is possible to say therefore that this measurement can be an indicator of the productivity of the relation. Accordingly, the likely willingness to sustain the IOC is more evident when the relation is inevitable and collaborators experience its obvious advantages and outcomes.

6.2.2.2 Interorganisational collaboration level

6.2.2.2.1 Shared vision

Reaching consensus about the collaborative arrangement objectives and tasks is a very critical component that facilitates implementing the project under collaboration (Akinbode and Clark, 1976). The empirical data reported that the vision is more than sharing goals and objectives. It means providing a shared territory where individual organisation's goals and collective goals are all addressed and embraced. Consensus-building therefore starts from formulating a vision that works as a beacon for the collaborators. The collaborative agenda, tasks, and values are then to be derived from this harnessing of agreed vision. However, as a key informant mentioned during the interviews, communicating this vision has to be given a high priority because of the

possible deviation that might occur, and consequently tasks are not focused on the required direction. Accordingly, public management involved in planning and formulating collaborative efforts should incorporate both the individual organisational goals and the collective goals in order to develop a shared vision, and also ensure that this vision is properly communicated to the collaborators.

6.2.2.2.2 Collaborative culture

At IOC level and as a new concept emerged from the empirical analysis, the collaborative culture refers to the beliefs, values and norms that label the arrangement, as indicated in Table 6-1. Evidence from the empirical investigation indicates clearly that the culture within the arrangement is considered as a critical success or failure factor, depending on the dominant atmosphere. The beliefs among the collaborators are linked with, and have implications on, the performance of the collaboration. For example, in case 1, feeling that partners were enthusiastic to work collaboratively to accomplish the proposed tasks was positively related to the acceleration of the process, and fostering familiarisation and nurturing openness between collaborators. The collaborative culture can be seen in the shared values and norms about the arrangement, the openness with regard sharing information and exchanging experiences, and willingness to continue the arrangement and learn from it. For the implementers, therefore, creating, managing, and assessing the existence of such culture has to be systematically carried out if the collaborators are interested in facilitating the implementation and would like to maximise its positive outcomes.

6.2.2.2.3 Ownership of the collaboration

Very few studies in the literature have tried to discuss the issue of the collaboration ownership (Hudson *et al.,* 1999). It is important to note that the ownership structure quality or aspect has been found an impacting and influential prerequisite. Ownership structure of the collaboration means defining to whom this collaboration, its duties, and rights belong to. As presented in Table 6-1, the cases reported unstructured ownership framework where there was not any contractual agreement that specifies these issues clearly. However, it is a recognised feature that labels the psychological contract if it is possible to claim between the collaborators. Articulating the equal opportunities for gaining from the arrangement and the distribution of the tasks and responsibilities has been reported as a clear manifestation of the ownership.

Accordingly, these findings suggest that regardless of the existence a formal or informal contract, collaborators should articulate clearly the rights and duties which promote feelings of possession of the efforts and its outcomes.

6.2.2.2.4 Collaborative image

This new factor has not been discussed in the literature, and found from the empirical investigation to be an impacting factor. It refers to the perceptions and impression that people within and outside the arrangement have cultivated about the collaboration. The internal image of the collaboration was found positively associated with the partners' characteristics, for example MoE staff conceives working with the ITA as a distinct experience because it has been legitimised as the responsible body for implementing such large-scale national e-driven projects like the GITTC. The image of the collaboration therefore, at least in this case, is a facilitative factor which maximises the attachment of the partners to the collaboration. External impression contributes also to formulating the collaboration image. Empirical data indicate that the positive contentions about the collaboration have motivated stakeholders to accept changes in the training agenda. Also, in some cases, and because they observed the practical side of their impression in enhancing their employees' IT/IS skills, organisations offered incentives to their certified staff as a clear translation to the satisfaction and positive impression about the collaborative arrangement. The possible implications, therefore, can be seen in the significance of the image in the prosperity and marketing of the project under collaboration. Public management, therefore, has to cultivate, utilise, and keep assessing the impression, and the collaborative image produced within the arrangement, and the image which has been cultivated by the external stakeholders.

6.2.2.2.5 Governance and administrative structure

The way in which the relationship is structured is in the forefront of the literature debate (e.g. Mandell and Keast, 2008; Mandell and Steelman, 2003; McGuire, 2006; Miles and Snow, 1986; Oliver and Ebers, 1998; Provan *et al.,* 2007; Brass *et al.,* 2004; Fedorowicz *et al.,* 2006; Fried *et al.,* 1998; Johnsen *et al.,* 1996). From the empirical data, the governance structure of the collaboration was based on the creation of the steering committee as a permanent body to plan, administer, and manage the whole process of the collaboration in a joint consensus-oriented

formulation. The importance of the consensus in the formulation and therefore the operational stages is an important structural characteristic, as Ansell and Gash (2007) argued. However, what notable in the findings are the delegated decisions to the partners as an agreed high level of representation. This means that a partner is allowed to represent the collaborators in making decisions on behalf of them in many tasks. The ITA, for example, represents the group in choosing the outsourcer in the GITTC programme. The implication of such decentralisation and devolution in making decisions within the arrangement is importantly considered by Hardy (2003) as an indicator of the effective flexible structure. Furthermore, behind such steering committees, the operational tasks were assigned to sub-groups and teams when required. Linked to the discussion about the collaboration structure are the dynamics and/or stability of the membership structure of the arrangement. The dynamic or changes in the number or roles of the membership impacts the stability and the speed of the tasks' fulfilment, as was confirmed in the literature (Huxham and Veng, 2000a). Empirical evidence, in this regard, showed that in order to deal with such dynamic changes, a clear framework based on a responsive strategy can minimise the effect of such changes. The example of creating an urgent committee to facilitate handling the emerged changes and issues in the educational sector indicates to what extent the adaptability and flexibility of the administrative structure is important. It is possible to say, therefore, that the effective structure is labelled by a mixture of consensus-oriented strategic decisions, decentralisation, adaptability and flexibility.

6.2.2.3 Institutional context

6.2.2.3.1 Technological and telecommunication infrastructure

Consistent with literature findings, the technological environment (Dawes and Prefontaine, 2003; Fedorowicz *et al.,* 2006, Luna-Reyes *et al.,* 2007) can shape IOC in many ways. From the empirical findings, technological infrastructure and regulative framework are seen as barriers to implementing the arrangements, whereby the inadequacy in the infrastructure can undermine the achievement of the project goals and the overall arrangement objectives. The role of the bodies responsible for regulating the telecommunication and technological sector is therefore critical when implementing collaborative projects that are based on, or driven mainly by, the technological motives. Having said that, collaborators need to analyse the capacity

and the characteristics of the institutional level (technological environment) if they would like to avoid any unanticipated problems which stem from not being able to develop a pre-implementation diagnostic and analysis stage to the real situation. Similarly, the geographical characteristics in the studied cases are found to be barriers when implementing a large-scale national-level project. Again, the pre-analysis and diagnostic approaches might help in minimising such effects. Although the collaborators in the studied cases have overcome such obstacles by providing temporary solutions (e.g. modems for the internet), it is possible to say that the processes were impacted in terms of the slowdown in the implementation, and additional funds were required to expedite the progress of the project.

6.2.2.3.2   Public sector domain's idiosyncrasies

Public sector idiosyncrasies, such as the bureaucratic nature of the sector, are found to be real constraints for implementing collaborative initiatives in the public sector (Luna-Reyes *et al.,* 2007). In this study, the implication of the bureaucracy is seen in impacting the rhythm of the communication between the members. Many solutions were used to overcome this problem, and among them, as the empirical evidences show, is the use of different informal and formal communication approaches and channels to interact and conduct daily tasks. Steering committees therefore can take a lesson from this experience if any arrangement is to be initiated in the public sector, in particular from the flexible interaction approaches that use informal (e.g. phone, email) and formal methods when required (e.g. official letters). Delegation of authority and empowering task committees may also result in minimising the bureaucratic implications.

6.2.2.3.3   Institutional demands and standardisation drivers

At the institutional level, empirical evidence showed that the need to attract institutional stakeholders' investments has triggered arranging and initiating the collaborative efforts. In case 2, and in order to build demand and create institutional capabilities, collaborators see the GITTC as an ideal reaction to overcome hesitation among companies in the IT/IS sector to invest in this sector because of the potential low demand. The low market demand is attributed to insufficient consumer awareness, and has motivated the collaborators to target civil service employees, which hopefully will result in building and enhancing IT/IS-awareness and demands.

What this experience tells public policy-makers who would like to technologically reform public service through collaborative arrangements is the reciprocal relation between the arrangements' goals and objectives, and the institutional stakeholders' requirements. Phillips et al (2000, p.34) acknowledge that the relationship between the institutional field and IOC is an overlooked area, and they propose that "as participants in a collaborative initiative draw on institutional structures as resources in their negotiations, they are simultaneously reproducing, challenging and constructing those same structures". This study asserts that the institutional forces and factors trigger collaborative initiatives, which in turn react and reproduce those factors and forces.

The implication of understanding the relation between the institutional level forces and the arrangement can be seen in the need for fostering in the earlier stages the alignment between the two levels. The alignment of the arrangements' goals with the institutional requirements can promote legitimacy, acceptance, and support from those actors in the institutional context. Among the strategies which might help in cultivating a solid alignment, and considered a key success factor as the empirical data reveals, is the involvement of the stakeholders from the institutional level. Not far from building market demands as a trigger, standardisation of the procedures (C1) and the level of digital literacy (C2) are also perceived as triggers for moving into establishing such collaborative efforts. Ultimately, the process of collaboration produces the institutional level force and characteristics, and in turn the collaboration processes are shaped by the institutional field.

6.2.2.4   External context

6.2.2.4.1   Political and cultural contexts
Cultural (Jones *et al.,* 1997; Reilly, 2001) and political context implications and interventions (Mandell and Keast, 2008; O'Toole, 1997; Gray, 1989; Reilly, 2001; Schroeder, 2001) are frequently discussed in the literature as impacting factors that are associated with the implementation of interorganisational collaborative arrangements. In its broad view, Hofstede (1994, 1993; 1980) believes that culture is a very important factor to be considered because it shapes the way in which management strategies are implemented.

Empirical evidence found that the effect of the cultural values in the implementation of the collaborative efforts manifests in the implication of the need to consider religious requirements, such as prayer times, when implementing the project. In case 2, female trainees in some training centres, because of the high level of conservative nature of the society, refused to be trained by males because this is against the dominant cultural values. Policy-makers and public management in IOC should therefore be aware of the possible culture-driven barriers, for example in this case they should offer alternative females' trainers, or send female officials and management in particular when the population or the target community extends beyond urban areas to the villages and countryside.

Consequently, considering the idiosyncrasies and cultural specifics is very important when designing a collaborative arrangement, as the transferability of the different approaches from incompatible cultures might not be applicable, and might generate disappointing results. For example, Ali *et al.* (2005, p.3) stated that "the failure of transferring Western management approaches to other cultures is often attributed to the lack of understanding that these management techniques were based on a different frame of mind and different cultural assumptions".

As another factors presented in Table 6-1, the political leadership support and the international recognitions are found empirically impacting factors to the way in which collaborative arrangements are implemented. Both are considered as triggers and motives to continue the efforts. While the political leaders' support is mentioned in the literature, the role of the *international recognition* is a new factor that has resulted in impacting the arrangement. Its impacts were seen in legitimising and enhancing the acceptance of the collaborative project among its members, target community, and external contexts.

6.2.3 Stakeholders dimension (Who)

The empirical data showed the importance of rigorous assessment and analysis of the potential stakeholders. As was discussed in Section 6.2.1.2, the central role which cultivates a bidirectional interaction between contextual levels is the stakeholders. The identification and stakeholder mapping are critical in understanding what are the possible sources for legitimacy, power, and positive or negative interventions, and

also to have a clear map about the interests of each stakeholder in these arrangements. In the literature, there are many theoretical paradigms and taxonomies for stakeholder analysis, for example, the stakeholders' power, legitimacy, and urgency framework (Mitchell *et al.,* 1997); classifying stakeholders based on the potential threat or cooperation (Savage *et al.,* 1991); or internal, corporate, and external level (Piotrowicz, 2007; Piotrowicz and Irani, 2008). This study extends their taxonomy as the empirical findings suggest that the precise mapping and analysis of the stakeholders should consider multi-contextual level actors, as Table 6-2 gives examples from the cases:

Table 6-2 Stakeholders' levels

Levels	Descriptions	Example from cases	
		Case 1	Case 2
Internal stakeholders	Different departmental levels and actors within organisations	The HEAC and the DGs from different departments	Project manager and IT departments in MoE and MoSC
Collaboration level	Refers to the primary stakeholders	The MoE and the MoHE.	The ITA, MoE, and MoSC
The institutional level	Refers to the stakeholders from the immediate context responsible for the frame of reference the organisations belong to	The ITA and the HEIs	Public sector domain and the governmental bodies
External stakeholders	Refers to the wider national and international levels	Students and HEIs internationally	Civil service employees

Source: derived from the empirical data

The multi-level analysis and mapping of the stakeholders can give the collaborators a comprehensive identification of the possible stakeholders, therefore meeting different requirements and needs and behaving accordingly. Inadequacy in embracing stakeholders' needs in one level might impact other levels and result in not being able to accomplish the collaboration agenda. To illustrate that, the empirical data shows in C2 that officials from the Ministry of Health (institutional stakeholders) complained about the content not being offered in the English language to some of the external stakeholders, in particular the target community (civil service employees in the health institutions). Accordingly, there are many steps and actions which can be done by the policy-makers and public managers who are responsible for developing an arrangement's proposal or framework, such as assessing the time (when) and type (what) of the possible impact and influence from each level, in addition to involving

stakeholders in the collaboration process and empowering them to cultivate their commitment and participation to achieve the collaboration objectives.

6.2.4 Revision of the process dimension (How)

6.2.4.1 Planning and formulating the arrangement

As a starting stage, planning for collaborative efforts is a critical stage that requires adequate attention to its inherent micro-actions. The empirical findings revealed both similarities to and also some key extensions to the existing research that relate to the planning stage. The empirical data reveals the importance of starting an internal assessment and evaluation to the internal organisational readiness to collaborate, as many previous studies indicate (Hudson *et al.,* 1999; Mandell and Keast, 2008; Gray, 1985; Fedorowicz *et al.,* 2006). However, this study is the first empirical research that identifies what this assessment involves and why it is important. Indeed, as shown in Table 6-3, all the actions are oriented toward the achievement of an earlier internal legitimacy, so the support from internal and key actors from an organisation itself are to be ensured. Mapping the potential resources, outcomes, and level of the conflict/consistency between the collective strategy and the organisational level are significant steps to preparing a coherent, convincing proposal to the potential stakeholders. As predicted, aligning the organisational and collective agendas is found, which also accords with the findings of Sullivan *et al.,* (2006), regarding critical success actions to minimise inconsistencies between the two agendas.

