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Business Relationships in the Automotive and Component Industries in Portugal

Maria de Lurdes Martins Veludo

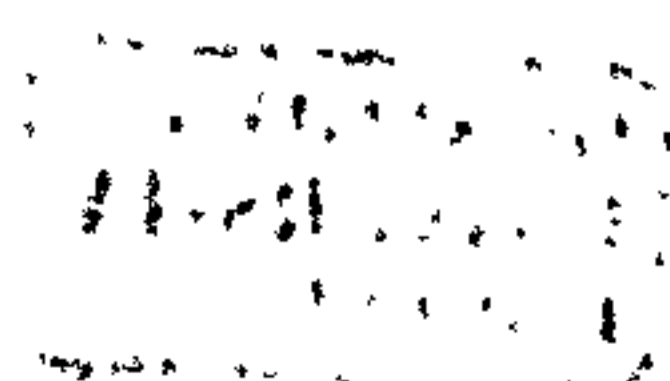
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Contents

ABSTRACT	v
LIST OF FIGURES	vii
LIST OF TABLES	viii
LIST OF APPENDICES	ix
ABBREVIATIONS	x
Chapter 1 Introduction	1
1.1 Background to research	2
1.2 The research problem	2
1.3 Focus of the research	7
1.4 Research objectives	8
1.5 Research methodology	8
1.6 Contributions	9
1.7 Limitations	11
1.8 The quality of the research	11
1.9 Thesis structure	13
1.10 Summary	14
Chapter 2 The Automotive Industry: An Overview	15
2.1 An evolutionary perspective of the world automotive industry	16
2.1.1 Craft production	16
2.1.2 Mass production	17
2.1.3 Lean production	19
2.2 The European automotive industry: Brief evolution and main characteristics	21

2.3	The automotive industry in Portugal	23
2.3.1	Historical perspective of the automotive industry in Portugal	24
2.3.2	The Portuguese motor vehicle parts and components industry: main features	27
2.4	The automotive industry: Main trends and features	29
2.4.1	Intense competition within the industry	29
2.4.2	Globalisation	30
2.4.3	Concentration: Mergers and acquisitions	33
2.4.4	Strategic alliances	35
2.4.5	Standardisation	36
2.4.6	Modularisation	37
2.4.7	The restructuring of the supply chain	37
2.4.8	Increasing partnering agreements and collaboration practices	39
2.5	An evolutionary perspective of buyer-supplier relationships	39
2.6	Conclusion	46
 Chapter 3 Inter-Firm Collaboration and Partnering		50
3.1	Introduction	51
3.2	A discourse on inter-firm collaboration and partnering: Definitions	52
3.3	Contributions of theoretical perspectives to the understanding of inter- firm collaboration and partnering	54
3.4	Partnering	60
3.4.1	An overview of related literature on partnering	61
3.4.2	Disciplinary	75
3.4.3	Partnering characteristics	81
3.4.4	Factors influencing partnering	86
	3.4.4.1 Partnering drivers	86
	3.4.4.2 Factors influencing the partnering process of implementation	89
	3.4.4.3 Success factors of partnering implementation	97
3.5	Conclusion	98

Chapter 4	Research Methodology	100
4.1	The philosophy of research	101
4.1.1	Epistemology	101
4.1.2	Epistemology and method	105
4.1.3	Epistemology, method and the research objectives	108
4.2	The research design	109
4.2.1	The research philosophy	110
4.2.2	Existing theory or new theory	112
4.2.3	The role of the researcher	113
4.2.4	Quantitative or qualitative approaches and methods of inquiry	114
4.2.5	The research strategy	116
4.3	Process of building theory from case study research	117
4.3.1	Getting started: enfolding literature	120
4.3.2	Case selection	121
4.3.3	Data collection and analysis	125
4.3.3.1	Entering the field	126
4.3.3.2	Quantitative data collection and analysis	127
4.3.3.3	Qualitative data collection	132
4.3.3.4	A grounded theory (GT) approach to qualitative data collection and analysis	143
4.4	Scientific concerns about the research process	155
4.5	Writing the case study	161
4.6	Summary	161

Chapter 5 Opel Portugal: A Case Study	164
5.1 Background of Opel Portugal (OP)	165
5.2 Profile of Portuguese based direct suppliers (PBDS) of OP	168
5.3 Inter-firm collaborative practices and partnering between OP and its Portuguese based direct suppliers	169
5.3.1 Analysis of quantitative evidence	169
5.3.2 Analysis of qualitative evidence	196
5.3.3 Inter-firm collaborative practices and partnering between OP and its PBDS: Summary of quantitative and qualitative analysis	206
5.3.4 Discussion	210
5.4 Influencing factors on inter-firm collaborative practices and partnering between OP and its PBDS	219
5.4.1 Influencing factors identified	219
5.4.2 summary of influencing factors and their direct impacts	245
5.4.3 Discussion	253
Chapter 6 Conclusions, Contributions, Implications and Recommendations	260
6.1 Research project: Overview	261
6.2 Major findings and conclusions	262
6.3 Major contributions	264
6.3.1 Insights on inter-firm collaboration and partnering	265
6.3.2 A conceptual framework on partnering	265
6.3.3 Contextual factors framework	271
6.3.4 Methodological approach to the study of inter-firm collaboration and partnering	276
6.4 Implications for theory	277
6.5 Implications for practice and policy	278
6.6 Strengths and potential weaknesses	286
6.7 Recommendations for future research	287
6.8 A final comment	289
REFERENCES	290

Abstract

Partnering has been the most commonly used term to describe collaboration between a buyer and its direct suppliers. The automotive industry has been the basis for the development of most studies on the subject. Despite the many studies on partnering, some people share the view that largely missing from the literature is a clear definition of this concept and of how it operates within dyadic (i.e. between a buyer and its direct suppliers), network and firm contexts. This is found to be particularly important if automotive companies geographically spread in the globe are to be properly managed.

The purpose of the research presented in this thesis was to explore inter-firm collaboration and partnering between a subsidiary of a motor vehicle manufacturer and its direct suppliers, taking into account the ownership ties of firms, such as those of multinational corporations (MNCs). The objective was to generate new knowledge on how inter-firm collaboration and partnering operate and on the factors that influence the business relationships that are established between the referred companies.

The researcher followed a single case study research strategy in order to develop a new and empirically grounded understanding, while favouring contextualisation and complexity. The researcher adopted a triangulated research design in which quantitative and qualitative data were gathered in two stages, through a self-administered mailed questionnaire and in-depth interviews, respectively.

The findings suggest that: (a) relationships can be characterized by several dimensions, (i.e. commitment, trust, win-win, long-term orientation, co-ordination, joint problem solving, flexibility, mutual dependence) each of which is a mix of collaborative and non-collaborative elements; (b) a diversified scenario of relationships can be explained by the different combinations of several contextual factors (i.e. organisational, relational, spatial and network); the importance of each needs to be weighted and hierarchised; (c) the network affects both to enable and constrain the freedom of action

at the level of the customer supplier dyad, and (d) partnering is contingent on the position, role and influence at different points in the network.

The research argues that relationship management can be enhanced through the application of analytical tools to the assessment of business relationships. New frameworks for analysis are presented as significant contributions to knowledge, among a series of theoretical, methodological and empirical contributions. The researcher suggests directions for research which will further enhance the understanding of inter-firm collaboration and partnering and business relationships within a multinational network context.

List of Figures

Figure 4-1:	A summary of the research methodology	p. 162
Figure 5-1	The business network of Opel Portugal	p. 242
Figure 6-1:	A conceptual framework to analyse inter-firm collaboration in industrial markets	p. 268
Figure 6-2:	Contextual factors framework	p. 273

List of Tables

Table 1-1:	What the study is designed to achieve	p. 12
Table 1-2:	Thesis structure	p. 13
Table 3-1:	Partnering: An overview of related literature	p. 62
Table 3-2:	Partnering characteristics	p. 82
Table 3-3:	A framework for understanding partnering	p. 84
Table 3-4:	Partnering drivers	p. 87
Table 3-5:	Selected models of buyer-supplier relationships	p. 91
Table 3-6:	Factors influencing the partnering process of Implementation	p. 94
Table 4-1:	Positivist and constructivist epistemologies	p. 103
Table 4-2:	Quantitative and qualitative approaches	p. 107
Table 4-3:	Process of building theory from case study research	p. 118
Table 4-4:	Participants in the interviewing process	p. 138
Table 5-1:	Activities implemented at Opel Portugal and its connections with other Opel subsidiaries	p. 167
Table 5-2:	Profile of PBDS	p. 179
Table 5-3:	Profile of inter-firm collaborative practices according to PBDS	p. 180
Table 5-4:	Intensity of inter-firm collaborative practices between the buyer and PBDS: Summary	p. 194
Table 5-5:	Inter-firm collaborative practices and strength of actor bonds, resource ties and activity links between OP and its PBDS	p. 213
Table 5-6:	Summary of major influencing factors and variables they impact on	p. 246
Table 5-7:	Comparison of emerging factors with some literature	p. 249

List of Appendices

Appendix 1: Questionnaire (Portuguese version)	p. I
Appendix 2: English version of the questions on inter-firm collaborative practices	p. XIII
Appendix 3: Letter of invitation	p. XXI
Appendix 4: Topic outline	p. XXIII
Appendix 5: Codified interviewees' statements (sample)	p. XXVIII
Appendix 6: Individual statements (sample)	p. XXX

Abbreviations

AAR	Actors Activities Resources
AB	Actor Bonds
ABS	Anti Lock Breaking System
AEP	Associação Empresarial de Portugal
AFIA	Associação dos Fabricantes para a Industria Automovel
AIMMAP	Associação das Industrias Metalicas e Metalomecanicas e Afins de Portugal
AL	Activity Links
BF	Bertrand Faure
BSR	Buyer-Supplier Relationships
CATIM	Centro de Apoio Tecnologico às Industrias Metalomecanicas
CBU	Completely built up
CKD	Complete Knock Down
DBR	Dyadic Business Relationships
EDA	Exploratory Data Analysis
EDI	Electronic Data Interchange
EEC	European Economic Community
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GERPISA	Permanent Group for the Study of the Automobile Industry and its Employees
GM	General Motors
GME	General Motors Europe
GT	Grounded Theory
HQ	Headquarters
IAPMEI	Instituto de Apoio às Pequenas e Medias Empresas
ICEP	Instituto do Comercio Externo de Portugal
IFC	Inter-Firm Collaboration and Partnering

IMP	Industrial Marketing and Purchasing
IMVP	International Motor Vehicle Program
ISEG	Instituto Superior de Engenharia e Gestao
JIT	Just-in-Time
MCG	Manuel Conceicao da Graça
MIT	Massachusetts Institute of Technology
MNC	Multinational Corporation
MPV	Multi-Purpose Vehicle
OEM	Original Equipment Manufacturer
OG	Opel in Germany
OP	Opel Portugal
OS	Opel in Spain
PBDS	Portuguese Based Direct Suppliers
PEDIP	Programa para o Desenvolvimento da Industria Portuguesa
R&D	Research & Development
RBV	Resource Based View of the Firm
RT	Resource Ties
SCM	Supply Chain Management
SSG	Sekurit Saint Gobain
TCA	Transaction Cost Analysis
UK	United Kingdom
US	United States of America
VM	Vehicle Manufacturer

Chapter 1

Introduction

This chapter will start by outlining the broad field of the study: inter-firm collaboration and partnering within the automotive industry. Then it will identify the research gaps and the potential avenues for research that directed the focus of the study. From this discussion, the focus of the thesis will be clarified and the objectives of the research will be stated. Then the methodology chosen will be drawn. The chapter will go on discussing contributions, limitations and the quality of the research. The chapter will end with an overview of the structure of the thesis.

1.1 Background to research

The automotive industry has been the subject of a great deal of study, largely due to its importance as “the single largest industrial sector in the world economy” (Turnbull, Oliver and Wilkinson, 1992). Of major influence has been the work of the International Motor Vehicle Programme (IMVP) of the Massachusetts Institute of Technology (MIT) and of the Permanent Group for the Study of the Automobile Industry and its Employees (GERPISA) of the School for Advanced Social Science Studies in Paris.

The search for synergies has been a determining strategy for the development of the automotive industry (Wyatt, 2001). This has contributed to the development of buyer-supplier relationships (BSR) in terms of increasing inter-firm collaboration and partnering relationships (De Banville and Chanaron, 1991). Convergence in the methods of supplier relations towards inter-firm collaboration and partnering relationships in Europe, the US and Japan, despite the existent controversy on the topic, has been demonstrated by various studies (e.g. Sako and Helper, 1999). However, the development of collaborative relationships between Western final assemblers and motor vehicle parts and components suppliers, so that they may jointly achieve further substantial gains through integrating all the steps down the value chain from raw material to end customer, remains a major challenge facing these companies (Jones, 1994).

1.2 The research problem

Whilst evaluating the approaches to empirical research into the interactions between firms, it is possible to notice a shift of focus from discrete transactional analysis and profit maximisation to relationship-based analysis (Backhaus and Büschken, 1997; Cheung and Turnbull, 1998). As Backhaus and Büschken (1997) observed, this shift reflects the increasing importance given to BSR. This is evidenced in the automotive industry through, for example: (a) the transference of responsibilities to the suppliers on the part of final assemblers, namely at the design and engineering level (Freysenet

and Lung, 2000), and (b) the increasing move from transactional and adversarial to collaborative relationships with suppliers (Calabrese, 2000).

Within the topic of BSR, partnering has, for many academics and practitioners, been the focus of attention, with the automotive industry forming the basis for the development of most studies (Leverick and Cooper, 1998). For Langfield-Smith and Greenwood (1998) the motor vehicle manufacturers and the motor vehicle parts and components companies provide an interesting focus for studying partnering. This argument is based, partly on the difficulty, due to high levels of complexity faced by those industries in the West, in adopting collaborative relationships, and the deeply ingrained adversarial supplier relationships of the past. Also Kim and Michell (1999) consider the automotive industry as a good illustration of both the adversarial and the relational models of BSR. The attractive context offered by the automotive industry for further research on partnering, is reinforced by the trends verified over the last decade which, according to Southey and George (1998), emphasise the importance of partnering between final assemblers and suppliers. Gules and Burgess (1996) noticed this importance of partnering, as evidenced by the recommendation, given to firms in the automotive industry, that they increase their collaborative relationships.

Despite the many studies on partnering, some people share the view that largely missing from the literature is a clear definition of this concept (e.g. Wyatt, 2001) and of how it operates both within dyadic (i.e. between buyer and supplier) and network contexts (e.g. Veludo and Macbeth, 2000; Veludo, Macbeth and Purchase, 2004), as well as within particular firm contexts (e.g. Young and Wilkinson, 1997; Veludo, Macbeth and Purchase, 2004).

Recently there is evidence of a sense of frustration and disappointment with the term partnering (Wyatt, 2001). As chapter three highlights, there is no universally agreed definition of partnering (Burnes and New, 1996). Moreover, partnering has been studied by a diversity of academic disciplines, such as supply chain management, purchasing and marketing. Attempts have been made to bring associated research under one heading, that of supply chain management (New, 1997), but the result is a

fragmented and poorly understood discipline (Monczka and Morgan, 1997). In fact there remains a lack of agreement among academics and practitioners as to the extent and suitability of partnering (Veludo and Macbeth, 2000). Moreover, while some authors believe that competitive relations, rather than collaborative, will remain the dominant trading reality for most companies (e.g. Ramsay, 1996), others believe that partnering has become, and will continue to be, a source of competitive advantage (e.g. Hendrick and Ellram, 1993). In addition, some others claim that partnering does not exist, rather, there are ranges of varying collaborative relationships, all of which are competitive (e.g. Cousins, 2002). Furthermore, Patterson, Forker and Hanna (1999) argued that existing characterisations of real-life collaborative relationships are too inadequate to describe the subtle differences in complex BSR. The on-going debate around inter-firm collaboration and partnering suggests the need for further research on these topics (e.g. Bresnen, 1996; Das and Hendfield, 1997; Wyatt, 2001).

Most studies on partnering are developed within a dyadic context, and thus, they do not take into account the network context where firms are embedded (Bellò, Lohtia and Dant, 1999; Olsen and Ellram, 1997). This is particularly true concerning studies on the automotive industry, which becomes a true spider's web in which there is little room for isolationism (De Banville and Chanaron, 1991). Moreover, the research that has been developed does not often take into account the ownership ties of firms, such as those of multinational corporations (MNCs), seen as inter-organisational networks (Ghoshal and Bartlett, 1990). The development of these network forms of organisation, creates major challenges to the management of partnering and value-creating networks, and generates a series of new research questions to which organisational studies must respond (Clegg and Hardy, 1996).

Finally from a critical review of literature it is inferred that there is a lack of a clear and deep understanding of the factors that shape inter-firm collaboration and partnering relationships. This is found to be particularly important if operational integration is to be properly managed by the participants (Bello, Lohtia and Dant, 1999; Metcalf, Frear and Krishnan, 1992).

In summary, although the research on partnering is substantial, a number of topics still remain to be explored. An examination of the literature (see Chapter 3) has revealed several issues worthy of investigation, such as: (a) the need to better understand the concept of partnering, (b) the need to understand the implementation of partnering within a network context, (c) the need to understand partnering taking into account the ownership ties of firms such as the ones that exist between the headquarters of a multinational corporation (MNC) and its subsidiaries, and (d) the need to explore the influencing factors on partnering relationships such as the motivational aspects of partnering or partnering drivers and the factors that influence partnering as a dynamic process.

Suggestions given by academics on the directions that research on BSR should concentrate tend to corroborate the above critical literature review on inter-firm collaboration and partnering. Some of these are presented in the next paragraphs.

The work by organisational theorists (e.g. Miles and Snow, 1992; Snow, Miles and Coleman, 1992) and academics largely associated with the Industrial Marketing and Purchasing (IMP) Group (e.g. Ford, 1990; Mattsson, 1997), suggested that research on BSR should move from a dyadic business relationships (DBR) approach to business networks regarded as sets of connected firms (Miles and Snow, 1992) or, as sets of connected relationships between firms (e.g. Cook and Emerson, 1984; Hakansson and Johanson, 1993). This shift of emphasis would suggest that research into DBR has reached its mature stage. However, recent studies related to networks found that the nature of a given relationship within a network has not been the target of sustained research, and thus is not well understood (Sheppard and Tuchinsky, 1996). Also Moller and Halinen (1999) contended that much of the research on BSR rarely makes a connection between a dyadic and a network approach and thus it fails to catch the full complexity of BSR. The view supported by Moller and Halinen leaves the impression that, although there has been substantial research on DBR, some issues have yet to be addressed at the dyadic level of inter-organisational relationships. They further highlighted the importance of understanding individual business relationships within a network context. These relationships form the basic unit of analysis in the

interaction and network approaches (Moller and Halinen, 1999) and in the supply chain management (SCM) approach (Harland, 1996). Moller and Halinen argued that the understanding of these relationships forms the prerequisite of the management on all other three levels of network management (i.e. level one - industries as networks; level two - firm in a network; level three - relationship portfolios). These authors recognised that, from a network perspective, the management of BSR should be regarded as a new topic in both academia and business. Also Anderson, Hakansson and Johanson (1994) questioned the high level of emphasis given to the research of business networks, yet recognised how challenging this field of research is. They pointed out that even when a network approach is taken, the examination of the individual relationships is often insufficient, with the relationships themselves greatly reduced to links within the focal network. Aware of these issues, Hakansson and Snehota (1995) suggested that managers should understand the process of change, in both the dyad and network of relationships, as a whole. The importance of the dyadic and network contexts was also given by Anderson, Häkansson and Johanson (1994) who pointed out that emerging business practices strongly suggest that, to understand DBR, greater attention must be directed to the business network context within which these DBRs take place.

Fast changing business environment forces firms to participate in complex multinational networks in which the management of multiple relationships and partnering relationships becomes exceedingly complex (Johnston, Lewin and Spekman, 1999). A broader set of issues emerges when business transactions and business organisations span institutional and economic systems (Johnston, Lewin and Spekman, 1999). The importance of developing studies in a specific institutional and economic context becomes clearer if we take into account that individual countries, regions and localities, by interacting with the larger-scale process of change, produce specific outcomes (Dickens, 1998). Much research has been conducted on domestic industrial relationships and as such often lacks the complexity of international industrial ones (Johnston, Lewin and Spekman, 1999). Young and Wilkinson (1997) suggested that studies should be conducted to investigate the types of relationships that emerge in particular cultural and industrial contexts. This is relevant for studies to be undertaken within the automotive industry. This industry shows increasingly

complex organisational chains, which are embedded within national and socio-political contexts, and show production processes divided on a geographical basis (Dickens, 1998).

It was the identified research gaps and potential avenues for research that directed the focus of the research and raised questions for the researcher.

1.3 Focus of the research

The research detailed in this thesis is focused on the exploration of inter-firm collaboration and partnering between a subsidiary of a motor vehicle manufacturer and its direct suppliers, taking into account the ownership ties of firms, such as those of multinational corporations (MNCs).

This research is developed using the perspective of a MNC as an internally differentiated inter-organisational network (Ghoshal and Bartlett, 1990) or, in other words, as an inter-organisation system rather than as an organisation. In addition, in accordance with Andersson and Forsgren (2000), this research assumes that a subsidiary, irrespective of the type of MNC, is engaged in its own unique network context formed by the business relationships it establishes, and on which its development is based.

The general confusion and lack of sufficient theoretical understanding surrounding inter-firm collaboration and partnering, and their implementation, emphasises the requirement for the development of a more grounded understanding. This is achieved through the exploration of these topics from the perspective of those involved: buyer and suppliers. The goal is not to create a complete picture or model of inter-firm collaboration and partnering; rather, it is to explore aspects of most relevance to buyer and suppliers. The research therefore aims to generate new knowledge that can contribute to future theory development.

1.4 Research objectives

The objectives of the research detailed in this thesis are:

Research Objective 1:

To explore how inter-firm collaboration and partnering operate between a subsidiary of a motor vehicle manufacturer and its Portuguese based direct suppliers.

Research Objective 2:

To explore the influencing factors on inter-firm collaboration and partnering between a subsidiary of a motor vehicle manufacturer and its Portuguese based direct suppliers.

1.5 Research methodology

The methodology selected for this research is driven by the exploratory nature of the study and by the research objectives. The emphasis is to generate theory from the data collected, as opposed to testing hypotheses associated with existing theory (see Section 4.2.2). The aim is to create a rich understanding of complex variables associated to inter-firm collaboration and partnering, generating new knowledge from the experience of those involved. The researcher plays the role of a bricoleur-theorist (see Section 4.2.3) within a continuum that can be discerned between the postpositivist and constructivist paradigms (see Section 4.1.1, Section 4.2.1). A single case study strategy is followed to generate theory (see Section 4.2.5 and 4.3.2) in the belief that good story telling about a single case can provide better theoretical insights than multiple case research based on creating good constructs (Chelly, 1996). Quantitative and qualitative evidence are used within the frame of a triangulated research design (see Section 4.2.4). The research is conducted in two stages. Stage one involves a self-administered mailed questionnaire to collect quantitative data, which is used to provide a description of inter-firm collaborative and partnering practices between buyer and suppliers. Exploratory data analysis is used to analyse the results obtained.

Stage two involves a series of in-depth interviews and telephone conversations to collect qualitative data, which is used to understand the rationale underlying inter-firm collaborative relationships revealed by the quantitative evidence, to explore the factors influencing these relationships and to generate theory. A grounded theory approach is used to collect and analyse qualitative data, leading to findings that are a result of an interaction between the researcher and the researched. In practice, data analysis begins early in the data collection with the coding of the transcripts of tapes and field notes, and then moves on to the interpretation of the data (see Section 4.3.3.4). This methodology is flexible, allowing emerging themes to be pursued.

1.6 Contributions

This research brings more conceptual clarity to inter-firm collaboration and partnering, by showing to what extent these concepts can operate at different points of a network and what factors can influence their implementation and development within a network context. Furthermore, this research brings insights into dyadic business relationships within multinational network contexts where the identification of the supply chain members and the types and levels of integration of processes are critical issues that need to be understood (Hakansson and Snehota, 1995).

A relevant contribution of this research is the creation of new connections between conceptual ideas on inter-firm collaboration and partnering. This is demonstrated in the two frameworks generated, which integrate several areas of knowledge, such as supply chain management, industrial marketing and purchasing (IMP) and the multinational and subsidiary theory. This has not been done, to the same extent, before. The findings extend an existing body of knowledge on the multinational and subsidiary theory by showing: (a) the relationships established between the subsidiaries of a MNC, and (b) how business relationships may affect and be affected by the organisational design of a MNC.

Another contribution of this research is that the emergent theory can be testable with constructs that can be readily measured.

Management research is predominantly based on deductive theory testing and positivistic approaches. However, these approaches fail to give deep insights and rich data into inter-firm collaboration and partnering in practice within organisations (Leonard and McAdam, 2001). In this situation a grounded theory approach is considered to be more appropriate (Wyatt, 2001). The methodology used in this thesis, facilitating the pursuance of emerging themes, is a contribution on its own. The novelty of this research in part lies in the combination of the postpositivism and constructivism philosophical views in attempting to understand inter-firm collaborative relationships in the automotive industry in Portugal from the perspective of buyer and suppliers involved (see Section 4.2.1). Quantitative evidence is used in a theory building context. The triangulated design enables the combination of the quantitative and qualitative approaches, with a resultant richness of robust data. Moreover, the use of a grounded theory approach has also enabled the focus on many variables associated to inter-firm collaboration and partnering, rather than selected ones, as most earlier studies have done.

Main empirical contributions (see Section 6.5 for more details) are: (a) evidence on the role and development of the subsidiary as integration takes place within the European Union, (b) a deeper understanding of the strategies of an American automotive manufacturer should inform those industrial strategists and policy-makers concerned with the development of the automotive industry, and (c) a network vision of business relationships which can be useful for the actors involved in this research (either individual organisations or MNCs); this is because, the better the network vision of a firm, the better its chances of foreseeing the strategic changes initiated by specific actors.

1.7 Limitations

Self-selection of case researched has various disadvantages, as pointed out by Lewis-Beck, Bryman and Liao (2004). In fact, the process of randomization followed in order to have access to interviewees did not give the researcher the opportunity to control the useful amount of data to collect. Lewis-Beck, Bryman and Liao explain that knowledge of a topic is not randomly distributed in the population. This means that collecting data by chance would result in excessive data being collected on topics that are generally known, and inadequate or insufficient data on less common topics. The researcher believes this can explain why some areas of analysis were slower to saturate than others or appeared thin.

As a theory built from case study research strategy is essentially a theory about specific phenomena (Eisenhardt, 1999), then the emergent theory generated by this study is likely to be seen as limited. However, the researcher claims that this limitation is lessened by the possibility of predictability in the sense that if elsewhere approximately similar conditions obtain, then approximately similar consequences occur (see Section 4.4).

1.8 The quality of the research

This study is predominantly qualitative in nature although following quantitative methods to gather quantitative evidence. Qualitative research has often been subject to criticisms regarding their validity and reliability. These assessments of a study's rigor and subsequent worth are, however, grounded in the traditional scientific needs for repeatability and generalisability. It will be stated many times throughout this thesis that the aim of this study is to generate new insights through an empirically grounded, context specific investigation. The study is therefore not aiming for generalisability in the way quantitative researchers define it. With regard to validity and depth of the information generated makes it hard for an outsider to assess true validity of qualitative research (Lewis-Beck, Bryman and Liao, 2004). Janesick (1994) is one of a number of qualitative researchers who replace the emphasis on validity with an

emphasis on credibility. In his view “validity” in qualitative research has to do with description and explanation, and whether or not a given explanation fits a given description. In other words, is the explanation credible? The aim of this thesis is to provide credible findings to both academics and industrialists alike. Thus findings should not be measured against traditional assessments of validity and reliability; rather their quality and worth should be established through their degree of credibility in the eyes of the reader. A number of mechanisms have been included in the study design to illustrate its credibility. These include triangulation and member checking. The essence of qualitative research in this context is the rich exploration of complex real world issues. The extent of its credibility will therefore be realized through the extent of new insights given to practitioners and researchers.

The expectations the researcher has about what the study is and is not designed to achieve are summarised in Table 1-1.

Table 1-1: What the study is designed to achieve

The study will	The study will not
Enhance our understanding of inter-firm collaboration and partnering between a subsidiary of a multinational corporation and its direct suppliers within a network context	Produce objective truths
Provide insights that can be tested further in additional studies	Establish the relevance of existing theory
Have a focus on those influencing factors of inter-firm collaboration and partnering that are most salient to those involved	Be generalisable to all subsidiaries
Incorporate and compare the perspectives of both parties	Provide a complete picture of inter-firm collaboration and partnering
Focus on the main themes	Explore all comments made by all participants
Focus on the emerging understanding and not the potential for variables to mediate or moderate	Use population variables to compare differing perspectives
Be a relevant and meaningful starting point	Provide all the answers

1.9 Thesis structure

This section provides an overview of the thesis in chapter format. The organisation of the thesis is divided into five main parts, which correspond to six chapters, as illustrated in Table 1-2.

Table 1-2: Thesis structure

Chapter (s)	Aim (s)	Outcome (s)
Chapter 1 Introduction	To provide the reader with an overview of the thesis and an understanding of the thesis structure	Thesis structure
Chapters 2 The Automotive Industry: An Overview	To describe the context for the research, and to identify the novelty of this work	Research objectives
Chapter 3 Inter-Firm Collaboration and Partnering	To review partnering related issues and to identify the novelty of this work	
Chapter 4 Research methodology	To select the most appropriate research methodology through comparison with alternative approaches	Research methodology
Chapter 5 Opel Portugal Case Study	To Present and discuss the empirical data obtained through two stages of data collection	Key findings
Chapter 6 Conclusions, Contributions, Implications and Recommendations	To summarise the approach taken and the overall contributions to knowledge made	Conceptual frameworks and Recommendations for future research

1.10 Summary

This chapter has outlined the main arguments, context and structure of this research. It started providing an overview of the logic behind the development and formation of the research objectives and the construction of the research. Then the methodology was briefly described, the key contributions and boundaries were given and finally the thesis structure was drawn. On these foundations, this thesis proceeds with a detailed description of the research.

Chapter 2

The Automotive Industry: An Overview

It has been reported that the automotive industry is the largest manufacturing industry and one of the fastest growing industries in the world; as such, it has received a great deal of attention from academics and practitioners alike. The automotive industry appears to be a vibrant and dynamic industry, with unique challenges and equally relevant learning opportunities. The researcher believes that before one can even begin to discuss strategies concerning the automotive industry in Portugal, it is essential to understand the directions of the industry as a whole, placing the Portuguese industry within a global and European context. This belief provides the major structure for this chapter. Thus, in order to provide the reader with a basic framework for understanding the context of the research, this chapter will be developed along six sections, excluding this introductory note.

Firstly, a brief history of the industry will be provided. Secondly, particular attention will be given to the European automotive industry. The following section will describe the automotive industry in Portugal, including an historical perspective of this industry. Then, the main trends and features will be identified. The chapter will go on by reviewing and discussing how relationships between vehicle manufacturers (VMs) and their direct suppliers - a main focus in this research - have changed over time. By covering these issues, the researcher expects to give an overview of the automotive industry at a global, European and national level (i.e. Portugal), and thus to provide a short diagnosis of the industry.

The classification of the automotive industry, by Beecham and Cordey-Hayes (1998), into two main sub-sectors, is the basis of the structure of this section. These two groups of companies are: (a) the motor vehicle manufacturer or final assembler (also designated in the literature by OEM – original equipment manufacturer), and (b) the motor vehicle parts and components manufacturers/suppliers.

2.1 An evolutionary perspective of the world automotive industry

This section will give an overview of the history of the automotive industry using three ages of production as a framework for discussion. The situation is obviously more complex than a simple move between the three ages. Today, craft production, mass production and lean production exist in various forms and in parallel (Wyatt, 2001). The aim is to provide the reader with an understanding of how the industry came to be what it is today. The content of this section is predominantly taken from the work of Womack, Jones and Roos (1990), Clark and Fujimoto (1991), Lamming (1993), Hines (1994) and Wyatt (2001).

2.1.1 Craft production

Car manufacture began in Europe at the end of the 19th Century. In 1894 Panhard & Lavassor (P&L), a machine tool company based in Paris, was the world's leading car company, producing several hundred vehicles a year. Every car that P&L made was unique; the components were bought from workshops across Paris and skilled fitters at P&L brought them together into the final product. The suppliers were all experts in their own field, used their own tools and had their own approaches to designing and making their parts. Little is written about the specific nature of the relationships between P&L and their suppliers, but it is clear that every firm involved was viewed as a specialist and was responsible for co-ordinating their own activities. For example, the customer frequently specified his requirements for the vehicle and discussed these with both P&L and the suppliers involved. By 1906, the industry had grown. P&L faced competition from hundreds of other companies across Western Europe and North America.

For craft manufacturers, building a car is a labour intensive, time-consuming process. Craft manufacture is characterised by low volume, highly individual products that are expensive to produce and buy. Craft producers, however, have two major strengths: the uniqueness of their products and the ability to tailor vehicles to satisfy the exact requirements of customers. These strengths mean that craft production has survived

the major changes in the industry and is still in evidence today in some niche markets, such as luxury and sports cars.

2.1.2 Mass production

Mass production had its origins in the US with the Ford - Sloan model of production and marketing. The term “mass production” encompasses both the standardisation principles of Ford and the market differentiation of Sloan.

Ford’s initial success was based on the production of huge volumes of a standardised car for a mass market. Ford’s aim was to build a car that would be available to everyone, a car that was low in price and easy to run and maintain. His approach was to standardise materials, tools and machines, the assembly process and the tasks performed by his employees. The result was the ability to produce high volumes of cars that were low in price, low in complexity and identical.

By 1926 General Motors (GM) led by Alfred Sloan Jr, in order to compete with Ford’s products, introduced an element of differentiation. Sloan created the concept of a model line, by dividing the market into five segments and developing individual products to suit each segment. All income levels were to be catered for by a broad range of models, each of which was modified on a yearly basis by incorporating gradual engineering improvements and regular style changes.

At first, Henry Ford attempted to purchase the components he required from subcontractors, but soon realised that his demanding standards and high volumes would make this impossible. In contrast to the autonomous relationships of craft production, Ford began a process of integrating suppliers into his operations. GM followed suit, but continued to outsource simple components. Where outsourcing occurred, it was characterised by fiercely adversarial purchasing policies and relationships; an option available to a vehicle manufacturer (VM) able to use a variety of suppliers for the same part (Liker, Kamath, Nazliwasti and Nagamachi, 1995). Adversarial relationships are characterised by a hands-off process, which involves open tendering with focus upon price competition. In this system the identity of

trading partners does not matter as long as the required goods are produced and developed (Morris and Imrie, 1993). Channels of distribution operated on the premise that buyers could rely on a large number of suppliers who could be played off against one another to gain price concessions and ensure a continuity of supply. Buyers would allocate portions of their business to suppliers to keep them in line, but on a short term basis; in doing so, they assumed an arm's length posture (Herbig and O'Hara, 1994).

The "big three" US carmakers (i.e. Ford, GM and Chrysler) expanded their operations into Europe, by creating regional operations designed to satisfy regional needs. By the 1930s many traditional craft producers in Europe followed their example and turned to mass production, where the range of consumer tastes further validated Sloan's approach to differentiation. From the 1940s until the early 1970s the automotive industry enjoyed a period of relative stability. Trade barriers and protectionist policies brought in after the Second World War, meant that competition remained at a national rather than an international level. The oil crisis of 1973 had a significant impact on the world automotive industry. The situation of regular expansion had given way to a more cyclical pattern, superimposed onto a trend of much more limited growth.

The Ford - Sloan model of the automotive industry began to fade as consumer power has placed a growing emphasis on variety and quality. This has dramatically increased the importance of product differentiation, with which more flexible production systems are better able to deal (Bloomfield, 1991).

In summary, mass production in the automotive industry is characterised by large volumes, standardisation of tools and processes, specialisation of work tasks at every level and a concentration of the industry into large final assembler organisations. Component manufacture is vertically integrated into the assembler, and single parts are aggressively outsourced. The customer benefits from the availability of low cost cars, and has a range of models from which to choose. However, mass producers also found that they suffered from a number of problems. Firstly, standardisation leads to economies of scale and subsequent cost savings, but in parallel it also leads to reductions in flexibility. Secondly, quality problems can remain hidden in the large production volumes leading to the extra cost of rework or simply waste. Thirdly,

employees on the shop floor become dissatisfied over time, as they gradually lose interest and motivation in their low skill, low variety environment. Finally, the integration of suppliers results in high levels of bureaucracy for the VM and potentially a loss of competitive edge for the supplier.

2.1.3 Lean production

After the second world war, the Japanese were subject to strict trading regulations and internal protectionist policies. The government focused its efforts on rebuilding the economy and curbing the enthusiasm of Western manufacturers to enter into their fragile market. While Western mass producers enjoyed stability, the Japanese internal market was both highly segmented and in a constant state of flux. The Japanese were building cars in the 1930s, but were forced to re-evaluate their entire approach. Eiji Toyoda and Taiichi Ohno of Toyota were the driving forces behind the third transformation in manufacturing practices in the automotive industry. Amongst the Japanese practices, the so-called “keiretsu structure” and the lean production system received particular attention.

Keiretsu is a term used to describe Japanese business consortia which rely on co-operation, co-ordination and joint ownership and control to competitively position businesses and industries. While keiretsu is an organisational form, it also represents a methodology, a unique Japanese way of competing, which reflects Japan’s culture, economic philosophy and industrial organisation (Ellram and Cooper, 1993). The “keiretsu structure” is characterised by a tiering system of suppliers (Dyer, Cho and Chu, 1998; Clark and Veloso, 2000) and obligational contracting (e.g. Sako, 1992).

A tiering system means that suppliers are arranged into tiers. Thus, the VM deals with tier one suppliers, who then play a strategic role marshalling the efforts of their own suppliers (Lamming, 1996). Within this structure, it is the motor vehicle manufacturer that takes the lead. The Japanese recognised the disadvantages of vertical integration for their suppliers, but at the same time they could not imagine a system in which there was no reciprocal obligation (Womack, Jones and Roos, 1990). They viewed their suppliers as critical to their own success and so developed an

approach that reflected their interdependence. The contrast between the Japanese model of subcontracting and that which, until the mid 1980s at least, pertained in the West, can be summed up as a contrast between obligational contracting in the former and adversarial contracting in the latter (Morris and Imrie, 1993). Obligational contracting implies that the firms involved recognise their interdependence and the importance of maintaining an ongoing relationship for future business (Sako, 1992).

The VM sits at the top of the keiretsu and its direct suppliers are small in number compared to mass production. The keiretsu binds its members together in many cases through transfers of equity, personnel and information (Ealey, Robertson and Sinclair, 1996); interdependence is therefore a physical reality as well as a mutual philosophy in obligational contracting.

Lean production is intrinsically more complex than either craft or mass production, and reflects a broader philosophy. The lean manufacturing techniques emphasise quality and fast response to market conditions, using technologically advanced equipment, and a flexible organisation of production processes (Ramcharran, 2001). The logic of lean production is that companies jointly identify the value stream for each product from concept to consumption and optimise the value stream regardless of traditional functional or corporate boundaries (Hines, 1994). The aim is the removal of all forms of waste.

The following list highlights some of the ways in which this is achieved:

- Production is driven by customer needs so that inventory levels of stock and finished products are reduced;
- Suppliers are required to deliver their components using JIT systems, again keeping inventory levels to a minimum;
- A quality philosophy, which incorporates goals such as zero defects, leads to a transparent process, where problems are identified so that they can be rectified as soon as they occur, minimising rework and waste;
- Activities are team-based and the teams work concurrently to eliminate hold ups in process;

- Information flow is high;
- Responsibility is developed as far as possible down the organisation, empowering those who have most knowledge to solve problems and improve processes;
- The number of players (e.g. suppliers, dealers) is reduced and relationships are improved;
- Suppliers are viewed as long-term assets in achieving competitive advantage.

Lean production came to the attention of Western automotive manufacturers in the early 1970s. There have been a number of studies conducted (e.g. the work of the IMVP throughout the 1980s; Womack, Jones and Roos, 1990; Morris and Imrie, 1992; Ellison, Clark, Fujimoto and Hyun, 1995), comparing lean production in Japanese factories to more traditional mass producers in the West. Hines (1994) based on Womack, Jones and Roos (1990) argued that typically the best of the Japanese manufacturers use half the time and effort to design the product, half the human effort to manufacture the product with half the defects and considerably less than half the inventories.

2.2 The European automotive industry: Brief evolution and main characteristics

In the 1950s and the 1960s, the European automotive industry consisted of a number of national industries, each producing vehicles to its own design, using a national supply base and selling mainly to the national market. For example, until the late 1960s, GM maintained largely independent operations in the UK and Germany. The political developments of the late 1980s and early 1990s in Europe, with the emergence and strengthening of the Single European Market, brought major strategic opportunities for final assemblers operating in Europe. GM, for example, created international integrated design and sourcing across multi-country production systems. By the late 1990s, there had been a significant move towards a European Motor Industry. A huge contiguous region (i.e. the European Union) appeared with the potential of being a large consumer market and a low-cost production location.

Freyssenet and Lung (2000) referred to the European Union as forming an integrated economic pole for the automotive industry, in which companies define their strategies and production investment on a continental scale. He further notes that at the scale of each region, companies organise a division of labour that relies on the specific advantages and competencies of each place. In the view of Lagendijk (1997), economic integration generates a shift to a less vertically integrated production system, which benefits from stronger economies of specialisation. Moreover, this is also facilitated by the nature of the industry, which offers the possibility of organisational separation of the individual processes prior to final assembly (Dickens, 1998). Aller, Ubillos, Beldarrain and Garcia (1999) argue that recent changes in final assemblers' and systems suppliers' strategies have caused a reorganisation of the industry, which has affected suppliers at the European periphery (i.e. Portugal and Eastern Europe).

Most final assemblers concentrate the main automotive company headquarters (HQ), research and development (R&D) departments, and the assembly of the higher-end models of vehicles in Europe's industrial heartland (particularly southern Germany). It is common that vehicles at the lower end of the market are assembled in the periphery. Aller *et al* (1999) reported that companies located in the periphery found themselves with two options to meet assemblers' size requirements; be acquired by a MNC or undergo rapid growth. In these authors' view, the first option represents a beneficial arrangement for both parties. On the one hand, the MNC increases its production scale, it can obtain more efficient production by exploiting local productive factors and furthermore, it can enter a new market or reinforce its position. On the other hand, the local supplier ensures its continuity as a direct supplier of a final assembler, since the multinational offers the conditions needed to meet the final assemblers' demands (e.g. capacity for product development, international scope and main offices close to the final assemblers' HQ).

Hyun (1994) described the European motor vehicle parts and components industry as highly fragmented with very few regional or inter-continental players. He found that most suppliers were grouped around their home country assemblers, both physically

and in terms of long-term relationships. Aller *et al* classified suppliers into two groups: systems' suppliers, specialised in production of those systems which account for their largest market share and those suppliers specialised in a particular process. This second group of suppliers does not carry out product development, as their innovation is focused on improving the production process. These suppliers are expected to be capable of regular price cuts and to fulfil quality and delivery requirements. Aller *et al* noted the tendency for the growing power of some systems' suppliers (e.g. Bosch) in the automotive value chain. That power can be manifested, for example, in the negotiation of prices (within certain limits). This situation is seen as typical of those systems which are complex enough to generate high entry barriers to new producers in the short term. Aller *et al* expect that in order to ensure supply at reasonable prices with a minimum amount of uncertainty, the final assembler will seek long-term contracts with this type of supplier.

2.3 The automotive industry in Portugal

This section will review the history and will assess the actual context of the automotive industry in Portugal. Section 2.3.1 will present a brief history of the development of the auto industry in Portugal, starting in the sixties, when the government used a number of policy initiatives to foster the development of this industry. Section 2.3.2 will make a more detailed characterization of the actual scenario of the auto components industry in Portugal. Section 2.3 is based on reports from AFIA (i.e. Association of Motor Vehicle Parts and Components Manufacturers in Portugal), ICEP (i.e. Department of Trade and Industry in Portugal), and IAPMEI (i.e. governmental institution to support small and medium size enterprises in Portugal), as well as studies from several Portuguese analysts.

The automotive industry is widely recognised as one of the industries with greatest importance in the development of a country's economy (Vale and Vila, 2002). This importance was irreversibly recognised, in 1963, by the Portuguese Government. Since then, the automotive industry assumed, with some drawbacks, an increasing importance in the Portuguese economy, representing about 7% of the GDP and 20%

of the exports in 1997 (Vale and Vila, 2002). The automotive production grew strongly, approaching the 250,000 vehicles in the year 2000, whereas more than 90% were exported to foreign markets (Vale and Vila, 2002).

At the present, automotive industry trends can be summarised in the following points (Vale and Vila, 2002): reduction of the number of assembly lines, increasing size of the companies, reduction of the number of platforms, increasing production series, intensification of foreign capital, and orientation to the external markets.

2.3.1 Historical perspective of the automotive industry in Portugal

The history of the automotive industry in Portugal during the last half century has been shaped by the interaction between two main players: (a) the state, through the definition of policies specifically addressed to the sector, and (b) international investors, led by automotive manufacturers. In the background, somewhat defining the boundaries for players' behaviours, there are economic integration processes, such as the one represented by the Economic and Monetary Union.

Before 1960 the automotive industry in Portugal was not of significant importance, which has been explained by the lack of constraints to the importation of vehicles (Selada and Felizardo, 2002). Having this in mind, the automotive industry in Portugal can be divided into three main stages: (1) the period of assembly of “complete knock down (CKD) vehicles, (2) the Renault project, and (3) the Auto-Europa project.

Assembly of CKD vehicles

The 1960s were dominated by the so-called “assembling law”. In 1963, the Portuguese Government, recognising not only the importance that the automotive industry could assume in the development of the country's economy, but also the relative weak stage of development of this industry in Portugal, issued a decree to block the import of “completely built up” (CBU) vehicles. The same decree imposed a 25% limit as the minimum national value added in vehicles assembled locally. This

was basically an import substituting device (Guerra, 1990). It was aimed at both curtailing imports and stimulating the development of domestic component manufacturing firms or, in other words, local production. As a result, final assemblers were forced to establish assembly plants within national territory. This happened in the context of direct foreign investment operations or licensing agreements, with the objective of protecting or even increasing market shares. Analysts like Feria (1997) concluded that the multiplication of small assembly units, addressed to a protected market, did not enable the emergence of a true motor vehicle parts and components industry. Feria further added that the negative effect of market size was compounded by the commercial origin of the Portuguese companies involved in the process, rather than the manufacturing one. By 1973, 30 assembly lines were producing passenger and commercial vehicles in Portugal. Due to the small size of the national market, these assembly lines were of a reduced scale, and consequently inefficient (Velooso and Felizardo, 1998). Moreover, the production level made it difficult, for the Portuguese components suppliers, to work exclusively for the automotive industry on a profitable basis. Only those firms with an organisational structure that allowed the commercialisation of items in foreign markets, and thus able to attain economies of scale, were able to produce high value added components. The remaining companies were limited to the production of low value added components. The crisis that followed the 1974 political revolution further aggravated the situation of an already fragile industry.

The Renault Project

From 1976 onwards, a policy reorientation started to take shape. This was the result of the recognition of the meagre results of previous years and of the commitments stemming from the European Economic Community's (EEC) agreement. By 1980, a new framework for the automotive sector (Law 352/79) was defined. This legislation allowed the imports of CBU and "complete knock down (CKD) vehicles, as long as they were compensated through the export of locally produced components. In other words, imports could only be increased to the extent they were offset by exports of manufactured items. Simultaneously, foreign direct investment (FDI) was stimulated through the governmental offering of financial incentives, which partially financed the

investments of foreign companies in Portugal. As a result of this new policy, the smaller component companies, with inefficient production structures and limited presence in foreign markets, faced increasing pressures, while bigger companies with a European presence were prospering. Some final assemblers, of which GM is the best example, responded to this policy by investing in component manufacturing. The main result of this policy is the launching of the so-called “Renault Project”.

Renault was attracted by the exceptional conditions offered by Portugal: the direct investment incentives and the access to the Portuguese market. The project enabled the creation of a relatively coherent automotive manufacturing system, involving a metal casting unit (i.e. Funfrap), an engine and gear-boxes producing plant, as well as an assembly unit with a capacity of 80000 vehicles per year. The size of the project, the local purchasing policy and the support provided to several Portuguese component manufacturers, made the “Renault Project” a landmark for the modernisation of the Portuguese automotive industry.

The Auto-Europa Project

The privileged conditions granted to Renault came to an end with Portugal’s accession to the EEC in 1986. During 1988, all remaining restrictions on EEC imports were lifted. Moreover, the programme PEDIP (i.e. EEC programme to help the development of the Portuguese industry) was launched. This programme aimed at accelerating the development process of the national industry. Within this context, the installation of another large VM in Portugal gained strategic importance for the development of the auto components industry and for the national industry as a whole. As such, by 1995 the Auto-Europa (i.e. Ford/Volkswagen joint venture) started the production of multi-purpose vehicles (MPV) for the Volkswagen and Ford groups in Palmela. This project, together with the opening of Central and East European markets, led to a fading-out process by Renault in the following terms: the assembly unit was closed, the engine and gear-boxes plant was granted juridical autonomy to pursue its own independent way, and the metal casting unit gave origin to Teksid - a new firm resulting from the merger of Renault and Fiat assets in the metal casting field.

While the investment by Renault was only possible under the domestic market protection, the Auto-Europa project, was a consequence of a regional integration process. Originally a joint venture between Ford and Volkswagen, set up in 1991, Auto-Europa was an export-oriented investment. It involved the setting up of a final assembly plant with a capacity of 80000 vehicles per year. Auto-Europa espoused some of the most recent trends concerning the manufacturing process and supply chain management such as: JIT, collaboration with suppliers - some of which located at Auto-Europa premises – and environmental protection. It was expected that Auto-Europa would play a pivotal role in: (a) the attraction of new foreign investments, including joint ventures with Portuguese firms; (b) the upgrading of local suppliers in terms of, for example, quality, reliability, logistics, and product engineering, and (c) putting Portugal on the map of major location alternatives for setting up new automotive plants. By 1996 the Auto-Europa assembly line was responsible for approximately 82% of all passenger cars produced nationally. This value further increased in 1998 when the last Renault Clio was produced in July at the Setubal plant. During 1999, the Ford Lusitana plant, where the Transit model was being produced, ceased its activity. The Ford facilities were acquired by Opel. Actually, the most important final assemblers in terms of number of vehicles are Auto-Europa and Opel Portugal (Monteiro, 2001). Though Renault and Auto-Europa played a key role, these were not stand-alone projects. They gave rise to the formation of supply networks as well as to learning processes inside those networks (Simoës, 2002).

2.3.2 The Portuguese motor vehicle parts and components industry: main features

The motor vehicle parts and components industry has shown a strong growth in the past ten years. According to a report written by Vale and Vila (2002), analysing the evolution of this industry, it is possible to verify that the number of jobs in this industry has increased from 24.100 in 1991 to 34.500 in 1994. In terms of size, the companies are mainly small to medium enterprises. In 2001, 77.9% of the component companies had less than two hundred and fifty employees. The turnover volume has increased from the middle of the 80's till the middle of the 90's, reaching the highest

values at the start of the Auto-Europa project. Since then the motor vehicle parts and components industry has been showing an instable growth. Since the middle 80's until today, more than 50% of the production is for export. The increased production in the number of vehicles, and particularly the installation of Auto-Europa, had a direct impact on the expansion of the internal market of the component industry, whose size tripled during the nineties. According to AFIA, foreign capital had been invested in 2001 in 27% of the Portuguese based component companies.

The main market of the component companies is the VM and not the segment of pieces of replacement. This reflects the effort of Portuguese companies to remain direct suppliers of the largest final assemblers. Initially strongly coupled to the national downstream value chain, the motor vehicle parts and components industry has gradually been gaining ground in other markets. Its dependency on the Portuguese located assembly lines has been diminishing. As previously mentioned (see Section 2.3.1), this situation has partially been induced by public policies aimed at boosting its capacity and importance at national and international levels.

According to the IMVP programme, cited by Veloso, Henry and Roth (2000), Portuguese owned companies are sub-assembly manufacturers, or in other words, process specialists with additional capabilities (e.g. machining) except for the design of the entire sub-assembly or other components. Thus, a significant part of local demand, more specifically of modules and systems, cannot be filled by national companies. As a result, the assemblers have to purchase from foreign suppliers, some of which do not possess production sites in Portugal.

As process specialists, the Portuguese owned motor vehicle parts and components companies have developed around a limited number of core competencies. They have been incorporating new technologies so as to maintain or gradually increase the added value of their products. However, most Portuguese owned companies remain weak in terms of new product development.

The international involvement of the Portuguese owned motor vehicle parts and components companies followed several phases:

- a) The exportation of components for international markets through independent channels (e.g. import and export agents). One of the reasons is that the low value added of the components did not require a physical presence of the companies (Vale and Vila, 2002). This phase involves a distribution network of components in the external markets.
- b) Installation of commercial branch offices in the international markets.
- c) The geographical proximity to final assemblers, which allows a closer participation in product development

2.4 The automotive industry: Main trends and features

The researcher believes that a perspective of the main trends and features of the automotive industry is needed to understand the dynamics of the interactions taking place between the players under investigation. A few main aspects deserve to be mentioned.

2.4.1 Intense competition within the industry

As has already been described in Section 2.1.2, between 1940 and 1970 the automotive industry enjoyed a period of relative stability. Competition was largely regional and the industry was dominated by the “big three” US manufacturers and the Western Europeans. The Japanese began exporting cars in the 1960s but it was not until the early 1970s that they began to have an impact on the world market. The oil crisis of 1973 had a significant impact on the world automotive industry. The situation of regular expansion had given way to a more cyclical pattern, superimposed onto a trend of much more limited growth. Until the end of the 1980s, despite some overseas presence of VMs, competition would still be mostly within regional brands. American automakers dominated the US market, Japanese the Asian market and European automakers their regional market. During the 1990s, this picture changed completely. The North American share of world output has continued to decline. At the same time,

the region has also experienced the greatest fluctuations in levels of production. An important element in this is the fact that the North American market is the most mature in terms of saturation, and possesses the oldest production infrastructure. The automotive industry of Western Europe has declined slightly in relative terms. There have been fluctuations in the levels of output, albeit not as severe as in North America. Within the region itself some locational shifts have taken place, as the industry in UK has declined, and that of Spain has expanded. The exception to the trends described above has been the Japanese industry, which has been the driving force of rapid change, while continuing to expand its output. For example, despite the severe recession and dramatically shrinking European automobile market in the half of the 1990s, the Japanese market share in Europe continued to grow (Rehder and Thompson, 1994). The competitive advantage of lean production was becoming increasingly evident. Overcapacity in the mature markets of US, Europe and Japan has continued to accelerate in recent years. New entrants such as Daewoo and Hyundai have added to competition and saturation levels.

2.4.2 Globalisation

As well as the volume and value of production, changes in the profile of markets are also an important indicator of the competitive climate in this industry.

In the 1990s, the stagnation of vehicle production and sales in the Triad regions (i.e. North America, Western Europe and Japan), together with the dynamism and the performance of the automotive industry in a wide range of emerging markets (including Central and Eastern Europe, China, Korea, India, Argentina, Brasil and Mexico), brought the issue of globalisation and relations between the Triad and emerging markets to the centre of the debate. During this period, there was simultaneously an increasing integration of Triadic markets (Ruigrok, Van Tulder and Baven, 1991) and a drive to gain positions in promising emerging markets.

A growth of transplants in the 1990s led to a presence of all competitors in virtually every continent (Sturgeon and Florida, 1999), particularly in emerging markets (e.g. China, India and Brasil) where VMs are fiercely disputing market shares as demand picks up. As a result, automakers are now planning operations on a global scale, having similar models launched at the same time in different locations with similar standards (Velooso, Henry and Roth, 2000). Simultaneously, global competition generated brand proliferation and pressures for continuous restyling of models. As a result, sales per model have declined, preventing automakers and suppliers alike from reaching economies of scale in manufacturing, with important adverse impact on cost. The solution automakers have been exploring is to share components and systems among cars and models (Lung, Chanaron, Fujimoto and Raff, 1999). This involves the development of standard platforms that homogenize basic structures of the car, while allowing adaptations of the interior and the exterior through modules that can be configured to particular vehicles. Suppliers have been active participants in this process, aiming to market modules and systems as diverse as an ABS or a seat frame across car models and even different VMs.

Despite the fact that final assemblers operate in one and the same global environment, there is a great variety in the specific corporate strategies adopted by the leading companies (Dickens, 1998; Freyssenet, Mair, Shimizu and Volpato, 1998; Belis-Bergouignan, Bordenave and Lung, 2000). If, for example, the strategy of most companies in Western Europe and North America has been to attempt to maintain their market position, Japanese companies have pursued a strategy of growth, which has been facilitated by moves into the higher-priced market segments. Furthermore, Belis-Bergouignan *et al* noted that an examination of the different paths followed by the North American companies to adapt to an increasingly global environment, reveals a wide range of geographical strategies. Moreover European manufacturers have been seen as defining themselves in terms of a mono-regional space, reflecting the difficulties in integrating themselves into the same process of globalisation.

Although automotive manufacturers' strategies may differ, globalisation is a major shaper of competitive strategies in the industry. Automakers are trying to replicate supply chain structures across locations, demanding suppliers to be present in the regions where they are present, often near their plant. However, many VMs are pursuing a 1+1 supply structure, that is, having a global supplier – capable of following them wherever assembly plants are established – and a smaller local supplier whose main role is to compensate any disruption in supply by the global player. This means that a need to make creative syntheses between global and local forces remains (Simoes, 2002). The increasing recourse to platform approaches may be justified by the need to match scale and scope economies with the maintaining of local flavours, since markets still have different demands and grant higher value to different features. The international expansion of supply chains, namely in emerging markets, is another expression of the local/global match. These moves to some extent add a new perspective to the strategy taxonomy suggested by Ruigrok, Van Tulder and Baven (1991): “glocalisation” (i.e. an international intra-firm division of work) and “globalisation” (i.e. the division of work among a geographically concentrated group of firms). The new perspective might be called global localisation, characterised by the international replication of different locations of variations of a value chain made of global players (Simoes, 2002).

Auto suppliers have seen VM globalisation as an opportunity to improve market presence and expand sales volume. Nevertheless suppliers are still behind any of the VMs as true global players, having sales and capacity of less than 50% outside their home markets (Group, 1998).

Major suppliers initially considered VM investments in emerging markets as the generation of important business growth opportunities. They reasoned that, because of their previous experience in Europe or the US, those that would decide to set up a plant near one of these new VM operations would be well prepared to supply the same components to the new plant. In particular, it would give them a potential edge in the supply bidding process. As a result, some firms quickly followed automakers into emerging regions where a multitude of assemblers were present. Therefore, component production volumes in these areas are often small, often below economical

scale. This situation was further aggravated by the financial crisis that has swept most of the developing world in 1997 and made the car sales slump. As losses for supplier plants in emerging areas mounted, investment decisions became more conservative. Suppliers realised that the economic return of investments in some of these regions could be negative, or at least below the one that a firm may get through investment in another region in the Triad. This led some large international firms to decide to be out of some of these regions, or at least have a limited presence there, preferring instead to concentrate resources in Europe, the US or Japan.

This situation opened new field opportunities for smaller local players in the Triad, which were increasingly feeling trapped in their own market. Faced with component standardisation and demands for more development responsibility and presence abroad, firms traditionally installed in a single location and supplying one or two VMs realised that they would be given less and less responsibility if they were to remain in a local market. They faced three alternatives: either become a small process-focused company that works as a second or third tier supplier of small parts, sell the operation to an international firm aiming to expand capacity or become themselves a multinational firm. While the two first options are found in a number of cases, more ambitious firms soon became aware of the market gap that the auto supply industry restructuring was generating in emerging regions. Automakers in these regions often did not trust local firms and were not being able to interest the larger suppliers to enter the market at the pace they required. The smaller companies used their limited experience to leverage this opportunity. In a small region like Portugal, for example, one in every eight local firms has embraced some form of international investment, most towards emerging markets. By tackling this VM supply need, they not only became multinational firms, but they often were given further responsibilities in development through the adaptation of components plant to particular conditions.

2.4.3 Concentration: mergers and acquisitions

The automotive industry exhibits a strong market concentration. According to Vickery (1997), in 1996, the 20 biggest automakers were responsible for more than 90% of world output, while the four biggest accounted for a share above 40%. Since then, the

concentration ratios increased again, namely as a consequence of the alliances between Daimler and Chrysler, Renault and Nissan, and GM and Fiat, as well as the acquisitions of Volvo and Saab by Ford and GM respectively. The motor vehicle manufacture is now in the hands of a small number of very large firms (Dickens, 1998). The wave of mergers and acquisitions that has swept the automotive industry will probably continue during the next few years but at a slower pace (Monteiro, 2001). Analysts anticipate that, within 5 to 10 years, fewer than 7 automakers, operating with a minimum 10% share in a region, will dominate the industry (Monteiro, 2001).

In previous mergers, market overlap has generally been avoided. Also the different brands existing within the groups have been maintained. In a period when differences between distinct models within the same group have, progressively, been eroded, brands are becoming the principal distinguishing factor between vehicles.

While the reasons underlying merger and acquisition decisions may vary among VMs, the high level of concentration in the motor vehicle manufacture is largely the result of the drive to achieve efficiency in: (a) technology, through the development of new, common technical solutions or the sharing of specific technologies; (b) production, encompassing co-production agreements and common use of manufacturing platforms to benefit from economies of scale, and (c) marketing, through reciprocal marketing agreements to counter situations of excessive market segmentation.

This concentration and the move carried out by some final assemblers towards world car programmes, will have significant repercussions on the relationships with suppliers. Capacity may be a main issue that suppliers will have to deal with, if they want to maintain a first tier position. In fact, since most mergers are partially based on exploiting the cost benefits of using the same components in different models and brands, suppliers may have: (a) to boost production capacity in order to supply a group as opposed to supplying a single VM, and (b) to follow VMs irrespective of assembly plant location (see Section 2.2.2), as such, to invest in creating capacity where it is needed, that is, near the assembly plant. Some suppliers have met this

challenge by establishing joint ventures and acquiring firms in the countries where VMs have manufacturing facilities (e.g. Portugal).

For Clark and Veloso (2000) it is undeniable, that concentration was a pervasive phenomenon that has also affected component manufacturers. For example, in 1997, the 4 biggest component manufacturers (i.e. Delphi, Visteon, Bosch and Denso) accounted for 29% of the sales of the 50 biggest component manufacturers (Stephan and Pfaffman, 1998).

2.4.4 Strategic alliances

In some instances alliances involved equity swaps and links between final assemblers, as well as the creation of joint ventures. Examples of these include Auto-Europa in Portugal, in the 1990s, and Nedcar, launched by Volvo and Mitsubishi in cooperation with the Dutch public authorities. The strategic goals behind these moves are concerned with size and the creation of synergies to enable the leveraging of the capabilities to compete globally. However, a number of alliances have shown to be relatively volatile.

According to a report of the Automotive Consulting Group (ACG) (Virag and Mount, 1998), strategic alliances are being created between all types of suppliers in all vehicle product areas. As global sourcing becomes more prevalent, strategic alliances between suppliers on different continents or in different countries are increasing. In terms of the vehicle area, suppliers are establishing strategic alliances both within and outside their vehicle area to be able to supply systems in accordance with the requirements of their customer base. The same report listed a number of drivers for strategic alliances between suppliers. Many have hoped to expand their customer base and product lines, to increase their global capabilities, to become a full service supplier, or to enhance product margins. Others have made that decision due to a request or demand of one or more of their VM customers. Supplier alliances take a variety of forms. In their broadest sense they can be either formal or informal. Formal alliances include mergers, acquisitions, joint ventures and licensing agreements. Informal are usually due to small scale deals. They are characterised, among several features, by synergy,

collaborative strategy development, sharing of benefits and risks, mutual incentives to improve products and processes and information sharing (Virag and Mount, 1998).

2.4.5 Standardisation

Standardisation appears through: (a) the use of standard designs (also known by follow design); (b) the use of common suppliers across markets (also known by follow sourcing); (c) development of common platforms, and (d) the implementation of standard processes in vehicles of similar dimensions. The primary objective underlying standardisation is the reduction in product and process development costs.

There is a tendency for design adaptations for the local market to be carried out in the home country. The consequence of this is that the resulting advance towards technological capability in host countries (e.g. Portugal) is very limited (Humphrey, Lecler and Salerno, 2000).

An important effect of standardisation is the creation of manufacturing plants that are able to produce various vehicles simultaneously (the so-called global car), by using common platforms in vehicles of similar dimensions, and thus respond to sudden changes in demand. Underlying the use of platforms is not only the search for economies of scale (Lung, 2000), but also for the increase of the life cycle of the components, in order to guarantee increased competitiveness of the products by decreasing unit costs associated with development and production.

In Western Europe, the number of mainstream light vehicle platforms, used by the major final assemblers, is expected to fall from approximately 67 in 1998 to 52 in 2005 (Group Global Interest, 1998). Particularly in the European market, market gains tend to be based on the differentiation and in the development of market niches, which causes the number of vehicles based on the same platform to be higher than in the case of vehicles produced for the American market. This difference has a double effect. Firstly, the differentiation associated with different market segments reduces the range of the use of the common parts, and secondly, the American groups tend to relocate the development centres associated with the low and medium segments to Europe.

The final assemblers strategy of standardisation affects the direct suppliers, who try to spread out costs, and benefit from economies of scale and scope, by using complex components (which entail major investments in R&D) in vehicle models produced globally, and sometimes by using the same components on different models (Lung, 2000). From the suppliers' point of view, increased pressure will be put on production capacity, since VMs tend to decrease the number of first tier suppliers. Whereas for the larger suppliers this may mean greater levels of specialisation, in case of smaller suppliers that wish to maintain a first tier position, the answer may be in increasing overall production capacity (Monteiro, 2001).

2.4.6 Modularisation

The employment of modules (i.e. integrated parts, such as a door) is increasing. The attribution of responsibilities to the more integrated parts suppliers is an attempt for the final assemblers to reduce assembly time and to reduce the costs associated to it, and as a result, give the suppliers a greater margin for the exploitation of innovations associated with the supply of integrated parts.

2.4.7 The restructuring of the supply chain

The final assemblers have been developing great efforts towards lean production, not only in terms of the manufacturing process, but also in terms of the size of the assembly plants. As a result, the final assemblers have been transferring responsibilities to some suppliers in terms of development of components or parts, and design and assembly of systems and modules, and standardised platforms. The trend towards increasing delegation of design responsibility means that suppliers must ensure that they compete not just on product design but also on the quality of service they provide to the final assembler. Many VMs have suggested they will keep future specialisation in the areas of vehicle design, final assembly, marketing and sales. As the suppliers take on more responsibilities, they tend to also restructure themselves.

The important tendencies underlying final assemblers' strategies have directly influenced the role and the technical, technological and financial behaviour of the component suppliers, which have been acquiring an increasing importance within the industry. Nowadays, suppliers' positioning seems ever more dependent on taking over activities that are being abandoned by final assemblers.

This new equilibrium point can only be struck if the number of first tier direct suppliers with whom VMs interact is substantially smaller than it is today. The strong pressure towards the reduction in the number of suppliers that interact directly with final assemblers, motivated by the demand for greater efficiency in supply, is evident (Aller, Ubillos, Beldarrain and Garcia, 1999; Calabrese, 2000; Legendijk, 1997). Bates and Croom (1998) demonstrated that final assemblers now recognise the importance of minimising their direct interactions with the supply base, while recognising that in certain technological situations this would not be suitable.

As a consequence of the reduction in the direct supply base of the final assemblers, some suppliers will tend to abandon this industry. Others will seek for a strategy based on the continuous improvement imposed by the high level of demand of the final assemblers, and on the increase on the number of services supplied to them. Final assemblers, on the other hand, tend to reinforce pressure on suppliers by promoting the competition between them in the assignment of business. The direct suppliers of the final assemblers tend to repeat upstream the pressure felt downstream on their activity, so as to maintain their competitive positioning. As a consequence, the traditionally called second tier supply base finds itself under similar pressure to reorganise.