Table 6-3 Internal assessment

The micro-stages	The aims and objectives
Internal assessment: - Potential internal stakeholders' perspectives and requirements. - Potential financial and non-financial resources needed. - Potential outcome. *Alignment* - Assessing and promoting alignment between organisational strategy and the collective agendas.	The main aim from this stage is to ensure the internal legitimacy and readiness to collaborate.

 Source: derived from the empirical data

After achieving agreement about the proposal from within an organisation, communication with external stakeholders starts as presented in Table 6-4. The aim of this stage is to set the structure and the design of the arrangement to clarify responsibilities and duties involved. Most of the previous literature indicates the importance of identifying the stakeholders by first developing selection criteria for the potential or suitable partners in the relationship (Ansell and Gash, 2007; Reilly, 2000). The empirical data extends the information regarding this process by suggesting that setting the selection criteria takes time in accordance with the level of complexity and/or the availability of choices to be selected in the relationship. The empirical data revealed, for example, that selecting partners was not that time-consuming because there was only one source for the data (case 1 student information from the MoE) or have the required resources (information about the civil service employees from the MoSCs or the human resources from the MoE). As an additional important finding, alignment extends to go beyond the organisational / arrangement level to cover also the arrangement / wider context levels. As was reported in case 2, to be aligned with the target community characteristics, the GITTC was implemented after a pilot stage to identify target group requirements, which results in considering the societal idiosyncrasies such as devoting times and breaks for praying times during the training periods.

Table 6-4 Negotiation with partners

The micro-stages	The aims and objectives

Negotiation and structuring the arrangement
 	
  - Selection of suitable partners.
  - Building consensus about the strategic goals, the content of the arrangement and the required resources.
  - Setting the rules, tasks, and overall decision-making, communication, and operationalisation procedures.
Alignment
  Between the arrangement, its goals, structures, substances and means, and the context in which it takes place.
	Structuring, formulation and designing of the process

Source: derived from the empirical data

Ultimately, this stage is about obtaining legitimacy, readiness and internal stakeholders' involvement and support. It is also the stage of formulating and structuring the relationship, and what are the content, resources and potential roles that might be anticipated from being in such an arrangement.

6.2.4.2   Execution and implementation stage

As mentioned in the literature (Ring and Van de Ven, 1994; Gray, 1989), this stage is about putting the agreed rules and procedures into action. Empirical findings show, consistently with the literature (Greasley *et al.,* 2008), the importance of diversifying the communication channels between formal and informal interaction strategies in order to operationalise the arrangement. Table 6-5 shows that a key implementation micro-action is to start with a pilot trial stage to test the collaborating framework and to refine the proposed strategies, before the main tasks are to be put in place. Public policy-makers, leadership, and public managers should be aware of facilitating interpersonal interaction by providing the required skills, empowerment culture, and incentives to those engaged in an arrangement directly, as these techniques are critically associated with implementing the collaborative agenda. This stems from the vital roles carried out by subordinate groups and/or individuals in helping the steering committees to execute and manage the daily process. Also, it is found that involving and incorporating the target groups or population-emerged perspectives is significant in addressing the target community concerns, and therefore obtaining their support and commitment to the process. Whether building members' or external stakeholders' commitment, the findings confirm the importance of building different parties' commitment to the arrangements that are mentioned in previous research (Ring and Van de Ven, 1994; Hudson *et al.,* 1999; Gray, 1985; Ansell and Gash, 2007). Commitment is generated by equal opportunities in duties, responsibilities, and rights.

Table 6-5 Execution and implementation stage

The micro-stages	The aims and objectives
Carrying agreed rules into action: - Activating communication channels - Pilot trial stage - Cultivation of interpersonal interaction atmosphere - Empowerment of the key actors and groups - Involving the target community - Applying pre-defined/emergent strategies - Building commitment	To operationalise, administer and govern the arrangement.

Source: derived from the empirical data

231

6.2.4.3　Evaluation stage

Evaluating the process in collaborative arrangements in the public sector is not well defined in the literature. As it is portrayed in Table 6-6, the empirical evidence showed that the evaluation stage is about assessing the achievement of individual, organisational and collaboration stakeholders, and targeted community goals and objectives. An evaluation, to be comprehensive, empirical data, suggests developing strategies that ensure combining the top-down and bottom-up evaluation methods.

Table 6-6 Evaluation stage

The micro-stages	The aims and objectives

Multilevel assessment:
   -   Top-down and bottom-up.
   -   Facilitate exchanging mutual feedback.
   -   Using formal and informal methods.
	To review, assess, and examine the arrangement progress

Source: derived from the empirical data

This means not only evaluating the performance of the individual or people participating in running the arrangements from the top levels, but also offering them opportunities to assess and provide feedback regarding the way in which the collaborative arrangement is operationalised. Empirical evidence shows that this increases and fosters the accountability of the evaluation, and promotes more transparency and a scrutinised process. To ensure flexibility and comprehension, it is recommended to use formal and informal methods to offer feedback and evaluate the arrangement. These methods include, for example, formal feedback applications, emails, phone calls, workshops and symposiums, focus groups, surveys, interviews, and participant observation.

6.2.4.4　Learning and reflection

As presented in Table 6-7, a new stage has been derived from the empirical data about the continuous learning from the experiences and reflections processes which were found interesting to be considered. Drawing on the experience of the cases through fostering learning and reflection of the new learned skills, knowledge or attitude is an essential step to cultivate an adaptive and proactive implementation strategy. Learning from the experience of the arrangement manifests in changing and modifying the predefined and pre-agreed norms and procedures. Learning is a continuous process

232

which resulted in renegotiation and reformulation of the established collaborative framework and it is mainly based on the outcome of the evaluation phase. The significant implications of this emerged stage are on its role in fostering the required adaptability of the framework to embrace emergent issues and fostering a learning environment. Empirical data has shown that the reflection of the captured experiences is influential in accumulating not only the organisational or the arrangement levels; however it covers individual and the target community levels. Many changes were proposed and implemented based on the emerged experiences and requirements.

Table 6-7 Learning and reflection stage

The micro-stages	The aims and objectives
Learning from the experiences: - Systematic data-driven decisions. - Allow spaces for modifications and changes. - Facilitate learning and reflection process.	To build on the new experiences and maximise the adaptability of the arrangement

Source: derived from the empirical data

6.2.4.5 Collaborative capacity

The empirical findings supported the collaborative capacity model developed by Sullivan *et al*. (2006) to analyse the capacity of arrangement in multidimensional conceptualisation. As an indicator or a thermometer to the productive process, collaborative capacity concerns boosting strategies, activities and mechanisms to achieve coherence of the arrangement, efficiency, and the general ability to absorb changes and the dynamic nature of the collaborative efforts (Hudson *et al*., 1999; Sullivan *et al.,* 2006). Consistent with this description of the capacity, the empirical evidences show that capacity-building is a central quality in the process dimension, and the relation between the process and capacity was found reciprocal where *"each shapes and is shaped by the other"* and all are surrounded by impacting contextual determinants (Sullivan *et al.,* 2006, p.307).

The empirical findings demonstrate first of all the usefulness of the collaborative capacity taxonomy developed by Sullivan *et al.* (2006) as strategy, governance, operational, practice, and community capacity in tracing the processual performance in the arrangement. The second important thing is that this research is more comprehensive in terms of incorporating the collaborative capacity framework into processual stages and multiple contextual levels. In addition, the validation of the notion in another context has resulted in an extension to the previous taxonomy by adding the adaptability, the sustainability, and the institutionalisation capacity, as Table 6-8 shows.

Table 6-8 Collaborative capacity added levels

Capacity levels	Adaptability	Sustainability	Institutionalisation
Meanings	Strategies applied to maximise the responsiveness to the dynamic contextual or processual changes.	The demonstration of the need to continuo in the collaborative efforts	The achievement of an acceptance, routinisation, and an embeddedness in the process within the whole structure of the arrangement to make consistency outweigh conflicts.
Operationalisation techniques	- Flexible structure through permanent and temporary emergent committees to embrace any changes. - Empowerment of the core operational level people to undertake daily tasks.	- Mobilising collaborative advantages through a clear ownership paradigm. - Fine-tuning and maintenance procedures. - Ensuring internal and external legitimacy.	- Using informal and formal means of interaction. - The repeated emphasis on the prolonged engagement and interpersonal relations between individuals. - Inducing familiarisation of the process by creating social environment/events and a collaborative harmonised culture.

Source: derived from the empirical data

As can be seen from the table, capacity in general is about maximising the productivity and effectiveness of the process to achieve multidimensional processual outputs encapsulated in the so-called capacity of the arrangement. The adaptability mechanisms aim to make the process more reactive and maximise the responsiveness of the arrangement. The sustainability is about the continuity of the arrangement until goals are being achieved, whereas the institutionalisation concerns reducing the operating costs by incorporating and integrating values, goals, and process into the daily interactive routines.

6.2.5 The implementation context

The timeframe is an integral component of the analytical CCP framework, as the empirical data reveals. The importance of having a defined implementation context can help policy-makers and implementers in realising what are the specifications of the implementation period to consider. The research pays attention to the initiation stage, to maintain the coherence of the processual stages and micro-actions. To do so, the prolonged engagement with the process was supported with retrospective interviews with key informants to gain clear insight about the earlier processual stages. The implementation context embraces, as predicted in the conceptual framework, the interconnectivity between the context, content, and process. It is

impacted by the upper contextual levels, and simultaneously impacts those levels. According to the empirical evidences, public policy-makers and public managers in IOC should manage the dynamic nature of the implementation context by understanding the time (when) and the type (what) of the action to be done, in order to perform successful implementation. Aligning the time with the nature of the intervention is not the only thing to be done, however, ensuring the maintenance and allowing continuous revisions to the implementation paradigm can evidently cultivate a flexibility and adaptability to the implementation.

6.2.6   Revision of the content dimension (what)

Content is the area in which the collaboration takes place, and the dimensions or the substances of the arrangement. From empirical evidences, while the broadest area is collaborative technological-driven public sector reforms (Dawes and Prefontaine, 2003; Fedorowicz *et al.,* 2006; Gil-Garcia, 2007), it is possible to say that the nature of the content takes many forms;

- *Informational*: refers to collaborator-exchanged data and information (e.g. information about civil service employee (mainly from the MoCS), and information about the students (mainly from the MoE).

- *Developmental*: building skills and/or offering training for each other (e.g. training the career guidance specialists from the MoE by MoHE).

- *Physical*: when the content includes utilising physical resources (e.g. schools by the collaborators in the GITTC programme).

- *Human*: refers to the utilisation of the human assets (e.g. employing the teachers for delivering GITTC).

- *Practice-related content*: which is mainly about the distribution of tasks and responsibilities between collaborators. The raw responsibilities or tasks (content) are then assigned and shared by the members, such as the task assigned to the ITA to select the company which will do the outsourced tasks.

The implication of this categorisation is therefore seen in the need to clarify the substance of the arrangement, so members can understand what will be included or involved in this relation. From the empirical investigation, it is found that the content is not static but dynamic, whereby it unfolds in accordance with the progress of the

arrangement. For example, in case 1, the collaboration started with an informational content to exchange information and data about students, and then it evolved to include building skills for career guidance specialists from the MoE.

6.2.7 Revision of the outcome dimension

As portrayed in Table 6-9, the taxonomy of the benefits and the outcomes of establishing an interorganisational arrangement is a novel taxonomy based on a multifaceted categorisation. It intends to offer multidimensional stances, and therefore provide public policy-makers, public management, and key actors in IOC arrangements in the public sector with rich insights so they can develop the most appropriate measurements and evaluation techniques. The emerged taxonomy incorporates the vertical and the horizontal levels into one table. The vertical level refers to the strategic, tactical, operational, organisational, arrangement, institutional and wider environment levels, whereas the horizontal level refers to the tangible, intangible, financial and non-financial benefits. Consistently with previous research, the concentration on the organisational level is not a surprise, because as stated previously in this research, organisational goals and objectives are the main catalysts for initiating IORs and that is why the main theories and interorganisational paradigms pay more attention to the organisational level. However, if a research is to be conducted in the public sector domain, multiple levels of effectiveness measurements and a multilevel outcome taxonomy are found to be important, as recommended by Mandell and Keast (2008) and Provan and Milward (2001). Because of the large amount of stakeholders from different levels, Provan and Milward (2001) stress that the outcomes and results should be investigated and examined in three levels: organisational, network or interorganisational level, and community levels. This conclusion is found to be valid and consistent with the literature review in this research, where empirical findings indicate that the outcome has exceeded the organisational level to be in different levels.

The emerged taxonomy suggests, therefore, more than the consideration of the contextual levels, bringing many features, natures, and levels when defining the benefits and the outcome of being in an IOC. For public management, the benefits of this taxonomy can be seen in the ability to draw and delineate the outcome in different stages so, for example, in the planning stage; members can understand the substances,

237

natures, and levels of the anticipated outcome, and accordingly can develop their strategy for evaluating such outcomes. Regardless of some tangible and financial benefits which can be measured, such as cost reductions or the number of employees required for the same task pre- and post-implementation, the dominant impacts are seen as intangible, strategic, and non-financial benefits, which indicates how difficult is the quantification of the results if any of the stakeholders require it. As Figure 6-1 indicates, the interplay between the outcome and the implementation context is another feature that labels the relationship between the outcome and the whole process of the arrangement. The manifestation of this relation is clearly observed in participants frequently mentioning that the emerged outcomes continuously trigger many changes in the process, commitment to the joint efforts, and acceptance among different levels of stakeholders. Accordingly, results, although they are not in the final shapes, impact the implementation context.