As an answer to this set of pressures directed towards the reorganisation of the supply structure, the existing suppliers seek a new and stronger positioning, according to the following possible scenarios: (a) sell the business; (b) move up in the hierarchy (through moving from the manufacture of components towards manufacture and assembly, and from this last phase to system production and finally module production), and (c) consolidate position (this involves the permanent search for

product development and the implementation of strategies based on decisions, related with for example, flexibility quality and cost).

These trends brought changes in the structure of the supply chain, which are causing it to diverge from the traditional organisation in tiers (see Section 2.1.3). Today, suppliers are increasingly characterised and distinguished by their function and capabilities and less in accordance to their position in the supply to the assembly lines. As a result of the IMVP Program, the following typology of suppliers was established: (a) system integrator; (b) system manufacturer; (c) assembly manufacturer; (d) component manufacturer, and (e) suppliers of raw materials and suppliers of specialised equipment and tools.

The key players in the industry are facing a double process of repositioning (Legendijk, 1997). On the one hand, final assemblers are engaged in a struggle for dominance. On the other hand, firms are reconsidering their position in wider socio-political contexts, particularly in Europe.

2.4.8 Increasing partnering agreements and collaboration practices

According to Bertodo (1990), partnering agreements and collaboration between complementary companies are set to become the key automotive strategies of the 1990s (see Section 2.5 for further details on partnering throughout the 1990s and in the early 2000s).

2.5 An evolutionary perspective of buyer-supplier relationships

The three ages of production referred to in Section 2.1 highlighted a number of alternative relationship-types of VM-supplier relationships.

Lamming (1993) was one of the first authors to discuss the nature of VM relationships with their direct suppliers. In a four-phase model, which charts their history, Lamming describes the following four stages of BSR: traditional (before 1975), stress (from 1972 approximately to 1985), resolved (from 1982 approximately to 1990) and

Japanese (from 1990 onwards). The fourth model is an amalgamation of Japanese practices and the enduring co-existence of the stress and the resolved models.

The traditional model (in the period before 1975) was characterised by low pressure in the relationships, in a flourishing market where the lack of effective competition did not require improvements. The stress model (1972-1985) featured fierce and chaotic competition, high pressure in the relationships and a generalised conflict climate. In the resolved model (starting from 1982), relationships in the true sense of the word began to emerge, with a redefinition of roles; some collaboration was arising despite a still closed competition, as well as a certain sense of relief in the relationships. The partnership/Japanese model began to be adopted from 1990 onwards, even though no company was practicing it integrally; in this model there would be a more collaborative competitive climate and a high degree of stress in relationships, due to the higher level of requirements imposed on the partners. The fourth model is an amalgamation of Japanese practices and the enduring co-existence of the stress and the resolved models. The author pointed out that, in particular relationships, as well as in national situations, characteristics of different models might co-exist. It has been recognised (e.g. Cousins, 1994) that these models fail to typify the complexity of the practical business situation.

Before the 1970s

Dickens (1998) reported that before the 1970s, during the so-called period of mass production, the American and European final assemblers established low cost objectives, which led them to search the world for low-cost component suppliers and develop relationships with their suppliers based on short-term, cost minimising contracts. The close geographical proximity of buyer and supplier, which had been a feature of the early years of the industry, began to break down as developments in transports and communications started to evolve, facilitating long-distance transactions. Dickens described the buyer-supplier relationships, at the time, as distant, both functionally and geographically.

During the 1970s

The literature (e.g. Thomas and Oliver, 1991) often talks about “traditional” approaches to supplier relationships when referring to the Western methods that were used in this period. Others such as Carlisle and Parker (1989) talked, instead, about an “adversarial” approach whose underlying assumption is one of a relationship between a buyer and a supplier where there is a one-off exchange of goods for money aimed at achieving the best price possible for the buyer. This approach is well illustrated in Porter’s (1985) model of strategies towards buyers and suppliers, which essentially advocates the creation of bargaining power relative to the focal buyer or supplier. This approach assumes an inherently adversarial interaction between firms. Moreover, the recommended strategies follow from an overall objective of extracting concessions from the exchange partner. The overall implication of Porter’s model for purchasing strategy is for buyers to deliberately keep suppliers at arm’s length and to avoid any form of commitment (Heide and Stump, 1995). Carlisle and Parker (1989) observed that both buyers and suppliers, in most manufacturing chains, seemed to spend their energies too often in sophisticated forms of bargaining in hopes of making their own piece of transaction pie larger than the one received by the other party in a win-lose approach.

Throughout the 1980s

Brennan (1997) reported that, during the 1980s, the final assemblers recognised that competitive success would increasingly result from product innovation, quality and speed to market, combined with high cost performance. He observed that to achieve this, the final assemblers felt compelled to maintain constant pressure on their suppliers, despite the recognised advantages of the establishment of stable buyer-supplier relationships with a high degree of trust, extensive sharing of information and joint work to bring improved products to the market or, in other words, collaborative relationships. However, as Leverick and Cooper (1998) reported, up until the early 1990s, the typical US and European model of supplier management was one of short-term, relatively adversarial relationships between final assemblers and suppliers. Furthermore, within these relationships the final assemblers undertook the majority of

design and product development work, and the supplier was chosen on price considerations.

Throughout the 1990s

Western VMs have realised that the adversarial approach to buyer-supplier relationships is no longer viable. Dyer (1994) noticed that US managers knew that the success of Japanese automakers stems to a great extent from their close relationships with suppliers. In the view of Hyun (1994), Western companies, as a result of this perception, restructured their supplier network and relationships. Hyun stated that these restructurings evolved around the following directions:

a) More cooperation

Increased cooperation where both the final assemblers and the suppliers collaborate to reduce the production cost, to improve quality and delivery and to increase innovation.

b) More coordination

More co-ordination appears as the result of the increased cooperation between final assemblers and suppliers, which implies the synchronised management of the interfacing activities.

c) More communication

More cooperation and more coordination demand more communication. To facilitate communication EDI systems were implemented.

De Banville and Chanaron (1999) demonstrated that collaboration and partnering relationships among final assemblers and parts and component suppliers grew exponentially during the 1980s and 1990s. According to these authors partnering agreements were driven by a variety of logics: economies of scale and/or variety (scope) in production, technological and organisational learning, economies in research and development, and savings in localisation. In this context, final assemblers-suppliers partnering relationships, characterised by highest levels of collaboration, have increasingly become the norm (Virag and Mount, 1998).

Not all authors share this view and not all studies got to the same conclusions about the development of buyer-supplier relationships within the automotive industry in the last decade. For instance, Brennan (1997) demonstrated that in the 1990s, in Western countries, there were still buyers emphasising cost reduction above other aspects, and suppliers who restrict information disclosure to their customers with fear that it will be used against them.

Legendijk (1997) also demonstrated how final assemblers have used collaborative strategies with suppliers primarily for their own strategic benefit. According to this author, most final assemblers have imposed, rather than negotiated predefined collaborative styles of interaction on their suppliers. Legendijk argued that the collaboration strategy was not born out of a genuine wish to change the position of the suppliers and to improve quality, but of the need to find response to rising competition. Legendijk views collaboration, and partnering in particular, as a survival strategy of the final assembler in which cost-cutting takes prominent place. This opinion is shared by Aller, Ubillos, Beldarrain and Garcia (1999) who also see final assemblers as having changed their relational strategies in an attempt to lower costs.

These views were confirmed by other studies of the automotive industry, which had concluded that the meaning of the term “partnering” was not reflected in its application. For instance, the report written for the Department of Trade and Industry-UK (Lamming, 1994) showed that, in UK, there was a large degree of rhetoric and little actual translation of collaborative practices between VMs and their suppliers, into real partnering. The main findings pointed out some progress towards the implementation of partnerships that had been made, but they were limited to a few firms. Overall, the scenario was one of a sense of confusion and disillusionment with the concept of partnering, much due to the discrepancy in approaches and application by the VMs involved in the study (Wyatt, 2001). Authors such as New and Burnes (1998) suggested that there were signs that some partnerships were not providing all of the benefits anticipated. These authors stated that it was buyers who would tend to win and suppliers who would tend to pay. Helper and Sako (1995) indicated that performance improvements often came at the suppliers’ expense. These authors found that suppliers were stockpiling inventory to meet the JIT delivery demands of their

buyers, and in addition that buyers often obtained price reductions by reducing supplier margins rather than supplier costs. Turnbull, Oliver and Wilkinson (1992) suggested that Europeans were not wholeheartedly behind the partnership movement. Bresnen (1996) stated that the notion of true partnership was misleading, since new terms and conditions were often simply those imposed by more powerful manufacturers on dependent suppliers. Bresnen took his argument a step further by suggesting that partnerships were simply another form of control mechanism for the buyer. In a survey conducted in conjunction with A. T. Kearney, Burnes and New (1996) found that the terms “partnership” as well as “partnering” were becoming devalued through over use and abuse and, as a result, were difficult to define and execute.

However, in Japan, the most used contract between a final assembler and supplier is based on collaboration. Stuart and McCutcheon (1996) recognised that in Japan a movement in supplier management has been the increased development of closer ties with selected supplier firms, with broadened expectations about what both buyer and supplier receive through their ongoing relationship.

In the early 2000s

Component suppliers are increasingly involved in different kinds of functional relationships with the final assemblers, as these are passing on more responsibility to the suppliers. Furthermore, different types of buyer-supplier relationships are established. They are part of the series of technological and organisational changes, which occurred in the automotive industry. These were summarised as follows (Wyatt, 2001):

a) **Technical collaboration**

Technical collaboration is associated with new product development, and improvement of production processes or technical suggestions. Nonetheless, the level of collaboration depends on the technological capabilities of all parties.

b) Multi-functional involvement

Multi-functional involvement is inevitable for relationship management, as collaboration becomes more technological.

c) Restructuring of the supplier network

The trend in the reduction of the number of suppliers leads to further industrial concentration with more technological competition, wherein some suppliers try to become specialists in high technologies to keep their position as preferred direct suppliers of the final assemblers.

d) Supplier network cooperation

Supplier companies share and exchange experiences or even resources.

e) Increased multi-directional information flows

Communication exchange between the final assemblers and the component suppliers is increasing. In addition, information flows are multi-directional within the supplier network.

Overcapacity, slow growth in the major markets and the intense pressure on costs has led to an increasing amount of collaboration between the assemblers (Calabrese, 2000). The progressive integration of buyers and suppliers becomes evident in the implementation of specific co-ordination mechanisms (e.g. JIT) and the widespread use of information technology. Moreover, other forms of alliances take place, varying from loose arrangements to increase manufacturing capabilities, through joint development projects to complete mergers or takeovers. It appears that firms are seeking to combine their strengths and overcome weaknesses in a collaboration that is much broader and deeper than the typical marketing joint ventures that were used previously. Competitive advantage is now dependent on an entire network of organisations (i.e. VMs, their first direct suppliers, their second tier suppliers, etc.) and competition is no longer at the individual firm level (Purchase, 2000). Rather, networks are competing with networks (Dyer, 1994). For a network to be competitive, VMs need to work alongside the components industry to make it viable and strong (Boston Consulting Group, 1993). Despite the intensive cooperative activities that are observed and recommended, for American and European automotive manufacturers, the BSR continues to be extremely tense (Calabrese, 2000).

Langfield-Smith and Greenwood (1998) suggested that the transition to cooperative relationships between buyer and suppliers may be difficult to implement for Western final assemblers, due to high levels of complexity, long lead times and the adversarial supplier relationships of the past. If, for some authors such as De Banville and Chanaron (1999), the duration and the acceleration of this process remain open to question, for Freissenet and Lung (2000), the tendency for collaboration between final assemblers and suppliers is inevitable. This is because global scale product development requires new methods in relation to the management of relationships between the different services and departments involved in the design of a global car. Calabrese (2000) noted that the increasing outsourcing of production to suppliers pushes buyers and suppliers into cooperation. Despite the existent different opinions, it appears undeniable that the Western automotive industry is moving away from its traditional philosophies and structures for supplier relationships (Calabrese, 2000). This author claims that the actual approach is from adversarial relationships to more collaborative ones.

2.6 Conclusion

This chapter has shown how the automotive industry has been evolving since the 1920s and it continues to evolve as a result of many forces of change that have been of influence over the last two decades. The automotive industry has been influenced by three groups of forces:

- a) One is largely the result of the implementation of corporate strategies (e.g. internationalisation, investment, production, purchasing, and assembler-supplier relationships).
- b) A second group of factors is largely outside of the control of the automotive manufacturers. These include the macroeconomic, regional, sectoral and environmental policies adopted by the governments. The automotive industry is thus greatly influenced by the reorganisation of the global economic and political space. For example, economic integration in Europe, offering new opportunities for the automotive industry.

- c) The third group of factors includes the specific characteristics of production and demand in emerging markets. The future development of the automotive industry will be influenced by the ways in which the global strategies of the companies deal with these local realities.

Cars were first manufactured using craft production techniques developed in Europe in the late 19th Century. Craft production involved the work of highly skilled, independent component manufacturers and the fitters in the coordinating manufacturer. Craft production was overtaken by mass production in the early 20th Century; an approach developed in the US to standardise vehicles and reduce costs. Mass production is characterised by high levels of supplier integration and aggressive outsourcing of simple parts. The dominance of the mass producers of the US and Europe lasted until the early 1970s. At this moment the period of the stability in the automotive industry came to an end. Western VMs faced increasing external pressures and heightened internal competition, particularly from the Japanese, who came to prominence with lean production techniques, removing waste, increasing flexibility and improving the quality of the final product. Lean producers engage in obligational contracting with their suppliers, where suppliers remain independent but tied together through equity stakes. Initially the first reaction of Western automakers was to use suppliers as a focus for cost reduction, creating strongly adversarial relationships and ultimately damaging the competitive status of the components industry. It then became clear that Western automakers were looking to imitate the Japanese through the implementation of lean production methods and the reduction of their supply base. VMs moved towards globalisation, consolidating their operations through alliances and mergers.

The move from adversarial to collaborative relationships with suppliers constitutes a major shift in approach for the Western automotive industry. Collaboration within the automotive industry has arisen out of a need to strengthen the industry in a time of maturity and over-capacity. It reflects the acceptance in the West of the competitive advantage demonstrated by the collaborative approaches of the Japanese. There is no blueprint for Western manufacturers to copy. The Japanese developed an industry that is appropriate for their culture and their work philosophy. Western firms have been

blurring their established boundaries and engaging in forms of collaboration that resemble neither the familiar alternative of arm's length market contracting, nor the former ideal of vertical integration. Western manufacturers have emulated various elements, attempted a shift in philosophy but ultimately are adapting what they have learnt from the Japanese to suit a different context.

After years in which "lean production" has been at the top of final assemblers' agendas, the end of the reorganisation of the industry seems not yet in sight (Legendijk, 1997). It is the view of Bates and Croom (1998) that, despite the final assemblers' expressions of confidence in the health of the market, and in their own ability to satisfy the customer, the automotive industry is still facing significant challenges, including: (a) over capacity in the market; (b) the need to reduce costs; (c) the challenge of being innovative even with a mature product; (d) shortening product development lead times; (e) resolving the conflict between standardisation and customisation, and (f) improvement in buyer-supplier relationships

If the challenge facing the automotive manufacturers in the 1980s was how to change their industrial model, that of the last decade has been how to reorganise internationally (Freysenet and Lung, 2000). Moreover, competitive advantage is now dependent on an entire network of organisations (i.e. VMs, their first direct suppliers, their second tier suppliers, etc.) and competition is no longer at the individual firm level. Rather, networks are competing with networks (Dyer, 1994). For a network to be competitive, VMs needed to work alongside the components industry to make it viable and strong (Boston Consulting Group, 1993).

From the literature review it has become clear that largely missing in the reports and empirical studies on the automotive industry is an analysis of the internationalisation courses followed by automotive companies in terms of the inter-firm collaborative and partnering strategies that have been applied in specific contexts at different points of the respective automotive multinational networks. This suggests that there are issues related to inter-firm collaboration and partnering within the automotive industry,

which require further investigation. The next chapter will describe predominant thinking on these topics in order to give the reader the theoretical context for the research.

Chapter 3

Inter-Firm Collaboration and Partnering

This chapter will start by reporting a variety of definitions on inter-firm collaboration and partnering, which on its own will give the reader an idea of the complexity of these concepts. Then it will review main contributions of some theoretical perspectives to the understanding of these topics. These are: the resource based view theory, transaction cost analysis and network theory. The chapter will go on providing a short overview of partnering related issues, including disciplinary perspectives, characteristics, and influencing factors. In this chapter the conceptual framework that was used as a basis for the empirical work, will be introduced. This framework contemplates defining variables of partnering, which the researcher has found in the literature.

3.1 Introduction

A review of literature, originated from several fields of research, has shown a wide range of work written on inter-firm collaboration and partnering. Theoretical perspectives, models and typologies on business relationships have included in their frame of analysis these topics. In what concerns theoretical perspectives, the diversity in theoretical backgrounds presents some problems as to how to order the development process of inter-firm collaboration and partnering. A great amount of research on BSR has focused on a debate regarding the need for closer relationships between buyers and suppliers (Lamming, 1996). The arguments start with the theory of the firm of Coase (1937) and the transactional economics work of Williamson (1975), and proceed with the concepts of inter-organisational relationships of writers such as Van de Ven, Emmitt and Koenig (1975), which are at the basis of the development of the network concept as opposed to supply chain (Lamming, 1996).

This research interest on inter-firm collaboration and partnering has accompanied the many changes and competitive trends in recent years in the world's automotive industry, which have forced firms to look at adding value and reducing costs. These changes and trends include increased globalisation of both sources of supply and markets and higher levels of quality consciousness (Hendrick and Ellram, 1993). As Womack, Jones and Roos (1990) mentioned, these changes have brought cost reduction programs, quality improvement initiatives, inventory reduction programs, early supplier involvement in product design and increased emphasis on cycle-time reduction. Japanese firms, followed by Western companies, found that a way to reduce costs was to work closer with their suppliers. The philosophical underpinnings of this approach, often designated indistinctively by collaboration, cooperation (Young and Wilkinson, 1997), closeness (Ford, 1998), partnership, partnering, strategic alliance (Spekman, 1988) or co-makership (Bevan 1987), originate from Deming's (1986) fourteen points on quality, which were developed in the late 1940s (Cousins, 1994). Deming argued that firms should work more closely with fewer suppliers to facilitate communication flows and to achieve the maximum of synergy from their relationship (Cousins, 2002).

3.2 A discourse on inter-firm collaboration and partnering: definitions

Despite the diverse terminology used interchangeably to express one of the several alternatives of people's interpretation of their goal interdependence (i.e. closeness, collaboration, cooperation, partnership and partnering) (Young and Wilkinson, 1997), there have been attempts to define, distinguish and establish the frontiers between terms.

For instance, Bello, Lohtia and Dant (1999) defined collaboration as the joint action of buyer and supplier personnel, which results in an interpenetration of organisational boundaries due to the sharing of resources and responsibilities as the personnel from the two firms conduct activities in a highly coordinated and integrated way. Spekman, Kamauff Jr. and Myhr (1998) referred to collaboration as the highest level of intensity in the exchange between trading partners, which requires high levels of trust, commitment, information sharing and a shared common vision of the future.

In turn, Ellram and Hendrick (1995) provided a distinction between partnering, cooperation and collaboration. The authors considered that partnering relationships go beyond cooperation (i.e. relationships that exist to improve operating procedures and efficiency) to include collaboration (i.e. relationships that exist to develop new products and/or new technologies).

For Hendrick and Ellram (1993) partnership is the concept, whilst partnering refers to the associated activities and the process of interchange.

Recent definitions of collaboration and partnering seem to go in parallel with the recognition of the complexity (e.g. Cheung and Turnbull, 1998) and variety of relationships (e.g. Gadde and Hakansson, 2001) that can arise as a result of an interactive process. This appears to be apparent in subsequent views on inter-firm collaboration and partnering.

As a result of the governance mechanisms or the way economic activity is organised, relational forms (i.e. types of relationships) occur. Some authors describe relationships within a continuum ranging from one extreme to another opposite extreme (e.g. MacNeil, 1980; Matthyssens and Van den Bulte, 1994; Sako, 1992; Wilson and Vlosky, 1997). Some others follow this view of a continuum or spectrum of relationships but consider many variations of collaborative relationships in between the extremes. Some of these classifications of intermediate relational forms appear to be broad and qualitative in nature (e.g. Lamming, 1993) whilst others have devised a detailed approach, which permits quantitative measurement of the buyer-supplier relationship (e.g. Sako, 1992). Contrary to this view of a continuum of relationships with two opposite extremes (e.g. Sako, 1992), lies Young and Wilkinson (1997) for whom collaboration and competition emerge as separate dimensions rather than opposite poles of the same dimension, suggesting that relationships comprise different mixes of each other rather than being one or the other. Competition is seen as a form of opposition, which is object-centred, indirect and impersonal. Collaboration is defined as involving a combination of object-centred and collaborator-centred activity based on compatibility of goals, aims and values. Young and Wilkinson also stated that relationships are multi-dimensional, including both elements of collaboration and competitiveness. This view of a firm conducting a number of different relationships at the same time, and at different levels is gaining ground (e.g. Araujo and Mouzas, 1997; Mudambi and Helper, 1998). Similar to Young and Wilkinson's perspective is the one claimed by Mudambi and Helper who admitted non collaborative behaviour within a context of formal collaboration. Cox (1996) suggested that organisations require an awareness of the benefits of both competitive and collaborative strategy and need to operate along both dimensions. In other words, there is a need for senior managers to start to conceive a strategic view of the right mix of competitive or collaborative relationships within the external supply chain.

Veludo and Macbeth (2000), in turn, defined buyer-supplier partnering as “a purposeful strategic relationship-type, precisely and clearly established between a buyer and a supplier who share compatible goals, strive for mutual benefits, and in which the mutual dependence requires mutual efforts to ensure that the commitment is

both sensibly targeted and effectively managed” (p.798). This definition reflects a recent trend, which considers partnering as a strategic collaborative relationship-type within a portfolio of relationships (e.g. Ford, 1998). Veludo and Macbeth view partnering as a “relationship type that has to be defined and targeted at the start of a learning process leading to previously agreed objectives” (p.803). The authors have distinguished partnering, as a formal arrangement, from vertical collaboration comprising both the set of joint activities practised by buyer and supplier and the parties’ behaviour (which is a combination of co-operative and non co-operative behavioural features). Moreover, Veludo and Macbeth view partnering as a wide combination of possible features which may differ from one dyad to another but have in common those “necessary and sufficient conditions” that constitute the core of the partnering approach. In this line of thinking Bensaou (1999) had distinguished collaborative relationships (within the scope of straightforward transactions) from relationships that are strategic partnerships. In this case, long-term commitments and substitutability of suppliers are the variables the author takes into account to distinguish both types of relationships.

From the above discourse on inter-firm collaboration and partnering it can be inferred that partnering is a complex concept (Lamming, 1993). As Burnes and New (1996) mentioned, there is no agreed definition of partnering.

3.3 Contributions of theoretical perspectives to the understanding of inter-firm collaboration and partnering

Researchers have adopted different theoretical perspectives such as resource based view (RBV), transaction cost analysis (TCA) and network theory in order to explain relationship governance. These three perspectives appear to be particularly relevant to the study of partnering and collaboration within the automotive industry, which is an industry of large MNCs with activities organised on international integrated networks, as the following authors will demonstrate. According to Fynes (1998) these theories have all contributed to the modelling of buyer-supplier relationships both in the identification of the underlying dimensions of relationships (e.g. trust, adaptation) and

in the selection of the unit of analysis (i.e. firm, dyad or network). Furthermore Doran (2001) observed that in recent years there has been a growing interest in applying TCA within a supply chain context, in which partnering fits. Moreover TCA has been used to address a wide range of topics related to co-operative strategy and strategic alliances such as modes of entry to foreign markets and the selection and structuring of alliance forms (Child and Faulkner, 1998). Finally, it is the view of Ghoshal and Bartlett (1990), and Tseng, Yu and Seetoo (2002), that the network theory provides a more accurate description of MNC operations than the traditional views of organisation.

Transaction cost analysis

TCA developed by Williamson (1975, 1985), was originally inspired by Coase's (1937) work. TCA emphasises the efficiency and cost-minimising rationales for collaboration (Child and Faulkner, 1998).

Within TCA it is assumed that a firm will be able to reduce transaction costs (relating to exchange, contract and control) with its suppliers by reducing the supply base and by entering into close and long-term collaboration with its key suppliers (Child and Faulkner, 1998). It is recognised that close relationships, however, involve the risk of opportunistic behaviour (Child and Faulkner, 1998). Therefore, it might be necessary to include safeguards (e.g. penalty clauses related to poor delivery performance or quality products) and credible commitments (e.g. joint investments in specialised tools and equipment, joint training programmes and exchange of employees between the firms) in supplier agreements (Child and Faulkner, 1998).

Whilst TCA provides a framework for exploring the choice between market and hierarchy as governance modes, it does not take into account how the relational aspects of collaboration evolve over time and which affect the nature of the transaction themselves (Child and Faulkner, 1998).

Resource based view theory

Young, Bell and Crick (2000) noted that the RBV is not a single or integrated perspective, but rather a set of contributions published mainly since the early 1980s, which suggest a wide variety of ways in which a firm can obtain the supply of resources critical to its survival and growth. According to these authors, a firm's resources and capabilities may be generated from either inside or outside the firm. For example, strategic alliances represent a way of enhancing competence through accessing the expertise possessed by partners, reducing risks, achieving economies of scale or learning through joint R&D (for more examples within the automotive industry see Section 2.4.4). Skjoett-Larse (1999) pointed out that the RBV recommends companies focus on their core competencies and develop capabilities which are valuable, difficult to imitate, and socially complex. He considered the development of partnerships as examples of distinctive capabilities, which have those characteristics. With its focus on needed resources, the resource based view of the firm (RBV) indicates that, when resources and competencies are not readily or sufficiently available to firms, these are more likely to establish linkages with other entities.

Skjoett-Larse contended that this perspective provides a good description of the inter-organisational processes that develop between the partners in a long-term relationship. Despite the contributions that this theory may bring, the author pointed out as one of its limitations the fact that there is no operational definition of resources, capabilities and core competencies.

Network theory

Network theory derives from social psychology and inter-organisational theory. Grandori and Soda (1995) noted that this theory has become increasingly important due to its capacity for explaining co-operative organisational interdependences.

A central construct to this theory is the network concept. The network concept was initially applied to describe the social relationships among individuals (e.g. Tichy, Tushman and Fombrun, 1979). Since the 1980s, the network concept has become increasingly prevalent and important for the strategic management and organisation of firms (Ebers and Jarillo, 1997). Later, as co-operative strategies in business became more popular, researchers then applied the network concept to strategic management (Johanson and Mattsson, 1987). Nowadays the concept is used in a variety of perspectives, including organisation theory, communication theory and small group theory (Grandori and Soda, 1995). As the concept has been widely used, the term network has lost precision (Nohria and Eccles, 1992). According to Araujo and Easton (1996), some researchers use the term network as an illustrative metaphor. This means that the concern is more with social and economic processes, and structures are regarded as the temporary effects on these network processes.

Network is a concept also used by authors such as Ghoshal and Bartlett (1990), and Tseng, Yu and Seetoo (2002) to refer to a particular type of organisation. Tseng, Yu and Seetoo view a network as a mode of organising economic activities through inter-firm co-ordination and co-operation.

The literature seems to suggest two different interpretations of the network organisation: the organic organisation and the small central organisation. The organic organisation is designed to handle tasks and to contend with environments that demand flexibility and adaptability (Kanter and Eccles, 1992). The other interpretation is that of a small central organisation which relies on other organisations to perform some of its business functions. In this case, the network organisation is viewed as a group of specialised units co-ordinated by market mechanisms, instead of a chain of command (Miles and Snow, 1992). Achrol (1999) advocated that all organisations have internal networks and that all participate in external exchange networks. Achrol defined a network organisation as a network of exchanges linked by the multiplexity and reciprocity of the ties among its members.

The MNC has attributes similar to those of a network organisation (Tseng, Yu and Seetoo, 2002). During the last decade, it has become more and more prevalent to refer to the MNC as an inter-organisational network (Birkinshaw, Holm, Thilenius and Arvidsson, 2000), and as a web of exchange relationships among different organisational units, both inside and outside the MNC (Nohria and Ghoshal, 1997). A MNC has been conceptualised as an inter-organisational network that is embedded in an external network consisting of all other organisations, such as customers, suppliers, and governmental institutions, with which the MNC must interact (Ghoshal and Bartlett, 1990; Andersson and Forsgren, 2000). A subsidiary, as a member of a MNC, is part of the network organisation, while having its own network (Tseng, Yu and Seetoo, 2002).

Networks comprise three sets of inter-related elements or dimensions: actors, resources and activities (Hakansson and Snehota, 1995). Actors are entities involved in activities to convert resources to finished goods and services for consumption by end users. In other words, actors are defined by the activities they perform and the resources they control. Therefore, actors are both resource holders and resource users. They possess different resources, depending upon the nature of the global environment they are working in and the position they hold in the network (Harland, 1996). One main assumption in the network theory is the dependence of the firm on resources controlled by other firms. The firm gains access to these resources through the interaction with other firms. According to this theory, a firm's relations with other firms often constitute its most valuable resource (Skjoett-Larse, 1999). For example, firms that operate within technologically advanced lines of business do not have the opportunity to follow the most recent technological development within all fields, due to the high costs and high level of resources involved. By entering into close co-operation with suppliers who maintain complementary competencies, the individual firm will be able to make use of resources and skills controlled by other players. Actors carry out activities; they pursue their own goals and possess their own perceptions of the interacting party (Hakansson and Snehota, 1989). The network as configurations of actors carrying out value activities, form the contextual domain the firms are embedded in (Moller and Halinen, 1999). From the ongoing process of

interaction taking place, actor bonds (AB), resource ties (RT) and activity links (AL) emerge and evolve. Bonds between firms in a network are influenced by a number of factors such as social, economic and technical (Easton, 1992). It is assumed (e.g. Halinen and Tornroos, 1998; Moller and Halinen, 1999) that it is the characteristics of network of actors and the relationships among them, which determine what activities will be performed in the network and by whom. Furthermore, the nature of network activities determines what resources are needed, how these resources will be acquired, and which actors are best suited to perform various network activities. A further assumption is that the network connects the participants through different activity chains.

~ Network theory regards each firm as being engaged and operating in a unique network context, consisting of a specific set of interconnected relationships, considered relevant by the firm. Anderson, Hakansson and Johanson (1994) argued that every firm should be viewed as being part of a network. Furthermore, two connected relationships can be both directly and indirectly connected with other relationships, as part of a larger business network. This idea has led the authors to the concept of business networks, which they regard as sets of connected firms or alternatively as sets of connected relationships between firms. The dyadic relationship is the unit of primary interest within business networks. The authors argued that an essential commonality of a dyadic business perspective and a business network perspective is a consideration of interdependencies that exist between firms doing business with one another and the resultant need for collaboration. Collaboration is expected to be more or less the rule in a network (Hakansson and Sharma, 1998).

The relations between the firms are developed through exchange and adaptation processes. Exchange processes include, for example, exchange of information, goods and services. Adaptation processes include, for example, mutual modifications of products. Through interaction, the parties in a network will develop various kinds of mutual bonds. Stability and change is another issue addressed in this theory. Networks are considered as stable and dynamic at the same time (Easton, 1992). New relations are established, and old relations come to an end for various reasons. Some relations

are stronger than others. Also existing relations will change over time. Thus, a network has a dynamic nature as it is in a permanent state of change. In this theory it is assumed that there is a power structure where the different participants have different powers, which determine the role and position of the individual firm in relation to the other firms in the network. Furthermore, the perception of the firm's role and position in the network is essential for the firm's strategic identity.

The network theory has been extensively used as a basis to describe the dynamics of buyer-supplier relationships. However, it gives few normative directions as to when inter-organisational co-operation is more efficient than alternative governance structures (e.g. market or hierarchy) (Skjoett-Larse, 1999).

3.4 Partnering

Literature does not seem to provide a coherent picture of partnering. The study of partnering resulted in a degree of frustration for the researcher as definitions and characteristics are broad and idiosyncratically selected by researchers dependent on their particular background or area of research. Moreover, much of the literature uses terms inter-changeably like "partnering", "partnership" and "collaboration", adding to the broadness and confusion surrounding the term itself. This reveals a patchy understanding of the nature of the concept and of how it operates. Hill summarises the topic by stating that partnering is the relationship between two organisations in order for them to survive within the marketplace.

For the purposes of this review the researcher will explore the broadness of the concept to guide the remainder of this thesis. This section will then provide a short overview of: (a) partnering related literature; (b) disciplinary perspectives on partnering; (c) partnering characteristics, and (d) influencing factors on partnering.

3.4.1 An overview of related literature on partnering

There is a body of literature which deals with a variety of issues including: characteristics or critical success factors of partnering; benefits and risks of partnering relationships; partnering implementation; procedures involved in identifying a suitable partner; factors that seem to affect the willingness of companies to engage in partnering relationships; applicability of partnering; partnering activities, and models for partnering implementation. An overview of this literature is presented in Table 3-1

Table 3-1: Partnering: an overview of related literature

Author (Year)	Contribution (s)
Cyert and March (1963)	The authors introduce the stakeholder theory. A main concern of their work is the effect pressure groups have upon the firm. The authors develop methods for identifying key stakeholder groups and then show how the firm can manage these groups within its environment.
Farmer (1970s)	Topics on purchasing and supply from strategic to operational issues.
Williamson (1975)	The author introduces transactional cost analysis, which is concerned with exploring markets and hierarchies within governance structures.
Ford (1978)	Relationships are defined using “marriages” as a metaphor.
Farmer (1980s)	The author focuses on the strategic importance of purchasing and supply. Supplier selection is critical to firm’s success.
Porter (1980)	Strategic implications of the purchasing function are discussed within the value chain concept.
Spekman and Hill (1980)	The author develops the five-force model, including determinants of buyer and supplier power. The authors focus on the strategic importance of purchasing and supply.
Hakansson (ed.) (1982)	According to the IMP Group, co-operation is a product of the exchange episodes that take place between buyer and supplier.
Kanter (1983)	The author focuses on the strategic and organisational perspective on partnership management.
Ring and Van de Ven (1984)	The authors examine the developmental process of co-operative inter-organisational relationships that entail transaction-specific investments in deals that cannot be fully specified or controlled by the parties in advance of their execution.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Van Weele (1984)	The author focuses on the strategic importance of purchasing and supply.
Porter (1985)	Competitive Rivalry Model. The author looks at strategic implications of the purchasing function discussed within the value chain concept. According to the author firms can only attain competitive advantage by aligning the buyer and supplier value chains. The author emphasises that alliances companies may establish are, by necessity, long-term relationships, due to the very nature of the time taken to develop new technologies and approaches. The author claims that these alliances can also allow the sharing of activities without the need to enter new industry segments. Moreover, the forming of close working relationships or alliances with strategic counterparts can bring the advantages of vertical integration without the physical integration of the parties and ultimately can lead to a distinctive competitive advantage for the parties involved.
Spekman (1985)	The author advocates that purchasing strategies must conform to the strategic plans of the firm and reflect considerations for the firm's present and future competitive posture.
Williamson (1985)	The consideration from markets to hierarchies is based on transaction cost economics. Markets and hierarchies appear as two organising principles for economic activity. According to the author the features of a transaction, in particular the degree of asset specificity should play an important role in the choice of a suitable governance structure. The employment contract is the legal basis for these governance structures, providing a structure for authority.
Deming (1986)	The author takes a quality perspective on relationship management.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Spekman and Strauss (1986)	Factors influencing the establishment and development of buyer-supplier relationships.
Wilson and Mummalaneni (1986)	Factors influencing the establishment and development of buyer-supplier relationships.
Dwyer, Schurr and Oh (1987)	Factors influencing the establishment and development of buyer-supplier relationships.
Lamming (1987)	The author develops the lean supply strategy.
Contractor and Lorange (1988)	The authors concentrate their ideas on strategic collaboration especially in the area of technical collaboration. They extend Hennart's (1986) work by presenting a few more motivations for the establishment of partnering relationships.
Spekman (1988)	The author discusses both the term strategic alliances and collaboration, specifically as they relate to the purchasing function. The author characterises collaborative relationships.
Carlisle and Parker (1989)	The authors provide a practical overview to relationship strategies concentrating on the negotiation aspect of the relationship. The authors claim that a firm should not take a short-term approach with annual negotiations, but build on a longer-term contract view which will allow the partners to work continually at improving the relationship. The authors also provide the essential steps towards creating a successful partnership.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Kanter (1989)	Concept of partnerships/stakeholders. The author adopts a strategic perspective of partnership management. The author identifies what she called the "six I's" to guide companies in the implementation of the partnership approach: importance, investment, interdependence, integrated, informed and institutionalised.
Landeros and Monczka (1989)	The authors use Porter's model to support strategic role of purchasing. The authors have presented a general description of co-operative buyer-supplier relationships.
Cavinato (1990)	The author focuses on the strategic importance of purchasing and supply.
Ford (1990)	Summary of the work of the IMP Group on interactions, relationships and networks.
Anderson and Narus (1990)	A Model of Distributor Firm and Manufacturer Firm Working Partnerships.
Heide and John (1990)	Model of closeness in industrial buyer-supplier relationships.
Macbeth, Baxter, Ferguson and Neil (1990)	Development of the customer-supplier relationship audit as a management guide.
Macbeth and Ferguson (1990)	Strategic aspects of supply chain management.
Womack, Jones and Roos (1990)	Lean production.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Farmer and Ploos Van (1991)	Pipeline management, which is primarily concerned with optimising the complete value chain.
Hennart (1991)	Main objectives for establishing partnering relationships.
Slack (1991)	Supply chain management is seen as a networking approach to value chain optimisation.
Metcalf, Frear and Krishnan (1992)	The authors introduced the concept of degree of co-operation The development of close relationships between buyers and suppliers is a function of three processes: exchange, co-operation and adaptation. According to the authors, a co-operative atmosphere is often a pre-condition for substantial investment actions made by one or both parties. The authors have identified a number of partnering characteristics.
Sako (1992)	The ACR-OCR framework. Relationships are based on a continuum from arm's contract relationship to obligational contract relationship.
Cooper and Gardner (1993)	The authors explore when and how to establish a wide range of business relationships.
Gardner, Joseph and Thach (1993)	The authors present a model of the full range of relationships, including partnerships between suppliers and distributors.
Hendrick and Ellram (1993)	The competitive-coercive and the cooperative-collaborative models. The authors conclude that supplier partnerships will continue to be an enduring major purchasing strategic initiative. The authors identify a number of partnering characteristics.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Lamming (1993)	The four-phase model in which the partnership model is included. Lamming's typology outlines the essential characteristics of buyer-supplier relationships within the UK automotive industry. Lamming's partnership model recognises the strengths associated with the closer buyer-supplier relationships adopted and developed by Japanese companies.
Lamming (1993)	Lean supply model.
Stuart (1993)	The author indicates that partnerships are strong inter-company dependency relationships with long-term planning horizons.
Burt and Doyle (1994)	The authors develop the idea that suppliers should be viewed as keiretsu partnerships. Provide examples of how partnerships increase competitive advantages for both the supplier and the buyer.
Cousins (1994)	The vendor management model (a positioning tool).
Ganesan (1994)	Factors influencing the establishment and development of buyer-supplier relationships.
Hines (1994)	Network sourcing model. The author argues that competitive advantage can be achieved without full organisational integration. He introduces the concept of supplier associations, suggesting a four-stage approach to implementing this strategy.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Macbeth and Ferguson (1994)	The authors develop the RAP-3 framework, which focuses on results through action on purpose, people and process. The model demonstrates the decision making process that needs to be considered when developing relationships. The authors also propose a partnership sourcing strategy, which involves a change process along the supply chain, from a system in which the parties expect to obtain one-sided advantages to another in which interdependence and mutual obligation prevail.
Nisigushi (1994)	The author, follows Hines's (1994) applying identical perspective in a Japanese business environment. The author also substantiates Lamming's (1993) arguments, adding to his work the idea that value analysis is a key component of Japanese success.
Spekman and Mohr (1994)	Characteristics of partnerships.
Sako, Lamming and Helper (1994)	The authors analyse partnering in a dynamic way in their report conducted in the worldwide automotive industry on the development of close relationships between final assemblers and component suppliers.
Akacum and Dale (1995)	Characteristics of partnerships. The authors are also concerned with difficulties that may occur with the implementation of partnerships.
Ellram and Hendrick (1995)	Characteristics of partnerships.
Grandori and Soda (1995)	The authors make out ten basic co-ordination mechanisms that sustain and regulate inter organisational co-operation.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Hakansson and Snehota (1995)	The authors, in their ARA model use the word collaboration without emphasising the construct. They consider collaboration as a natural and regular event between buyers and suppliers.
Landeros, Reck and Plank (1995)	A model for developing and maintaining partnerships.
Mudambi and Mudambi (1995)	A game theoretical model of close but adversarial buyer-supplier relationships in which formal commitment is accompanied by non-cooperative behaviour.
Lamming, Cousins and Notman (1996)	The RAP (Relationship Assessment Program) model.
Mudambi and Schrunder (1996)	The authors introduced the concept of degree of partnerships.
Sheppard and Tuchinsky (1996)	The authors consider a number of factors influencing partnerships.
Biong, Wathne and Parvatiyar (1997)	Factors which drive companies to resist to engage in partnering relationships
Brennan (1997)	Benefits and costs of implementing partnerships,
Buono (1997)	The authors develop an alliance-based intervention model, which is a way for managers to conceptualise and improve issues related to creation, maintenance and assessment of partnerships. In this model critical components of a partnership process are presented.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Campbell (1997)	The author is concerned with the factors that play an important role in whether or not firms engage in co-operative relationships. His work is based on flexible packaging industry.
Cooper, Ellram, Gardner and Hanks (1997)	The authors define partnering as referring to an area on a continuum of possible relationships. They introduce the concept of degree of partnership, which is related to the more or less inter-organisational linkages companies may establish.
Cox (1997)	The collaborative approach is not necessarily more effective than the competitive approach.
Crane <i>et al</i> (1997)	Partnering process model. This model consists of five steps that a company entering a partnering relationship must work through to ensure a successful partnering relationship.
Fontenot and Wilson (1997)	The authors review four models of relational exchange to introduce theoretical constructs and to illustrate the ways in which relationships have been deductively studied in marketing. They conclude their work by presenting a prediction matrix for partnering activities and typical distributor-manufacturer relationships.
McIvor, Humphreys and McAleer (1997)	The authors provide an overview of the impact that partnership sourcing has upon buyer-supplier relationships. The authors assess the stages involved in developing closer buyer-supplier relationships and outline the difficulties that companies face when moving from traditional adversarial modes of commercial relationships to the more co-operative approach associated with partnership sourcing.
Olsen and Ellram (1997)	Factors influencing partnering relationships.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Young and Wilkinson (1997)	Co-operation and non co-operation may coexist. Firms may choose to co-operate with regard to some goals and not to co-operate with respect to others.
Wilson and Vlosky (1997)	Attempt to formulate an inductive model of partnering activities using qualitative data.
Beecham and Cordey-Hayes (1998)	Introduction of the concept of technology partnering as a relationship between a buyer and a supplier that encourages the development of technology to meet the buyer's requirements. The authors identify four levels of technology partnering. They also identify a set of contributory factors considered important in a partnering arrangement.
Langfield-Smith and Greenwood (1998)	The authors provide an overview of the development of buyer-supplier relationships within an automotive context. They demonstrate that practical difficulties and potential solutions associated with moving towards the latter stages of Lamming's typology (i.e. the partnership and the lean models). Using a case study of Toyota Australia to demonstrate the factors perceived to be influential in the development of such relationships, they conclude that there were, and continue to be, difficulties associated with moving from arm's length to co-operative relationships. They conclude that the effective development of improved buyer-supplier relationships is likely to be improved if consideration is given to similarities between the industry and technology of the two parties, employees' prior experience of change, the improvement of communication levels and experiential learning.
Leverick and Cooper (1998)	The authors are concerned with risks in implementing partnering and how to lessen them. They assume that partnerships are build gradually. The authors showed that for close buyer-supplier relationships to succeed the parties must consider the importance of selecting the right partner, guaranteeing effective communications and the ensitive issues of information disclosure and partnership monitoring.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Macbeth, Boddy, Wagner and Charles (1998)	They introduce the change process model, which includes the organisational areas of objectives, results, business processes, technology, structure, people, power and culture.
Mudambi and Helper (1998)	The application of the close but adversarial model of buyer-supplier relationships to the US auto industry. The model incorporates non-cooperative behavior within a context of formal commitment, using data from the US auto industry.
Nielson (1998)	The author defines the concept of closeness and identifies the role that it plays in a partnering relationship.
Spekman, Kamauff Jr and Myhr (1998)	A perspective on the implementation of partnerships in the supply chain: an empirical investigation. The authors showed that closer buyer-supplier relationships should only be encouraged where the component is viewed as strategically critical to the buyer and that non-strategic relationships should adopt the more traditional open market negotiations approach.
Thompson and Sanders (1998)	The authors argue that many "shades" of partnering exist, based on the degree of objectives alignment between involved parties. As a result, the authors develop the idea of a partnering continuum, made of four general stages: competition, co-operation, collaboration and coalescence.
Vlosky and Wilson (1998)	Benefits of partnerships.
Vlosky <i>et al</i> (1998)	The authors develop a framework of partnership structure as defined by the activities of highly successful partnering firms in contrast to average or typical inter-firm relationships. Their contribution is a profile of partnering activities as they are manifested in the manufacturer/distributor channel in the woods products industry.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Bello, Lohtia and Dant (1999)	Their work examines overall collaboration across the major development stages for component parts and empirically tests strategic and cost antecedents. In addition to specific assets and uncertainty, the production cost factors of task-related scale and OEM-specific scale are shown to influence collaboration during component development.
Bensaou (1999)	The author distinguishes collaborative relationships from relationships that are strategic partnerships.
Kim and Michell (1999)	Partnerships are costly to establish and maintain. Furthermore, they reduce a customer's ability to switch away from inefficient suppliers.
Hall and Andriani (1999)	The authors define partnership as an explicit and as an implicit form of governance.
Patterson, Forker and Hanna (1999)	The authors are concerned with factors influencing partnerships.
Ahuja (2000)	Importance of inducements and opportunities in the formation of inter-firm linkages.
Boddy, Macbeth and Wagner (2000)	The authors present an interaction model of partnering which shows seven contextual factors that shape and are shaped by individuals. The interaction model brings insights into both the content and process of supply chain partnering.
Calabrese (2000)	Co-operative relations with suppliers can be considered a means for final producers to scan the technological knowledge base of related industries and to keep its progress under control.
Tuten and Urban (2001)	An expanded model of business-to-business partnership formation and success.

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Table 3-1: Partnering: an overview of related literature*Continued*

Author (Year)	Contribution (s)
Weber (2001)	The authors identify prospective foundations for supplier-reseller relationships, by tracing the evolution of supplier-reseller partnerships and by introducing a set of solutions designed to build more efficient and productive supplier-reseller partnerships.
Cousins (2002)	A conceptual model for managing long-term inter-organisational relationships. The author argues that partnership relationships do not exist but instead, there are ranges of varying collaborative relationships, all of which are competitive.
Ramsay and Caldwell (2002)	“The partnership metaphor shares the same attention narrowing effects as the dyad metaphor” (p. 632). The metaphor focuses on the human social aspects of business interactions.
Wynstra and Pierick (2002)	Supplier involvement in single development projects. The authors establish guidelines for the interfaces in the different collaborative relationships.

3.4.2 Disciplinary perspectives on partnering

This section will discuss the way in which partnering has been viewed within a variety of disciplines with an interest on the topic. The researcher expects, this way: (a) to give to the reader the disciplinary contexts in which inter-firm collaboration and partnering have been studied, and (b) to identify where further research is required and the broad principles of how it should be conducted. Supply chain management, purchasing and industrial marketing are three of these disciplines where much of the literature written on inter-firm collaboration and partnering can be traced to.

Supply Chain Management

The concept of supply chain management (SCM) has its roots in the 1960s concept of logistics management (Lazzarini, Chaddad and Cook, 2001), and it has evolved since then. The concept of SCM has been used to represent a variety of different meanings, some related to management processes, others to the structural organisation of businesses (Harland, 1996). Lazzarini, Chaddad and Cook found that despite divergences that may exist on the conceptualisation of SCM, the literature on SCM has been emphasising, in general, the role of management to co-ordinate the flow of products, information and decisions in supply chains in order to minimise costs, optimise production flows, or capture value along the chain. Despite this view on SCM it seems that more and more the term supply chain is giving place to the term supply network, which considers the complex non-linear network of relationships that exists for any product or service that is provided for an end customer (e.g. Cox, Sanderson and Watson, 2001). According to Harland, Lamming, Zheng and Johnsen (2001), the supply network concept appears to be more complex than the traditional supply chain concept. The authors argued that whilst SCM tends to concentrate on more simplistic, linear, and unidirectional flows of materials and associated information, supply networks encompass the complexity of networks involving lateral links and two-way exchanges. Christopher (1998) has recognised a lack of precision of the term “chain”, suggesting that the term “network” is more realistic and that ideally it should be “demand” and not “supply”. However, for Christopher, more

important than the words is the way firms manage upstream and downstream relationships with suppliers and customers on an integrated basis. The distinction between supply chain and supply network seems to become clearer when taking into account the different levels of analysis within supply chain management, as considered by Harland (1996). These are:

- The internal supply chain, which integrates business functions involved in the flow of materials and information within the firm,
- The dyadic relationship level, which involves the management of dyadic or two party relationships with immediate suppliers,
- The external chain level as the management of a chain of businesses also being described as a pipeline (the term was introduced by Farmer and Ploos Van, 1991), and
- The inter-business network level, which relates to the management of a network of inter-connected businesses in the supply of products and services.

For Christopher (1998), one of the most significant breakthroughs in SCM thinking has been the realisation that individual firms no longer compete as stand-alone entities, but rather as supply chains (as formed by suppliers and alliance partners). The author views that the opportunities for achieving sustainable competitive advantage through the supply chain are considerable as the basis for competition switches from the individual firm to the network. He further suggests that in today's increasingly global markets, the way to reach sustainable competitive advantage lies in managing the complex web of relationships that link highly focused providers of specific elements in a cost-effective value-added chain. In the view of Stock and Lambert (1992) this can be achieved only if traditional adversarial relationships between channel members are abandoned and replaced by a partnership based on mutual trust and the desire to increase performance within the entire pipeline. Chopra and Meindl (2001) reinforce this idea, when they argue that effectively managed supply chain relationships foster co-operation, and thus support increasing supply chain co-ordination.

This importance given to relationships is demonstrated by the increasing emphasis on the establishment and management of supply chain partnerships (Wyatt, 2001). Partnerships are increasingly viewed in terms of the dyadic relationships between two organisations, and also as core elements of competitive advantage in supply networks (Wyatt, 2001).

Ellram (1991) recognised that the relative “newness” of supply chain management and its multidisciplinary nature had resulted in difficulties for researchers in the area. This view is shared by Monczka and Morgan (1997) who emphasise the fragmentation that exists within the discipline and assert that after almost a decade of existence, supply chain management continues to be a poorly understood, badly explained and wretchedly implemented concept. Particularly in relation to partnering research, Stannack (1997) states that there is as yet no comprehensive model which can be used to explain inter-firm relationships. For Stannack, as a result, partnership strategies may well be self-defeating.

Purchasing

Today, moves towards collaboration have expanded the approach taken by purchasing to supplier management and supplier development activities (Wyatt, 2001). However, much of the literature on partnering within the purchasing domain reflects the enduring belief in the dominant role of the buyer in buyer-supplier relationships (Wyatt, 2001). For instance, supplier development practice, which is associated to a collaborative approach (Krause and Ellram, 1997), has its essence in an active partner (the buyer) who puts resources into improving its suppliers (Burnes and New, 1998). As a consequence of this buyer-centric perspective, much of research on partnering has tended to focus on the role of the customer in establishing and managing partnering relationships (Burnes and New, 1996). The purchasing discipline is itself dominant in the research of buyer-supplier relationships and partnering in particular, producing the most papers and owning highly respected journals (Wyatt, 2001).

Industrial Marketing

Over the last two decades, research in industrial marketing has moved steadily away from the emphasis on analysing organisational purchasing decisions in discrete transactions, to the study of how organisations interact in industrial markets. In a brief literature review, Ford (1980) considered that the majority of the research in industrial marketing, particularly in the US, had fallen into a general research tradition, which he labelled as the “industrial buying approach”. This approach had focused into two main areas: (a) the understanding of the industrial purchasing decision and the supplier choice process, and (b) the understanding of the impact of different elements of the marketing mix on industrial markets. He also mentioned a tendency to isolate the study of the industrial buying process and industrial marketing activities, rather than look at the interplay between the two. The dissatisfaction with this state of affairs, and the recognition of the importance of interdependence of buyers and suppliers in industrial markets, led to a new approach to the study of industrial marketing and purchasing, which attempted to readdress some of the imbalances pointed out in Ford (1980). One of the starting points of the new approach, labelled the “interaction approach”, was to view the process of industrial marketing as “the mirror image of the industrial purchasing process and to look at the interaction between two active partners in a buying/selling episode” (Araujo 1990: 29). A significant legacy of this approach is the interaction model by Hakansson (ed.) (1982).

According to the interaction approach, each interaction between companies, whether for product, service, financial, social, or information exchange is an episode within the relationship between the companies. Each episode within the relationship (which may be close or distant, complex or simple) is affected by the relationship, and in turn may affect the relationship itself. The relationship between the companies consists of learned rules and behaviours that provide the atmosphere within which interaction takes place. Individuals will approach each episode on the basis of their experience within the relationship and elsewhere and on the basis of the values that they hold, both in general and in regard to the particular relationship. The interaction approach

has introduced the concept of atmosphere to capture the subtle co-existence of conflict and co-operation within a business relationship (Hakansson (ed.), 1982; Turnbull and Valla, 1985).

Criticisms to the interaction approach have been made, among which: (a) “the tendency to overemphasise harmony in buyer-seller relationships and neglect, to some extent, the disruptive impact of competitive forces on a relationship” (Ford, 1980: 236), and (b) very little guidance on adaptation decisions (Brennan and Turnbull, 1998). Also Wyatt (2001) noticed that its application to the study of the European automotive industry has been limited. According to Wyatt it is also the case that the model has a theoretical basis as it was developed from concepts and assumptions taken from inter-organisational theory and new institutional economics as well as trends in marketing and purchasing literature.

Based on the knowledge accumulated in the study of exchange relationships in industrial markets and recognising the limitations of a dyadic level of analysis, a number of Swedish researchers proposed a “network approach” to the study of industrial systems (e.g. Johanson and Mattsson, 1987). The network approach has become a major research direction in industrial marketing (Cheung and Turnbull, 1998). This is due to the fact that more and more researchers in industrial marketing are aware that dyads are only part of an overall picture and with a dyadic approach the network view is lost since connectedness is assumed away (Backaus and Buschken, 1997). According to Purchase (2000), researchers (e.g. Axelsson and Easton, 1992; Araujo and Easton, 1996) within the network approach have begun to consolidate their research around the Actors-Resources-Activities (ARA) model originally developed by Hakansson and Johanson (1992) and further extended by Hakansson and Snehota (1995). The ARA model was developed to describe industrial networks and to integrate network stability and development into a single model.

The network approach adds to the interaction approach the awareness that the focal relationships cannot be managed in isolation from the other relationships a firm has (Moller and Halinen, 1999), and that these focal relationships represent a conduit to

other relationships through which resources may be accessed (Easton, 1992). The network approach emphasises co-operation, complementarity in relationships and co-ordination. Within this approach, cooperation depends on the relationships between the firms' objectives. For Easton, competition and co-operation are two "dialectical processes in networks". Easton considered two types of co-operation: (a) instrumental in that each firm seeks to gain different ends from the same means, and (b) complementary in the objectives both parties held. The author assumed that firms buying and selling from one another have to have a minimum level of co-operation. According to Low (1997), the network structure and the positions occupied by the actors in the network are a result of mutual co-operation and adaptation. Easton (1992), and Easton and Araujo (1992) have included both vertical and horizontal relationships in network analysis. Horizontal, competitive interactions, are mediated by vertical, cooperative relationships between buyers and suppliers. The recognition of the interdependence between horizontal, competitive relationships and vertical buyer-supplier relationships reinforces the argument for moving beyond a dyadic to a network level of analysis.

According to Johnston, Lewin and Spekman (1999), the complexity of relationships increases when business relationships occur at an international level. From an industrial network perspective, internationalisation of the firm means that the firm establishes and develops network positions in foreign markets (Johanson and Mattsson, 1988). For Fletcher and Barrett (2001), in the international business context, business transactions are embedded in networks of relationships that cut across cultural boundaries. In addition, the authors observed that these relationships, in turn, are embedded in different national as well as global business environments. Furthermore, these environments include social networks, institutional networks and market networks. This means that: (a) there are likely to be differences in the political environment; (b) there will be different institutions and organisations to deal with, and (c) the nature of the market is likely to be different. Johnston, Lewin and Spekman (1999) believe that a changing global environment is forcing firms to move closer to their exchange partners, to form international alliances, and to participate in complex multinational networks.

3.4.3 Partnering characteristics

Studies have been conducted that look at the nature of partnering in terms of its main characteristics. Academics have been stating the boundaries of partnering by defining the concept through the consideration of the so-called dimensions, attributes, features, critical success factors or indicators of partnering success. The identification in the literature of the defining characteristics of partnering is not an easy task because different authors use different constructs to express similar ideas, which creates methodological problems in establishing comparisons and in looking for similarities. Perhaps this happens because the literature on partnering characteristics does not appear to represent a common stream of research. In spite of the divergences concerning the key characteristics of partnering, some commonalities emerge. Authors appear to converge to consider joint work, sharing of resources and mutual benefits as key defining characteristics of partnering. Key partnering characteristics extracted from literature and respective authors are displayed in Table 3-2. Based on these characteristics, the researcher developed a framework for partnering, which is illustrated in Table 3-3. This framework was developed by the researcher to provide guidance in exploring and analysing partnering relationships and thus aid further discussion. In this framework the dimensions correspond to the defining features of partnering, which in turn can be defined through a number of characteristics. It is not the objective of the researcher to explore in detail what has been written on each construct, which would extend this thesis beyond what the researcher believes to be necessary to the understanding of the concept of partnering following a constructivist and grounded approach, and as a basis for the fieldwork.

Table 3-2: Partnering characteristics

Characteristic (s)	Author (s)
Co-ordination	Spekman (1988) Metcalf, Frear and Krishnan (1992) Young and Wilkinson (1997)
Commitment	Herbig and O'Hara (1994) Sako, Lamming and Helper (1994) Ellram (1995) Valsamakis and Groves (1996) Buono (1997) Spekman, Kamauff Jr. And Myhr (1998)
Communication: Two-way communication	Spekman (1988) Ellram (1995) Mudambi and Schrunder (1996) Leverick and Cooper (1998)
Conflict resolution	Spekman (1988) Hendrick and Ellram (1993)
Continuous improvement focus	Ellram and Hendrick (1995)
Flexibility	Mudambi and Schrunder (1996) Vlosky and Wilson (1997)
Information disclosure & sharing	Bertodo (1990) Morris and Imrie (1992) Sako (1992) Hyun (1994) Dyer (1994) Campbell (1997) Leverick and Cooper (1998)

Continued on next page

Table 3-2: Partnering characteristics*Continued*

Characteristic (s)	Author (s)
Joint planning	Spekman, Kamauff Jr. And Myhr (1998)
Joint problem solving	Landeros and Monczka (1989) Sako (1992) Burnes and New (1998)
Joint R&D	Morris and Imrie (1993) Dyer (1996)
Long-term orientation	Sako, Lamming and Helper (1994) Ellram and Hendrick (1995) Campbell (1997)
Mutual dependence	Landeros and Monczka (1989) Sako (1992) Lamming (1993) Bensaou and Andersen (1997) Leverick and Cooper (1998)
Sharing benefits	Hendrick and Ellram (1993) Blancero and Ellram (1997) New and Burnes (1998)
Sharing risks	Herbig and O'Hara (1994) Ashmore (1995) Ellram and Hendrick (1995) Campbell (1997)
Sharing goals	Ellram (1995) Spekman, Kamauff Jr. And Myhr (1998)
Supplier development	Krause and Ellram (1997)
Trust	Sako (1992) Ellram and Cooper (1993) Mudambi and Schrunder (1996)
Willingness to help one another	Ellram and Hendrick (1995)
Win-Win	Spekman (1988) Vlosky and Wilson (1997)

Table 3-3: A framework for understanding partnering

Dimension (s)	Characteristic (s)	Indicator (s)
Commitment	Formal commitment	Type of contracts
Trust	An inherent trust	Type of contracts
		Negotiation
		Ordering procedure
		Technology transfer
		Quality inspection
		Information disclosure
Win-Win	Sharing of risks	
	Sharing of benefits	
	Increase in joint competitiveness	
Long-term orientation	Expectation of continuity	Type of contracts
		Substitutability of suppliers
		Length of contracts
		Information disclosure on long-term forecasting
		Assessment schemes
	A continuous improvement focus	Multi-functional teams
		Assessment schemes
		Payment performance
	Cost reduction projects	
	Supplier development	Supplier development programme

Continued on next page

Table 3-3: A framework for understanding partnering

Continued

Dimension (s)	Characteristic (s)	Indicator (s)
Co-ordination	Joint strategy setting	
	Joint planning	Planning product mix Management of capacity Joint cost planning
	Joint R&D	Joint design Prototyping Joint product development Joint process definition
	Two-way communication	Channels of communication Frequency of interaction
Joint problem solving	Willingness to help one another	
	Personnel allocation	
	Conflict resolution	
Flexibility	Two-way flexibility	Flexibility in agreements
		Flexibility in delivery
Mutual dependence	A reduced supply base	Proportion of buyer total demand provided by the supplier Importance of this item /product class to buyer Number of suppliers for this item/product class bought Number of alternative sources
	A reduced customer base	Supplying on an exclusivity basis Proportion of buyer's purchases

3.4.4 Factors influencing partnering

In the literature there is a lack of emphasis and of a clear distinction between the factors that motivate the choice of a partnering relationship-type (i.e. the motivational aspects of partnering or partnering drivers), the factors that influence partnering as a dynamic process and the success factors of partnering implementation. The researcher proposes in this section to bring some insights into these factors and briefly discuss the work that has been developed.

3.4.4.1 Partnering drivers

Empirical studies have indicated a wide variety of driving forces behind the development of partnering relationships (Hendrick and Ellram, 1993). These drivers are not mutually exclusive and a participant can manifest more than one at different times or in different circumstances (Ford, Mcdowell and Tomkins, 1998). For instance, different industrial settings may have different drivers (Bello, Lohtia and Dant, 1999). According to some authors, partnerships are motivated primarily to gain competitive advantage (e.g. Mudambi and Helper, 1998; Vlosky *et al*, 1998) through the development of potentially important synergies between firms with different capabilities (Dodgson, 1992). According to other authors, although partnering relationships can be implemented for a variety of strategic and operational goals (Ellram, 1991; Monczka and Trent, 1991) it is agreed the improvement of the product development process and access to innovative technologies are of paramount importance (Hakansson and Eriksson, 1993). Firms may choose to collaborate with respect to some goals and not to collaborate with respect to others (Young and Wilkinson, 1997). This may explain the myriad of ways in which buyer-supplier partnering relationships begin and are developed (Hendrick and Ellram, 1993). For example, a partnership focused on the trading partners with a long-term horizon differs from a project-based partnership; in this case two firms may jointly work towards a common goal and dissolve their agreement after achieving the goal. The main drivers or motivations for partnering (i.e. partnering drivers) emphasised in the literature are summarised in Table 3-4.

Table 3-4: Partnering drivers

Author (Year)	Driver (s)
Contractor and Lorange (1988)	Linking of the complementary contributions of the partners in the value chain (e.g. access to technology, materials, labour, capital).
Dodgson (1992)	The promotion of synergies between firms with different capabilities.
Cousins (1994)	The development of partnership philosophy appears as a result of firms' need to reduce costs.
Mudambi and Schrunder (1996)	Main drivers: better integration of design efforts, improvement of specific areas, increased stability of supply.
Beecham and Cordey-Hayes (1998)	Technology is increasingly the focus of collaboration. However, there are broad differences in the actual focus of collaboration between industries. In some industries the focus can be in product development and in others it can be in process development. Moreover, the focus of collaboration changes over time, sometimes with product life cycles.
Langfield-Smith and Greenwood (1998)	Main drivers: cost reductions, improves product quality, productivity and lead-time.
Mudambi and Helper (1998)	Ultimately firms are driven by the desire of greater competitive advantage.
Vlosky and Wilson (1998)	The ultimate goal of collaborative relationships is to develop strategic advantage by pooling resources, gaining access to market and/or technical information, leveraging of complementary strengths and achieving of economies of scale.
Bello, Frear and Krishnan (1999)	Firms collaborate not only to safeguard assets and enhance adaptation, but also to lower the costs of conducting development tasks by joining together to exploit scale economies better.
Calabrese (2000)	Collaborative relationships with suppliers can be a means for buyers to scan the technological knowledge base of related industries and to keep its progress under control.
Corbett, Blackburn and Van Wassenhove (2001)	Main drivers: increased market share; inventory reductions; improved delivery service; improved quality; shorter product development cycles.

According to Biong, Wathne and Parvatiyar (1997), resistance of firms to engage in partnering relationships is driven by:

- **Fear of Dependency**

Firms will be reluctant to engage in partnering relationships when they fear unilateral dependency on the other party due to: (a) loss of flexibility in strategic choices (e.g. in choice of suppliers); (b) fear of opportunistic behaviour of the partner, and (c) loss of personal or organisational control.

- **Lack of perceived value in the relationship**

Firms will be reluctant to engage in partnering relationships unless significant value added is proposed in terms of: (a) cost reductions; (b) new sources of revenue such as development of new products and access to new markets; (c) superior market position; (d) development of new competencies (i.e. new technological solutions can provide advantages for both the customer and the supplier), and (e) social rewards (e.g. the effect on company's reputation).

- **Lack of credibility of partners**

Firms will be reluctant to partner with other firms that: (a) are small relative to the firm's total demand in terms of size and capacity; (b) are unreliable in fulfilling agreements (e.g. related to delivery, quality); (c) lack an innovative outlook, and (d) have a generally low reputation.

- **Rapid technological changes**

In industries with rapid technological changes, large growth and many actors, firms will resist engaging in partnering relationships.

- **Lack of relational orientation in the buying company**

Firms with low relational orientation will be less inclined to engage in partnering relationships. This low relational orientation could be due to: (a) inhibitive firm policies; (b) transactional-based reward systems; (c) corporate belief systems; (d) rigid organisation structure, and (e) restricted flows of communication.

3.4.4.2 Factors influencing the partnering process of implementation

Literature has identified a large number of factors that shape inter-organisational relationships and has offered numerous categorisations for investigating each set of factors. For example, literature suggests that to fully understand buyer-supplier relationships one must consider the characteristics and behaviour of the supplier, the characteristics and behaviour of the buying organisation, the interaction process between buyer and supplier (e.g. Wren and Simpson, 1996), the network where the dyad is embedded (e.g. Hakansson and Johanson, 1992), the political and socio-economic environment under which both parties are operating (e.g. Hakansson (ed.), 1982), and the characteristics of the industry both buyer and supplier are associated with (e.g. Campbell, 1985). Such categorisations are apparent in models of buyer-supplier relationships and in many studies, either conceptual and/or empirical. Some of these models, which will be listed in Table 3-5 at the end of this section, have brought together many significant influencing factors related to inter-firm collaboration and partnering. The models in this table follow Fynes's (1998) classification in order to facilitate their identification. They are by no means an all-encompassing list of the models possible to find in the literature. They have appeared in several disciplines such as channel management, operations management, supply chain management, relationship marketing, and industrial marketing and purchasing. It happens that not all focus the same aspects of relationship management and when addressing the same issues, they examine them from a different perspective and even use a different terminology. Classifying models into discrete streams is an inexact task due to the level of duplication across literature.