Table 6-9 Outcome analysis taxonomy

The outcomes	The cases		Tangible	Intangible	Strategic	Tactical	Operational	Financial	Non-financial	EX: external level. INS: institutional level IOR: interorganisational relation level IN: inner context			
	C1	C2								EX	INS	IOR	IN
Accessing external resources through collaboration	✓	✓	✗	✓	✓	✗	✗	✗	✓	✗	✗	✗	✓
Achieving partnership synergy between collaborators	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✗	✓	✗
Bridging the digital divide in the Omani society	✗	✓	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗
Building public awareness	✓	✓	✗	✓	✗	✓	✗	✗	✓	✓	✗	✗	✗
Building community capacity and awareness to embrace changes	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗
Creating positive public perception about the transparent process of the application	✓	✗	✗	✓	✗	✓	✗	✗	✓	✓	✗	✗	✗
Creating public value	✓	✗	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗
Developing accurate data and information about the applicants	✓	✗	✓	✗	✗	✓	✗	✗	✓	✗	✓	✗	✗
Developing innovative strategies	✓	✗	✗	✓	✓	✗	✗	✗	✓	✗	✗	✗	✓
Saving time through online application	✓	✗	✗	✓	✗	✗	✓	✗	✓	✗	✓	✗	✗
Eliminating problems with civil service employees related to the digital literacy level	✗	✓	✗	✓	✗	✓	✗	✗	✓	✗	✓	✗	✗
Eliminating problems with the target groups	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✓	✗	✗
Eliminating queues in the MoHE and MoE	✓	✗	✗	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗
Enhancing organisational capacity to daily exchange information with partners	✓	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗	✗	✓
Enhancing public awareness regarding digitalisation strategy	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗
Expanding organisational experience in collaborative arrangements	✓	✓	✗	✓	✗	✓	✗	✗	✓	✗	✗	✗	✓
Improving collaborative arrangements with HEIs	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✗	✗	✗
Improving collaborative arrangements with public sector organisations	✗	✓	✗	✓	✗	✓	✗	✗	✓	✗	✓	✗	✗
Improving organisational monitoring of the application process	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✗	✗	✓
Improving student allocation processing	✓	✗	✓	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
Improving civil service employees' computing skills	✗	✓	✗	✓	✗	✗	✓	✗	✗	✗	✗	✗	✗
Improving information-sharing about students between the collaborators and HEIs	✓	✗	✗	✓	✗	✗	✓	✗	✓	✗	✓	✓	✗
Improving information-sharing between the collaborators and other governmental bodies	✗	✓	✗	✓	✗	✗	✓	✗	✓	✗	✓	✓	✗

The outcomes	The cases		Tangible	Intangible	Strategic	Tactical	Operational	Financial	Non-financial	EX: external level. INS: institutional level IOR: interorganisational relation level IN: inner context			
	C1	C2								EX	INS	IOR	IN
Increasing collaborative learning	✓	✓	✗	✓	✗	✓	✗	✗	✓	✗	✗	✓	✗
Increasing collaborative advantage	✓	✗	✗	✓	✓	✗	✗	✗	✓	✗	✗	✓	✗
Increasing applications efficiency	✓	✗	✓	✗	✗	✓	✗	✗	✓	✗	✓	✗	✗
Increasing public services efficiency	✗	✓	✓	✗	✓	✗	✗	✓	✗	✗	✓	✗	✗
Increased staff interpersonal skills	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✓	✓	✓
Meeting the global demand for ICT skills	✗	✗	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗
Minimising costs associated with the implementation of the project	✓	✗	✗	✗	✗	✓	✗	✓	✗	✗	✗	✓	✗
Minimising costs associated with the individual implementation of the GITTC	✗	✗	✗	✗	✗	✓	✗	✓	✗	✗	✗	✓	✗
New institutional norms and characteristics	✓	✗	✗	✓	✓	✗	✗	✗	✓	✗	✓	✗	✗
New institutional norms and characteristics related to the public services domain	✗	✗	✗	✓	✓	✗	✗	✗	✓	✗	✓	✗	✗
Overcoming geographical barriers	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✗	✗	✗
Promoting students' learning and skills development	✓	✗	✗	✓	✗	✓	✗	✗	✓	✓	✗	✗	✗
Promoting teachers' learning and skills development	✗	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗
Reducing workload and number of staff to do the job	✓	✗	✓	✗	✗	✗	✗	✓	✗	✗	✓	✗	✗
Reducing workload through an online process	✗	✗	✓	✗	✗	✗	✗	✓	✗	✗	✓	✗	✗
Reducing manual mistakes costs	✓	✗	✓	✗	✗	✗	✓	✓	✗	✗	✓	✗	✗
Reducing travelling costs	✓	✗	✓	✗	✗	✗	✓	✓	✗	✓	✗	✗	✗
Reducing costs stemming from paper-based applications	✓	✗	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✓
Reducing human errors in manual applications	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✗	✗	✓
Saving time through the joint collaborative structure	✗	✗	✗	✓	✗	✗	✗	✗	✓	✗	✓	✗	✗
Social equity where all students can apply through the system	✓	✗	✗	✓	✓	✗	✗	✗	✓	✓	✗	✗	✗
Unifying all admissions and HEIs application procedures	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✓	✗	✗

Source: derived from the empirical data

240

6.3 Lessons learned and recommendations

There are many data-driven and literature-grounded lessons and recommendations that can offer insights to the public managers, policy-makers, and project managers who plan, initiate, or manage IOC in the public sector. This section presents the main contextual and processual lessons and recommendations that are found relevant and associated with the implementation of collaborative arrangements in the public sector.

6.3.1 Multilevel contexts and factors

There are many contextual levels and factors that are found associated with and impacting the collaborative implementation, as Figure 6-1 and Table 6-1 showed. These factors can be found in organisational, IOC, institutional, and wider external environment. Accordingly, mapping the impacting factors should consider the multilevel of analysis as the only accurate exploration to the whole picture rather than just focusing in one or two levels. Collaborators in both cases need to understand that these factors are variable in nature, in that they can be triggers, enablers, constraints, or essential requirements pre-, during, or post-implementation. Although the projects in both cases have been considered as successful initiatives, interviewees elicited some of the barriers and inhibitive factors such as the reported complaints about the involvement of different levels of stakeholders. Accordingly, as the framework clarifies, understanding the levels, sub-factors, and the nature of the impact of such factors can help the implementers to maximise the influence of the supportive factors and avoiding or overcoming barriers or inhibitive factors. Ultimately, analysing the contextual factors should consider the multilevel nature of the context and the nature of the impact or the influence and time of the impact in accordance with the phases of the project.

6.3.2 Mutual interaction

The bidirectional interaction between the contextual levels implies changing the classic view to the interaction as a top-down only. Findings, for example, proved that the institutional level and factors shape the structure, goals, and the process of the arrangement (top-down) where the collaborators were forced to open registration centres (C1) in some cities and regions for the students in the

early stages to overcome the lack of internet services. Simultaneously, the arrangement shapes the institutional norms, regulations, and structure, when the collaboration resulted in standardisation of the HEIs' procedures in the application process. The implication of the bidirectional interaction therefore can be seen in the ability of the bottom-up interactions, such as the collaboration in impacting upper levels and changing, for example, institutional rules and norms. Moreover, the role of the policy-makers and public management, steering or temporary committees in collaboration is a significant role in balancing the influences and impacts that come from both the top and bottom sides. In C2, evidence showed insufficient treatment of the simultaneous impact or stakeholders' preferences or requirements. When the collaborators developed the content in the Arabic language because of the preference of the trainers (internal level) who are mainly from the MoE, the Ministry of Health (institutional level) complained because they have employees from foreign countries who need the content in English. As a result they joined the programme later than the others in the target community. Ultimately, understanding that the levels are linked and mutually impact each other implies considering this dynamic nature when developing a collaborative arrangement framework, especially when analysing the stakeholders' needs.

6.3.3   Cyclical dynamic process

The process of the collaborative arrangement is not linear, but cyclical and iterative in nature. This implies adopting strategies and policies that can respond actively to the dynamic nature of the process, because the linearity assumes that the process is predictable, and pre-planned strategies can effectively embrace the stages and the implementation steps. However, the cyclical nature is derived from the empirical data when the process returns to the start via the continuous learning and reflection from the previous steps. Public management and public policy-makers should develop a framework that explicitly addresses the dynamic nature of the process and boosts continuous learning and reflection strategies and cultures. Both cases have indicated an understanding of the dynamic nature of the stages; consequently, many strategies and techniques which cultivate the learning and reflection

242

atmosphere, adaptability, and responsiveness of the process to any changes were applied as Section 6.2.4 indicates.

6.3.4 Collaboration accountability

Collaborators should have clear processual actions that promote and foster accountability. The data-driven conclusion shows that the cases have informally enforced an accountable framework which properly, according to the interviewee, helped in generating a feeling of responsibility, and that the processes are bounded by a code of rules and settings. However, a few interviewees stated that having a formal framework that explicitly articulates the rules and norms and helps in fostering accountability by gathering, interpreting, and evaluating and sharing information about the progress and the outcome is not sufficiently recognised by the collaborators (C2). The issue of collaborative accountability is very complex "because it is not often clear whom the collaborative accountable to and for what" (Bryson *et al.,* 2006, p.51). However, the data-driven evidences showed that the accountability is for the different contextual levels' stakeholders, whereby a clear paradigm to embrace their needs, sustain their tangible or intangible supports, and mobilise the outcomes, can contribute to producing an accountable arrangement. Moreover, developing a systematic evaluation of the arrangement and involving different contextual levels' stakeholders in the evaluation process is a key aspect in generating and provoking an accountable culture. Ultimately, involving different levels of stakeholders in producing a framework for the accountability can help in overcoming the assumed clash between the collaborating organisations' frameworks (internal level) and the collaboration accountability framework (arrangement level) as the alignment between different level approaches is an essential step to achieve the objectives for different levels.

6.3.5 Collaborative capacity

Deepening the understanding of the collaborative capacity required more theoretical and empirical researches as Weber *et al*., (2007) argue. This study helps practitioners and academics in developing new insights into capacity by

incorporating the framework developed by Sullivan *et al*., (2006) with the processual factors that are data-driven and literature-grounded. The main lesson that can be derived from the analysis is the reciprocal relationship between capacity and the process and context, whereby the capacity is an outcome of the process and activities and simultaneously produces activities and fosters strategies, and it also influences and is influenced by the context, as Sullivan *et al.* (2006) also find. Having said that, the collaborating organisations' tasks thus become multifaceted. First, organisations must seek clarity in defining and identifying what processes might boost the capacity of the arrangement under consideration, whether administrative, operational, adaptability, or other levels of capacity. Second, evidences show that the capacity shapes the context and is shaped by the context, which means that diagnosing which contextual level influences capacity-building can help in developing a proper response. For example, the weakness in the technological and telecommunications infrastructure (institutional level) at the time of initiation of the project (C1) was a real barrier that impacted negatively on the cultivation of the community capacity as a level of the collaborative capacity. Collaborating organisations therefore must have a continuous assessment strategy to identify the possible impacting contextual or processual factors in collaborative capacity, which stands as the heart of the arrangement and the manifestation of its healthy performance.

6.3.6   Content

Findings suggest that one possible key to minimise the uncertainties and complexity that are inherited in collaborative arrangements, and therefore cultivating an in-depth understanding of what makes them work, lies with the nature of the project under consideration. Both cases implement technology-driven changes in the public sector, and both have large numbers of stakeholders in the entire country. As a result, implementing such a project is linked with and distributed in multilevel contexts and factors. This implies understanding the possible clash / consistency with, for example, the national culture, as the cases proved, and different levels of stakeholders' concerns. Moreover, the content of the arrangement matters in choosing proper required

244

competences and skills for organisational representatives in an arrangement. For example, the informational content which refers to the collaboration that is based mainly on exchanging data and information - e.g. C2: information about civil service employees (mainly from the MoCS), and information about the students (mainly from the MoE) requires equipping and training people in sharing information and knowledge, data analysis and interpretations, and communication skills. Understanding the substance of the content can help also in aligning different stakeholders' strategies and concerns with the project agenda. For example in C2, when the target population, the public services providers and governmental bodies knew that the content of the project was going to be in building digital literacy, they considered the programme as a part of their own strategy to build their employee skills, and aligned the organisational human resource development strategy with the GITTC programme.

6.3.7 Outcome

The findings from the outcome illuminate the need to have a multilevel outcome investigation and analysis tools so different stakeholders' levels objectives are addressed and benefits are clarified. The contextual levels can offer the first dimension in taxonomy to analyse the potential or the actual outcome of an arrangement. The rationale for suggesting the contextual levels as an integral part in the taxonomy lies in demonstrating that the benefits extend across the levels of the stakeholders, and are not monopolised by the focal organisation or the collaborating organisations. In addition, having several features and characteristics to label the outcomes, such as strategic, tactical, operational, tangible, intangible, financial and non-financial benefits can help public policy-makers in widening the scope and the description of the results, so they convince only those interested and concerned stakeholders. Furthermore, defining in detail the outcome also helps in creating proper measurements and evaluation methods and techniques.

6.4 Conclusions

This chapter offered revisions, validations, and testing for the proposed conceptual CCP framework for analysing and exploring the contextual and processual factors that are associated with the collaborative arrangements in the public sector. The emerged validated and revised framework would be an effective lens to explore and describe the contextual levels and factors, the relationship between different levels, the processual stages and micro-actions, and the anticipated outcomes from an arrangement. The revisions suggest that the framework would be more effective, comprehensive, and valid if it takes into consideration the multilevel nature of contexts in four levels; organisational, collaboration, institutional, and external levels, with a mutual bidirectional interaction between them. The revision therefore proves that some previous research in the field had the rationale to call for a multilevel analysis that goes beyond the organisational level which dominates the field. It is found from this study that the majority of the previous studies were not able to see the whole picture of the phenomenon because of the narrowed conceptualisations and the stress on specific areas (e.g. the organisational factors and benefits).

This limited understanding and investigation means that many influential and significant factors and elements were missed, and therefore it was not possible to know why and how the arrangements progress in particular ways. Discussions in this chapter revised the processual stages and the micro-actions, whereby there were found to be four stages, as the learning and reflection stands as an integral phase ensuring the continuity of learning from practice and development of the arrangement. Linked with this critical finding is the iterative cyclical nature of the process, which was not sufficiently addressed in the literature. The implication of explicitly articulating, based on the empirical findings, that the processes are cyclical in nature, is the need to situate this empirically-derived result in any attempt to develop a proposal for an arrangement. The rationale for this call is to maximise the awareness about the process and reflect this awareness in building an implementation strategy that is adaptable, responsive, and proactive, because the processes are not static but

dynamic, and therefore any inflexible pre-planned strategy will not be able to absorb changes and emerged requirements. Moreover, the findings stress the need to acquire collaborative skills for public managers and policy-makers, in particular those skills required for communications, sharing knowledge, negotiation, planning and evaluation, and project management skills. Ultimately, the discussion confirms the applicability of the revised framework in capturing the contextual and processual factors that are associated with the collaborative arrangement in the public sector in Oman.