A review of the literature revealed four groups of models exploring the influencing factors of buyer-supplier relationships: one exploring the behaviour of only one party (e.g. Sheth, 1973), another exploring the buyer-supplier dyad (e.g. the IMP interaction model), a third group emphasising the network in which the firm is embedded (e.g. Hakansson and Johanson, 1992) and a fourth group attempting to bring together the dyadic and the network elements (e.g. Hakansson and Snehota, 1995). Unfortunately this research has not been evolutionary, which means that the resulting models of

buyer-supplier relationships have not built on previous models (Wren and Simpson, 1996). This has led to a body of research rather disjointed, as well as confused and confusing (Cheung and Turnbull, 1998). The use of different terms to express the same category of factor is illustrative of this. In some cases, the categorisations and labels given to constructs not only confuse meaning, but also make it difficult to compare and summarise. Another example is found on the lack of clarity of the type of influence a factor may exert on buyer-supplier relationships. It often remains to be explained if a factor is influencing the overall buyer-supplier relationship or a particular feature of a relationship. Other times, impacts on collaborative or partnering relationships are mentioned without specification of the feature in question. Models and studies refer to factors influencing buyer-supplier relationships, but often ignore factors that will affect each relationship uniquely and to a varying extent (Veludo, Purchase, Macbeth, 2001). It seems in these cases that the complexity of relationships is not fully taken into account. The researcher believes that results and conclusions of studies are quite dependent on the type of research methodologies that have been employed. The researcher claims that in certain cases the methodologies used were not the most appropriate or sufficient in terms of complementary methods to be used.

Some factors influencing the partnering process of implementation, which have been uncovered in literature are summarised in Table 3-6, at the end of this section.

Table 3-5: Selected models of buyer-supplier relationships

Type of Model	Author (Year)	Model (s)
IMP Models	Hakansson (ed.) (1982)	The interaction approach
	Campbell (1985)	Buyer-seller interaction model: an interaction approach to organisational buying behaviour
	Metcalf, Frear and Krishnan (1992)	Structural model of the relationships among the interaction processes
	Petitt (1992)	Revised Integrated Model of Buyer-Seller interaction
Network Models	Hakansson and Snehota (1989)	Network model of organisation-environment interface
	Hakansson and Johanson (1992)	A model of industrial networks
	Hakansson and Snehota (1995)	The Actors-Resources-Activities (ARA) model
	Mittila (2000)	The Relation Trine
Channel Models	Anderson and Narus (1984, 1987)	A model of the distributor's perspective of distributor-manufacturer working relationships
	Heide and John (1988)	The role of dependence balancing in safeguarding transaction-specific assets in conventional channels
	Heide and John (1992)	The impact of norms in exchange relationships
	Gardner, Joseph and Thach (1993)	Modelling the continuum of relationship styles between distributors and suppliers
	Morgan and Hunt (1994)	Deductive model of the commitment trust theory
	Wilson and Croom- Morgan (1994)	The product, process, facilitation (PPF) model
	Wren and Simpson (1996)	A dyadic model of relationships in organizational buying

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Table 3-5: Selected models of buyer-supplier relationships*Continued*

Type of Model	Author (Year)	Model (s)
Process Models	Dwyer, Schurr and Oh (1987)	A relationship development process model
	Frazier, Spekman and O'Neal (1988)	A four-stage model in the explanation of exchange behaviour of just-in-time relationships
	Wilson and Mummalaneni (1988)	A bonding model of long-term relationships
	Ring and Van de Ven (1994)	Developmental processes of cooperative inter-organisational relationships
	Wilson (1995)	An integrated model of buyer-seller relationships
	Young and Wilkinson (1997)	Model of relationship development
Partnership Models	Anderson and Narus (1990)	A Model of Distributor Firm and Manufacturer Firm Working Partnerships
	Heide and John (1990)	Model of closeness in industrial buyer-supplier relationships
	Sako (1992)	The ACR-OCR framework
	Hendrick and Ellram (1993)	The competitive-coercive and the cooperative-collaborative models
	Lamming (1993)	The four-phase model
	Lamming (1993)	Lean supply model
	Hines (1994)	Network sourcing model
	Macbeth and Ferguson (1994)	The RAP-3 framework: results through action on purpose, people and process

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Table 3-5: Selected models of buyer-supplier relationships

Continued

Type of Model	Author (Year)	Model (s)
Partnership Models	Landeros, Reck and Plank (1995)	A model for developing and maintaining partnerships
	Mudambi and Mudambi (1995)	A game theoretical model of close but adversarial buyer-supplier relationships in which formal commitment is accompanied by non-cooperative behaviour
	Lamming, Cousins and Notman (1996)	The RAP (Relationship Assessment Program) model
	Crane <i>et al</i> (1997)	Partnering process model
	Mudambi and Helper (1998)	The application of the close but adversarial model of buyer-supplier relationships to the US auto industry
	Macbeth, Boddy, Wagner and Charles (1998)	The change model
	Tuten and Urban (2001)	An expanded model of business-to-business partnership formation and success

Table 3-6: Factors influencing the partnering process of implementation

Author (Year)	Factor (s)
Campbell (1985)	Product characteristics.
Jackson (1985)	Strategic tendency for buyers to be more willing to develop co-operative relationships with suppliers when the supplier item is critical. This view would be criticised later on by Bello, Lohtia and Dant (1999) whose findings failed to support the role of criticality in motivating joint action.
Bertrand (1986)	Partnerships draw on supplier expertise in developing new products.
Metcalf, Frear and Krishnan (1992)	The development of close relationships between buyers and suppliers is a function of three processes: exchange, co-operation and adaptation. Adaptations represent durable, transaction-specific investments. The perceived product importance is another factor to take into consideration. The construct satisfaction may also affect the development of close, long-term relationships as well.
Hendrick and Ellram (1993)	Customisation of products.
Sheppard and Tuchinsky (1996)	Long-term orientation influences partnering relationships in that a firm makes an investment in some asset anticipating the other's existence as a partner in the future.
Campbell (1997)	Environmental factors such as task and competitive environment play an important role in whether or not firms engage in co-operative relationships.

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Table 3-6: Factors influencing the partnering process of implement*Continued*

Author (Year)	Factor (s)
Olsen and Ellram (1997)	Transaction specific investments, expected continuity, the perceived uncertainty, trust and dependence due to factors such as the product importance, are among the important factors determining the long-term orientation and the level of collaboration in buyer-supplier relationships.
Saxton (1997)	Alliance behaviour is a function of the combined economic value of a resource per se and the likelihood that a satisfactory relationship will be formed in a social structure.
Langfield-Smith and Greenwood (1998)	Many behavioural (e.g. willingness to accept change which depends on similarities in industry and technologies, positive prior experiences of change, effective communication and information sharing and experiencing learning), organisational (e.g. low resources dedicated to the sharing of innovative research and development between buyer and supplier) and environmental factors (e.g. uncertainty created by geographical distances from other regions) can affect the likelihood of both buyer and supplier developing partnering relationships based on mutual gains, trust and co-operation. Achieving co-operative buyer-supplier relationships depends on achieving high levels of trust among all parties. This requires bilateral communication and information sharing to develop these features.
Mudambi and Helper (1998)	The institutional environment plays a role in determining whether formal or informal commitment is the dominant form of co-operation.

Continued on next page

Table 3-6: Factors influencing the partnering process of implement*Continued*

Author (Year)	Factor (s)
Vlosky <i>et al</i> (1998)	Corporate strategy.
Bello, Lohtia and Dant (1999)	Collaboration can be a consequence of strategic goals and cost factors, which can be sensitive to the tasks associated with each development stage of component parts. Their findings showed that collaboration during component development was associated with sophisticated, complex components, technical uncertainty and final assembler's specific investments.
Bensaou (1999)	The level of specific investments (e.g. buildings, tooling, equipment, products and process customised to the components bought, investments in people or in time spent learning the supplier's business practices and routines or spent exchanging information, best practices, and knowledge to further develop and nurture the relationship) made by either partner to the relationship significantly correlates with practices commonly associated with partnerships.
Patterson, Forker and Hanna (1999)	Influencing factors of collaboration: the type of industry and the type of project undertaken.

3.4.4.3 Success factors of partnering implementation

For Sako, Lamming and Helper (1994) it takes time to develop partnerships. There are authors, such as Leverick and Cooper (1998) who suggest that building partnerships should be a step-by-step approach, or in other words, should be built gradually, as familiarity and trust between companies increase. Cousins (1994) shares a similar opinion, but justifies his view by arguing that organisations will find the change easier to implement if they go about it one step at a time. For Cousins important changes need to occur (e.g. an organisational cultural change) in both parties because if changes are not properly prepared, the move towards the adoption of partnering relationships can be compromised. Also, Burnes and New (1998) have referred to the need for considerable changes in the behaviour of both buyer and supplier to develop a viable long-term and close business relationship. The notion of change is at the centre of the change model developed by Macbeth Boddy, Wagner and Charles (1998), which recognises the need to allow for the dynamics of change and consider the combination of people and institutional mechanisms as part of an implementation route for change. This model takes into account the dynamic and developmental process aspects of partnering, which do not often appear to be emphasised in the literature. Bensaou (1999) suggested that a partnering relationship should be carefully planned and chosen as a type of relationship which is costly to develop and maintain, as well as risky, given the specialised investments they require. Besides, the choice affects how a firm defines its boundaries and core activities. Leverick and Cooper (1998) pointed out that partnering has risks which can be lessened by good partnership management, which takes into account the factors that influence the process of collaboration.

3.5 Conclusion

Literature review revealed that partnering has been, for years, a competitive strategy pursued by the VMs and their motor vehicle parts and components suppliers. Long practiced in Japan, VM-supplier partnering relationships have increased in the US and Europe. In a market characterised by changing regulations, intense cost pressures, and discriminating consumer preferences, VMs have developed partnering relationships with their supply base as a means to attain resources and achieve goals that elude these companies when operating alone. The increasing importance given to partnering within the automotive industry has been accompanied by a great number of studies on this topic, as this chapter tried to illustrate. However, lack of clarity, misunderstanding, controversy, partial views of phenomena, lack of an integrated and multi-disciplinary approach to research, is evidenced from this review of literature on partnering. Overall, the picture painted is one of a sense of confusion with the concept and a lack of empirical studies taking into account both perspectives of VMs and respective suppliers as well as the organisational structure of the parties involved in the business relationships they establish. Thus, useful but partial insights can be drawn from the existent literature. This may be explained by: (a) the assumptions researchers based on and the different objectives that they were set to achieve; (b) the limitations on the research design; (c) a static perspective, which took “snapshots” of the organisation at particular points in time, and which described the organisation at that point in time only, and (d) a focus on dyadic relationships without taking into account the network context and the ownership ties of the companies involved.

The purpose of the literature review was to develop an understanding of the relevant work on inter-firm collaboration and partnering and to identify areas where further research is required. Literature review was explored to unearth the research objectives. These “grow out” of the discussion as gaps in the body of knowledge were discovered. In so doing, the aim is to help the reader to grasp the novelty of the work conducted by the researcher. It is therefore important to select particular areas on which to focus the research. An area not yet explored and discussed is the one that refers to inter-firm vertical collaboration and partnering taking into account the

ownership ties of firms, such as those of MNCs. It is based on this gap that the researcher has defined the following objectives, already referred in Chapter 1: (a) to explore how inter-firm and partnering operates between a subsidiary of a motor vehicle manufacturer and its direct suppliers in Portugal, and (b) to explore the influencing factors on inter-firm collaboration and partnering between a subsidiary of a motor vehicle manufacturer and its direct suppliers in Portugal.

Chapter 4

Research Methodology

This chapter will examine the various possible approaches to designing a research methodology and the decisions made concerning this research. Section 4.1 will start exploring the predominant thinking in research philosophy and comparing the main paradigms in the social sciences. Then it will establish the connection between the theories of how human beings come to have knowledge of the world around them and the methodological approaches to investigate that world. It will end emphasizing the factors that can dictate the choice of a methodological approach. Section 4.2 will focus on the research methodology used in this study and how it was chosen as the most appropriate way of meeting the research objectives. The various decisions that were taken will be discussed and the choices made will be compared to alternative approaches. These decisions concern: (a) the research philosophy adopted; (b) the engagement in testing existing theory or in theory building; (c) the role of the researcher; (d) the methods used to meet the research objectives, and (e) the research strategy chosen to conduct this study of an exploratory nature. Section 4.3 will describe all the steps undertaken in the process of building theory from case study research and will give detailed justification for all the procedures followed. Section 4.4 will discuss the assumptions taken on several canons by which the quality of studies is normally evaluated. Section 4.5 will explain and clarify the writing style used for this thesis. The chapter will end by presenting a summary of the research methodology and of the decisions taken.

4.1 The philosophy of research

The study of people and how they think, feel and behave both as individuals and groups clearly lies within the domain of the social sciences. In attempting to understand the relationships between organisations and how these are perceived and operated by the people involved in them, it is therefore necessary to employ methods and approaches originating from the social sciences. The social sciences include areas such as psychology, sociology, anthropology, politics and education, and each area has its own epistemological and methodological preferences.

4.1.1 Epistemology

Epistemology is a philosophical theory of how human beings come to have knowledge of the world around them (Lewis-Beck, Bryman and Liao, 2004). Epistemology provides a philosophical grounding for establishing what kinds of knowledge are possible, for deciding how knowledge can be judged as being both adequate and legitimate and for deciding which scientific procedures produce reliable social scientific knowledge (Lewis-Beck, Bryman and Liao, 2004).

Two theories of knowledge have predominated in philosophical discourse (Crotty, 1998): rationalism and empiricism. While with rationalism there is innate knowledge, empiricism claims that all knowledge comes from the senses. In the context of social sciences, these philosophical positions are further elaborated in terms of two dominant epistemological positions (Lewis-Beck, Bryman and Liao, 2004). These are: nominalism and realism. When nominalism and realism are combined with the two major alternative ontological positions (i.e. concerning what constitutes social phenomena), materialism and idealism, a four-way classification scheme is generated (Johnson, Dandeker and Ashworth, 1984): empiricism (i.e. a combination of materialist ontology with a nominalist epistemology), substantialism (i.e. a combination of materialist ontology with a realist epistemology), subjectivism (i.e. a combination of idealist ontology with a nominalist epistemology), and rationalism (i.e. a combination of idealist ontology with a realist epistemology).

In empiricism, reality is viewed as being constituted of material things that can be observed by the use of human senses. Moreover, both concepts and generalizations are summaries based on many observations. Substantialism also adopts a materialistic view of reality, but assumes that people in different times and places can interpret reality differently. Furthermore, the material world is seen to constrain human actions and social relations. Because subjectivism views the reality as being socially constructed and interpreted, knowledge of this reality is available only from the social actors' accounts. Finally, rationalism views reality as existing independently of people, and their circumstances.

These four positions, which must be regarded as ideal types (Johnson, Dandeker and Ashworth, 1984), are associated with the major philosophies of social sciences. Empiricism is associated with positivism, substantialism is associated with critical realism, and subjectivism is associated with constructivism. Rationalism is now uncommon in social sciences (Lewis-Beck, Bryman and Liao, 2004).

Positivism and constructivism are two contrasting paradigms (Lincoln and Guba, 1985). The fundamental differences between these two schools of thought are summarized in Table 4-1.

Table 4-1: Positivist and constructivist epistemologies (adapted from Lincoln and Guba, 1985)

Assumptions about	Positivism	Constructivism
<i>The nature of reality</i>	Reality is single, tangible and fragmented	Realities are multiple, constructed and holistic
<i>The relationship of the researcher and the researched</i>	They are independent	They are interactive and inseparable
<i>The possibility of generalisation</i>	Time and context free; generalisations are possible	Only time and context-bound working hypotheses (idiographic statements) are possible
<i>The possibility of causal linkages</i>	There are real causes, temporally precedent or simultaneous with their effects	All entities are in a shape of mutual simultaneous shaping, being impossible to distinguish causes from effects
<i>The role of values</i>	Inquiry is value free	Inquiry is value bound

In the context of positivism it is assumed that the social world consists of a number of truths or facts that can be uncovered through observation and experimentation. This forms the basis for many people's ideas of science: a process of discovery of reality, of providing causal explanations for events or behaviors that occur in the world around us, thereby testing pre-determined hypotheses, which can often be taken from existing theories.

The meaning and validity of positivism have been matters of recurrent dispute. Against them, it has been argued that no data are simply available to researchers without interpretation, and there are, therefore, no data whose validity can be taken as indubitable (Hammersley, 1995, 1999). Equally, it is claimed that science does not operate simply by seeking logically to infer laws from observational data (Hammersley, 1995, 1999). Instead, it requires development of theories, which are then tested against data; a process that can only indicate likely truth or falsity, rather than establishing validity beyond all doubt (Hammersley, 1995, 1999).

In the context of constructivism it is assumed that reality is not something that simply exists; rather it is constructed by the individuals involved and the context in which the research is being conducted. In this case, research is not seen as finding things in the reality, but of creating meanings (Stratton, 1997). Because it is assumed that the subjects of the research and the research process itself actively construct meaning, the emphasis is to generate theory from the data collected, as opposed to testing hypotheses associated with existing theory. Constructivism assumes a relativist ontology (i.e. the relativism of multiple social realities), a subjectivist epistemology (i.e. recognises the mutual creation of knowledge by the researcher and the researched), and a naturalistic (i.e. in the natural world) set of methodological procedures (Denzin and Lincoln, 2000).

Often, positivism and constructivism have been taken as stereotypes opposing each other. However, there is an increasing trend, associated with management research, to provide some bridging between the two extreme viewpoints (Easterby-Smith, Thorpe and Lowe, 1991). This is the case for postpositivism, with Strauss and Corbin (1990, 1998) two of its followers.

Denzin and Lincoln (2000), in their description of postpositivism, point out the following assumptions and characteristics of this paradigm:

- a) Reality can never be fully apprehended, only approximated;
- b) Utilization of multiple methods as a way of capturing as much of reality as possible;
- c) It relies on rigorously defined qualitative methodologies;
- d) Emphasis is placed on the discovery and verification of theories;
- e) Instrumentation and quantification are simply procedures employed to extend and reinforce certain kinds of data;
- f) Traditional evaluation criteria, such as internal and external validity, are stressed, as it is the use of qualitative procedures that lend themselves to structured analysis.

4.1.2 Epistemology and method

Easterby-Smith, Thorpe and Lowe (1991) argue that the epistemological stance of researchers influences the methods used to investigate a particular research problem. By methods it is meant the various means by which data can be collected and/or analysed (Lewis-Beck, Bryman and Liao, 2004).

According to Easterby-Smith, Thorpe and Lowe (1991), the key assumption of positivism is that the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through reflection or intuition. It is the quantitative methods that have dominated in this area because they render the concepts embedded in theoretical schemes or hypotheses observable, manipulable and testable (Henwood and Pidgeon, 1993). Within this approach emphasis is put on the neutrality and separateness of the researcher from the subject under investigation. The value of quantitative research is assessed through concepts of reliability, validity and objectivity, all concepts that lend themselves to measurement and quantification (Flick, 1998).

The constructivism paradigm stems from the view that reality is socially constructed rather than objectively determined (Easterby-Smith, Thorpe and Lowe, 1991). It also considers the context as a product of history and social structure (Taylor and Bodgan, 1984). The reduced need for numerical verification coupled with the increased emphasis on discovering meaning rather than providing existence leads to the dominance of qualitative methods in the constructivist approach (Taylor and Bodgan, 1984). Bannister *et al* (1994) define qualitative research as the interpretative study of a specified issue or problem in which the researcher is central to the sense which is made. These authors recognize that there is no single qualitative method and quite different aims will be accomplished by different interpretative approaches. In addition, they recognise that the criteria for the assessment of qualitative research are less well established than those of quantitative research. Stake (1995) observes that most contemporary qualitative researchers nourish the belief that knowledge is

constructed rather than discovered. He further points out that for such qualitative researchers human beings construct their understandings from experience and from being told what the world is, not by discovering it.

The debate between quantitative and qualitative

Several similarities and several differences between quantitative and qualitative approaches are apparent. They have been emphasised by Stake (1995) in the following terms:

- a) Both quantitative and qualitative researchers plan carefully;
- b) The quantitative researcher seeks a collection of instances, expecting that, from the aggregate, issue-relevant meanings will emerge. The qualitative researcher concentrates on the instance, trying to pull it apart and put it back together again more meaningfully – analysis and synthesis in direct interpretation;
- c) The quantitative researcher looks for the emergence from the repetition of the phenomena. The qualitative researcher looks for the emergence in the single instance.

The main differences between the two approaches, as pointed out by Glesne and Peshkin (1992), are presented in Table 4-2.

Table 4-2: Quantitative and qualitative approaches (adapted from Glesne and Peshkin, 1992)

	Quantitative	Qualitative
Assumptions	The social world has objective reality (positivism); The method is the focus; Variables are identifiable and relationships measurable; Etic (outsider perspective)	Reality is socially constructed (constructivism); The subject matter is the focus; Variables are complex and often not measurable; Emic (insider perspective)
Purpose	Generalisability; Prediction; Causal explanations	Contextualisation; Interpretation; Understanding actors' perspectives
Approach	Begins with hypotheses and theories; Manipulation and control; Uses formal instruments; Deductive; Seeks consensus, the norm; Reduces data to numerical indices	Ends in hypotheses and grounded theory; Emergence and portrayal; Researcher as instrument; Inductive; Searches for patterns; Orientation away from cause and effect explanation; Seeks pluralism, complexity; Makes minor use of numerical indices
Researcher role	Detachment and impartiality; Objective portrayal	Personal involvement and partiality; Empathic understanding

As previous authors demonstrate, some researchers distinguish between quantitative and qualitative approaches to research, not on the basis of evidence type, but on the basis of different philosophical or epistemological beliefs (Yin, 1994). Within this frame, quantitative research is often taken to mean deductive, theory-testing, objective and positivist. In contrast, qualitative research is often taken to mean inductive, theory generating, subjective, and phenomenological. Another facet of distinction between quantitative and qualitative is that the former is oriented to the specific concerns of the investigator and the latter to subjects' perspectives (Bryman, 2001).

Bryman (2001) points out that the epistemological version of the debate between quantitative and qualitative approaches to research does not readily accept a blending of quantitative and qualitative research since the two traditions are considered to represent highly contrasting views about how social reality should be studied. This is the view of Henwood and Pidgeon (1993), who argue that quantitative and qualitative methods should be radically different as the underlying assumptions of the positivist and the constructivist epistemologies are, themselves, radically different. In Bryman's view, the tendency to associate particular methods with particular epistemological positions is little more than a convention. Glesne and Peshkin (1992) noticed that debates about whether to use quantitative or qualitative methods in social research often confuse the underlying epistemology with the technical aspects of each. For Bryman the technical version of the debate much more readily accommodates a combination of the two since it acknowledges the respective strengths and weaknesses of the two approaches as methods of data collection.

4.1.3 Epistemology, method and the research objectives

It is the belief of Henwood and Pidgeon (1993) that the personal views of the researcher as to what constitutes warrantable knowledge will undoubtedly influence the stance taken and the methods chosen. McGrath (1964) believes that when a methodology is chosen for reasons of personal preference, familiarity or operational expediency, the researcher is changing the nature of the problem as well as altering the amount of information that will be obtained from the study. For McGrath it is therefore essential to good research that the epistemological stance taken and subsequently the type of method chosen are dictated by the research problem under investigation, as opposed to the personal preferences of the researcher. For Glesne and Peshkin (1992) one method is not better than the other; rather, the decision to use one or the other should be based on the nature of the research objectives and which method is best suited to their investigation. McGrath recommends to researchers to choose the methodology to use in a given case on the basis of the kinds of information that are being sought (i.e. the nature of the problem under investigation). He argues that this way the amount of information obtained about the problem would be

maximised. Also Swartz and Boaden (1997) advocate that different types of evidence-generating methods suit different types of research problem. For instance, qualitative methods are ideally suited to research substantive areas about which little is known (Stern, 1980). Denzin and Lincoln (2000) point out that there is a growing recognition, within disciplines that are concerned with social behavior, including management, that qualitative research methods are needed to capture holistic real-world answers to real-world problems in a way that is not possible in a quantitative context. Finally, Glesne and Peshkin (1992) argue that despite the dichotomy that has been used in the literature to characterise both quantitative and qualitative approaches, it should not be suggested that a constructivist approach cannot use quantitative methods or alternatively a positivist cannot use qualitative methods.

4.2 The research design

A research design is a framework for guiding the research (Robson, 1994). Its purpose is to lay the foundations for conducting the research project and thus answer the research objectives and the research questions (Saunders, Lewis and Thornhill, 2000). Research design consists of the specification of choices related to research philosophy, research approaches, research strategies, time horizon, data collection methods, and data analysis techniques (Saunders, Lewis and Thornhill, 2000). Therefore, in order to determine the type of research design, it is necessary to have a clear understanding of the nature of the problem being investigated (Zikmund, 2000) and bear in mind that the mode of inquiry must suit the research objectives (Adams and Schvaneveldt, 1985).

The research objectives of this research project were defined in Chapter 2 through exploring the literature in the area and identifying gaps in the existing knowledge. These objectives are:

Research Objective 1:

To explore how inter-firm collaboration and partnering operates between a subsidiary of a motor vehicle manufacturer and its direct suppliers in Portugal

Research Objective 2:

To explore the influencing factors on inter-firm collaborative relationships and partnering between a subsidiary of a motor vehicle manufacturer and its direct suppliers in Portugal

The following sub-sections will focus on the research design and how it was chosen as the most appropriate way of meeting the research objectives. The various decisions that were taken will be discussed and the choices made will be compared to alternative approaches at every stage.

4.2.1 The research philosophy

The research, presented in this thesis, is undertaken from a postpositivist (e.g. Strauss and Corbin, 1999) and constructivist philosophical views, within a continuum that can be discerned between these paradigms (Charmaz, 2000). This research is postpositivist by providing description of inter-firm collaborative relationships between buyer and its suppliers through quantitative evidence, which is used in a theory building context (see Section 4.3.3.2). This evidence is collected through a structured instrument (or in other words, a questionnaire), in the belief that the reality can never be fully apprehended, only approximated. This research is constructivist by looking for rich contextual meaning as opposed to generalisable and objective facts. Qualitative evidence is used (see Section 4.3.3.3) to understand the rationale underlying relationships revealed in the quantitative data, explore the influencing factors influencing these relationships and suggest theory.

The research has been designed based on the following assumptions:

- a) All our knowledge of the world is constructed from our own subjective realities. For example, it is commonplace for those who have witnessed the same event to have quite different memories and descriptions of it. Thus, in this research, many realities may be constructed by those involved, as perspectives on the nature and the operation of inter-firm collaborative relationships may therefore vary widely between individuals. Similarly to

Stake (1995), the researcher does not see subjectivity as a failing, which needs to be eliminated, but as an essential element of understanding. The understanding reached by each individual is to some degree unique, but with much held in common. At the end, although the reality under investigation results from each individuals' making, it is a "collective making" (Stake, 1995: 102).

- b) The value of interpretations varies relative to their credibility and utility. In other words, every informant's personal reality is not equally important, either epistemologically or socially (Stake, 1995). Thus, some interpretations are seen to be better than others.
- c) The researcher herself, by conducting the investigation, plays an interactive role in the development of the understanding gained from the investigation. The analysis of the output will undoubtedly be the result of an interaction between the meanings evolved by the researcher and the meanings offered by the participant.
- d) The understanding gained from the investigation is context specific and not necessarily generalisable to larger populations.
- e) The very questions asked by the researcher and the context in which they are discussed will influence the way in which relationships are presented.
- f) Because reality is being constructed and that this reality is being influenced by the values and motivations of those involved, there is very little opportunity to identify the link between causes and effects. It would be unwise to take the factors influencing inter-firm collaborative relationships in the particular context of this study and suggest that they are applicable to all buyer-supplier relationships.

The aim of the researcher is not to discover the external reality, for that is impossible, according to the researcher's beliefs. Rather, it is to construct a clearer reality formed of interpretations and a more sophisticated universe of integrated interpretations. In this research, similarly to has been advocated by constructivists (see Section 4.1.1), the reality is constructed by the individuals involved and the context in which the

research is being conducted. The researcher seeks to make sense of reality by thinking about it as deeply as she can and, by doing this, being subjective. The search for meaning is a search for patterns, for consistency within certain conditions.

4.2.2 Existing theory or new theory

This research is of an exploratory nature. The research objectives reflect the desire to explore and increase our understanding on inter-firm collaboration and partnering in the automotive industry based on the premise that research to date has failed in its quest to establish an overarching theory of partnering and of how it operates. Given all research on inter-firm collaboration and partnering that has been conducted in a variety of disciplines, knowledge on it might be considered to be in its final stages. However, given the new guises in which collaborative efforts are showing up within today's organisations, research might also be considered to be in its infancy. This research aims to develop our understanding of inter-firm collaboration and partnering through investigating the experience of collaborative practices from the perspective of those involved rather than testing existing theory. The emphasis is to generate theory from the data collected. The researcher's aims are in the line with what Trim and Lee (2004) believe: in order that new models, concepts and theories can be produced, it is necessary for researchers to engage in theory building. This becomes more important as rapid social change and the resulting diversification of life worlds are increasingly confronting social researchers with new social contexts and perspectives (Trim and Lee, 2004). As Flick (1998) mentions, the actual social contexts and perspectives are so new for researchers that deductive traditional methodologies – deriving research questions and hypotheses from theoretical models and testing them against empirical evidence – are failing in the differentiation of objects. He further adds that as a result, research is increasingly forced to make use of inductive strategies while theories are more and more developed from empirical studies.

4.2.3 The role of the researcher

Prior to the empirical investigation, an extensive literature review on inter-firm collaboration and partnering was conducted by the researcher. This was done with the purpose of gaining an understanding of the area and clearly specifying the nature of the research problem. This review in itself gave the researcher a certain number of preconceptions regarding the nature of collaborative buyer-supplier relationships and partnering and how they operate. It was felt that these preconceptions undoubtedly would play a role in the design and analysis of the data. It was also felt that literature in itself was not sufficient to provide the contextual understanding for the study, and that familiarity and experience of the automotive industry was essential. These factors (i.e. strong preconceptions and familiarity with the participants in the automotive industry) led the researcher to feel how important it would be to adopt an active role in the investigation. This active role was not taken at the stage of collection of quantitative evidence, but rather during the simultaneous collection and analysis of qualitative data through in-depth interviewing, in accordance with a constructivist approach to research (see Section 4.2.1 and Section 4.3.3.3). In taking this approach it was assumed that the new understanding generated is a function of the interaction between the researcher and the participants (as mentioned in Section 4.2.1). As Pidgeon and Henwood (1997) state, what appears to be the discovery and emergence of theory is really the result of the interplay between data and the researcher's developing conceptualisation.

At the end the researcher plays the role of a "bricoleur-theorist" working between and within competing and overlapping perspectives and paradigms (Denzin and Lincoln, 2000). This role entails interpretive, political and narrative aspects. As interpretive bricoleur the researcher understands that research is an interactive process shaped by one's personal history and by that of the people in the setting. As political bricoleur she knows that there is no value-free science. As narrative bricoleur she tells stories about the world she studied, and framed within storytelling traditions, often defined as paradigms (i.e. postpositivism and constructivism in the case of this research).

4.2.4 Quantitative or qualitative approaches and methods of inquiry

The central question is therefore: “Which approach and which methods will best enable the researcher to meet the research objectives”. The researcher opted for quantification in research which is qualitative and interpretive in design. Thus, in this research, triangulation is the approach chosen. More specifically, methodological, data source and theoretical triangulation are adopted. Methodological triangulation is followed as both quantitative and qualitative methods of inquiry are used. In this research greater prominence is accorded to the qualitative method than to the other. Data source triangulation is pursued as slices of data both in different companies, and from a variety of people, are gathered. Finally theoretical triangulation appears in the use of more than one theoretical position in interpreting data (i.e. the IMP and the network approaches as well as the multinational and subsidiary theories).

At the outset, qualitative methods seemed most appropriate to answering the research objectives, which are focused on exploration. As was mentioned in previous sections, little was known on inter-firm collaboration and partnering taking into account the ownership ties of companies involved (e.g. multinational organizational structure). According to Robson (1994) this was the type of inquiry to best suit the purpose of seeking new insights and assessing phenomena in a new light. However, quantitative methods of inquiry were thought to be of importance within the frame of a triangulated research design.

A variety of reasons led the researcher to opt for triangulation:

a) To cross-check data

As Swartz and Boaden (1997) argued, the exclusive use of one method would militate against a cross-checking of data. According to these authors this cross-checking is necessary to balance out the problems inherent in both approaches. Denzin (1970) points out that the combination of quantitative and qualitative methods helps to determine how far they arrive at convergent findings. Bryman (2001) observes that discrepancies between the findings deriving from research in which quantitative and qualitative research are combined are not in

the least unusual. Furthermore, he states that it is in the spirit of triangulation that inconsistent results may emerge. Bryman suggests that discrepancies may prompt the researcher to probe certain issues in greater depth, which may lead to fruitful areas of inquiry in their own right. These areas can relate to either the methods concerned or the substantive area involved (Lewis-Beck, Bryman and Liao, 2004).

b) To fill gaps in knowledge

Quantitative methods in a predominantly qualitative study were chosen because of the researcher's calculation that a reliance on qualitative methods might not allow all the relevant issues to be fully addressed. The researcher feared the inaccessibility either of particular people or of particular situations.

c) To produce a general picture by bringing structure and process together and thus add rigor, complexity, richness and depth to the inquiry

Bryman (2001) argues that a questionnaire can establish regularities in social life while qualitative inquiry can allow the processes which link the variables identified in the questionnaire to be revealed. It seems clear for Bryman that qualitative research may be able to establish the structural features of social life in many instances, but the use of questionnaires can be a more efficient way of forging connections and revealing underlying patterns, which might take an age to produce when relying solely on qualitative methods.

d) To present a substantial body of uncontested description (Stake, 1995).

e) To search for additional interpretations and not only for the confirmation of a single meaning.

In the view of Denzin and Lincoln (2000) the stronger one's belief in constructed reality, the more difficult it is to believe that any complex interpretation can be triangulated. These authors see in triangulation not a tool or strategy to validation, but an alternative to validation. For them, triangulation is "the display of multiple, refracted realities simultaneously" (p.5).

4.2.5 The research strategy

There are several different ways in conducting an exploratory research, among which are survey, experiment, focus group and case study. Lewis-Beck, Bryman and Liao (2004) pointed out that the contrast between the case study and the survey relates to the number of cases investigated and the amount of detailed information the researcher collects about each case. They explain that social surveys study a large number of cases but usually gather only a relatively small amount of data about each one, focusing on specific features of it. Furthermore, by contrast, in case study, large amounts of data are collected about one or a few cases, across a wide range of features. Case study has been distinguished from experimental research on the basis of the control that researcher exerts upon variables. In the view of Lewis-Beck, Bryman and Liao, what truly distinguishes the experimental research from the case study research is the fact that experimental research involves direct control of variables. A focus group is a research interviewing process specifically designed to uncover insights from a small group of subjects (Lewis-Beck, Bryman and Liao, 2004). The focus group consists of a limited number of homogeneous participants, discussing a predetermined topic, within a permissive and non-threatening environment (Lewis-Beck, Bryman and Liao, 2004).

Taking into account the characteristics of the different ways of conducting an exploratory research, and that the overall aim of the researcher was to develop a new and empirically grounded understanding (i.e. generate theory) of inter-firm collaboration and partnering while favoring contextualization and complexity, it was found that the case study was the best strategy to follow. In the context of this thesis by case study it is meant “a research strategy, which focuses on understanding the dynamics present within single settings” (Eisenhardt, 1999: 138). As has been recognized (e.g. Lewis-Beck, Bryman and Liao, 2004), the case study strategy is particularly useful to: (a) provide description; (b) appreciate the uniqueness and complexity of its embeddedness and interaction with its contexts by handling rich sources of data and multiple forms of data collection, and (c) generate theory. Moreover, the case study strategy proves to be particularly appropriate to the research

of industrial networks where the complexity and dynamics of relationships limit the applicability of positivist research, which is based on inferential statistics methods (Easton, Wilkinson and Georgieva (1997). This is the case concerning VMs which form true spiders' webs of interactions.

4.3 Process of building theory from case study research

All the steps undertaken in the process of building theory from case study research are illustrated in Table 4-3, which is a roadmap for executing the research.

Table 4-3: Process of building theory from case study research
(adapted from Eisenhardt, 1999)

STEP	ACTIVITY	REASON
Getting started: Enfolding literature	Definition of research objectives	Focuses efforts
	A priori specification of constructs concerning partnering	Provides better grounding of construct measures. It allows researcher to measure constructs more accurately
	No hypotheses	Retains theoretical flexibility
Case selection	Single, atypical and holistic case self-selected by chance	Useful case as extends theory by filling conceptual categories. No statistical reasons are behind the use of the case
Entering the field	Initial data gathering and analysis, including field notes, reports, newspaper articles, internet data	Getting acquainted with the automotive industry; To increase theoretical sensitivity (i.e. the capacity to think about the data in theoretical terms (Douglas, 2003))
Quantitative data collection and analysis	Crafting questionnaire for data collection	Strengthens grounding of theory by triangulation of evidence; synergistic views combined
	Analysing data from questionnaires: exploratory data analysis	The researcher gains familiarity with data and preliminary theory generation

Continued on next page

Table 4-3: Process of building theory from case study research
(adapted from Eisenhardt, 1999)

Continued

STEP	ACTIVITY	REASON
Grounded theory approach to qualitative data collection and analysis	In-depth interviewing	Clarify the quantitative data obtained previously; Explore the influencing factors of inter-firm collaborative relationships
	Organizing the data storage system	To provide a relatively incontestable description for further analysis and ultimate reporting
	Coding instances from interviews	To facilitate the organization, retrieval, and interpretation of data and lead to conclusions on the basis of that interpretation
	Shaping hypotheses (i.e. statements of relationships between concepts) and interpreting: searching evidence for “why” behind relationships	The researcher constantly compares theory and data, iterating toward a theory which closely fits the data
	Theoretical saturation when possible	Ends process when marginal improvement becomes small
	Member checking of interviews and of interpreted data	Crucial for establishing the credibility of the researcher’s findings
	Enfolding literature: Comparison with similar literature	Sharpens generalisability and raises theoretical level
	Enfolding literature: Comparison with conflicting literature	Builds internal validity, raises theoretical level, and sharpens construct definitions
	Frameworks for understanding	Analytical picture for mapping patterns

4.3.1 Getting started: enfolding literature

Qualitative researchers differ in the role they give to the literature. Some may reject the formulation of theories and concepts with reference to literature in advance of beginning their field-work. Others, such as Eisenhardt (1999), suggest that researchers should formulate a research problem and possibly specify some potentially important variables, with some reference to extant literature, at an early stage of the process of building theory from case study research. He also suggests that researchers in doing so should avoid thinking about specific relationships between variables and theories as much as possible, especially at the outset of the process. Glaser (1978) recommends, similarly to Eisenhardt, that prior understandings to beginning the field-work should be based on the problem area and reading very widely to sensitise the investigator to a wide range of possibilities. Strauss (1987) contends that both use of self and the literature are early influences and, while diffuse understandings provide sensitivity, both specific understandings from past experience and literature may be used to stimulate sensitivity and generate hypotheses.

Blumer (1954) proposes an approach treating social scientific concepts as “sensitizing concepts”, that is, those background ideas which provide a general sense of reference and guidance in approaching empirical instances. This approach was taken later on by Glaser (1978) who recommends the use of sensitizing concepts as points of departure from which to analyse the data. According to Glaser these concepts offer ways of seeing, organizing and understanding experience. Bryman (2001) contends that a sensitizing concept retains close contact with the complexity of social reality, rather than trying to bolt it on to fixed, pre-formulated images. Bryman further states that the general understanding of concepts seems to imply that they are both inputs and outputs in relation to the research study; that is, they provide a general frame of reference at the outset and are also refined by the researcher during the field-work period.

As mentioned in Section 4.2.3, at the outset of the research, the researcher carried out a literature-based concept review of inter-firm collaboration and partnering before attempting to further develop these concepts via a grounded theory (GT) approach. As recommended by Eisenhardt (1999), the researcher avoided to establish relationships between variables and think of potential explanatory theories as much as possible. A wide literature review was done on the topics mentioned above in order to obtain background ideas to approach empirical situations. This a priori specification of constructs shapes the initial design of this theory-building research study. The researcher believed that if these constructs proved important as the study progressed, then a firmer empirical grounding theory would be generated.

4.3.2 Case selection

The aim of the researcher was to empirically generate a contextual understanding from the research itself. However, a choice had to be made about how broad the scope of the research should be, who to involve and how many cases should be studied.

In Portugal there was a very small population of accessible cases of subsidiaries of VMs, each case being unique and with atypical features: Auto-Europa (i.e. joint venture of Ford-Volkswagen), Mitsubishi Trucks Europe (MTE) and Opel Portugal (OP). The researcher thought it would be difficult to receive a positive feedback from Auto-Europa as this company was at an initial phase of installation in Portugal (see Section 2.3.1). Finally, from the three only MTE and OP were hospitable to the inquiry, with actors willing to comment on certain materials. However, despite previous negotiations, it was impossible to get, from MTE, the permission to publish the results. What started to be a potential three case study involving buyer and suppliers, turned out to be a single case research study.

The sampling of cases, concerning the number and type of cases to include in a research project, has been subject to debate. This controversial issue is not taken in the same way by those (e.g. Stake, 2000) who claim that case study research is not

sampling research. Within this line of thought is Eisenhardt (1999), who recognizes that the sampling of cases from the chosen population is unusual when building theory from cases.

The researcher realized that even when the sampling of cases is seen as an important issue, there are no agreed rules for sample size (see Section 4.3.3.3). However, she found that the use of single cases has deserved the attention of many academics. Some accept single cases but in certain circumstances. For instance, Yin (1994) views a single case to be justifiable only if one or more of these three conditions apply: (a) where the case represents a critical test of existing theory; (b) where the case is a rare or unique event, and (c) where the case serves a revelatory purpose. Easton (1998) argues that a single case looks far more defensible if the network where the case is embedded is one in which there are a large number of actors.

It appears that the on-going debate on the use of single cases is much related to the problem of case study generalization. Social scientists have written about a single case study as if the study of a particular case is not as important as studies to obtain generalizations pertaining to a population of cases. Many qualitative researchers themselves display unease about the extent to which their findings are capable of generalization beyond the confines of the particular case. According to Bryman (2001) there are grounds for thinking that the “problem” of case study generalization entails a misunderstanding of the aims of a research study. In his view this misconception arises in particular from a tendency to approach a case study as if it were a sample drawn from a wider universe of cases. For this author this tendency can be considered to be misguided as the issue should be couched in terms of the generalizability of cases to theoretical propositions rather than to populations or universes.

Related to the problem of generalization is the problem of representativeness of cases. Stake (1995) finds useful the selection of cases that are typical or representative of other cases in qualitative research, but contends that a sample of one or just a few is unlikely to be a strong representation of others. For Stake, though a collective case

study may be designed with more concern for representation, the typicality of a small sample is difficult to defend. He thinks that even for collective case studies, selection by sampling of attributes should not be the highest priority. Rather, opportunity to learn is of primary importance. He further asserts that good instrumental case studies (i.e. case studies that provide insights on a topic) do not depend on being able to defend the typicality, as each case has important atypical features, happenings and situations. In the view of Stake, the real concern of case study is particularization and not generalization. Within this frame, the emphasis is on uniqueness and on understanding the case itself. This means that a researcher takes a particular case and comes to know it well, not primarily to know as to how it is different from others but what it is and what it does. Stake believes that despite the particularity, people can learn much that is general from single cases. This belief lead the author to the definition of “naturalistic generalizations”, which are “conclusions arrived at through personal engagement in life’s affairs or by vicarious experience so well constructed that the person feels as it happened to themselves” (p.85).

The case study used in this thesis (i.e. Opel Portugal) is both “instrumental” and “intrinsic”, according to Stake’s (1995) classification. It is instrumental because it is examined mainly to provide insights on a specific topic (Stake, 1995): inter-firm collaboration and partnering between a subsidiary of an automotive multinational corporation and its direct suppliers. Within this frame, the case is of secondary interest, it plays a supportive role. Nevertheless, the case is looked at in depth, its contexts scrutinized, all because this helps the researcher to advance understanding on the topic mentioned above. It is intrinsic (see Section 4.3.3.2 about the quantitative data analysis and particularly about the uniqueness of the single case study) as it is not undertaken primarily because the case represents other cases or because it illustrates a particular problem, but because the case is itself, in all its particularity, of interest. Yet there too the researcher examines a part of a whole, seeking to understand how it operates within a wider context. At the end, as the researcher has several interests, particular and general, there should not be seen a line distinguishing the intrinsic from the instrumental case study; rather, a zone of combined purpose separates them.

In what concerns representational grounds, the epistemological opportunity seemed small to the researcher, but she was optimistic believing that important issues could be learned from almost any case. Furthermore she also believed that it was better to learn a lot from an atypical case than a little from a seemingly typical case. The most important was to seek out essential properties of everyday life and expect that subsequent research would then focus on the validity of the naturalistic generalizations or assertions she would arrive at, in other environments. Similarly to Stake (2000) the researcher believed that the purpose of the case report was not to represent the world, but to represent the case.

At the initial stage of research design, the researcher thought of using embedded case studies (as defined by Yin, 1994) as there was the possibility of identifiable logical subunits: the relationships that the subsidiary of a VM (i.e. Opel Portugal) would establish with each of its Portuguese based direct suppliers (PBDS), at a dyadic level. It was believed that these subunits could offer significant opportunities for extensive analysis, enhancing the insights of the research study. However, the strategy of gathering buyer's and suppliers' perceptions regarding each dyadic relationship had to be abandoned due to the unavailability of the buyer to give the necessary details. Moreover, at the outset of the research project, and according to the researcher's working experience in Portugal, there would be no certainty about how much time each supplier would allow for interviewing. The characteristics of companies based in Portugal in terms of their structure (i.e. SME with professionals accumulating more than one operational function) suggested that people could be very busy and consequently unavailable. These signs suggested to the researcher that it could be very difficult to obtain significant data on each buyer-supplier relationship or dyad. As a result, the researcher chose to adopt a holistic case study, with OP as focus of analysis, which in practice meant to take a global approach to the business relationships the focal company (i.e. Opel Portugal) had with its PBDS, while keeping the examination of their complexity. It was therefore felt that although valuable information would be gathered on the VM's perspectives in isolation, there would be an increased emphasis on the study of suppliers' perspectives.

4.3.3 Data collection and analysis

As it was mentioned in Section 4.2.4, quantitative and qualitative methods of inquiry were followed within the frame of a triangulated research design. Quantitative methods were adopted at a first stage of data collection and analysis, followed by qualitative methods. Briefly, the reasons that led the researcher to opt for methodological triangulation were (see Section 4.2.4 for more details): (a) to cross-check data; (b) to fill gaps in knowledge; (c) to produce a general picture by bringing structure and process together; (d) to present a significant body of description, and (e) to search for complementary or additional interpretations. In sum, it was believed that both quantitative and qualitative data would reinforce the categories that represented the inter-firm collaboration and partnering issues, providing consistent data. The researcher believed that this strategy exhibits the ability to examine a particular unit holistically and hence become aware of contextual nuances. Moreover, the researcher believed that quantitative data would offer a means to survey a whole corpus of data that could be lost in intensive qualitative data collection and analysis. Instead of taking the researcher's word for it, the reader has a chance to gain a sense of the flavor on inter-firm collaborative and partnering practices between companies as a whole, from the suppliers' voice. In turn, as believed, the researcher was able to test and revise her naturalistic generalizations, removing nagging doubts about the accuracy of her impressions about the data. The researcher designed the research project believing that "numbers still talk for many people".

The end-product of this strategy was an amalgam of quantitative data, field-notes, interview transcripts and documentary evidence. While quantitative data was analysed through exploratory data analysis, qualitative data was analysed using the principles of grounded theory, which allows the necessary flexibility for such kind of exploratory study. As it was mentioned in section 4.2.2, the choice for a grounded theory approach to qualitative data collection and analysis was based on its suitability to investigate "relatively uncharted waters". The researcher starts with minimalist a priori constructs, inquires deeply into organizational behavior and inter-firm collaborative and partnering practices and respective influencing factors and gradually

tests and forms theoretical constructs. The researcher develops theory through a comparative method, by looking at the same event, issue or process in different settings. Within this approach, practitioner-based data sources and inputs are essential to ensure triangulation and theory building. After stage two of data collection and analysis two conceptual frameworks are generated and propositions offered.

4.3.3.1 Entering the field

In addition to the literature review on inter-firm collaboration and partnering undertaken at the outset of the research process (see Section 4.3.1) a wide review of literature on the automotive industry was undertaken. The researcher felt the literature did not provide her with a practical, in-depth understanding of the automotive industry in Portugal. This understanding was felt to be a key element in the design of the study, by providing the contextual framework for the investigation, and more specifically for the design of the questionnaire. Without such an understanding a number of potential problems were foreseen: (a) the design of the study might be inappropriate to the setting in which it was to be conducted; (b) the initial learning curve during the data collection phase would necessarily be very steep and could potentially interfere with understanding and interpretation of the issues being revealed, and (c) most fundamentally, if the researcher did not have a conceptual framework on which to base the design of the study she might well not answer the research objectives because she was asking the wrong question. As a result, the researcher decided to engage in a series of informal face-to-face and telephone conversations with various professionals in the area: some working for institutions close to the automotive industry and others working for automotive companies. The conversations undertaken were intended to increase theoretical sensitivity (i.e. the researcher's capacity to think about the data in theoretical terms) and find a clearer direction from the field rather from the literature.

Institutions such as AEP (i.e. association of companies in Portugal), AFIA, (i.e. association of the automotive companies in Portugal) AIMMAP (i.e. association of metal and mechanical companies in the North of Portugal – a strong association within the sector), CATIM (i.e. technological centre working for metal and

mechanical companies), ICEP (i.e. governmental department of trade and industry) and IAPMEI (i.e. institute of governmental support to small and medium sized companies) were contacted. On the one hand these institutions are a landmark in Portugal's landscape as holders and producers of information concerning various industries including the automotive; information that otherwise can be very difficult, if not impossible, to access. On the other hand these institutions are a means to reach reputed and knowledgeable professionals on the automotive industry in Portugal. Getting the support of these institutions is "half way" to get access to people and companies and, indirectly, to data. As in some other countries in the world, there are personal networks in Portugal that are very influential in certain environments, made of people who know each other quite well.

Professionals reputed for their experience and knowledge on the automotive industry and working for companies such as Auto-Europa (i.e. a joint venture between Ford and Volkswagen), Mitsubishi Trucks Europe and Salvador Caetano (a Portuguese owned manufacturer of buses), were consulted.

This initial data gathering extended over a period of three months with each informal face-to-face conversation lasting about two hours. The outputs of the conversations were much more than expected. Some of the data, of a qualitative nature, acted as a precursor to the development of a questionnaire. Other data were about the companies that participated in the case study research (i.e. Opel Portugal and its Portuguese based direct suppliers). It was then that the researcher became truly aware of the importance of all the contacts established, which revealed themselves as a precious source of data on what was happening within the automotive industry in Portugal and other European countries. Many of these first impressions were later on refined.

4.3.3.2 Quantitative data collection and analysis

Quantitative data was gathered through a self-administered, mailed questionnaire, sent to Portuguese based direct motor vehicle parts and components suppliers of Opel Portugal (OP). In this research, the researcher though collecting quantitative data is

not taking the epistemological commitments of a positivistic and quantitative view of research, which she refutes in this type of study of an exploratory nature (see Section 4.2.4 for similar statement). The choice to conduct research using a self-administered questionnaire is viewed by the researcher simply as seeking answers to a research problem in a certain way. By using a questionnaire the researcher expected: (a) to provide information relatively quickly; (b) to increase the researcher's understanding of the inter-firm collaboration and partnering context before the interviewing process and thus think of the interviews relatively in advance; (c) to find out regularities and underlying patterns in companies' lives, and (d) to highlight those aspects most pertinent for further investigation in stage two. A questionnaire was thought to be very useful because there would be the possibility of asking the questions in the same way to each person and thus provide a simple way of constructing a structured data set. A substantial degree of standardization had to be imposed in order to ensure that roughly the same issues could be addressed in a roughly comparable way. It would also be useful to describe the characteristics of a set of cases through aggregates of coded data. The need to engender inferences across sites means that the data had to be reduced to comparable categories, thereby losing some of the richness of texture. The collection of the same type of information about each case would simplify the task of description. In fact, the quantitative data collection method includes repeated situations to get a representative coverage (Robson, 1994) of the relationships between buyer and suppliers.

The development of a self-administered, mailed questionnaire (see Section 4.3.3 for introductory methodological discussion) took thought, time and other resources as the researcher wanted to maximize the collection of reliable and valid data to pursue the research objectives and specifically Research Objective 1: the exploration of how inter-firm collaboration and partnering operates between a subsidiary of a motor vehicle manufacturer and its direct suppliers in Portugal.

The outcomes of the quantitative data study inform the researcher on the intensity levels of inter-firm collaborative activities implemented, and on the occurrence of partnering relationships. As mentioned in Section 4.2.4, through the questionnaire,

regularities in buyer-supplier relationships are caught. Thus, the questionnaire is a way of revealing underlying patterns of inter-firm collaborative relationships (as demonstrated by findings in Table 5-4 and Table 5-5), which might take too long to produce if relying solely on the qualitative inquiry. The outcomes of the questionnaire are taken forward into stage two for detailed exploration during in-depth interviews.

Questionnaire development

The field-notes material obtained from the initial data gathering (see Section 4.3.3.1), through informal personal and telephone conversations, were of great help in the construction of the questionnaire. From those questionnaires that had been found during the literature review concerning inter-firm collaboration studies, most questions were found not adequate to be included in this questionnaire. In fact the researcher found that inter-firm collaborative and partnering practices had not been subject to enough investigation and thus a lack of examples of those practices came to light. The questionnaire used in this quantitative study was jointly developed with Jose Carola (professional with more than thirty years of experience in the automotive industry, inside and outside Portugal) and Hildebrando Vasconcelos from CATIM. Also academic expertise on the structure and questionnaire design was obtained at the University of Glasgow. The development of the questionnaire, which followed all the recommended procedures in the literature, lasted for about one year.

The questionnaire (see Appendix 1) comprises two sections with seventy three questions in total. The first section includes general questions in order to obtain the main characteristics of the supplier company and to have an idea of the importance Opel Portugal (OP) can have for each supplier. The second section includes issue questions concerning inter-firm collaborative and partnering activities. These issues are those related to the conceptual framework introduced in Section 3.4.3, in Table 3-3. This framework lists potentially important variables related to inter-firm collaboration and partnering, without establishing specific links between them and avoiding theories as much as possible (as mentioned in Section 4.3.1). These variables that were at the basis of the formulation of the questionnaire were specified at an early

stage of the literature review process (as mentioned in Section 4.3.1). The questions are about activities that both buyer and supplier can perform having an impact on the other party. The main reason behind this choice is the belief that “we understand ourselves and others only when we transfer our own lived experience into every kind of expression of our own and other peoples’ lives ... only from our actions, and their effects upon others, can we humans learn about ourselves” (Dilthey (1976) quoted in Stake, 1995: 35-36). Most questions are close-ended questions. A scale from one (i.e. never) to seven (i.e. always) is used to measure the intensity of inter-firm collaborative practices and, indirectly, partnering related constructs. This scale, for the purpose of analysis and of summarizing data, was transformed into one where one corresponds to “very low” and seven to “very high”. The original scale with “never” and “always” as extremes was thought to be better for the purpose of rephrase of questions in Portuguese.

The original questionnaire was refereed by one academic (i.e. Guerra, from ISEG- Instituto Superior de Engenharia e Gestao) and professionals working in the automotive industry in Portugal, before the document was used. They checked wording, order of the questions and issues to be addressed. The feedback received was to make a few changes to the questionnaire. Most questions were then translated into English (see Appendix 2) to be commented on by academics at the University of Glasgow. The questionnaire was pilot tested (i.e. pretested) before being used for gathering the actual study data. The population chosen was the Portuguese based direct suppliers of Mitsubishi Trucks Europe who since the start of this research project showed willingness to participate in it. This pilot study was both an opportunity to get a flavor of buyer-supplier relationships in the automotive industry in Portugal and to check the validity of the questionnaire (i.e. the extension “to which any measuring instrument measures what it is intended to measure” (Lewis-Beck, Bryman and Liao, 2004: 1171)). From forty potential participants eighteen answered the questionnaire. Data were analysed and from the resulting report a conference paper was written (i.e. Veludo and Macbeth, 2000). This in itself was the confirmation that the measuring instrument in relation to the purpose for which was being used was valid.

Sampling and distribution of questionnaires

Address lists of Portuguese based direct suppliers of Opel Portugal were obtained through the purchasing director of OP. The researcher devised a letter of invitation, (see Appendix 3) which she then sent to 14 supplier sites together with the questionnaire. These were addressed to the managing director of each site, explaining the objectives of the research. This was done based on the belief that such kind of project would require the involvement of top management. The positive reaction of the managing director would be a sign of commitment in its own right. The letter asked for participant volunteers who would fit the following criteria: (a) would represent the buyer-supplier interface; (b) would know in depth the buyer-supplier relationship and/or (c) would have a profound knowledge of the company and Opel as a customer. A follow-up to this letter was done by telephone in order to get the attention for the research project and to track the questionnaires, and by doing so to ensure that these would be answered. The researcher was aware that the environment was one where potential respondents suffered from an over-bombardment of mailed questionnaires and other appeals to participate in research, which could discourage potential informants from participating. The results of the phone calls were very positive. Four companies, due to ongoing restructuring processes and uncertainty in their future with OP, preferred not to participate in this research. However, precious information was given by telephone. Ten companies indicated that they would answer the questionnaire.

Quantitative data analysis

Given the small sample size, exploratory data analysis (EDA) was used to analyse quantitative evidence. It consists of “an approach to data analysis that allow the data themselves to reveal their underlying structure and that gives the researcher a feel for the data” (Lewis-Beck, Bryman and Liao, 2004: 359). This approach relies heavily on graphs and displays to reach these goals because visual inspection offers special insight into the data. It also uses many numerical techniques (Hartwig and Dearing, 1979). Given that EDA represents a general philosophy of understanding data, “the

techniques serve as a means to that end rather than ends in themselves” (Lewis-Beck, Bryman and Liao, 2004: 359). In this thesis outputs (i.e. Table 5-3, Table 5-4 and Table 5-5) were used to describe emerging patterns rather than to test for statistically significant differences between variables.

According to Hartwig and Dearing (1979), analysts should: (a) be open to unanticipated data patterns that go beyond expectations, and (b) be skeptical of numerical summaries of data that can misrepresent the most informative aspects of data. As Hartwig and Dearing (1979) had discussed, the quantitative evidence gathered in this research was unexpected. On the one hand unanticipated data patterns were captured in terms of the levels of inter-firm collaboration; regarding certain constructs (e.g. joint R&D) they were higher than those foreseen on the basis of the researcher’s knowledge and experience of the field and various studies on the automotive industry in Portugal. On the other hand some questions of two of the questionnaires (concerning Delphi and Huf) were not answered as their respondents ignored some issues concerning the relationships that were established with OP. This was an interesting discovery in its own right to be explored during the stage two of qualitative data collection and gathering. Taking into account that the questionnaire had been pre-tested, the discrepancies showed to be a sign and a proof of the uniqueness of the single cased study used in the research (as mentioned in Section 4.3.2).

4.3.3.3 Qualitative data collection

The qualitative data collection of stage two of the research project means finding moments to reveal the unique complexity of the case through a grounded theory approach. The qualitative stage of research works with episodes of unique description of the case. Main aims at this stage were: (a) add depth and richness to the researcher’s investigation of inter-firm collaboration and partnering between the companies under investigation, through a more focused study of the key aspects of these topics as identified in stage one, and (b) to explore the influencing factors of inter-firm collaboration and partnering practices as identified in stage one. It was

intended that outcomes would go some way to developing the academic understanding of inter-firm collaboration and partnering through an approach that places emphasis on grounded, contextual understanding. In parallel it was intended that the findings would have application to practitioners; because practitioners generate meaning and understanding themselves, the implications should be relevant and owned by them.

In this stage, qualitative data was gathered through in-depth face-to-face and telephone interviews undertaken in the light of a constructivist approach to interviewing (see Section 4.2.1 and Section 4.2.3), taking into account both perspectives of suppliers and buyer. Such an approach to interviewing means that the researcher and researched are always actively engaged in constructing meaning (see Section 4.2.3).

Qualitative interviewing has been defined as involving a special kind of conversation, one in which an interviewer asks questions to a respondent (or more than one), on a particular topic or topics, and carefully listens to and records the answers (Lewis-Beck, Bryman and Liao, 2004). The specific questions asked by the interviewer are related to the topic of interest and to the study designer's research questions (Lewis-Beck, Bryman and Liao, 2004). The purpose of qualitative interviewing is to obtain descriptions of the life world of the interviewee with respect to interpreting the meaning of the described phenomena (Kvale, 1996).

Individual interviews were chosen for the following reasons:

- a) It was felt that one to one interviews would enable the participants to explore issues in a comfortable, non-threatening atmosphere. It was felt that group discussions or focus groups could introduce an inhibitor element and more subtle elements of peer pressure, thus influencing the data produced in ways that may not be easily identified.

- b) The interview situation itself would enable the researcher to build up a relationship with the participants in order to facilitate more open discussion and exploration of issues that perhaps they would not put down in writing on a questionnaire.
- c) Observation, as it would require permission to participate fully in the lives and activities of companies and thus become a member of their organization for a certain period of time, was an unlikely option due to unwillingness of companies.

Theoretical sampling, theoretical saturation and characteristics of participants

The “sampling of cases” is uncommon when building theory from case study research (see Section 4.3.2 on this subject). Instead, it is the concepts of “theoretical sampling” and “theoretical saturation” that are dominant in a grounded theory (GT) approach.

It was Glaser and Strauss (1967) who developed the concept of theoretical sampling. Theoretical sampling is the process of data collection for generating theory whereby the investigator jointly collects, codes and analyses his/her data and decides what data to collect and where to find them, in order to develop theory as it emerges. This process of data collection and analysis is controlled by the emerging theory. Sampling decisions are therefore not based on relevance to a general population; rather they are based on assessments of a participant’s ability to add new insights to the developing understanding. It is the emerging theory that drives the selection of cases. Flick (1998) states that theoretical sampling is therefore the most applicable when determining how many cases to study in research that seeks to generate understanding rather than test hypotheses. In the view of Flick there are no hard and fast rules to when an investigator should decide that one has investigated enough cases, but two general guidelines: The first is the requirement to avoid “premature closure” or the reaching of a conclusion before the theory has been fully explored. The second relates to the identification of theoretical saturation. Theoretical saturation is the point at which incremental learning is minimal because the researcher is observing or listening to phenomena seen and heard before (Eisenhardt, 1999) or, in other words, the point at

which no new insights are emerging. According to Goulding (1998), rigorous GT research will sample until no new or relevant data appears. In the view of Douglas (2003), GT has a built-in mandate to strive towards verification through the process of category saturation which is achieved by staying in the field until no further evidence emerges.

Although it has been recognized that the sampling of cases is uncommon when building theory from case study research (as mentioned in see Section 4.3.2), the researcher felt the need to have some guidelines for the number of cases to include, for reasons of credibility of the data collection and analysis process and resulting naturalistic generalizations, specially in the eyes of a reader with quantitative research preferences.

While some authors give a few suggestions on the number of interviewees to use in an interviewing process when doing qualitative research, others do not refer directly to the number of interviewees; rather, they remain quite vague simply referring to “cases”. The lack of clarity and of standardization in the use of the term “case” led the researcher to infer that much of what has been written on the sampling of cases and specifically on the sample size is applicable to the evaluation of the number of interviewees (also designated in this thesis by participants, respondents, and researched) to include in a single case study research.

The researcher realized that there were no agreed rules for the number of cases to include in case study research (as mentioned in Section 4.3.2). The researcher found that while there was no ideal number of cases, a number between four and ten cases had been suggested as usually working well (Eisenhardt, 1999). The key for this study was to ensure that a large enough pool of potential supplier companies was available as a means of guaranteeing potential diversified perspectives and patterns of the inter-firm collaborative and partnering practices with Opel Portugal. The size of this initial pool was self-defined at the start of the interviewing process. Seven of the ten supplier companies who responded the questionnaire showed willingness to participate in the

second stage of the research process; number which fits Eisenhardt's recommendation. Therefore, the number of interviewees to include in this study was driven by the ability to recognize the theoretical saturation point.

In the view of Lewis-Beck, Bryman and Liao (2004) the theoretical saturation point is directly related to the a priori definition of the research problem, and to the appropriateness and the adequacy of the sample. In their view saturation occurs more quickly when the study has a narrow focus, and when the sample is appropriate and adequate. Appropriateness refers to the deliberate selection of the best participants to be involved in the study. Adequacy refers to enough data. To be considered as enough, data must replicate within the data set. According to Lewis-Beck, Bryman and Liao it is not satisfactory to hear something from someone once; ideas should be verified by other participants or verified by other means.

Although the study is of an exploratory nature, some delineation of the problem was done at the very beginning of the study. This together with a conceptual framework on inter-firm collaboration and partnering brought to light important issues to be explored, helping to establish the boundaries of data collection and ultimately the number of interviewees.

Selection of interviewees was made by the organizations not the researcher. With volunteers to be interviewed, the researcher did not know a priori if the interviewee would meet the minimum criteria for a good participant: (a) be able to reflect on one's experience; (b) would represent the buyer-supplier interface; (c) would know in depth the buyer-supplier relationship; (d) would have a profound knowledge of the company and Opel as a customer, and (e) have time available to be interviewed (some of these criteria are the same as for respondents to the questionnaires – see Section 4.3.3.2). Nevertheless, the participants that volunteered were, for their contribution, beyond expectation so that no secondary selection was needed. The level of literacy and experience of the participants who helped to bring excellent details and insights to the study was undoubtedly high and this also is true in the eyes of external professionals (e.g. Jose Carola and Hildebrando Vasconcelos) to this study who knew them.

The researcher believes that these factors (i.e. delineation of the research problem, conceptual framework on inter-firm collaboration and partnering, literacy and experience of interviewees) justify the appropriateness and adequacy of the theoretical sample (i.e. the number of interviewees) used, which enabled her to stop gathering data sooner than if she had interviews that were vague, irrelevant, ambiguous or contradictory. Moreover the overall time engaged in conversations and face-to-face interviews with each participant (more than three hours per participant on the suppliers' side on total) originated significant amount of data leading the researcher to reach closure after interviewing ten participants (including three participants representing the buyer). This is not surprising when taking into account Lewis-Beck, Bryman and Liao's (2004) view who state that methods that use in-depth interviewing techniques such as interactive interviews, which involve interviewing participants three times for more than 1 hour each, will reach saturation more quickly, with fewer participants, than if they used semi-structured interviews and presented participants with only a small set number of questions. The number of interviewees goes in line with McCracken's (1988) suggestion who views eight participants as being sufficient.

The Table 4-4 gives a detailed breakdown of the range of organizations and people interviewed. Each company and interviewee was labeled for ease of reporting and to maintain anonymity. Interviewees represented both the inbound and the outbound side of a company's operations, and technical and non-technical functions.