7 Chapter seven: Conclusions

7.1 Introduction
The previous chapter discussed the findings and delineated the main patterns and factors, and answered the research questions through applying the framework and revising its constructs and dimensions. In this chapter the contributions and implications are presented and grouped by starting with situating the contribution within the background theory. Contributions and implications seek to accumulate the body of knowledge with regard to the conceptualisation and investigation of the contextual and processual factors in interorganisational collaborative literature in public sector studies.

The practical implications offer insights into the managerial implications and how public managers, policy-makers, and consultants could advance their practices when implementing collaborative-based projects in the public sector. In addition, the methodological implications offer epistemological insight to be considered when applying the CCP framework and studying interorganisational arrangements in the public sector. The chapter then presents the novelty dimensions, limitations, and finally the possible future studies which might advance the field and are derived from the result of this research.

7.2 Contributions vs. background theory
This research contributes to the body of knowledge by providing a contextual empirically tested lens to explore the processual and contextual factors of IOC. The research responses to the need to have a contextual insights and investigations into the implementation of IOC in the public sector. The contributions of the research therefore accumulate the body of knowledge by offering new, extended, and sometime validated insights that are found important in enhancing the current level of understanding of IOC in the public

sector. In this research, the contributions can be seen in many dimensions including:

First: the research provides rich exploration to the contextual and processual factors that are associated with the implementation of collaborative arrangements in the public sector. The research helps illuminate an interesting area of interorganisational relations that needs theoretical and empirical attention to accumulate knowledge in the public sector literature. As discussed in background theory (Chapter 2), the multidisciplinary literature review reveals that the field of interorganisational relations in the public sector lacks a multilevel, multifaceted, comprehensive framework that can offer a macroscopic lens to understand and explore the contextual and processual factors associated with the phenomenon. The need stems from the identified overreliance on exploring the organisational level factors, such as the outcomes, triggers, constraints and enablers at the expense of exploring the wider external factors that can shape and impact the process of any collaborative arrangement (Mandell and Steelman, 2003; Cropper *et al.,* 2008; Boje and Whetten; 1981). Therefore, any attempt to explore the contextual factors has to take into account the endogenous and the exogenous levels and factors (Cropper *et al.,* 2008; Marchington and Vincent, 2004). This research responds to these calls empirically in the public sector, and found that a multilevel lens can delineate accurately the contextual factors in the organisational levels and beyond. The result shows the importance of the multilevel analysis in enhancing the understanding of the contextual forces, derivers, and general contextual factors. Accordingly, it is worthless to investigate one level without having rigorous theoretical underpinnings or justifications, or any attempt will provide only a partial picture, and influential factors might be omitted or neglected.

Second: the largest body of the literature in IOC is based on economic perspectives and assumptions (Cropper *et al.,* 2008; Marchington and Vincent, 2004; Lotia and Hardy, 2008) at the expense of socio-political perspectives (Kumar and Van Diesel, 1996). As the economic rationale is not only the case,

and to embrace wider social, political, cultural, and public sector idiosyncrasies, the research applies for the first time in the field and suggests that the contextual perspective encapsulated mainly in the CCP framework can have promise to offer new insights to the field. This stems from the idea that the main premise of the CCP framework is analysing phenomena by investigating the context, content, and process simultaneously, which are underrepresented in the collaborative arrangement in the public sector literature. The researcher strengthens this lens by testing it in a pilot stage, and before that by incorporating public policy and IOC literatures, themes, and previous explanations, to make the proposed framework more accurate in capturing the reality and detecting the contextual and processual factors. The findings add substantially to the understanding of the underlying assumptions of the IOC field by highlighting the role of the social, political, cultural, and overall contextual forces, factors, and influences in shaping the collaborative arrangements in the public sector.

Third: these findings enhance our understanding of the process of collaborative arrangement, and make an important contribution in clarifying in detail what have been considered as underdeveloped areas in the field, in particular the articulated uncertainty level of what is involved in the process (Thomson and Perry, 2006; Ansell and Gash, 2007; Reilly, 2001) and the relationship between the process and the context (Sullivan *et al.,* 2006). The research enriches the literature about the stages, the micro-actions within each stage, and the interplay between the process and the context. Theoretically, these findings imply that collaboration processual studies should take into account the nature of the process as dynamic, cyclical, and liable to change. To do so, for example, developing processual models has to consider the continuity of the process due to the learning and reflection stage and process which emerged from the data as a source for the continuous and iterative process.

Fourth: the research extends the contextual CCP framework to be able to analyse and explore the complexity of the interorganisational collaborations. Although the framework, as it is found in Chapter 2, is widely accepted in theoretical and empirical studies in different fields, the framework was not examined in an interorganisational collaborative arrangement in the public sector. The evidences showed that any future attempt to apply the framework in analysing such an arrangement has to consider that the classic dichotomy of the context (internal/external) is unable to accurately describe and explore the contextual factors. This is because there are other levels which stand in between and occupy social spaces, and have to be considered as independent unities and entities of analysis. As Piotrowicz (2007) and Piotrowicz and Irani (2008) found, the complex context in international corporation when he examined the framework in information system evaluations and the need to add the corporate level between the internal and external levels; this study added the IOC and the institutional levels between the internal and wider external levels. By doing so, the research explored a new complex context (IOC arrangements) whereby the classic dichotomy in the CCP framework for the context (internal/external) is not enough to map accurately the contextual impacting factors.

Sixth: the research collected data from the public sector in Oman, and as far as the researcher is aware, this study is the first investigation into the collaborative arrangements in the public sector in Oman. Therefore, it accumulates the existing knowledge in the field by providing new insights from other contextual idiosyncrasies and commonalities with the western-developed contexts which dominate the literature in this realm.

7.3   Practical implications
First: the complexity and the multidimensional nature of collaboration imply that public managers and policy-makers understand the multifaceted role that is required from them when involved in collaboration. Collaboration is influenced by organisation, arrangement attributes, institutional characteristics, and wider environmental and external factors. Public managers, therefore, should have an

ample scope when analysing or developing an arrangement proposal whereby different levels' factors and characteristics have to be investigated in-depth to avoid missing influential factors that might be either inhibitive or supportive. Not being able to realise the stakeholders' requirements from different levels can be an administrative dilemma for collaboration management.

Accordingly, public managers should learn how to manage the possible tension between different interests and preferences of stakeholders. Among the possible ways to manage such tension is by renegotiating and reframing the governance rules to absorb and embrace different interests. In addition, consistent with findings of previous studies (e.g. Huxham and Vangen, 2005; Bryson *et al.,* 2006) public managers should understand the importance of equalising power within the arrangement, as power imbalance can impact negatively the process of the arrangement. To do so, data-driven solutions propose constantly mapping stakeholders' interests, feedbacks, and emerged concerns. Moreover, managers and policy-makers should understand how to distribute and mobilise power, and involving stakeholders in different stages of the arrangement.

Second: the role of the steering committee in dealing with the possible changes in the structure of an arrangement was found very critical. The movement of key actors is not a problematic issue if the policy-makers and public managers in the steering committees institutionalise the arrangement as was approved from the study. Institutionalisation can be achieved by nurturing and routinisation of the collaboration and interaction process, and by developing a proactive strategic planning that is equipped with adaptable and responsive methods and techniques to embrace any changes.

Third: public policy and public managers are required to pay sufficient attention to the required skills and competences that are found essential in conducting or arranging collaborative efforts. Findings supported by the literature emphasise the attention that has to be paid to the collaborating skills

and competencies. The literature emphasises frequently some essential skills, some of them reported by this study including communication skills (Huxham and Vangen, 2000a), stakeholders' involvement (Bryson and Crosby, 1992), and facilitating interaction (Koppenjan and Klijn, 2004). The competencies and skills are in the forefront of the critical supportive factors according to the empirical evidence. These skills are required to manage and administer the process of the collaboration. According to the empirical findings, cultivating collaboration management skills is a continuous and accumulative process which includes:

- Learning how to develop and frame proposals for collaboration.
- How to communicate effectively the vision of the collaboration with internal and external stakeholders.
- How to build commitment and institutionalise the process of the arrangement.
- Negotiation skills.
- Resource and time management.
- Delegation and involvement skills.
- How to evaluate the outcome of the relation.
- Problem-solving and decision-making skills.

All these collaborative skills are required through different stages of the collaboration and, therefore, these findings further support the idea that there are many formal and informal roles and tasks to be done when being in a collaborative arrangement which implies that leaders and public managers acquire leadership competencies (Bryson *et al.,* 2006).

Human resource managers in the organisational level should play vital roles in building staffs' collaborative skills for the sake of the collaborative success. Data reveals that one possible way to save time and effort in building competencies and developing organisational collaborative skills is by integrating a collaboration-oriented skills development programme into the corporate human resource strategy in an organisational level. For example, in C1, a new training content was launched and introduced to train the MoHE

employees, particularly HEAC staff, based mainly on the requirements of the interaction and communication with the MoE. This training and development programme is an integral part of the corporate HR strategy, and aligned with its priorities and needs to avoid any duplication or repetition in training and development strategies. Ultimately, the role of managers in an arrangement has a multidimensional nature (Sullivan *et al.,* 2006), where "new competencies are needed for collaboration; some of these are already inherent in the public manager" (McGuire, 2006, p.39). Whether collaborative management skills are already available to the managers, or a new training programme has to offer them, these skills are essential prerequisites for achieving individual and collaborative goals.

Fourth: this study offers practical guidelines and milestones that can help public managers and policy-makers in predicting and anticipating the possible process and micro-process involved in collaborative arrangements in the public sector in similar contextual characteristics. Accordingly, the research helps in reducing the repeatedly cited uncertainty about the process and the micro-actions which are likely to take place and/or be required throughout the implementation. Top management and leadership should assess the internal acceptance of the collaboration and provides a clear map to what is expected from the arrangement; both rights and duties. The need for this step during the planning stage is to minimise internal resistance and identify internal stakeholders' concerns, support and commitment, and in general initial legitimacy. Public managers, particularly the DGs who are representing their organisations in the management of an arrangement, must communicate effectively the progress and changes in the collaboration level to the organisations and people to elicit support and ensure the required alignment between self-interests and collective interests.

Fifth: in the other phases, managerial tasks can be seen in facilitating the operationalisation of the agreed rules. In the execution stage, public managers should apply several techniques to facilitate the interaction between

collaborating organisations. In the forefront of these techniques is the empowerment of and delegation to the people to communicate with partners in flexible ways such as using informal means and reducing the bureaucratic permissions procedures. Furthermore, among the responsibilities which are strongly recommended is the cultivation of a learning and development atmosphere to promote learning influenced by the evaluation procedures and methods where public policy-makers and public management have to ensure that the feedback is developed and pooled from top-down and bottom-up simultaneously. Learning and reflection must have committed public management to provoke and foster systematic data-driven decisions and allowing spaces for modifications and changes to take place regularly throughout the collaboration process.

Sixth: the role of public managers in creating and building collaborative capacity is fundamental as they develop, execute, and assess the arrangements. It is suggested therefore that the collaboration requires skills and responsibilities to be included in an expanded job description. In particular in this complex interdependence and interconnected public sectors, or at least in such an arrangement where the collective efforts are expected for a long time or have an inevitable nature, such as the C1 case between MoE and MoHE. Collaborative skills and the relevant responsibilities which might be added to the job description can include, for example, managing and evaluating collaborative efforts, managing and equalising power in interorganisational efforts, and aligning the organisational strategy with the collective strategy.

Seventh: public policy-planners and -makers need to recognise that the content and the potential outcome of the public collaborative arrangements determine many procedural and implementation requirements. Public policy management has to analyse and identify the substance of the policy in terms of its targeted groups, the core content, and the stakeholders' requirements, since deciding the content in which the collaboration takes place means identifying the needed resources, timescale, and possible stakeholders. Similarly, the validated

taxonomy to analyse the outcome of an arrangement shows that analysts, evaluators, consultants, and public managers have to adopt a multifaceted categorisation to read the benefits and the outcome.

The rationale and the underlying logic are to develop the proper measurements when investigating the achievement of an anticipated outcome. In addition, it helps in identifying and mapping different stakeholders' objectives and whether they have been met or not. In particular these can be derived from the last columns in the taxonomy, which grouped the outcomes into organisational, arrangement level, institutional, and wider external levels.

7.4   Methodological implications

First: new unit and levels of analysis were examined when applying the CCP framework. This research, is the first examination and validation of the extension made by Piotrowicz (2007) and Piotrowicz and Irani (2008) about the third level (corporate level in international corporation) which occupies the social space between the internal and external contexts when applying the CCP framework. The empirical evidences confirm the limitation of the classic dichotomy of internal and external levels, as Piotrowicz did. However, this study produces and extends the CCP framework and adds two levels in between which are the arrangement level and the institutional level. The methodological contribution therefore can be seen in strengthening the CCP framework to be able to predict more accurately the contextual factors, forces, and characteristics when applied in analysing and exploring interorganisational collaborative arrangements. in additions, despite the idiosyncratic implication of some emerged contextual factors from the cases and the content of the collaboration, the framework introduced new levels of analysis that have to be considered as the theoretical underpinning implied, the focal theory proposed and suggested, and the empirical evidences confirmed.

Second: there are insufficient qualitative studies in the field of IOC because of the difficulty to access and collect the data from all partners, and therefore

previous studies mainly collect data quantitatively from one organisation. This research among those few studies which were conducted qualitatively and data collected from all the participants; five organisations in both cases. IOCs are social phenomena and are linked with interaction, dynamism and complexity (Huxham and Vangen, 2000; Hardy, 2003; Evert and Jamal, 2003). Accordingly, qualitative insights and in-depth research are the correct methods to use. Oliver and Ebers (1998) found that although qualitative research is more likely to deeply explore social interaction phenomena, qualitative studies in interorganisational networks have not been applied or used sufficiently compared to quantitative researches. In a similar vein, Hardy *et al*. (2003, p.322) found that "while such quantitative studies have proved invaluable in furthering our understanding of precise, specific, individual effects of collaboration and their relationship to a host of other factors, they have not helped us develop a more comprehensive understanding of what is involved in collaboration". Additionally, Provan *et al*. (2007, p.511) suggest that to have in-depth insights into interorganisational networks, the frequent use of quantitative researches will not help but that greater understanding of interorganisational networks' initial conditions at founding, and changing contexts could be gained by the additional use of qualitative methodologies such as narrative interviews and participant observation".

Third: contextual and processual themes and sub-themes were emerged from the data. Also, a contextualised case study protocol was validated in which a helpful guidelines for future researchers in IOC and the accessibility idiosyncratic requirements and procedures in the Omani context (see Appendix A).