Table 4-4: Participants in the interviewing process

Participant	Professional status	Company
IA	Director of the “commercial department” of the company in Portugal with responsibilities at a regional level (i.e. Spain and Portugal)	Supplier
IB1, IB2 and IB3	Account manager for OP; Account manager for Opel; Managing director	Supplier
IC	Managing director	Supplier
ID	Director of the “commercial department”	Supplier
IE	Director of the “commercial department”	Supplier
IF1 and IF2	Managing director; Agent in Germany	Supplier
IG	Managing director, previously operations manager at OP	Supplier
B1 B2 B3	Purchasing director in OP Purchasing director in Opel Spain Managing director in OP	Buyer

Following Lewis-Beck, Bryman and Liao’s (2004) view, the researcher used three principles in the evaluation of the amount of data versus number of interviews included: (a) the broader the scope of the study, the greater the amount of data that is needed; (b) the better the quality of the interviews, the fewer interviews that will be needed, and (c) there is an inverse relationship between the amount of data obtained from each participant and the number of participants. These principles acted as a reference for the researcher to evaluating the design of the research in terms of the amount and quality of data in relation to the number and quality of interviews. Nevertheless, with qualitative social science on trial, the researcher believes she cannot afford to stay discouraged by potential theoretical critiques to the analytical and practical uses of the postpositivist and constructivist approach to GT taken in this thesis where sampling of cases and volume of data are not a main concern, rather it is the quality of data and their interpretation both by the researcher and the researched, which is key.

In-depth interviewing for qualitative data collection

The in-depth interviewing process involved a special kind of conversation, one in which the researcher asked questions to a respondent or sometimes more than one, on inter-firm collaborative and partnering topics, carefully listening to the interviewees and recording the answers. The purpose of the conversations was to obtain descriptions of the life world of the interviewees with respect to interpreting the meaning of the described phenomena.

The interviewing process started with a series of interviews with OP's suppliers. The main purpose of these interviews was to get a deeper understanding of the answers obtained from the questionnaires, and the issues around which the questionnaire had been developed. These interviews would allow the researcher to get a deeper picture and understanding of the inter-firm collaborative and partnering practices between Opel Portugal (OP) and its Portuguese based direct suppliers (PBDS).

The interview time spent with each supplier company was divided into four sections. Five hours per supplier on average and eight weeks were needed to complete this agenda. The first section started with a personal introduction (of the researcher and the researched) followed by a synthesis of the research project. Confidentiality issues were explained, and the structure and flexibility of the interview were then described. This section was designed to help the participants (one or more than one depending on the company) feel more comfortable and relax into the conversation, by engaging them in a discussion of their background and their current position within the organization. The second section evolved around the questions as asked in the questionnaire. It was then the researcher realized that the answers from the questionnaires had been given taking into account the business relationships suppliers were establishing with Opel (i.e. another designation for General Motors Europe) rather than Opel Portugal (OP). This was because of the influence exerted by Opel, which was perceived by the PBDS as one single corporation on its own (as the case study presented in Chapter 5 will demonstrate). Here was the explanation for the unexpected data patterns the researcher had found in the quantitative data analysis

stage. The third section developed around issue oriented questions, which would provide a powerful conceptual structure for organizing the case study (presented in Chapter 5). These issues were about those partnering constructs presented in Table 3-3 (see Section 3.4.3). A variety of prompts were used for each concept, in order to explore the particular issue from a variety of perspectives and to address the need for consistency across the interviews. Also it was important to operationalise these concepts through the discussion. The fourth section covered topical questions which formed a topical outline covering the anticipated needs for information necessary for the description of the case (see Appendix 4). This outline provided an inventory of the data needed, as perceived at the outset of the study. It was used as subordinate to issue structure. Here a more flexible approach to the interviewing was followed, allowing themes to emerge and be pursued. Despite a departure based on pre-defined partnering constructs, the interviews were conducted as a flexible conversation, the aim being to develop ideas of interest to the interviewees, whilst using stage one issues to guide the discussion.

The interviewing process went on with a second group of interviews to explore the influencing factors on inter-firm collaborative and partnering practices between OP and its PBDS. These would take seven weeks of field work to be conducted. Each interview length varied between 2 hours and 3 hours, depending on the time offered to the researcher for interviewing and on the stage of emergent themes and correspondent data coding (see Section 4.3.3.4). The order of questioning proceeded from the most general and unthreatening to; at the end, questions that might cause discomfort to the respondent. The interviewer hoped to gain some rapport with the interviewee in the early part of the interview so that more sensitive questions would be acceptable later on. At a certain stage the interviews turned into thematic discussions through which the participants and the researcher explored events and themes with greater freedom. The discussions aimed to enable participants to articulate concepts that had arisen throughout the course of the interviews. The interviews became conversations, where concepts were used as prompts for discussion rather than questions requiring answers. The researcher thought that participants should be provided with the opportunity to raise themes and situations that they

thought were important, and for the researcher to guide the discussion gently. The researcher believed that the flexibility given would allow participants to introduce new insights and explore complex relationships between the data, which suited the exploratory purpose of the research as well as the GT approach to the qualitative data collection. The researcher was thus able to build a relationship with each individual involved and discuss themes within a meaningful context. The openness and the flexibility of the interview, with its many on-the-spot decisions (e.g. when to close one topic and move on to the next, how to pursue a theme without losing direction and when to pursue a new emerging issue) put strong demands on advance preparation. Beyond those questions asked to all interviewees, such as introducing questions (e.g. “Can you tell me about?”), probing questions (e.g. “Could you tell me more about?”) and specifying questions (e.g. “What did you think then?”), the researcher also let the occasion tell its story, the situation, the problem, resolution or irresolution of the problem. On the one hand, this method would ensure that the same areas could be covered across all participants and it would also enable the researcher to incorporate “consistency checks” (i.e. asking the same questions in slightly different ways to both explore the particular issue more deeply and to assess the consistency of answers). On the other hand participants by not being always asked the same questions were expected to have had unique experiences, special stories to tell. To sharpen the search for understanding, the researcher tried to perceive what was happening in key episodes or testimonies. The researcher remained all the time sensitive to the interpretations and meanings given to the situation by those whose social world was being studied. During these interviews the researcher made every effort to ensure the outcomes and discussion reflected the views of participants. However, it was inevitable that the quest for meaning would involve interpretation and an interaction between the views of the researcher and the researched. During the interviews the researcher tried clarify key points during the course of discussion and to ensure that, what was being captured as data, was agreed by the respondent and covered the substance of discussion. Understanding was greatly facilitated by the participant.

Often, during the interviews, it was difficult for interviewees from supply companies to focus only on data specific to relationships between Opel Portugal (OP) and its Portuguese based direct suppliers (PBDS). They had a tendency to mention Opel rather than OP. Sometimes, a supplier may have made observations, not in the name of his company, but on behalf of other suppliers. The researcher inferred that this was due to links and personal relations established between suppliers who knew each other, and discussed amongst themselves perspectives concerning the buyer.

The results of these interviews with PBDS of OP were then used as a basis for research within OP. The VM interviewees consisted of a Portuguese managing director of the site (also operations manager director), the purchasing director of OP and the purchasing director of Opel Spain. The interviews were adapted to reflect the opposing perspective. The researcher felt that the fully developed interview content worked well with VM participants, generating in-depth conversation around the core issues.

Not all conversation time was incorporated in the data set, at the request of representatives of supplier companies and of the buyer. Nevertheless, the tapes and the field-notes were stored, just in case they would be needed later on. This request made the researcher realize that despite promises of confidentiality, some people feared that some situations would be divulged in public. The researcher was not surprised with such behavior as she was aware that the issue of confidentiality is not treated in the same way in different cultures.

Organizing the data collection: data storage system

Data generated by any kind of qualitative study are voluminous; hence, the critical task is to organize the data from the beginning of the study (Charmaz, 2000). During interviewing the researcher kept a good record of events, through audio-taping, to provide a relatively incontestable description for further analysis and ultimate reporting. Field notes were also taken whenever issues and comments were thought of relevance. According to Charmaz (2000) field notes are an important means of

accomplishing the overlap of data analysis with data collection and an ongoing commentary about what is happening in the research. Transcription occurred in parallel to interviewing.

Audio-taping was valuable for catching the exact words used, but the researcher recognizes the annoyance for the researcher and the researched, which argues strongly against it. As it was mentioned previously, not all conversation time was incorporated in the data set, at the request of representatives of supplier companies and of the buyer. While transcribing, the researcher had to distinguish what could be included in the data analysis from what could not be included. The researcher found the amount of taped data she could work with was very small compared to all the work required by the interview transcripts.

While the face-to-face interviews were recorded, the same did not happen to telephone conversations. Instead, shorthand notes were taken.

In the process of reading through all field notes and interview transcripts, data were organized into topics and files, seeking different patterns, themes, and streams of thought (see next Section on data analysis).

4.3.3.4 A grounded theory (GT) approach to qualitative data collection and analysis

This section will describe the processes by which the qualitative data was analysed by the researcher.

For several reasons already pointed out in Section 4.2.2, the researcher chose the GT approach to analyse data from the field notes and the transcripts. The GT approach focuses on the development of meaning and theory through a flexible process of data collection and analysis techniques. The underlying principle is to construct meaning through the interaction of the researcher and the participants, in the absence of pre-existing hypotheses.

GT has moved into different directions in the process of theory generation with different emphasis on induction, deduction, verification and also in the form theory should take (Heath and Cowley, 2004). In this thesis, the researcher, following Charmaz's (2000) view, takes a rather simplified and flexible approach to GT believing that: (a) GT strategies need not be rigid or prescriptive; (b) a focus on meaning while using GT furthers, rather than limits interpretive understanding; (c) GT can be adopted without embracing the positivist leaning of early proponents of GT, and (d) researchers can use GT either with quantitative or qualitative data and whether they are working from an objectivist or a constructivist approach. In the GT approach followed, the researcher adopts Strauss and Corbin's (1998) principles in that: (a) the researcher prefers to predetermine the general subject of inquiry before entering the research site; (b) theory is also constructed around a predetermined framework (see Section 3.4.3); (c) emphasis is put on deduction followed by reflexivity from further data comparisons and "member checking", which ensure emergence; (d) the researcher shapes the data by their interpretations, which moves analysis beyond description, but they are also shaped by the data, and (e) experience and the literature are used to extend the analysis and guide the examination of subsequent data (i.e. interpretation is guided by existing literature and theory, as already mentioned in Section 4.2.4). The researcher also adopts principles of a constructivist GT approach as described by Lincoln and Guba (2000). These are: (a) categories, concepts and theoretical level of analysis emerge from the researcher's interactions within the field and questions about the data; (b) the researcher does not seek universal and lasting truth as neither human realities and real worlds are immutable; (c) the researcher constructs an image of reality, not the reality; (d) the constructed reality arises from an interactive process and its temporal, cultural and structural contexts, and (e) the researcher seeks to define assertions that constitute a set of hypotheses that other researchers can transport to similar research problems and to other substantive fields.

As Strauss and Corbin (1998) have emphasised, the researcher's aim is not to discover "the" theory, but a theory that aids understanding and action in the area under investigation. Also in generating grounded theory the research does not expect to create new ideas – since most ideas on inter-firm collaboration and partnering are

already known in some way – but new connections between conceptual ideas. Rather GT is adopted with the aim of exploring basic social processes and to understanding the multiplicity of interactions that produces variation in that process. The adoption of GT in data collection and analysis goes in line with the view of Goulding (1998) and Douglas (2003) for whom GT has much to offer to the disciplines of marketing (discipline that is related to this research for its focus on buyer-supplier interface issues) and management given its emphasis on context, theoretical emergence and the social construction of realities.

In this thesis the implementation of GT is based on three components:

- a) The data, which come from in-depth interviews and telephone conversations supplemented by documentary data

The main categories of data are: field-notes, interview transcripts, extant academic literature, reports, and internet data including newspaper articles. The researcher treated data differently. The researcher attended to richer data or, in other words, data that provided more explanations to the developing insights. Other data was used to support or refute developing notions. Finally other data was not attended in any phase of analysis and consequently ignored, for not containing any relevant information.

- b) The analytic or interpretive procedures which are applied to the data

The making of comparisons is an essential feature of this approach: comparing incident to incident and using theoretical comparison to stimulate thinking and to direct theoretical sampling. Theoretical comparisons are “a list of properties for looking at something somewhat objectively rather than naming or classifying without a thorough examination of the object at the property and dimensional levels” (Strauss and Corbin, 1998: 80).

- c) The “report” that present the findings of the research

The simplified procedures followed in this thesis, while retaining the essence of the GT approach, are:

- a) Familiarisation with the data (e.g. through mainly informal face-to-face or telephone conversations undertaken at the outset of the empirical work – see Section 4.3.3.1)
- b) Simultaneous gathering and analysis of data
- c) Systematic coding process, categorization and conceptualisation
- d) Shaping hypotheses and interpretation
- e) Theoretical saturation
- f) Member checking
- g) Enfolding literature
- h) Frameworks of understanding

The process of building theory from the case study research used in this thesis is an iterative one, as explained by Eisenhardt (1999). This is because the process involves constant iteration backward and forward between steps. Moreover, the process of data collection and interpretations are guided by successively evolving interpretations. However, the process also involves converging on construct definitions, measures, and two frameworks for structuring the findings. The GT approach as taken in this thesis facilitated a synthesis of the quantitative and qualitative data allowing the researcher to return to the case study data to seek clarification of findings.

Analysing interviews with professionals

The researcher initially focused on the field-notes taken during the informal conversations with reputed professionals (see Section 4.3.3.1), searching for revelatory aspects on Opel, OP and business relationships this VM established with suppliers in general in order to better understand the case study.

Coding instances from interviews

After the first supplier's interview was transcribed the researcher began the process of coding. Coding is "a systematic way in which to condense extensive data sets into smaller analyzable units through the creation of categories and concepts derived from the data" (Lewis-Beck, Bryman and Liao, 2004: 137). Coding facilitates the organization, retrieval, and interpretation of data and leads to conclusions on the basis of that interpretation (Lewis-Beck, Bryman and Liao, 2004).

This process of coding started with open coding, which involved breaking down, comparing, and categorizing the data (Strauss and Corbin, 1998). Firstly, the researcher broke down data by highlighting comments and statements that referred directly or indirectly to inter-firm collaboration and partnering. Working her way through the document she used a highlighter pen to identify any statements she believed to be relevant to the concepts of inter-firm collaboration and partnering. Using a PC she then conducted a process of cutting and pasting each statement highlighted into a new document (see Appendix 5 for a sample of this document). Second, the researcher gave a code to all individual comments or statements, formed by an interviewee letter and the number of statement (see Appendix 6 for a sample of this document). Each coded statement was then placed within a card. The researcher then physically moved each card, rearranging cards, and attempted to match each statement with other statements, grouping them into themes or categories based on a principle of similarity.

These categories were theory driven (e.g. the network theory), derived from research literature (e.g. terms from existing literature including the conceptual framework illustrated in Section 3.4.3), data driven (i.e. terms that emerged from data), and based on intuition. Some of the categories were generated from the conceptual framework employed, and the data was allocated into these categories. This type of coding has been termed "coding down" (Fielding, 1993). Those categories generated from the data involved "coding up" (Fielding, 1993).

The process was repeated after each supplier's interview was transcribed. New statements were either placed within existing categories or where the researcher felt there was little or no similarity between statements and existing categories, a new category was created. On a number of occasions, the researcher also disassembled categories to extend into new categories which she felt to be appropriate. As Eisenhardt (1999) claims, the freedom to make adjustments during the data collection and analysis process is a key feature of theory building. The process was repeated until the researcher believed theoretical saturation was beginning to occur, where no new categories seemed to be emerging.

As analysis proceeded and themes or categories formed, some areas of analysis were slower to saturate than others or appeared thin. For instance, data concerning other sites of the suppliers' MNCs were difficult to get; activities and situations were unknown or unclear for staff in Portugal.

Initially, the researcher deliberately sought as much variation as possible within the limits of the topic. This variation enabled the scope of the phenomena to be delineated. Later, as understanding was gained, and as categories began to emerge the researcher adopted theoretical sampling in order to verify emerging theoretical formulations. The term sampling is used in this situation, not as the process of selecting participants for the study, but as the selection of and attending to particular data during the process of analysis (Lewis-Beck, Bryman and Liao, 2004).

According to Lewis-Beck, Bryman and Liao (2004) in order for the developing theory to be complete and valid, negative cases must be purposefully selected until the negative category is saturated, and logical explanation for these exceptions included in the theory. A sort of "negative case" (i.e. an exception to the developing theoretical scheme) emerged during the interviewing process presenting a unique perspective about OP's behavior (issue discussed in the case study analysis on the influence on inter-firm collaborative practices exerted by the personality of the purchaser).

After analyzing suppliers' interviews the researcher began conducting interviews at OP. As each interview was conducted, it was transcribed; as in the process applied to suppliers' interviews, statements were highlighted, cut and pasted into an additional document, coded and grouped into categories. However, the researcher became aware that her previous analysis of the supplier data inevitably influenced the generation of categories from the VM data. Consequently, categories were generated very early in the process, and the researcher quickly ceased to develop new categories from the VM data. Rather than assume theoretical saturation, the researcher made the decision to continue interviewing until checking and comparing the perspective from the VM's interviewees with the perspective from suppliers. At this stage VM and supplier categories were kept separate.

The researcher then looked for possible connections between each category, by taking each category in turn and comparing it to every other category generated. This process, designated in the literature by axial coding (e.g. Strauss and Corbin, 1998) resulted in the following:

- a) The emergence of categories from categories, where the researcher felt that statements from two separate categories belonged together and should lead to the creation of a new category
- b) The integration of two or more categories; where the researcher felt that categories were overlapping. Where this occurred a new heading was created to incorporate all integrated categories.
- c) The development of connections between categories; where the researcher felt that two or more categories were related in some way

This stage refers to the process of looking for relationships between the categories of data that have emerged from open coding. As relationships between categories were recognized, they were rearranged into a hierarchical form, with the emergence of sub-categories. Whereas the earlier stage of coding involved the breaking down of individual elements, axial coding is the restructuring and the rebuilding of the data into various patterns with the intention of revealing relationships.

Selective coding was a third step in coding (e.g. Strauss and Corbin, 1998). The purpose of selective coding was to identify a core category in order to relate the other categories to this category, with the intention of integrating the research and developing a grounded theory. In this stage the emphasis was placed on recognizing and developing connections between the principal categories that have emerged from the grounded approach, in order to develop an explanatory theory.

Shaping hypotheses and interpreting

The next step of this iterative process when categories, concepts and relationships began to emerge was to compare systematically the emergent frame with the evidence from each source in order to assess how well or poorly it fitted with case data. The central idea is that the researcher constantly compares theory and data – iterating toward a theory which closely fits the data. In the view of Eisenhardt (1999) a close fit is important to building good theory because it takes advantage of the new insights possible from the data and yields an empirically valid theory. Overall, the shaping of hypotheses in this theory-building research involved measuring constructs and verifying relationships. Theory generation occurred around categories, with evidence of properties of these categories and therefore patterns of behavior to be found in the research phenomenon studied (Douglas, 2003).

The researcher felt that it was essential to have the interpretive power in immediate touch with developing events and ongoing revelations, partly to redirect questions and pursue emerging issues (Stake, 1995). Also there was much intuitive processing to the search for meaning, which is well accepted among qualitative researchers (e.g. Stake, 1995). The researcher did not confine interpretation to the identification of variables and interpretation for the report. Rather the researcher emphasized recording objectively what was happening but simultaneously examining its meaning. Although it was the participants who were studied, they regularly provided critical interpretations. Ultimately, the interpretations of the researcher were likely to be emphasized more than the interpretations of those people involved.

Reaching closure: theoretical saturation

The researcher stopped gathering data when theoretical saturation was reached, as recommended by grounded theorists (e.g. Eisenhardt, (1999). As was already mentioned in Section 4.3.3.3, there is no ideal number of interviewees to include; therefore, it is considered that a number between four and ten usually works well (Eisenhardt, 1999). The repetition of events and variables was in one sense a validation of their occurrence, but was in another sense indicative that these were probably the most significant examples and that there were not many more significantly different examples.

Member validation or checking

Member validation also called “member check” (Lewis-Beck, Bryman and Liao, 2004: 633) is a procedure “whereby a researcher submits materials relevant to an investigation for checking by the people who were the source of those materials”. Although member validation is not an unproblematic procedure as Lincoln and Guba (1999) observe, it was thought to be crucial for establishing the credibility of the researcher’s findings. Furthermore it was thought it could also alleviate researcher’s anxieties about her capacity to comprehend the social worlds of others. Moreover it was a way to confirm to the researcher what confidential data should not be included in the data set for analysis. This procedure was employed to check interviews’ transcripts after each interview was done. The participants were also requested to examine rough drafts of interpreted research materials when no further data was collected from them. This was done informally. Contrary to what may happen in other cultural environments (e.g. Germany), informality was the climate per excellence between researcher and researched and a facilitator of communication. The researcher believes that she would not obtain the same results if using formal channels. This allowed the reviewing of the material for accuracy (Stake, 2000). Also the frameworks for understanding, which the researcher developed at the final stage of the research process were given to two of the researched for their comments. These respondents showed themselves particularly helpful and understanding regarding the

researcher's need for verification of the research's findings and outputs. The researcher did not find any difficulties in handling suggestions by members or to get the attention she would like. Since the start of the empirical work all the people contacted showed to be very helpful and willing to take this research project ahead. This makes the researcher believe that participants' commitment largely explain the amount and quality of the data obtained and interpretations rendered, and thus the account of findings. The researcher's experience in interviewing people from different backgrounds and cultures tells her that national cultural features can be a significant explanatory variable upon the results of an interviewing process.

Enfolding literature

In Glaser's (1992) view more focused reading only should occur when emergent theory is sufficiently developed to allow the literature to be used as additional data. More focused reading was done doing data collection and analysis in a process much like an iterative spiral constantly flitting between inquiry and analysis. Thus literature review on the work of the IMP Group, network theory and multinational and subsidiary theory was undertaken. Literature provided informative contributions to the interpretation (Goulding, 1998). It was the developing theory that directed the researcher to the literature which best informed, explained and contextualized the findings. The comparison of the emergent concepts, theory and assertions with the extant literature, is an essential feature of theory building from this case study, as Eisenhardt (1999) recognizes. Tying the emergent theory to existing literature (e.g. as Table 5.7 demonstrates) was a way to enhance the internal validity, generalizability and theoretical level of theory building from case research (Eisenhardt, 1999).

Frameworks of understanding

The process that has been previously outlined in detail was both time consuming and mentally demanding. Although no categories were rejected, not all statements were included. The analysis was an ongoing phase of work, which took place over a period of 6 months. Identifying relationships between data was a complex task, requiring

concentration, constant revision and an ability to bring new insights at all points in the process. It was also a test of memory and ability to conceptually juggle a wide variety of themes and categories at any one time. Chapter 5 represents a synthesis of the vast amounts of data produced by the interviewees. It also introduces the “frameworks of understanding” generated through this complex analysis process, one of which (i.e. the framework concerning the influencing factors on inter-firm collaboration) by including micro and macro conditions / consequences looks like a conditional / consequential matrix as referred by Strauss and Corbin (1998). These frameworks are presented in Chapter 6.

The traditional conditional / consequential matrix is an analytic device to stimulate thinking about the relationships between macro and micro conditions / consequences (i.e. structure) both to each other and to process (i.e. actions / interactions) (Strauss and Corbin, 1998). Macro conditions / consequences are “those that are broad in scope and possible impact” (Strauss and Corbin, 1998: 181). Micro conditions / consequences are “those that are narrow in scope and possible impact” (Strauss and Corbin, 1998: 181).

Like the conditional / consequential matrix as referred by Strauss and Corbin (1998), the framework on the influencing factors on inter-firm collaboration (see Figure 6-2 in Chapter 6) was constructed on the basis that macro conditions often intersect and interact with the micro ones and thereby, in direct or indirect ways, become part of the situational context. This framework does not: (a) explain the varied, dynamic and complex ways in which conditions, actions / interactions, and consequences can coexist and affect each other; (b) account for the different perceptions, constructions and standpoints of the various actors; (c) put all the various pieces together to present an overall picture of what is going on, or (e) emphasise that both micro and macro conditions are important to the analysis.

Similarly to Strauss and Corbin (1998), the researcher sees her framework of the influencing factors on inter-firm collaboration as a diagrammatic representation of a set of ideas. These are:

a) Conditions / consequences do not stand alone

They are integrated into the case study description. Moreover, the relationship between conditions and consequences and subsequent actions / interactions does not follow a linear path.

b) The distinction between micro and macro is an artificial one

Micro conditions often have their origins in macro conditions. The researcher made an attempt to trace the relationships between these. However, as is advocated by grounded theorists like Strauss and Corbin, the researcher did not trace every event sometimes due to the non-accessibility to data.

c) Conditions and consequences exist in clusters and can associate or co-vary in different ways.

d) Action / interaction is not confined to individuals per se; rather, it is carried out by organisations, albeit by the individuals within these who are representing the organizations.

The analytical picture this framework provides is one of multiple patterns of connectivity where paths of connectivity (i.e. the complex ways in which macro and micro conditions / consequences intersect to create a context for action / interaction) are patent. As Strauss and Corbin (1998) advocate, not every event or incident which gave rise to the mapping of such patterns was traced out extensively. The researcher traced out only those linkages that emerged as pertinent and that would explain what was going on. This means making sampling choices about what questions to ask.

While a conditional / consequential matrix is a practical means for helping researchers to keep track of the various components of analysis (Strauss and Corbin, 1998), the framework on the influencing factors on inter-firm collaboration provided in this thesis is an output of the data analysis.

4.4 Scientific concerns about the research process

Before this study is being evaluated on its quality, the researcher will explicitly discuss the assumptions she took in this research on several canons or standards by which the merit of qualitative studies has been judged.

Reliability, reproducibility and predictability

Reliability “refers to the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions” (Hammersley, 1992: 67).

Some social researchers argue that a concern for the reliability of observations arises only within the quantitative research tradition (Lewis-Beck, Bryman and Liao, 2004). In its original formulation among quantitative researchers, a study was considered reliable if it could be replicated by other researchers (Lewis-Beck, Bryman and Liao, 2004). Among qualitative researchers, there is a considerable division of thinking as to whether replication or the possibility of reproducing results has any importance in terms of judging the value of qualitative studies. Some people (e.g. Kirk and Millar, 1986) argue that reliability in the sense of repeatability of observations has an important epistemic role to play in qualitative inquiry. They contend that for a study to be good, the observations made in that study must be stable over time, and that different methods, such as interviews, should produce similar results. Strauss and Corbin (1998) emphasise that reproducing social phenomena can be difficult because it is nearly impossible to replicate the original conditions under which data were collected or to control all the variables that might possibly affect findings. Nevertheless they recognize that given the same theoretical perspective of the original researcher, following the same general rules for data gathering and analysis, and assuming a similar set of conditions, other researchers should be able to come up either with the same or a very similar theoretical explanation about the phenomena under investigation. Others, most particularly Guba and Lincoln (1994) have noted that because of the philosophical assumptions underlying qualitative inquiry (i.e.

constructivism, according to which reality is constructed) the concept of reliability should give way to the analogous idea of dependability. They contend that replication is not possible for qualitative inquiry; all that can or should be expected from a researcher is a careful account of how she or he obtained and analysed data. Finally, some now hold that there is little point in continuing to consider reliability as a criterion for evaluating the quality of studies (Lewis-Beck, Bryman and Liao, 2004). The basis for this claim arises from the recognition that theory-free observation is impossible or that researchers can observe the world only from a particular place in that world (Smith and Deemer, 2000). For Silverman (2001) reliability is still an important issue in field research. For this author high reliability in qualitative research is associated with what he designates by low-inference descriptors. This involves: recording “verbatim accounts of what people say, rather than researchers’ reconstructions of the general sense of what a person said, which would allow the researchers’ personal perspectives to influence the reporting” (Seale, 1999: 148).

Albeit this debate, the researcher could not proceed by ignoring the issue of reliability. The researcher, playing the role of a “bricoleur-theorist” (see Section 4.2.3), positions herself among those who claim the difficulty of replication of social phenomena and for whom one can expect is the careful account of how data collection and analysis was undertaken. However, despite her beliefs, the researcher kept records and transcriptions of face-to-face conversations, according to the accepted needs of reliable analysis (e.g. not handing the task over to an audio-typist). As mentioned in Section 4.3.3.3 (about the data storage system), the researcher balancing the advantages and disadvantages of audio-taping, found the tape recorder was of little value. The researcher shares Stake’s (1995) view who accepts that getting the exact words of the respondent is usually not very important; rather, it is what they mean that is important. The researcher thinks that the meaning of words becomes more important in those cases where data and interpretations of data checked by interviewees need to be translated into a language whose semantics is different (such is the case of Portuguese and English languages). Similarly to Stake, the researcher claims that a researcher should develop skills in keeping shorthand notes and count on member checking to get the meanings straight. Rather than tape-record, the researcher

thinks that it is better to listen, to take a few notes, to ask for clarification. Moreover, the researcher finds that a good interviewer can reconstruct the account and submit it to the interviewee for accuracy and stylistic improvement. In this thesis the researcher made an attempt to describe the contexts and techniques of the study in detail so that subsequent follow-up studies can match them as closely as possible.

As theory that is developed through the methodology used in this research is able to specify consequences and their related conditions, the researcher claims predictability (i.e. statements about future outcomes) for it, in the limited sense that if elsewhere approximately similar conditions obtain, then approximately similar consequences occur (Strauss and Corbin, 1999). Because the grounded theory built from this case study research embraces the interaction of multiple actors and because it emphasises temporality and process, it has a striking fluidity (Strauss and Corbin, 1998). As a result, predictions hold true only for a concrete instance, in a given place and time frame (Lewis-Beck, Bryman and Liao, 2004).

Validity

Validity has been interpreted as “the extent to which an account accurately represents the social phenomena to which it refers” (Hammersley, 1990: 57).

The idea of validity originated in quantitative research. For quantitative researchers, validity is a concept of major epistemic importance (Silverman, 2001). To say that a study is valid is to say that it is a good study in that the researcher has exactly represented the phenomena or reality under consideration (Lewis-Beck, Bryman and Liao, 2004). For various reasons, most particularly the rejection of epistemological beliefs, qualitative researchers do not find this definition of validity acceptable (Lewis-Beck, Bryman and Liao, 2004). For many qualitative researchers a valid study is seen as one whose results have met the tests of plausibility and credibility. By plausibility is meant “a matter of whether or not an account of a situation is likely true given the existing state of knowledge of that situation” (Lewis-Beck, Bryman and Liao, 2004: 957). Credibility is concerned with “whether or not a researcher’s

judgment is accurate given factors such as the nature of the phenomena, the circumstances of the research and the characteristics of the researcher” (Lewis-Beck, Bryman and Liao, 2004: 957). There are qualitative researchers who offer alternative terms to validity, among which are catalytic, situated and interrogated (e.g. Altheide and Johnson, 1994). Finally, some qualitative researchers see little reason to bother with the concept of validity or in continuing to talk about true accounts of the world, or of an independently existing reality (Lewis-Beck, Bryman and Liao, 2004). They claim that all that is available to us are “different linguistically mediated social constructions of reality” (Lewis-Beck, Bryman and Liao, 2004: 958). Also, as mentioned in Section 4.1.1, a process of development of theory can only indicate likely truth or falsity, rather than establishing validity beyond all doubt. As such, the most that can be said for validity is that it is a matter of social, political and moral agreements (Smith and Deemer, 2000). This view is not shared by Silverman (2001) although the author believes that a number of practices may be inappropriate to validate “field research” (p.248) such as data triangulation (i.e. comparing quantitative data with qualitative data) and member validation (i.e. taking one’s findings back to the subjects being studied in order they can be verified). Instead, Silverman suggests the following ways of validating such research: (a) analytic induction; (b) the constant comparative method; (c) deviant-case analysis; (d) comprehensive data treatment, and (e) using appropriate tabulations.

Taking into account the epistemological positions and assumptions taken in this study, the researcher (as explained in Section 4.2.1, Section 4.2.2 and Section 4.2.3) rejects the standard issues of validity in favor of credibility. Thus, and despite the on-going debate, the researcher claims for credibility in this research by using the following forms: (a) triangulation in which is included data triangulation (see Section 4.2.4 for details), (b) member checking (see Section 4.3.3.4 for its implementation), and (c) the use of the constant comparative method (see Section 4.3.4.3 where the method involves simply inspecting and comparing all the data fragments that arise in a single case). Nevertheless, the GT approach has a built-in mandate to strive towards verification through the process of category saturation which is achieved by staying in the field until no further evidence emerges (Stake, 1995). This is one of the steps the researcher followed in the process of building theory from the OP case study.

Generalizability

As the researcher's aim is to build theory from case study research, she talks more the language of explanatory power rather than that of generalizability. By explanatory power she means the ability to explain what may happen in given situations. Therefore in writing the theoretical formulations (i.e. assertions or naturalistic generalizations) that evolved from the study, the researcher specifies the conditions that gave rise to certain phenomena (i.e. inter-firm collaboration and partnering within a MNC context). The researcher does not suggest that the substantive theory (i.e. one developed from the study of one single case study) she constructed has the explanatory power of a larger, more general theory. According to Strauss and Corbin (1998) it cannot because it does not build in the variation or include the broad propositions of a more general theory. However, the merit of the researcher's substantive theory should be seen in the light of its ability to speak specifically for the population from which it was derived and to apply back to it (Strauss and Corbin, 1998). As mentioned in Section 4.2.1, the understanding gained from the research is context specific and not necessarily generalizable to larger populations.

The constructivist view of knowledge the researcher takes in this research project does not impede her of delivering generalizations (Stake, 1995). Nevertheless these are naturalistic generalizations or assertions based on chronological presentations, with emphasis on place and person (Stake, 1995). From assertions, understandings are drawn. Their derivation are: (a) of some hidden mix of personal experience, scholarship and assertions of other researchers, and (b) of influence from each individual's life context and the varied social constructions of the knowledge, which are what the researcher is searching for (Goulding, 1998). Ultimately to take such a constructivist view of knowledge means focusing on the search for meaning and understanding to build innovative theory and not universal laws (Goulding, 1998). Stake (1995) pointed out that by custom researchers are privileged to assert what they find meaningful as a result of their inquiries. He observed that it is not uncommon for case researchers to make assertions on a relatively small database, invoking the privilege and responsibility of interpretation.