7.5   Linking research novelty with the gap

This research applies and validated an extended version of the CCP framework as mentioned in sections 1.1, 2.4, and chapter three to deepening the understanding of the contextual and processual factors in IOC arrangement in the public sector. The gap was the lack of a multifaceted lens that can help public management and policy makers, academics to understand indepth the phenomenon and therefore minimise the uncertainty, complexity, and the high

rate of failure in IOCs. In this regard, a new empirically examined multifaceted CCP framework was validated to analyse and explore the contextual and processual factors associated with the implementation of collaborative arrangement in the public sector. The framework enhances the understanding of the IOC arrangements as it delineates systematically the context, its boundaries, forces, triggers, and the relationship between different levels. In addition, for the first time the collaborative capacity framework (Sullivan *et al.,* 2006) is incorporated into the CCP framework in an empirical study. This incorporation helps bridging the identified gap by portraying explicitly the relationship between the capacity, process, and the surrounding context. The research develops and examines empirically a new taxonomy to analyse, map, and explore the outcome and the benefits of collaborative arrangements in the public sector. The contribution of this taxonomy to the outcome helps in bridging the gap also in particularly in terms of defining how the outcome is impacted by the contextual and processual factors. It helps public management and policy makers in understating what process are required in similar contextual characteristics to reach a particular outcome. Moreover, the research is the first study which applies the CCP framework in the interorganisational relations field. This attempt has resulted in an extension to the CCP framework by adding the interorganisational collaboration level and the institutional levels are for the first time which implies that future researches consider the as integral levels when applying the CCP framework in similar settings to avoid ignoring critical and important influential factors.

7.6   Boundaries and limitations of the study

"No proposed research project is without limitations; there is no such thing as a perfectly designed study ... limitations derive from the conceptual framework and the study's design" (Marshall and Rossman, 1999, p.42). This study adapts a descriptive approach with no intention to investigate causal relationships. The findings from the background theory imply selecting a descriptive exploration rather than measuring significance of a particular factor. Also, the research focuses on the contextual and processual factors only and investigates the emerged factors from the literature and shaped by the pilot stage. Many other

factors might be excluded during the pilot stage, and therefore further studies can study other factors such as organisational size, collaboration size, and individual perceptions.

The research adopts the definition of collaboration as a non-market-based structure, which is to exclude supply-buyer or any form of financial-based relations. Organisations are from the public sector in Oman, and therefore transferability of the findings and implications should consider contextual idiosyncrasies related to developing countries, the Arab region, and the Omani public sector context. The study focuses also on the execution and implementation stage of the initiatives, accordingly termination stage insights may not be derived clearly or obviously from this study. Although the researcher has a prolonged engagement with the cases and data collection phases, such research, where a processual stage and factors are accurately to be followed, requires a longitudinal method to avoid any limitations which stem from the retrospective data collection methods.

7.7   Recommendations for further studies

-   The framework was applied and revised in the context of developing countries, therefore examining and testing it in different contextual characteristics will validate the findings and confirm the reliability of the framework.

-   Employing longitudinal methods is recommended because it helps more in detecting the evolution of the process of an interorganisational arrangement and can offer more rigorous and accurate time-based comparative analysis.

-   It is recommended also to conduct a positivistic research to answer the questions of which of these contextual factors have more effects and influences in the process of the collaboration.

-   Another proposition is studying the reasons why public managers and policy-makers choose particular ways, methods, and strategies to

259

implement collaborative arrangements. Are there any behavioural justifications or contextual motives behind choosing particular techniques?

- Comparative studies between public-private partnerships, public-public collaborations, and cross-sectoral arrangements are recommended future direction. This trend has many promises to enrich the field with regard the commonalities and idiosyncrasies in different interorganisational relations' contextual and processual factors.

References

- Abonyi, G. and Van Slyke, D. M., (2010). Governing on the Edges: Globalization of Production and the Challenge to Public Administration in the Twenty-First Century, *Public Administration Review*, Vol. 70, No. 1, pp. 1-11

- Agranoff, R. And McGuire, M., (2001). Big Questions in Public Network Management Research. *Journal of Public Administration Research and Theory*, Vol. 11, No. 3, pp. 295-326.

- Agranoff, R., (2006). Inside Collaborative Networks: Ten Lessons for Public Managers. *Public Administration Review*, Vol, 66, No. 6, pp. 56-65.

- Akinbode, I. A. Clark, R.C., (1976). A framework for analyzing interorganisational relationships, *Human Relations*, Vol. 29, No. 2, pp.101-14.

- Alajoutsijärvi, K. Tikkanen, H., (2002). Customer Satisfaction in Industrial Markets. Opening Up the Concept. *Journal of Business & Industrial Marketing*, Vol. 17, No. 1, pp. 25-42.

- Aldrich, H. E., (1976). "Resource Dependence and Interorganisational Relations: Relations Between Local Employment Service Offices and Social Services Sector Organizations." *Administration and Society*, Vol. 7, No.4, pp. 419-454.

- Ali, A., Lee, M., Hsieh, Y. and Krishnan, K. (2005). Individualism and Collectivism in Taiwan, *Cross Culture Management*, Vol. 12. No. 4, pp. 3-17

- AL-Twaijri, M.I., and Al-Muhaiza, I.A., (1996). Hofstede's Cultural Dimensions in the GCC Countries: An Empirical Investigation, *International Journal of Value-Based Management*, Vol. 9, No. 2, pp. 121-131

- Alwatan (2008). Civil services employee training program, http://www.alwatan.com/graphics/2008/10oct/26.10/dailyhtml/economy.html, Accessed in 1-7-2009

- Amirkhanyan , A. A., (2009). Collaborative Performance Measurement: Examining and Explaining the Prevalence of Collaboration in State and Local Government Contracts. *Journal of Public Administration Research and Theory,* Vol. 19, No. 3 pp: 523-554.

- Andrews, R. and Entwistle, T., (2010). 'Does Cross-Sectoral Partnership Deliver? An Empirical Exploration of Public Service Effectiveness, Efficiency and Equity', Journal of Public Administration Research and Theory, Vol. 20, No. 3, pp. 679-701

- Ansell, C and Gash, A. (2007). Collaborative governance in theory and practice. *Journal of Public Administration Research and Theory*, Vol. 18, No. 4. pp. 543-571.

- Armenakis, A. A., & Bedeian, A. G., (1999). "Organizational Change: Review of theory and research in the 1990's". *Journal of Management,* Vol. 25, No. 3, pp. 293-315.

- Asgarkhani, M., (2005). Digital Government and its effectiveness In Public Management Reform, *Public Management Review*, Vol. 7, No. 3, pp. 465 - 487.

- Babaheidari, S. M., (2007). Reviewing Interpretive Approaches for Evaluation of Information Systems Investments, Master thesis, IT University Of Göteborg available online at http://gupea.ub.gu.se/dspace/bitstream/2077/19439/1/gupea_2077_19439_1.pdf accessed 5/6/2009.

- Bada, A., Aniebonam, M. and Owei, V., (2004). Institutional pressures as sources of improvisations: a case study from a developing country context. *Journal of Global Information Technology Management,* Vol. **7**, No. 3, pp. 27–44.

- Baldwin, N., (1990). Perceptions of public versus private sector personnel and informal red tape: their impact on motivation. *American Review of Public Administration*, Vol. 20, No.1, pp. 7–27.

- Barringer, B. R. & Harrison, J. S., (2000). Walking a Tightrope: Creating Value through Interorganisational Relationships. *Journal of Management*, Vol. 26, No. 3, pp. 367-403.

- Bingham, L. B, and O'Leary, B (2006). Conclusion: Parallel play, not collaboration: Missing questions, missing connections. *Public Administration Review* 66:161–7.

- Boje, D. M. Whetten, D. A., (1981). "Effects of organizational strategies and constraints on centrality and attributions of influence in interorganisational networks", *Administrative Science Quarterly*, Vol. 26 No.3, pp.378-95.

- Borgatti, S. P and Foster, C. P., (2003). The Network Paradigm in Organizational Research: A Review and Typology *Journal of Management* Vol. 29, No. 6, pp. 991-1013.

- Bozeman, B., and Bretschneider, S., (1994). The 'Publicness Puzzle" in Organization Theory: A Test of Alternative Explanations of Differences Between Public and Private Organization. *Journal of Public Administration Research and Theory,* Vol. 4, No.2, pp.197-223

- Brass, D. J. Galaskiewicz J, Greve, H. R. and Tsai, W., (2004). Taking stock of networks and organizations: a multilevel perspective. *American Review of Public Administration,* Vol. 47, No. 6, pp. 795–817.

- Bretschneider, S., (1990). Management information systems in public and private organizations: an empirical test. *Public Administration Review,* Vol. 50 No. 5, pp., 536-545.

- Brignall, S., Ballantine, J. (2004). "Strategic enterprise management systems: new directions for research", *Management Accounting Research*, Vol. 15 No.2, pp.225-40

- Brown, M.M., O'Toole, L.J. and Brudney, J.L. (1998). Implementing Information Technology in Government: An Empirical Assessment of the Role of Local Partnerships. *Journal of public administration*, Vol. 8, No. 4, pp. 499-525.

- Brown, T. L., (2010). The Evolution of Public Sector Strategy. *Public Administration Review*, 70: s212–s214.

- Bryman, A. & Bell, E. (2007). Business Research Methods, Oxford University Press.

- Bryson, J. & Crosby, B. (1992). Leadership for the common good: Tackling public problems in a shard-power world. San Francisco, CA: Jossey-Bass.

- Bryson, J. M,   Crosby, B. C, and Stone, M. M., (2006). The Design and Implementation of Cross-Sector Collaborations: Propositions from the Literature. *Public Administration Review,* Vol. 66, No. S1, pp., 44-55.

- Buchanan, D and Boddy D. (1992). The Expertise of the Change Agent, Prentice-Hall.

- Buchanan, D. A. and Bryman, A., (2009). The Sage handbook of organizational research methods. Sage Publications

- Buchanan, D. A., (1991). Vulnerability and Agenda: Context and Process in Project management. *British Journal of Management*, Vol. 2, No. 3, pp. 121-132.

- Burk, W and Litwin, G., (1992). A Causal Model of Organizational Performance and Change, *Journal of Management*, Vol. 18, No. 3, pp. 523 - 545.

- Burt, M.R. (1980). Cultural Myths and supports for rape. *Journal of Personality and Social Psychology*. Vol. 38 No. 2, pp. 217-230

- Bushouse, B. K, Jacobson, W. S, Lambright, K. T, Llorens, J. J, Morse R. S, Poocharoen, O., (2010). Crossing the divide: Building bridges between public administration practitioners and scholars. *Journal of Public Administration Research and Theory*, Vol. 21. No. (Supp. 1).:i99-i112

- Caldwell, R., (2006). Agency and Change: Rethinking Change Agency in Organizations, London, Routledge.

- Cappelli, P., Sherer, P.D., (1991). The missing role of context in OB: the need for a meso-level approach", in Cummings, L.L., Staw, B.M.

(Eds).,Research in Organizational Behavior, JAI Press, Greenwich, CT, Vol. Vol. 13 pp.55-110.

- Casciaro, T., and Piskorski, M. J., (2005). Power Imbalance, Mutual Dependence, and Constraint Absorption: A Closer Look at Resource Dependence Theory. *Administrative Science Quarterly*, Vol. 50, No. 2, pp. 167-199.

- Cho, S. Mathiassen, L. Nilsson, A., (2008). Contextual dynamics during health information systems implementation: an event-based actor-network approach. *European Journal of Information Systems*, Vol. 17, No. 6, pp. 614-630.

- Cline, K. D., (2000). Defining the implementation problem: Organizational management versus cooperation. *Journal of Public Administration Research and Theory,* Vol. 10, No. 3, pp. 551–571.

- Collins, D., (1998). *Organizational Change: Sociological Perspectives*, Routledge, London.

- Connelly, D. and Canestraro, D. (2007). Success Factors in Interorganisational Information Technology Projects, Paper presented at the annual meeting of the Midwest Political Science Association, Chicago, Illinois, http://www.allacademic.com//meta/p_mla_apa_research_citation/1/9/6/8/1/pages196818/p196818-1.php Accessed 5-5-2009.

- Constantinides, P., and Barrett, M., (2006). Negotiating ICT development and use: The case of a telemedicine system in the healthcare region of Crete. *Information and Organization*, Vol. 16. No. 1, pp. 27-55.

- Coram, R., Burnes, B., (2001). Managing organisational change in the public sector: lessons from the privatisation of the Property Services Agency. *International Journal of Public Sector Management*, Vol. 14, No.2, pp.205-20.

- Coursey D. and Bozeman, B., (1990). Decision making in public and private organizations: a test of alternative concepts of publicness. *Public Administration Review*, Vol. 50, No. 5, pp., 525–35.

- Cropper, S and Palmer, I., (2008). Change, Dynamics, and Temporality in Inter-organizizational Partnerships - in (Eds).: Cropper, S, Ebers, M., Huxham, C., and Ring, P. S. The Oxford handbook of interorganisational relations. Oxford, United Kingdom: Oxford University Press. Pp.635-663.

- Cropper, S, Ebers, M., Huxham, C., and Ring, P. S. (2008). The Field of Inter-organizational Relations: A Jungle or an Italian Garden? In (Eds).: Cropper, S, Ebers, M., Huxham, C., and Ring, P. S. The Oxford handbook of interorganisational relations. Oxford, United Kingdom: Oxford University Press. Pp. 719-738.

- Cropper, S. (1996). Collaborative working and the issue of sustainability. In creating collaborative advantage, edited by C. Huxham, 80-100. London: Sage.

- Cropper, S. 1996: Collaborative working and the issue of sustainability. In Huxham, C., editor. *Creating collaborative advantage*. London: Sage, 80–100.

- Daley, M. D., (2009). Interdisciplinary Problems and Agency Boundaries: Exploring Effective Cross-Agency Collaboration. *Journal of Public Administration Research and* Theory, Vol. 19, No. 3., Pp.477-493

- Dawes, S., & Prefontaine, L., (2003). Understanding New Models of Collaboration for Delivering Government Services. *Communications of the ACM*, Vol. 46, No. 1, pp. 40-42.

- Dawson, P. (1996). Beyond conventional change models: A processual approach. *Asia Pacific Journal of Human Resources*, Vol. 34, No. 2, pp. 57-70.

- Dawson, P., (1994). Organisational Change: A Processual Approach, London, Paul Chapman.

- De Caluwe, L. and Vermaak H., (2003). 'Learning to Change; A Guide for Organization Change Agents'. Sage Publications

- Denzin, N., (1989). The Research Act. Englewood Cliffs. Prentice Hall.

- Devos, G. Buelens, M. and Bouckenooghe, D., (2007). Contribution of content, context, and process to understanding openness to organizational change: two experimental simulation studies, *The Journal of Social Psychology,* Vol. 147, No. 6, pp., 607–629.

- DiMaggio, P. J. and Powell, W. W., (1983). 'The iron cage revisited: institutional isomorphism and collective rationality in organizational fields'. *American Sociological Review*, Vol. 48, No. 2, pp.147–60.

- Donaldson, Thomas; Preston, Lee E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management Review (Academy of Management)*. Vol. 20, No. 1, pp.65-91

- Dudman, J., (2009)., The challenge of joining up government http://www.guardianpublic.co.uk/public-managers-joined-up-government, accessed 26-5-2009.

- Dyer, J., (1997). Effective Interfirm Collaboration: How Firms Minimize Transaction Costs and Maximize Transaction Value. *Strategic Management Journal,* Vol. 18, pp.553-566

- Easterby-Smith, M., Thorpe, R. and Lowe, A. (1993)., Management Research: An Introduction, Sage, London. chapter 4

- Eisenhardt, K.M., (1989). "Building theories from case-study research", *Academy of Management Review,* Vol. 14 No.4, pp.532-550

- Everett, J. and Jamal, T., (2004). Multistakeholder Collaboration as Symbolic Marketplace and Pedagogic Practice. *Journal of Management Inquiry*, Vol. 13, No. 1, pp. 57–77.

- Ezz, I and Papazafeiropoulou, A., (2006). Inter-organisational collaboration towards process integration in the public sector. E-government collaboration in Egypt, Proceedings of the 39th Hawaii International Conference on System Sciences.

- Farazmand, A. (2009), Building Administrative Capacity for the Age of Rapid Globalization: A Modest Prescription for the Twenty-First Century. *Public Administration Review, Vol. 69 No. 6, pp.1007-1020.*

- Fedorowicz, J., Gogan, J and Williams, C. (2006). E-Government Collaboration Challenge: Lessons from Five Case Studies, http://www.businessofgovernment.org/pdfs/FedorowiczReport.pdf accessed 15-6-2009

- Feldman, M. S., (2010). Managing the Organization of the Future. *Public Administration Review*, 70: s159–s163

- Finn, C. (1996). Utilizing stakeholder strategies for positive collaboration. In: C. Huxham, Editor, Creating Collaborative Advantage, Sage Publications.

- Flick, U., (2008). Managing Quality in Qualitative Research, Sage Publications Ltd.

- Flyvbjerg, B., (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, Vol. 12, No. 2, pp. 219-245.

- Fried, B. J., Johnsen, M. C., Starrett, B. E., Calloway, M. O., & Morrissey, J. P., (1998). An empirical assessment of rural community support networks for individuals with severe mental disorders. *Community Mental Health Journal*, Vol. 34, No. 1, pp. 39-56.

- Gajda, R., (2004). Utilizing Collaboration Theory to Evaluate Strategic Alliances *American Journal of Evaluation*, Vol. 25, No. 1, pp. 65-77.

- Getha-Taylor, H, Holmes, M. H, Jacobson, W. S, Morse, R. S., Sowa, J. E., (2011). Focusing the Public Leadership Lens: Research Propositions and Questions in the Minnowbrook Tradition. *Journal of Public Administration and Research and Theory,* Vol. 21 (suppl 1).: i83-i97

- Gil-Garcia, J. R., Chengalur-Smith, I., and Duchessi, P., (2007). Collaborative e-Government: impediments and benefits of information-sharing projects in the public sector, *European Journal of Information Systems*, Vol. 16, No 2, pp. 121-133.

- Graetz, F, Rimmer, M, Lawrence, A. and Smith, A. (2006). *Managing organisational change*, 2nd Australian edition, John Wiley & Sons, Australia

- Gray B (1985). Conditions Facilitating Interorganisational Collaboration. *Human Relations, Vol.* 38, No. 10. Pp., 911–936.

- Gray, B and Wood, D., (1991). Collaborative Alliances: Moving from Practice to Theory *Journal of Applied Behavioral Science* Vol. 27, No. 3. pp. 3-22.

- Gray, B., (1989). Collaborating: finding common ground for multiparty problems. Josses-Bass, San Francisco.

- Gray, B., Hay, T.M., (1986). "Political limits to international consensus and change", *Journal of Applied Behavioral Science*, Vol. 22 pp.95-112

- Greasley, Paul J. Watson, J. P and Patel, S., (2008). The formation of public-public partnerships: A case study examination of collaboration on a "back to work" initiative *International Journal of Public Sector Management*, Vol. 21. No. 3, pp.305-313

- Green, G., and Thorogood, N (2008). Qualitative Methods for Health Research, *SAGE Publications Ltd*

- Gulati, R. and Gargiulo, M., (1999). 'Where do interorganisational networks come from?' *American Journal of Sociology*, 104(5)., pp. 1439–1493.

- Gutierrez L.H.S., (1995). Transformations of the HR function in the context of restructuring, *International Journal of Manpower*, Vo. 16. No. 10, pp. 25 – 38.

- Hallett, C, & Blrchall, E. (1992). Coordination and child protection: A review of the literature. Edinburgh UK: HMSO.

- Hardy, C., Nelson, P., and Lawrence, T. B., (2003). "Resources, Knowledge and Influence: The Organizational Effects of Intel-organizational Collaboration," *Journal of Management Studies*, Vol. 40, No. 2, pp. 321-347.

- Higher Education Admission Centre (2010). http://www.heac.gov.om/index.php?option=com_content&view=article&id=2&Itemid=2&lang=en accessed 1/2010

- Hofstede, G. (1993). Cultural constraints in management theories. *Academy of Management Executive,* Vol. 7, No. 1., pp. 81—94

- Hofstede, G., (1994). Management Scientist Are Human. *Management science* Vol. 40, No.1, pp.4-13.

- Hofstede, G., (1980). Culture's consequences: international differences in work-related values. Beverly Hills, CA: Sage.

- Huang, J, Newell, S, Galliers, R and Pan, S L., (2003). Dangerous Liaison: Component-Based Development and Organizational Subcultures. *IEEE Transactions on Engineering Management* Vol. 50 No. 1, pp. 89-99.

-

- Hudson, B., Hardy, B. Henwood, M., and Wistow, G., (1999). In Pursuit of Inter-Agency Collaboration In The Public Sector What is the contribution of theory and research?. *Public Management Review*, Vol. 1, No. 2, pp. 235 – 260

- Huerta, E. and Sanchez, P.J., (1999). Evaluation of Information Technology: Strategies in Spanish firms, *European Journal of Information Systems*, Vol. 8, No. 4, Pp.273-283

- Hughes, M., (2006). Change management: A critical perspective, CIPD House, London.

- Huxham , C., and Vangen, S (2005). . Managing to Collaborate: The Theory and Practice of Collaborative Advantage . New York : Routledge .

- Huxham C, Vangen, S., (2000a). Ambiguity, complexity and dynamics in the membership of collaboration, *Human Relations* Vol. 53, No. 6, pp. 771–806.

- Huxham, C. (2003). Theorizing collaboration practice. *Public Management Review* Vol. 5, No. 3, pp., 401–23.

- Huxham, C., & Vangen, S., (2000b). Leadership in the shaping and implementation of collaboration agendas: How things happen in a (not quite). joined-up world. *Academy of Management Journal*, *43*(6)., 1159-1175.

- Huxham, C., (1996). Creating Collaborative Advantage. Sage Publications.

- Institute for Government Report., (2009). Performance Art: Enabling better management in the public services

http://www.instituteforgovernment.org.uk/pdfs/IfG_Performance_Art_SP.PDF, Accessed 25-5-2009.

- Isett K, and Provan, K., (2005). "The evolution of dyadic interorganisational relationships in a network of publicly funded nonprofit agencies" *Journal of Public Administration Research and Theory*, Vol. 15. No.1, pp. 149-165.

- Isett, k., Kelly, L., Ines ,M., Pamela, A. M., and Karl, R., (2011). Networks in Public Administration Scholarship: Understanding Where We Are and Where We Need to Go. *Journal of Public Administration Research and Theory*. Vol 21, Issue supp l 1Pp. i157-i173

- Janesick, V., (2000). The Choreography Of Qualitative Research Design. Handbook Of Qualitative Research, 2, 379-399.

- Jayasuriya, R., (1999). Managing information systems for health services in a developing country: a case study using a contextualist framework International *Journal of Information Management* Vol. 19, No.5, pp. 335-349.

- Johns, G., (2001). In praise of context. *Journal of Organizational Behavior.* Vol. 22, No. 1, pp. 31-42.

- Johnsen, M., Morrissey, J. P., & Calloway, M., (1996). Structure and change in child mental health service delivery networks. *Journal of Community Psychology*, Vol. 24, No. 3, pp. 275-289.

- Jones, C. Hesterly, W. S Borgatti, S . P., (1997). A general theory of network governance: exchange conditions and social mechanisms. *The Academy of Management Review,* Vol. 22, No. 4, pp. 911-945.

- Karyda, M., Kiountouzis, E., Kokolakis, S., (2005). Information systems security policies: a contextual perspective. *Computers and Security* Vol. 24, No. 3, pp. 246–260.

- Kautz, K. and Nielsen, P.A., (2004). Understanding the Implementation of Software Process Improvement Innovations in Software Organisations, *Information Systems Journal*, Vol. 14, No. 1, pp. 3-22

- Keast, R Mandell, M, Brown, K and Woolcock, G, (2004)., Network Structures: Working Differently and Changing Expectations. *Public Administration Review*, Vol. 64, No. 3, pp.363-371.

- Ketchen, D. J., Thomas, J. B., & McDaniel, R. R., (1996). Process, content and context: Synergistic effects on organizational performance. *Journal of Management*, Vol. 22, No. 2, pp.231-257.

- Khojasteh, M., (1993). 'Motivating the private vs. public sector managers'. *Public Personnel Management*, Vol. 22, No.3, pp. 391–401.

- Knight, L and Pye, A., (2004). exploring the relationships between network change and network learning. *Management Learning*, Vol 35, No 4, pp. 473-490.

- Knight, L and Pye, A., (2005). Network learning: An empirically derived model of learning by groups of organizations. Human *Relations*, Vol. 58, No. 3, 369-392.

- Koppenjan , J. and Klijn, E. H., (2004). Managing Uncertainties in Networks . London: Routledge .

- Krueathep W, Riccucci, N, M., and Suwanmala, C., (2010). Why do agencies work together? The determinants of network formation at the subnational level of government in Thailand. *Journal of Public Administration Research and Theory* Vol. 20, No. 1, pp. 157-85

- Kumar, K. and van Diesel, H., (1996). 'Sustainable Collaboration: Managing conflict and Cooperation in Interorganisational Systems'. *MIS Quarterly*, September: 279–300.

- Lan, Z. and Rainey, H., (1992). 'Goals, rules and effectiveness in public, private and hybrid organizations: more evidence on frequent assertions about differences'. *Journal of Public Administration Research and Theory*, Vol. 2, No. 1, pp. 5–28.

- Lasker RD, Weiss E, Miller R., (2001). Partnership synergy: A practical framework for studying and strengthening the collaborative advantage. *Milbank Q, Vol.* 79, pp.179-206

- Lawless, M.W., & Moore, R.A., (1989). Interorganisational systems in public service delivery: A new application of the dynamic network framework. *Human Relations*, Vol. 42. No. 12, pp.1167-1184.

- Lawrence, T. B., Hardy, C.,& Phillips, N., (2002). Institutional effects of interorganisational collaboration: The emergence of proto-institutions. *Academy of Management Journal*, Vol. *45*. No. 1, pp. 281-290.

- Lincoln, Y. & Guba, E. (1985). Naturalistic Inquiry (Beverly Hills, Ca, Sage).

- Lotia N & Hardy C., (2008). "Critical perspectives on collaboration" in (Eds).: Cropper, S, Ebers, M., Huxham, C., and Ring, P. S. The Oxford handbook of interorganisational relations. Oxford, United Kingdom: Oxford University Press. Pp. 366-389.

- Luna-Reyes. L. F., Gil-Garcia, J .R and Cruz, C. B., (2007). Collaborative digital government in Mexico: Some lessons from federal Web-based interorganisational information integration initiatives. *Government Information Quarterly*, Vol. 24, pp. 808–826.

- Mandell, M and Steelman, T., (2003). Understanding what can be accomplished through interorganisational Innovations. *Public Management Review*, Vol. 5, No. 2, pp.197-224.

- Mandell, M. P., and Keast, R., (2008). Evaluating the effectiveness of interorganisational relations through networks *Public Management Review*, Vol. 10. No. 6, pp. 715-731.

- Mandell, M., (1984). Application of Network Analysis to the Implementation of a Complex Project. *Human Relations*, Vol. 37, No. 8, 659-679.

- Marchington, M P., Vincent, S., (2004). "Analysing the Influence of Institutional, Organizational and Interpersonal Forces in Shaping Inter-organizational Relations." *Journal of Management Studies* Vol. 41, No. 6, pp. 1029-1056.

- Margerum, R. D., (2002). "Collaborative Planning: Building Consensus and Building a Distinct Model for Practice*." Journal of Planning Education and Research*, Vol. 21, No. 3, pp. 237-237

- Marshall, C. & Rossman, G. B., (1999). Designing Qualitative Research. Sage Publications. USA.

- Mason, J., (2002). Qualitative Researching, Sage Pubns Ltd.

- Maxwell, J., (2005). Qualitative Research Design. Thousand Oaks, Ca: Sage.

- McGuire, M., (2006). "Collaborative Public Management: Assessing What We Know and How We Know It." *Public Administration Review*. Vol. 66, No s1, pp. 33-43.

- Medcof, W., (2001). Resource-based strategy and managerial power in networks of internationally dispersed technology units. *Strategic Management Journal*, Vol.22, No. 11, pp. 999-1012

- Metcalfe, L. And Richards, S., (1990). Improving Public Management, Sage: European Institute of Public Administration.

- Metcalfe, L., (1993). Public sector: from mitigation to innovation. *Australian Journal of Public sector*, Vol. 52, No. 3, pp., 292-305.

- Miles, M. B., Huberman, A.M., (1994). *Qualitative Data Analysis: An expanded sourcebook* (2nd edn.)., Sage: London & Thousand Oaks, California.

- Miles, R. and Snow, C., (1986). 'Organizations: new concepts for new forms', *California Management Review*, Vol, 28. No. 3, pp. 62-73

- Milward, B., (1982). Inter Organizational Policy Systems and Research on Public Organizations. *Administration & Society*, Vol. 13, No. 4, 457-478.

- Ministry of Education Terms of reference (2011). http://www.moe.gov.om/portal/sitebuilder/sites/eps/english/ips/right_m enu/ministry/ektsas.aspx , Accessed 1/2011

- Ministry of information (2008). At The Opening of the Annual Session of The Majlis Oman,

http://www.omanet.om/english/hmsq/hmsq8.asp?cat=hmsq, Accessed, 15-5-2010.

- Ministry of Information (2010). Speech of His Majesty Sultan Qaboos Bin Said Sultan of Oman

- Mitchell, R.K., Agle, B.R., & Wood, D.J., (1997). "Toward a Theory of Stakeholder Identification and Salience: Defining the Principle of Who and What Really Counts." *Academy of Management Review*, Vol. 22, No. 4, pp. 853-886.

- Morrissey, J. P., Tausig, M., & Lindsey, M., (1985). Community mental health delivery systems: A network perspective *American Behavioural Scientist*, Vol 28, No. 5, pp. 704-720.

- Nohria, N., & Eccles, R. (1992). Face to face: making network organizations work. In N. Nohria & R.G. Eccles (Eds.). *Networks and Organizations: Structure, Form, and Action.* Boston: Harvard Business School Press, 288-308.

- O'Toole, L. and Montjoy, R. S., (1984). Interorganisational policy implementation: A theoretical perspective. *Public Administration Review*, Vol, 44, No. 6, pp. 491–503

- O'Leary, R. and Van Slyke, D. M., (2010). Introduction to the Symposium on the Future of Public Administration in 2020, *Public Administration Review*, Vol. 70, No. 1, pp. 1-11

- Oliver, A., Ebers, M., (1998). "Networking network studies: an analysis of conceptual configurations in the study of inter-organizational relationships", *Organization Studies*, Vol. 19 No.4, pp.549-83.

- Oliver, C., (1990). Determinants of Interorganisational Relationships: Integration and Future Directions. *Academy of Management Review Vol.* 15, No. 2, pp. 241 – 65.

- O'Looney, J. (1997). "Making progress towards service integration: Learning to use evaluation to overcome barriers". *Administration in Social Work*, Vol. 21(3/4).:31-65.

- Orum, A., Feagin, J. & Sjoberg, G., (1991). Introduction: The Nature Of The Case Study. A Case For The Case Study, 1-26.

- O'Toole, L.J. and Meier, K.J., (2004). "Public management in intergovernmental networks: Matching structural networks and managerial networking", *Journal of Public Administration Research and Theory*, Vol. 14 pp.469-94.

- O'Toole, L.J., (1997). Treating Networks Seriously: Practical and Research-based Agendas in Public Administration. *Public Administration Review*, Vol. 57, No. 1, pp. 45-52.

- Peak, M. L., (2008). Organizational change and the research university: The exploration of technological transformation in an academic research library, PhD thesis, University of Virginia

- Perry, J. and Rainey, H., (1988). 'The public-private distinction in organization theory: a critique and research strategy'. *Academy of Management Review*, Vol. 13, No. 1, pp. 182–201.

- Pettigrew, A. and Whipp, R., (1991). 'Managing Change for Competitive Success' Oxford, Basil Blackwell.

- Pettigrew, A., (1987). Context and action in the transformation of the firm. *Journal of Management Studies*, Vol. 24, No. 6, pp. 649-670.

- Pettigrew, A., (1990). Longitudinal field research on change: Theory and practice. *Organization Science*, Vol. 1, No. 3, pp. 267-292.

- Pettigrew, A., (1997). "What is a Processual Analysis?" *Scandinavian Journal of Management Studies,* Vol 13, No. 4, pp.,331-503.

- Pettigrew, A., Ferlie, E. and McKee, L., (1992). '*Shaping Strategic Change'* London: Sage.

- Pettigrew, A., Woodman, R., & Cameron, K., (2001). Studying Organizational Change and Development: Challenges for Future Research, *Academy of Management Journal*, Vol. 44, No. 4, pp. 697-713.

- Pettigrew, A.M., (1985). The awakening giant: Continuity and change in imperial chemical industries. Oxford: Basil Blackwell.

- Pettigrew, A.M., McKee, L. and Ferlie E., (1988). 'Understanding change in the NHS'. *Public Administration,* Vol. 66, No. 3, pp.297-317.

- Phillips, N., Lawrence, T. B., & Hardy, C., (2000). Interorganisational collaboration and the dynamics of institutional fields. *Journal of Management Studies*, Vol. 37, No. 1, pp. 23-42.

- Pichault, F., (2007). "HRM-based reforms in public organisations: problems and perspectives", *Human Resource Management Journal*, Vol.17, No. 3, pp.265-282.

- Piotrowicz, W., (2007). Evaluation of electronic procurement implementations, unpublished PhD thesis, Brunel University.

- Piotrowicz, W. and Irani, Z. (2008), Information system evaluation in context-impact of the corporate level, Proceedings of the European and Mediterranean Conference on Information Systems, Dubai, 25-26 May.

- Provan, K. G., & Sebastian, J., (1998). Networks within networks: service link overlap, organizational cliques, and network effectiveness. *Academy of Management Journal,* Vol. 41, No. 4, pp. 453-462.

- Provan, K. G., and Milward H., (1995). "A Preliminary Theory of Network Effectiveness: A Comparative Study of Four Mental Health Systems." *Administrative Science* Quarterly Vol. 40, pp. 1-33.

- Provan, K. G., and Milward. H., (2001). Do networks really work? A framework for evaluating public-sector organizational networks. *Public Administration Review*, Vol. 61, No. 4, pp. 414-423.

- Provan, K. G., Isett, K. R., & Milward, H. B., (2004). Cooperation and compromise: A network response to conflicting institutional pressures in community mental health. *Nonprofit and Voluntary Sector Quarterly*, Vol. 33, No. 3, pp. 489-514.

- Provan, K. G., Nakama, L., Veazie, M. A., Teufel-Shone, N. I., & Huddleston, C., (2003). Building community capacity around chronic disease services through a collaborative network. *Health Education and Behavior*, Vol. 30, No. 6, pp. 646-662.

- Provan, K.G., Fish, A., and Sydow, J., (2007). Interorganisational Networks at the Network Level: A Review of the Empirical. Literature on Whole Networks. *Journal of Management*, Vol. 33, No. 3, pp. 479-516 .

- Raadschelders, J.C.N., and Lee, K.-H., (2011). Trends in the Study of Public Administration: Empirical and Qualitative Observations from *Public Administration Review*, 2000-2009, *Public Administration Review* Vol. 71, No 1, pp.19-33.

- Raak, V. A., Meijer. E., Meijer, A and Paulus, A., (2005). A Sustainable partnerships for integrated care: the role of decision making and its environment *The International Journal of Health Planning and Management* Vol. 20, No. 2, pp. 159–180.

- Reilly, T., (2001). Collaboration in action: An uncertain process. *Administration in Social Work*, Vol. 25, No.1, pp.53–73

- Ring, P, S and Perry, J. L., (1985). Strategic Management in Public and Private Organizations: Implications of Distinctive Contexts and Constraint. *Academy of Management Review,* 1985, Vol, 10. No. 2. ,pp.*276-286*

- Ring. P. S., & Van de Ven, A. H., (1994). Development processes of cooperative interorganisational relationships. *Academy of Management Review*, Vol. 19, No 1, pp. 90-118.

- Roberts, P. W., & Greenwood, R., (1997). Integrating transaction cost and institutional organizational design adoption. *Academy of Management Review*, 22, 346-373

- Robertson, P.J., and Seneviratne, S.J., (1995). Outcomes of planned organizational change in the public sector: a meta-analytic comparison to the private sector. *Public Administration Review,* Vol. *55, No.* 6, pp.547-558.

- Rod, M R M and Paliwoda, S. J., (2003). Multi-sector collaboration: a stakeholder perspective on a government, industry and university collaborative venture. *Science and Public Policy*, Vol. 30, No. 4. Pp.273–284.

- Roroi. M, Jayasuriya, R Kase, P. And Kavanamur., (2008). Public Sector Reform and its impact on Human Resource Management in the health sector in Papua New Guinea: a contextualist analysis of experience conference paper presented in the 3rd ASIA- Pacific Action

Alliance Conference, 12th-15th October, 2008 In Colombo/Kandy, Sri Lanka.

- Rowley T, Behrens D and Krackhardt D., (2000). Redundant Governance Structures: An Analysis of Structural Ad Relational Embeddedness in the Steel and Semiconductor Industries. *Strategic Management Journal*, 21, 369-86.

- Sarantakos, S. (2005). Social Research New York: Palgrave Macmillan.

- Saritas, O., Taymaz, E., Tumer, T., (2007). "Vision 2023: Turkey's national technology foresight program: a contextualist analysis and discussion", *Technological Forecasting and Social Change*, Vol. 74, No. 8, pp.1374-93.

- Sastry, M. (1997)., Problems and paradoxes in a model of punctuated organizational change, *Administrative Science Quarterly*, Vol 42, pp.237 - 75

- Saunders, M., Thornhill, A. & Lewis, P. (2009). Research Methods for Business Students, Financial Times/Prentice Hall.

- Savage, G. T., Nix, T. H., Whitehead C.J., and Blair. J.D., (1991). "Strategies for Assessing and Managing Organizational Stakeholders." *Academy of Management Executive* Vol. 5, No. 2, pp. 61-75.

- Schroeder, (2001). Building Implementation Networks: Building multi-Organizational, Multi-Sector Structures For Policy Implementation. PhD thesis, Virginia Polytechnic Institute and State University.

- Scott SG, Lane VR., (2000). A stakeholder approach to organizational identity. *Academy of Management*

- Seitanidi, M.M. and Crane, A., (2009). "Implementing CSR Through Partnerships: Understanding the Selection, Design and Institutionalisation of Nonprofit-Business Partnerships". *Journal of Business Ethics*, Vol. 85, No. 2, pp.251-477.

- Self, D. R, Armenkis, A. A and Schrider, M., (2007)., Organisational change Content, Process, Context: A Simultaneous Analysis of Employee Reactions, *Journal of Change Management*, Vol, 7, No 2, pp. 211-299.

- Selin, S. and Chavez, D., (1995). "Developing an evolutionary tourism partnership model", *Annals of Tourim Research*, Vol. 22 No. 4, pp. 260-73.

- Serafeimidis V. and Smithson S., (1996). The management of change for information systems evaluation practice: Experience from a case study. *International Journal of Information Management*, Vol. 16, No 3, pp. 205-217.

- Serafeimidis, V., and Smithon, S., (1999). Rethinking the approaches to Information systems evaluation, *Logistics Information Management*. Vol. 12, No. 1, pp.94-107.

- Sharfman, M.P., Gray B. and Yan, A., (1991). "The context of interorganisational collaboration in the garment industry." *Journal of Applied Behavioral Science* Vol. 27, No. 2, pp. 181-208.

- Sim, J. & Sharp, K., (1998). A Critical Appraisal of the Role of Triangulation in Nursing Research. International Journal of Nursing Studies, 35, 23-31.

- Smith, C. R (2009). Institutional Determinants of Collaboration: An Empirical Study of County Open-Space Protection *Journal of Public Administration Research and Theory*, Vol. 19, No. 1, pp. 1-21.

- Stake, R., (1995). The Art of Case Study Research: Perspectives on Practice, Sage.

- Standifird, S., Weinstein, M., (2007). The transaction cost economics of market-based exchange: The impact of reputation and third party verification agencies. *International Journal of the Economics of Business*, Vol. 14, No. 3, pp. 409-431

- Stockdale R. and Standing C., (2006). "An interpretive approach to evaluating information systems: A content, context, process framework", *European Journal of Operational Research,* Vol. 173, No. 3, pp. 1090-1102.

- Stockdale R., Standing C. and Love P. E. D., (2006b). "Propagation of a parsimonious framework for evaluating information systems in construction", *Automation in Construction*, Vol. 15, No. 6, pp. 729-736.

- Stockdale, R., Standing, C., Love, P. E. D., and Irani, Z., (2008). 'Revisiting the content, context and process of IS evaluation, in Irani, Z. And Love, P. (eds.), Evaluating information systems: public and private sector, Elsevier Ltd, pp. 35-48.

- Straus, D. (1999). *Designing a Consensus Building Process Using a Graphic Road Map.* In Consensus Building Handbook: A Comprehensive Guide to Reaching Agreement, Edited by Lawrence S. Susskind, Sara McKernanan, and Jennifer Thomas-Larmer, 137-167. Thousand Oaks, CA: Sage.

- Sullivan, H., Barnes, M., & Matka, E., (2006). Collaborative capacity and strategies in area-based initiatives. *Public Administration*, 84(2)., 289–310.

- Susskind, L . and Cruikshank, J. (1987). Breaking the Impasse: Consensual Approaches to Resolving Public Disputes. New York: Basic Books.

- Symons, V. (1991)., "A review of information systems evaluation: content, context and process", *European Journal of Information Systems*, Vol. 1 No. 3, pp.205-12

- Thomson T, and Perry, J., (2006). Collaboration processes: Inside the black box. *Public Administration Review*, Vol. 66, No. s1, pp.19–32.

- Thomson T, Perry, J and Miller, K., (2009). Conceptualizing and Measuring Collaboration, *Journal of Public Administration Research and theory*, Vol. 19, No. 1, pp. 23-56.

- Thong, J.Y.L., Yap C.S. and. Seah K.L., (2000). Business process reengineering in the public sector: the case of the Housing Development Board in Singapore. *Journal of Management Information Systems,* Vol. 17, No. 1 , pp. 245–270.

- Times of Oman (2010). ITA signs pact with Certiport to train Civil Service staff in digital literacy, http://www.timesofoman.com/echoice.asp?detail=20175, Accessed in 3-10-2010

- Toraskar, K. and Lee , P. C. B., (2006). A Contextualist Approach to the Development of E-Commerce Education: An Analysis of Key Issues and Challenges, *Journal of Information Technology Management,* Vol. XIII, No. 3-4, pp.1-12.

- Trist, E.L., (1983). "*Referent organizations* and the development of interorganisational domains", *Human Relations*, Vol. 36 pp.269-84.

- Ulrich, David, & Barney, Jay B., (1984). Perspectives in organizations: Resource dependence, efficiency, and population. *Academy of Management Review*, Vol. 9, No. 3 pp.471-481.

- Waema, T. M. and Mwamburi, M. C., (2009). *International Journal of Computing and ICT Research*, Vol. 3, No. 1, pp. 65-76

- Walker, H., Harland, C., Knight, L., Uden, C., Forrest, S., (2008). Reflections on longitudinal action research with the English National Health Service,. *Journal of Purchasing and Supply Management*, Vol. 14, No.1, pp. 136-145.

- Walker, M. R., (2011). Globalized Public Management: An Interdisciplinary Design Science? *Journal of Public Administration and Research and Theory* Vol. 21 No. 1, pp.: i53-i59

- Walsham, G., (1993). Interpreting Information Systems in Organisations, John Wiley, Chichester.

- Walsham, G., (1995). "Interpretive case studies in IS research: nature and method," *European Journal of Information Systems*, Vol. 4, No. 2, pp. 74--81

- Weber, E. P, Lovrich, N. P, Gaffney, M. J., (2007). Assessing collaborative capacity in multidimensional world. *Administration and Society* Vol. 39. No. 2, pp. 194–220.

- Webster J. and Watson R. T., (2002). "Analysing the past to prepare for the future: Writing a literature review", *MIS Quarterly*, Vol. 25, No. 2, pp. xiii-xxiii.

- Whittington, C., (2004). Collaboration and Partnership in Context, in: Weinstein, J., Whittington, C. & Leiba, T. (Eds.). Collaboration in

social work practice. London, England: Jessica Kingsley Publishers, pp. 13-38.

- Williamson, O. E., (1991). Comparative economic organization: the analysis of discrete structural alternatives, *Administrative Science Quarterly*, 36(2).: 269

- Willmott, H., (1997). `Rethinking Management and Managerial Work: Capitalism, Control and Subjectivity'. *Human Relations*, 50, 11, 1329-1360.

- Wischnevsky, J. D., (2004). Change as the Winds Change: The Impact of organisational Transformation on Firm Survival in a Shifting Environment, *Organisational Analysis*, Vol 12, No, 4., pp.361-377.

- Wood, D. J. & Gray, B., (1991). Toward a comprehensive theory of collaboration. *Journal of Applied Behavioral Science*, Vol. 27, No. 2, pp. 139-162.

- Wood, S. (1979). A reappraisal of the contingence approach to the organisation, *Journal of management studies* Vol, 16, No 3, p. 334-54.

- Yin, R., (2009). Case Study Research: Design and Methods, Sage Publications, Inc.

- Zeffane, R., (1994). 'Patterns of organizational commitment and perceived management style: a comparison of public and private sector employees'. *Human Relations*, Vol. 47, No. 8, pp. 977–1010.

Appendix (A) Case study protocol

The purpose of this thesis is to explore and describe the contextual and processual factors that are associated with the implementation of interorganisational collaborations in the public sector. The main premise of this project is the use of multilevel analysis to analyse the phenomenon through applying the contextual (CCP) framework. The research is carried out in response to the emerging complexity in managing and understanding interorganisational collaborative networks in the public sector. The level of interdependency as a pattern to implement policies in the public sector context has increased and has complicated the context of change from change that can be easily delivered through a single public organisation to a multiple-organisation, collective actions and a network-based implementation. The methodological dimension of this research is based on Yin's (2009) suggestions which are encapsulated in developing a case study protocol. He proposes developing a case-study protocol to be the core of the research design and he considers that "having a case study protocol is desirable under all circumstances, but it is essential if you are doing a multiple-case study". In order to maximize the reliability of the research and having clear guidelines to direct its process to be more focused, Yin argues that case study protocol should include:

1- Overview about the cases

2- Field procedures (credentials and access to sites)

3- Questions (specific questions that the investigator must keep in mind during data collection)

4- Guide for the report (outline, format for the data) (p.81)

Case no 1:

After series of meeting and discussions between the Ministry of Higher Education and the Ministry of Education, the Higher Education Council approved the initiation of the establishment of the Higher Education Admission Centre (HEAC) in 2003. The HEAC is responsible for the students' applications that have finished their High school or its equivalent when applying to the Higher Education Institutions (HEIs) The project main goal is to transfer the previous manual applications with an online process. An electronic system allocates places to students in their preferred institutions and programs according to their results in an accurate, fair and transparent way (HEAC, 2010). The collaboration between the two Ministries to facilitate the operation of the centre is in the core of its initiation, implementation and execution. Committees from both sides delegated to carry out its daily process and to offer feedback for future planning and assessment. Mutual benefits are claimed by both sides in particularly enhancing public services delivery through partnership and collaborative arrangements

Case no 2:

In order to develop ICT skills and increasing ICT awareness among civil service employees, the government launched in 2008 an ambitious collaborative-based training programme. The IT training (Government IT Training and Certification (GITC) program) for the civil servants in Oman is one of the large scale projects that are introduced to build the capacity to the public sector to absorb the so-called "eOman" initiative. The main aim is to train and certify all civil service employees (about 93,507) with an internationally recognised digital literacy certification. Also the project intends to:

- Improve the skills and performance of civil servants.
- Empower civil servants under the Ministry of Civil Services with ICT knowledge and skills to enable delivery of public sector e-services.
- Give an equal chance of training for all civil servants.
- Help ITA utilise GITC findings relating to infrastructure, processes, scheduling and observations for other training programmes.

The programme is governed and introduced through a collaborative-based strategy between the Information Technology Authority (ITA), the Ministry of Civil Services

and the Ministry of Education. The certification and training content are based on a contract between the ITA and Certiport Inc, while the overall supervision of the project is shared between the two ministries and the ITA.

Field procedures
- **Preparations prior to the interview**

- Provide details about the project, its purposes and goals.

- Provide details about the ethical issues and confidentiality considerations.

- Arrange for interview appointments and locations.

- Prepare the necessary equipment, clothes and travelling requirements.

- Consider the Omani culture and societal norms in terms of:

    - Respecting the titles of the participants such as "Sayyid" for participants who are from the royal family and "Sheikh" for participants who belong to leading tribes' houses and families. Also consider other titles such as "Doctor", "Mohandas" (engineer), and "Ustadh" (professor).

    - Preparing the formal and informal clothes (the Omani "Mussar" turban, traditional white full-length robe "Dishdasha", the "khanjar" which is the traditional dagger of Oman, and the "Assa" which is an ornamental stick).

- Confirm the appointments.

- Review the relevant information with regard to:

    - The organisation.

    - The interview questions and structure.

    - The collected data so far.

- Reach the location 25 minutes prior to the time of the interview.

- **Practices during the interview**
- Consider the Omani culture and societal norms and customs in terms of:

    - Starting with handshake greeting for men, but for women it is unusual and uncommon to greet each other by shaking hands.

    - Maintaining strong eye-contact.

- Demonstrate appreciation of the acceptance to participate in this research.

- Introduce the researcher, and the project and its objectives.

- Clarify the ethical considerations and what is involved in the participation.

- Ask for official permission for interviewing and recording the interview by signing the BBS form which is developed for this step.

- Start the interview without using leading questions.

- Using different type of questions to elicit a detailed discussion, for example using: Introducing questions; follow-up questions; probing questions; specifying questions; structuring questions; and interpreting questions.

- Thank the participant for agreeing to take part, and explain the next step to the interviewee in terms of sending the transcription to approve it.

- **After the interview**

- Start transferring data to the computer and save an extra copy to memory stick.

- Contact participant to thank them for their participation.

- Transcribe data and comments.

- Save copies of transcriptions.

Case study questions

Based on the recommendation of Yin (2009), questions were formulated to collect data and simultaneously to achieve goals and objectives of the research. Five levels were identified in this research and therefore questions were developed into five categories, however the priority was given to the level 2 as it is recommended by Yin

Question levels	Questions
Level one	- Why and how does this organisation implement interorganisational collaborative projects or participate in such projects? - Who is involved in the collaboration from the organisation?
Level two	- Which factors under organisational, interorganisational collaborative settings, institutional, and external/environmental contexts are associated with the implementation of interorganisational collaborative arrangements? - How do the factors impact the collaboration? - How is IOC implemented, and what are the stages and the micro-actions within the process steps? - How does collaborative capacity impact, and how is it impacted by, the process? - What is the area in which collaboration takes place? - What is involved in the implementation context? - Who is involved in the collaboration from inside and outside the cases? - What are the outcomes of the collaborative implementation?
Level three	- What are the shared denominators between the cases in terms of the Contextual levels and factors? - Are the processual stages consistent cross cases? - What are the micro-processes that are found similar cross cases? - Who are the main stakeholders and to which level they belong to cross cases? Dose the content of collaboration consistent cross cases?
Level four	- In general, do the cases cover or follow the predicted contextual and processual conceptualisation offered by the CCP framework? - Do the cases follow the predicted contextual levels and factors? - What are the strengths and limitations of this framework as a diagnostic tool to analyse collaborative-based changes? - Do the cases match the proposed interconnectivity between content, context and process? - Do the cases follow the anticipated factors that are mentioned in the literature?

Question levels	Questions
Level five	- What are the possible recommendations for both theory and policy that can be drawn from the study? - What are the possible amendments or extensions to the CCP framework? - What are the possible recommendations for the implementation of change through collaboration in the public sector in Oman? - What are the possible theoretical, managerial, epistemological implications?

Thematic coding schemes

Concepts	Questions	Sub-themes	Codes
External level	What, why	International factors	EX:INT
		Political	EX:P
		Social and cultural	EX:SC
Institutional level	What, why	Public sector domain	INS:PUB
		Technological context	INS:T
Interorganisational collaboration level	What, why	Consensuses and shared vision	IOC:CO
		Structure	IOC:ST
		Image	IOC:IM
Internal level	What, why	Strategy	IN:S
		Structure	IN:ST
		Culture	IN:CU
		Position within arrangement	IN:PO
		Management support	IN:SUP
		Perceived individualism limitation	IN:IND
		Representatives skills	IN:RS
Process	How, when, what	Stages	PR:S
		Micro-actions	PR:M
		Collaborative capacity	PR:CC
Stakeholders	who	External stakeholders	ST
Outcome	What		OU

Interview questions

Levels of questions	CCP components	Interview questions	Sources for data
Level 1	Internal (organisational) context	1. What is the organisation's structure? 2. What are the organisation's goals and strategies in general? 3. What are the organisational goals for participating in this collaboration? 4. What do you think is the role of your organisation in this collaboration? 5. Why did your organisation become a member of this collaboration? 6. Was there any previous experience with collaborative-based projects? If yes, how does that affect this attempt?	**Internal context**: Interview, observation, focus group, documents review, archival records, mission statement and goals, organisational reports, organisational plans, and organisational media centres' publications. **Stakeholders**: Interview, focus group, documents' review, archival records, newspapers, media, contracts and websites **Process**: contracts, letters, newspapers, written plans and professional reports, observation, interview, focus group, documents' review, and archival records. **Interorganisational collaborative context**: Interview, focus group, documents' review, archival records, contracts, reports and letters. **Institutional context**: Interview, focus group, documents' review, archival records, regulations, laws, and professional reports and press.
	Stakeholders	7. Who is involved in the collaboration from the organisation?	
	Process	8. Are there any changes that your organisation has made at an organisational level that are associated with the implementation of this project interorganisationally? If yes, what are they?	
	Interorganisational Institutional, and external contexts	9. In general, what are the forces from outside the organisations that influence the current stage?	

			External context: national economical reports, media, national statistics, forums and Sits of governmental policies, newspapers, interview, focus group, documents' review, and archival records
Level 2	External and institutional contexts	10. Do you think that collaborative implementation of this idea matches well with the existing political environment? 11. In which ways do you think that the implementation influences and/or is influenced by the national economy? 12. How do you think cultural values and factors have been considered during the implementation stage? 13. Do you think that the regulative frameworks and the key players in the technological environment impact the collaboration? 14. Are there any characteristics or elements from the public sector environment linked with the collaborative efforts?	**Internal context**: Interview, observation focus group, documents review, archival records, mission statement and goals, organisational reports, organisational plans, and organisational media centres' publications. **Stakeholders**: Interview, focus group, documents' review, archival records, newspapers, media, contracts and websites **Process**: contracts, letters, newspapers, written plans and professional reports, interview, focus group, documents' review, and

Level 2 *Continuo*	Interorganisational context	15. What dose collaboration means for you? 16. What are the collaboration's objectives and goals? 17. Are there any changes in the membership number or structure of the arrangement? 18. From your experience, what factors do you think influence the relationship between partners in this arrangement?	archival records. **Interorganisational collaborative context**: Interview, focus group, documents' review, archival records, contracts, reports and letters. **Institutional context**: Interview, focus group, documents' review, archival records, regulations, laws, and professional reports and press. **External context**: national economical reports, media, national statistics, forums and Sits of governmental policies, newspapers, interview, focus group, documents' review, and archival records **Content**: contracts, letters, written plans and professional reports and websites. and professional reports.
	Process	19. Describe the decision-making process in this collaboration? 20. How has this collaborative-based project been implemented? 21. When do you think that collaboration has taken place during this project? 22. Describe the communication and negotiation between members in terms of its tools, frequency and procedures? 23. How has the implementation phase been governed? 24. In which ways you evaluate the process? 25. From your experience, what are the processual actions that you consider as vital to keep this arrangement productive and fulfil its objectives? 26. In which ways will the next step be prepared or addressed?	
	Content	27. What is the area in which collaboration takes place? 28. Has the content of the collaboration changed? If yes, who decided that? 29. What do you think are the factors that influence the content from inside and outside your organisation?	
	Stakeholders, Internal , Interorganisational Institutional, and external	30. Who is involved in the collaboration from outside the organisation? 31. Who affects the collaboration's process and content? 32. To what extent do you think these stakeholders have an effect on or can influence the outcome of this project?	

Level 2 *continuo..*	contexts		
	Implementation context, Stakeholders Internal , Interorganisation al Institutional, and external contexts	33. Why do members of this arrangement sustain the implementation of this project using collaborative-based structure? 34. Why not implementing this project by only one organisation? 35. What are the characteristics of the implementation stage? 36. Do you have another ideas or comments on the implementation stage in particularly and on the overall discussions? 37. Do you thing that there is missed questions you think that it is critical and need to be asked about the implementation stage in particularly and on the overall discussions?	
Levels 3,4,5	All the CCP components	Because these levels are about: cross cases synthesisation, the general findings compared with the theory, and the possible recommendations for theory and practice, so they are associated with all the interview 32 questions.	All the mentioned and enlisted sources and the literature review