Contextuality

With its own unique history, this case study is a complex entity operating within a number of contexts where social phenomena are situational and influenced by happenings of many kinds (Lincoln and Guba, 2000). Thus this research is context bound and facts should be viewed as both theory laden and value laden (Goulding, 1998). The idea that findings are theory laden rests on the basic proposition that the researcher approaches the research situation with a theoretical perspective developed from her academic background and personal interests. Furthermore, the researcher has her own personal paradigm or basic belief system and her values, which partially dictated ontological and epistemological underpinnings.

If contextuality is a canon to be taken into account, a balance was therefore made between creating meaning so context specific that it could not be expanded further, and creating a superficial understanding through surface level investigations of a certain number of organisations.

Rigor

The researcher adds rigor through reflexive documentation of interviewees' opinions (as it will be emphasized in Section 4.5). The researcher believes that including an element of reflexivity into the collection and analysis of data enables people external to the investigation to assess the rigor of the links made and the inferences drawn from the data. Like Flick (1998), the researcher also believes that despite all the methodological controls (e.g. pretest of questionnaire, member checking), the research and its findings are unavoidably influenced by the interests and the social and cultural backgrounds of those involved.

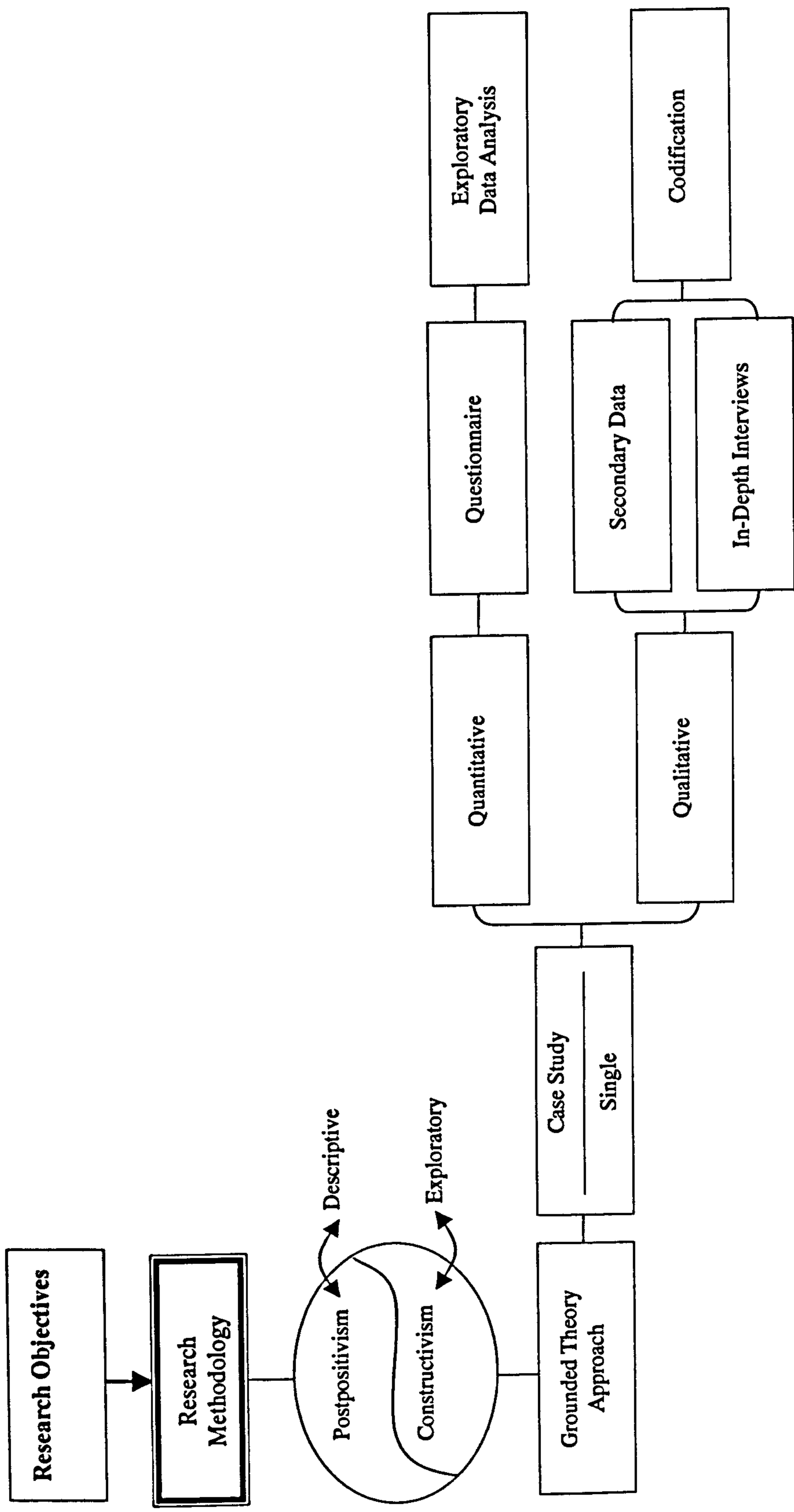
4.5 Writing the case study

According to Leonard and McAdam (2001), there are two main ways to write the results of a case study. The first is descriptive. The second is to combine analysis and description where statements (see Appendix 6) from the interviewees are included as an essential element of the analysis and description. The researcher adopts the second approach to the writing of the case study. By doing so the practitioners are allowed to “speak” and the full meanings and richness of the opinions are allowed to come across. This permits the practitioners to have a greater input and hence to be critically reflexive. At the writing stage, the researcher purposely selects the best examples of statements to illustrate points made in the developing argument.

4.6 Summary

This chapter has briefly discussed and compared the major philosophies involved in conducting research. It has identified the decisions to be made in the design of the study and has highlighted the choices made by the researcher at every stage and the reasons for these choices. The overall research methodology has been described and summarized. Figure 4-1 summarises the research methodology

Figure 4-1 : A summary of the research methodology



The scientific concerns about the research process have been discussed concerning reliability, validity, generalizability, contextuality and rigor issues. At this stage the researcher has discussed the assumptions she took in this research on standards by which the merit of this study may be judged. At every stage in the design the methodology has been driven by the achievement of the research objectives. The following chapter describes the Opel Portugal case study.

Chapter 5

Opel Portugal: A Case Study

In this chapter the study's findings are presented, interpreted and discussed in the light of the literature reviewed. This chapter begins by introducing Opel Portugal (OP), which is the focal company of the case study (Section 5.1). The description of this Portuguese based subsidiary of a major American automotive manufacturer includes its historical background and organisational characteristics, which are summarised in Table 5-1. The chapter goes on to describe the profile of the suppliers of OP that have participated in this case study (Section 5.2). Then, in Section 5.3, the findings are presented, interpreted and discussed in order to answer research objective 1. This section explores inter-firm collaborative practices and partnering between OP and its PBDS. This chapter proceeds with section 5.4, which corresponds to a second stage in the analysis. This section looks at the data in order to identify the contextual factors that influence the development of inter-firm collaboration in the business relationships involved and thus answer the research objective 2. The chapter then concludes with a brief summary of the main conclusions that can be drawn from the data analysis (Section 5.5).

5.1 Background of Opel Portugal

In 1963, (Opel Portugal) OP officially opened its motor vehicle assembly plant in Azambuja; a small town 40km North of Lisbon. To increase capacity it was extended in 1965. At that time, using the same assembly line, the plant produced Bedford trucks and cars for Opel and Vauxhall. In 1984, investment in the plant resulted in more automation and a new painting line. Following a major restructuring of General Motors Europe (GME), between 1980 and 1990, the production capacity of the Portuguese plant was further increased, but the product line was reduced to that of the Kadett Combo only. Moreover, this rationalisation and modernisation (equipment, process and human resources) enabled the plant to produce products that matched the most demanding European standards in quality and reliability. In 1991, the plant at Azambuja became fully integrated into GME's communications and logistics circuits, thus becoming part of GME's network. Also, GME decided that the Portuguese plant would exclusively produce the Corsa Combo and Corsa Van. In 1992, the plant underwent a further period of investment and restructuring, resulting in increased automation, a new painting pre-treatment line, and an increasing capacity. In 2001, Opel (i.e. GME) invested 130 million euros to modernize the plant. It tripled the number of welding robots, installed a new conveyor system in assembly and built a waterborne paint shop. The latter made it the first plant in Europe to utilise new application technology for metallic paint and under-body PVC insulation. As a result of modernization work, the assembly line at the plant was completely refurbished. This update increased the automation rate at Azambuja, but did not change the plant's overall goal, which is to stay agile balancing human labor and robotics.

The Azambuja plant is the sole production facility for the Combo, the kind of van that is ubiquitous in most of the world, but practically non-existent in North America. The "Cargo" version makes up 65% of production and is targeted at the business market, while the "Tour", which is fitted with seats in the rear and intended for families, accounts for the remainder. The Combo is built off Opel's Corsa platform, but also shares many components with Astra. Though Azambuja currently builds only the Combo, it has the flexibility to build the Corsa and the Corsa Van if needed.

OP is an operational unit under the direction of General Motors's co-ordination centre (i.e. GME) in Zurich and, in this study, is regarded as a subsidiary of a MNC (i.e. GM).

As a full-fledged member of GM's production network, Azambuja has instituted the Global Manufacturing System (GMS) and works with other production facilities in Europe to standardize practices and solve individual problems. OP is a final assembler subordinate to Opel in Spain (OS) and Opel in Germany (OG). For this reason, it has been regarded as a branch affiliate (Dickens, 1998) rather than a subsidiary, reporting to the regional headquarters (HQ) in Spain, which in turn, reports to OG. OP is dependent on those two other subsidiaries for resources, and the management of some of its activities (B1, B2 and B3). For example: (a) research and development (R&D) activity and associated resources, are located at OG; (b) a supplier development program for Portugal is under the responsibility of OS; (c) payment to Portuguese based direct suppliers (PBDS) passes through OS; (d) the management of quality is shared between OG and OS, and (e) the planning of OP operations is set by GME. These and other examples are illustrated in Table 5-1.

Table 5-1: Activities implemented at Opel Portugal and its connections with other Opel subsidiaries

Activity	Implementation
R&D	Located in Germany.
Production	Opel Portugal is mainly an assembly plant. The engineering of the process relies mainly on the painting process. Opel Portugal is considered as having a low volume of product per range, in comparison to other units and to other automotive assemblers' plants.
Planning	Opel Portugal follows the planning that is established for Europe by Opel. However, it develops its own internal planning.
Quality Management	Opel in Germany, Opel in Spain and Opel in Portugal share quality management responsibility for their output, suppliers' assessment, and the analysis of any defective items.
Logistics	Logistics is an important function at Opel Portugal. This unit keeps stocks, which are not as high as those that suppliers are required to keep.
Information Management	Information management has become an important activity, as the management of the internal and external flows of information. EDI is used with certain suppliers.
Sales Management	Opel Portugal only has the management of sales for the internal market.
Financial Management	Payments to suppliers are made through Opel in Spain.
Purchasing	Opel Portugal does not directly negotiate with suppliers for the appointment of most supply contracts. However, it is responsible for the outsourcing of certain services up to a certain amount and of those it urgently needs. Opel Portugal places the orders once the negotiation process is over. Opel in Germany does the follow-up on those orders.

5.2 Profile of Portuguese based direct suppliers (PBDS) of Opel Portugal

The OP's PBDS who participated in this study vary mainly in terms of ownership, the supply network they are part of, their organisational structure, the resources involved, their activity structure, their manufactured products, and their dependence on OP (see Table 5-2, Section 5.3.1, for some details on the companies). Divergences will be patent throughout the case study.

The Portuguese owned suppliers have established alliances (e.g. joint ventures) with foreign companies, and employ subcontractors for parts of the production, destined for OP. Amongst the Portuguese owned suppliers, there are those doing R&D, and those whose expertise is based on the production process.

The foreign owned companies are subsidiaries of MNCs, geographically scattered in different units throughout several countries, and even continents. These subsidiary companies do not have the same level of autonomy in regard to the definition of strategies and the negotiation process with Opel. The degree of autonomy of these companies ranges from a high level, to a total dependence on their HQ decisions. Not all subsidiaries have R&D activities at their premises, but instead, rely on R&D sited at other parts of their network. It is worth emphasising that, in order to establish themselves in Portugal, and in an attempt to eliminate competitors, large MNCs have bought existing Portuguese plants. This approach utilises the existing structure, and thus, benefits from existing experience and knowledge of the workforce (IC.14).

Both Portuguese and foreign owned companies supplying OP, are part of a network form of organisation. All the companies have been doing business with OP for at least ten years. All the items supplied to OP are customised: these can be either simple components or complex systems. Some items are developed according to the supplier's in-house design. If dependence is measured by percentage of total sales destined for OP, then it is evident that there are suppliers who are heavily dependent upon OP whilst others, with low percentage of sales, are not so dependent.

5.3 Inter-firm collaborative practices and partnering between Opel Portugal and its Portuguese based direct suppliers

In an attempt to explore how inter-firm collaboration and partnering operated between OP and PBDS (see research objective 1, Section 1.4), quantitative data was gathered through a self-administered mailed questionnaire (see Section 4.3.3.2 on the methodological issues concerning this instrument, used at stage 1 of data collection and analysis). The results of this questionnaire are displayed in Table 5-3, Section 5.3.1. As mentioned in Section 4.3.3.2, exploratory data analysis (EDA) was used to analyse this data. In order to add depth and richness to the investigation of inter-firm collaborative practices and partnering relationships and to understand key aspects as identified in the previous analysis, qualitative data was gathered through in-depth face-to-face and telephone interviews. The analysis of this data, in the light of a constructivist approach to interviewing (see Section 4.2.1, Section 4.2.3 and Section 4.3.3.3) taking into account both perspectives of PBDS and buyer, is presented in Section 5.3.2. In Section 5.3.3 a summary of the main findings on inter-firm collaborative practices and partnering relationships is presented.

5.3.1 Analysis of quantitative evidence

The results from the self-administered mailed questionnaire were supposed to reveal inter-firm collaborative practices between OP and its PBDS. However, some data attracted the attention of the researcher for their inconsistency and inadequacy. For example, the spread of companies along the “very low-very high” continuum concerning joint planning and joint R&D issues is such that it is difficult to see any underlying pattern. Also, knowing that OP does not negotiate with suppliers for the appointment of most supply contracts of components (see organisational characteristics of OP in Table 5-1), the researcher would not expect that partnering agreements would be established (see Table 5-3, question 14). Another example of inadequacy concerns the joint R&D activities. Taking into account that the activity of R&D for Opel is located in Germany (see organisational characteristics of OP in Table 5-1), it seems unreasonable that PBDS show such intensity of collaboration

with OP as reported by some of the respondents (see questions 34, 53, 54 and 55 in Table 5-3). The missing answers and the notes Huf and Delphi left in their questionnaires stating that some of the activities were taking place in other sites of the respective MNCs, alerted the researcher to the possibility that some of the answers had been given in the view of the existing links between OP, Opel Spain (OS) and Opel Germany (OG).

Both the procedures followed in the development of the questionnaire and previous work done using the questionnaire as a basis (see Section 4.3.3.2), had removed any doubts concerning the validity and reliability of the questionnaire and its usefulness in exploring inter-firm collaborative practices between a subsidiary of a MNC and its PBDS. Before the outcomes of the questionnaire are taken forward into stage 2 for detailed exploration (see following section) during in-depth interviews (as referred in Section 4.3.3.2), a short analysis of the results was carried out in the belief that later on situations can be clarified and thus inter-firm collaborative practices between OP and its PBDS can be better understood.

Formal commitment

Data reveal that some PBDS, such as Ficocables and SSG, established more partnering agreements concerning components supplied to OP than companies such as Gametal and MCG. The fact that Gametal and MCG gave the same answer is not surprising for the researcher, as these two companies are competitors in the same market. The researcher wondered: (a) what are the factors influencing buyer and suppliers in establishing partnering agreements and (b) who, among OP, OS and OG is responsible for this formal commitment.

An inherent trust

The purchasing contracts that are used translate to a low level of trust between the buyer and suppliers as most times they are preceded by a written letter, which states and formalises the promise of buying (question 8), and they contain detailed purchasing clauses to prevent unexpected situations (question 9).

Low levels of collaboration in the negotiation process (question 10) translate to a reduced climate of trust between buyer and suppliers.

Most times suppliers do not start production based on informal and verbal orders from the buyer (question 11). It would be interesting to know if this is due to a decision taken by suppliers in isolation or if this is the result of the buyer's procedures.

Another sign of low level of trust concerns the technology transfer indicator (question 33). With the exception of BF and SSG, the buyer does not always transfer to PBDS new technology that can be relevant to their activity. The following question can be raised at this stage: what makes the buyer differentiate these two suppliers from the others.

The concern the buyer has towards quality inspection (question 64) also attracted the researcher's attention. It made her wonder why most of times the buyer inspects components when these arrive at the OP's site with the exception of Huf's products. Perhaps this is due to the reputation of supplier and to the criticality of the components (i.e. if these may stop the assembly line).

The information about the total product cost structure (question 43) and the material costs (question 46), which PBDS give to the buyer, appear to translate to high levels of trust between the parties. However, this information disclosure may result from the pressure the buyer puts on the suppliers. Also the fact that the buyer informs the suppliers on its product cost targets (question 44) does not mean on its own that the buyer trusts its suppliers. This may rather be done in the interest of the buyer and without any concern for the suppliers. The low value (i.e. from 1 to 3 on the "very low-very high" continuum) of information disclosure from the VM to its suppliers on market sales trends (question 47) and on benchmarking results concerning the suppliers' competitors (question 48), leads the researcher to think that in reality the VM does not act motivated by the potential suppliers' interests or needs. Similar thought may be shared by suppliers who, in consequence, may become suspicious about the buyer's behaviour. A lack of trust seems to be confirmed by the answers to

question 49, which report that suppliers tend not to give information to the buyer about their suppliers. The researcher believes that suppliers fear that this information can be used by the buyer against them.

Sharing of risks

The buyer tends not to share risks concerning fluctuations in the prices of raw materials (question 16) and in currency (question 20), BF being an exceptional case which remains to be understood.

The penalty clauses due to delivery problems (question 17), which are included in purchasing contracts, are a practice used by the buyer. This shows how much the buyer is not willing to share, with its suppliers, risks related to delivery problems. The perspective Ficocables and SSG give, leads the researcher to think that certain companies may not incur these penalties for rarely failing to deliver on time and according to the buyer's orders.

The trend shown in previous answers about the buyer's unwillingness to share risk seems contradicted by the potential joint investments in equipment (question 21) and tools (question 22). The researcher notes that the answers do not inform if tools are a result of joint investments or if the buyer is buying tools and giving them to suppliers for the time needed. Answers to questions 21 and 22 lead the researcher to think that the buyer is guided in its decisions by a concern on production related issues. Moreover, some reasons, unknown to the researcher, may exist to explain why the buyer makes joint investments with certain companies and not with others.

The two opposite tendencies of risk sharing related to VM's final products (question 23) may be driven by different suppliers' strategies towards the buyer or be the result of the buyer's imposition on suppliers.

Sharing of benefits

The buyer tends not to share benefits with its suppliers. However, the value of four within the continuum of “very low-very high” inter-firm collaborative practices given by Gametal and Huf, made the researcher wonder if this is the result of these companies being German and thus preferred by Opel in Germany which has the responsibility of some of OP’s activities.

Increase in joint competitiveness

It is the perspective of most suppliers that doing business with the VM has improved their relative position in the market sector (question 70) and their competitiveness (question 71). The researcher notes that for MCG, Gametal and Arjal, OP is a key customer as it represents more than 50% of suppliers’ turnover. Inteplastico is the only company for whom doing business with the buyer has not contributed to an increase in its relative position in the market and in its competitiveness. This is perhaps due to the fact that OP represents 2% (in 2002) in the total amount of sales. For the remaining companies, OP is not a key customer in terms of volume of sales (less than 10% in 2002). Figures lead the researcher to infer that for these companies more than OP, it is Opel as a whole that it is important as a customer. Inteplastico seems not to follow this pattern.

It appears that all the suppliers, more or less think that doing business with the buyer has reduced the VM’s product cost (question 72). The researcher infers that suppliers believe that OP gains from the relationships it establishes with them.

Not all the PBDS share the same opinion regarding the improvement in supplier’s product margin due to the relationship with the buyer (question 73). The researcher thinks that this may be the result of the pressure put upon the suppliers concerning cost cuttings (a practice known to be used by VMs). It is not surprising, that concerning this issue, MCG, Arjal and Gametal see as quite favourable their relationships with OP, as this subsidiary is a key customer for these companies.

Despite the higher levels of collaboration than lower demonstrated by suppliers' answers on increase in joint competitiveness these, in isolation, do not tell enough about suppliers' satisfaction with the relationships they establish with the buyer. The situation can be precarious and can hide that some suppliers are just waiting for an evolution on buyer's behaviour to change (or not) their strategy of commitment towards the buyer. Results concerning indicators such as the level of trust and expectation of continuity may bring some complementary information on the suppliers' perspective.

Expectation of continuity

Inconsistencies are apparent when looking at the evidence concerning "expectation of continuity". On the one hand, the buyer by giving to suppliers information on long-term forecasting (question 52) and by assessing their capability to meet VM's future needs (question 57), appears to create some expectations of continuity in doing business with them. On the other hand, the type of contracts it makes (question 12) and the high probability of re-sourcing the business when a competitor offers lower prices for a product of equal quality (question 13), induces the suppliers to lose hope. However, not all the suppliers seem to be treated the same way and have the same strengths. For instance, MCG, by showing higher levels of expectation than lower looks like being a preferred supplier for the buyer. The same does not happen to Arjal and Inteplastico. Although these companies are evaluated on a basis of VM's future needs, they show lower levels of expectation than higher. Several reasons may explain these differences. Perhaps the fact that these companies were being restructured might have affected the buyer's perspective on their performance. Experience tells the researcher that for many VMs the organisational stability of a supplier is important. It appears that Ficocables and SSG do not fear losing business with this particular buyer, which is not surprising taking into account their geographical proximity to OP and reputation acquired in the market. The researcher thinks that the value Simoldes gives to "substitutability of suppliers" is a way of penalizing the buyer for previous behaviour regarding sourcing. The researcher bases this belief on the evidence

demonstrated regarding indicators such as joint strategy setting, joint R&D and willingness to help one another, to which this company gives higher values on the “very high – very low continuum”.

Continuous improvement focus

Data indicates to the researcher that some joint work was done in identifying (question 28) and making the follow up to continuous improvement opportunities (question 29). Data also tells that there is still space for improvement in buyer’s payment (question 63) and for joint work regarding cost reduction projects (question 30). Supplier’s improvement as a result of VM’s assessment schemes can be more of a supplier’s initiative than the result of buyer-supplier collaboration. Moreover, according to the data, it is certain that the suppliers involved in this study do not participate in supplier development programmes, with the exception of MCG. It is known that Opel in Germany, Opel in Spain and Opel in Portugal (OP) share quality management responsibility for their output, suppliers’ assessment, and the analysis of any defective items (as mentioned in Table 5-1, Section 5.2). It will be interesting to know if OP has enough freedom to work jointly with PBDS in continuous improvement activities.

Joint strategy setting

The joint development of strategies aimed at improving the VM’s (question 35) and the suppliers’ competitiveness (question 36) does not occur intensively. The buyer seems not unwilling to discuss with most suppliers the next product generation (question 37), with the exception of Ficocables, Simoldes and SSG. Perhaps these exceptions can be explained by the type of components and the characteristics of the supply companies. This reinforces the researcher’s belief that the buyer is much concerned with production (as showed by the answers about investments in equipment and management of capacity) and product related issues (as showed by the answers on joint R&D).

Joint planning

Joint adjustments to marketplace conditions, measured by the VM's discussion of its marketing plans (question 38) and of business changes that can affect relationships with suppliers (question 39), are lower in intensity of inter-firm collaboration than higher. The results regarding the joint planning of production mix (question 40) and of target costs (question 42) show low levels. Higher values can be observed on the joint planning of production volumes (question 41). This shows how much the buyer is concerned with production issues on its convenience. These results lead the researcher to believe that it is the buyer who is playing a determinant role in planning, leaving to suppliers a more passive and reactive role.

Joint R&D

The answers on how much the suppliers are involved in the VM's value analysis (question 34) seem to reveal that the buyer is not much open to accept supplier's collaboration in internal processes of the company. This may be the result of a strategic decision or of cultural (i.e. national and organisational) features.

The answers to questions 53, 54 and 55 concerning joint product development activities reveal that not all suppliers are involved in product development with the buyer. This may be explained by the type of product (i.e. system and module) and the size and characteristics of supplier. These cases can be understood in the context of a relationship with Opel in Germany where the R&D department is located. These PBDS need to have R&D internally or have access to R&D through strategic alliances or through other sites of the respective multinational networks.

Two-way communication

Data shows high levels of communication between buyer and suppliers about: (a) compatible software and hardware to communicate with each other (question 31), (b) VM's communication of the product specifications in a standardised form (question

50), and (c) information send in an agreed format (question 51). This is a sign of good communication between parties, but in the view of the researcher the answers are not enough for evaluating what is really happening, as buyer and suppliers may not communicate for other essential issues.

Willingness to help one another

It seems there is a high reciprocal spirit of willingness to help one another in the case of difficulties (question 1). This looks likely to contradict other evidence where the buyer seems to decide and react in pursuit of his interests (e.g. cost reduction projects). For the researcher, the high levels given by the suppliers for providing the VM with assistance for which there is no immediate or explicit compensation (question 2), are not surprising. The researcher would expect that the suppliers would make an effort to please the customer in the view of keeping the customer, i.e. this for strategic reasons. As mentioned in Section 2.4.3, the motor vehicle manufacture is now in the hands of a small number of very large firms, which means that some suppliers may struggle to maintain themselves as direct suppliers of the VMs. However, not all the suppliers give identical priority over other buyers in an effort to help them out (question 3). Perhaps this is due to the relative importance the buyer under investigation has for each supplier (see Table 5-2), which is measured in this study by the % turnover supplied to OP and/or a true willingness and commitment in helping OP, which can be understood in the light of protecting what at the end is a Portuguese based company.

Personnel allocation

Suppliers' divergences in the view of transfer of personnel to solve difficulties (question 24) and for purposes of technical support (question 25) are obvious. Several reasons may explain these divergences. For instance, those companies that show a lower level of inter-firm collaboration regarding these indicators may not have enough technical problems to justify transfer of personnel and/or solve technical problems by other means than through transfer of personnel.

Conflict resolution

Most suppliers told that when performance problems arise, the supplier tried to work with the VM to solve them in the minimum possible time (question 26). The researcher does not doubt this. However the researcher doubts that the buyer has a similar attitude. Only interview data can uncover what is really happening regarding the way the buyer tries to resolve conflicts.

Two-way flexibility

In the view of suppliers, when an unexpected situation arises, the parties often negotiate new conditions in a minimum period of time (question 15). This is a sign of high flexibility in agreements. However the position of Huf relative to the other suppliers attracts the attention of the researcher who wonders if this is due to the fact that Huf is not responsible for many decisions regarding the buyer, being dependent from its headquarters in Germany. The researcher expected high levels of flexibility in delivery, which data confirms (question 61). It is well known in the market that the requirements of VMs for delivery, where systems like just-in-time are quite extensively implemented, are very challenging.

Table 5-2 : Profile of Portuguese Based Direct Suppliers (PBDS)

Name Company	Ownership	Headquarters location	No. employees	Name component	Type component	% Sales to OP
Arjal	Portuguese owned	Portugal	480	Pedals; Car jacks; Hand brakes	Customised	> 50%
Bertrand Faure	Faurecia	France	750	Automotive seating	Customised	< 10 %
Delphi	Delphi International	US	288	Cables		< 10 %
Ficocables	Ficosa Internacional	Spain	310	Command and control systems; Security and locking systems; Systems for seats	Customised	< 10 %
Gametal	Kirchhoff Group	Germany	220	Mechanical parts	Customised	> 50%
Huf Portuguesa	Huf Group	Germany	320	Electronic & mechanical lock systems	Customised	< 10 %
Inteplastico	Portuguese owned	Portugal	50	Thermo-moulded plastic parts	Customised	2 %
M.C.G	Portuguese owned	Portugal	300	Mechanical parts Stamped metallic parts	Customised	> 50%
Simoldes Plasticos	Portuguese owned	Portugal	435	Panels and panel accessories; Bumpers and accessories	Customised	< 10 %
S.S.G.P.	Saint-Gobain	France	310	Window glasses	Customised	< 10 %

Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
COMMITMENT	Formal commitment	Type of contracts / Partnering agreements	14		Gametal MCG		Arjal Inteplastico Simoldes		BF	Ficocables SSG
				Arjal Inteplastico MCG Simoldes	BF Ficocables Gametal SSG					
	An inherent trust	Type of contracts / Promise of buying	8	Arjal BF Ficocables Gametal Inteplastico MCG Simoldes SSG						
				Arjal BF Ficocables Gametal Inteplastico MCG Simoldes SSG						
TRUST	An inherent trust	Type of contracts / Detailed purchasing clauses	9	Arjal BF Ficocables Gametal Inteplastico MCG Simoldes SSG						
				Arjal Inteplastico MCG	Simoldes	BF Ficocables Gametal SSG				
		Negotiation	10	Arjal Inteplastico MCG	Simoldes	BF Ficocables Gametal SSG				

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices							
				Very Low	2	3	Medium	5	6	Very High	
TRUST	An inherent trust	Ordering procedure	11	Arjal Inteplastico MCG	BF Delphi Ficocables Gametal Huf Simoldes SSG						
		Technology transfer	33	Arjal Delphi Ficocables Inteplastico MCG	Simoldes	Gametal Huf		BF SSG			
		Quality inspection	64	Arjal Ficocables SSG	Delphi Gametal Inteplastico	BF MCG Simoldes				Huf	

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
TRUST	An inherent trust	Information disclosure from PBDS to VM / Total product cost structure	43						BF Ficocables Gametal Inteplastico Simoldes SSG	Arjal MCG
		Information disclosure from VM to PBDS/ Product cost targets	44				Gametal Inteplastico MCG		Ficocables	Arjal BF Simoldes SSG
		Information disclosure from PBDS to VM / Material costs	46						BF Ficocables Gametal MCG Simoldes SSG	Arjal Inteplastico
		Information disclosure from VM to PBDS / Market sales trends	47	Arjal Delphi	BF Ficocables Inteplastico MCG	Gametal Huf Simoldes SSG				

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
TRUST	An inherent trust	Information disclosure From VM to PBDS / Benchmarking results of suppliers' competitors	48	Arjal Inteplastico	Ficocables Gametal Simoldes	BF MCG SSG				
					Arjal BF Ficocables Inteplastico	Gametal MCG Simoldes SSG				
		Information disclosure from PBDS to VM / About their suppliers	49							
WIN-WIN	Sharing of risks	Sharing risks concerning fluctuations in prices of raw materials	16	Ficocables SSG	Gametal Inteplastico MCG	Arjal Delphi Simoldes	Huf		BF	
					BF Gametal Huf Simoldes	Delphi Inteplastico MCG	Ficocables SSG			
		Penalty clauses due to delivery problems	17	Arjal						
		Sharing risks concerning fluctuations in currency	20	Arjal Gametal SSG	Ficocables Huf Inteplastico MCG	Delphi Simoldes			BF	

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
WIN-WIN		Joint investments in equipment	21	Delphi Ficocables SSG	BF Gametal MCG	Inteplastico		Simoldes	Huf	Arjal
			22	Inteplastico	BF Ficocables	SSG	Simoldes	Delphi MCG	Huf	Arjal Gametal
	Sharing of risks	Sharing risks concerning defect VM's final products	23	Arjal	Delphi Huf Inteplastico Simoldes			Gametal	BF Ficocables MCG	SSG
		Sharing of benefits	19	Arjal BF Ficocables SSG	Delphi MCG	Inteplastico Simoldes	Gametal Huf			

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
WIN-WIN	Increase in joint competitiveness		70			Inteplastico		BF Delphi Ficocables Huf SSG	Arjal Gametal Simoldes	MCG
						Inteplastico		BF Delphi Ficocables Huf Simoldes SSG	Arjal Gametal	MCG
						Inteplastico	Huf Simoldes	BF Delphi Ficocables	Arjal Gametal MCG SSG	
				BF	Delphi Ficocables SSG	Inteplastico Simoldes	Arjal Gametal Huf MCG			

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
LONG-TERM ORIENTATION	Type of contracts / Length of contracts		12	Arjal	BF Inteplastico	Delphi Gametal MCG	Ficocables Huf Simoldes SSG			
				Arjal	Gametal Huf Simoldes	BF Inteplastico	Delphi Ficocables SSG	MCG		
	Substitutability of suppliers		13	Arjal						
					Inteplastico				BF Gametal Huf MCG Simoldes SSG	Delphi Ficocables MCG Simoldes SSG
Expectation of continuity	VM's information disclosure on long-term forecasting		52	Arjal						
										BF Gametal Delphi Ficocables MCG Simoldes SSG
Assessment schemes / Capability of PBDS meet VM's future needs			57					Arjal Inteplastico	BF Delphi Gametal Huf	Ficocables MCG Simoldes SSG

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
LONG-TERM ORIENTATION		Multi-functional teams / Identification of areas for improvement	28		Arjal BF	Gametal Inteplastico MCG	Delphi Huf	Ficocables Simoldes SSG		
		Multi-functional teams / Follow up of areas for improvement	29		Arjal BF	Gametal Inteplastico MCG	Delphi Huf	Ficocables Simoldes SSG		
		30		Arjal BF Gametal Huf Simoldes	Delphi Inteplastico MCG		Ficocables SSG			
	Continuous improvement focus	58					Ficocables Inteplastico Simoldes	Arjal BF Delphi Gametal Huf MCG SSG		

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices							
				Very Low	2	3	Medium	5	6	Very High	
LONG-TERM ORIENTATION	Payment performance		63	Arjal BF Gametal MCG Simoldes	Delphi Ficocables Inteplastico Huf SSG						
				Delphi Ficocables	Arjal BF Gametal Inteplastico	Huf Simoldes SSG		MCG			
	Supplier development programme		67	Delphi Ficocables	Arjal BF Gametal Inteplastico	Huf Simoldes SSG		MCG			
				Delphi Ficocables Huf Simoldes SSG	Arjal BF Gametal Inteplastico MCG						
		68									

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
COORDINATION	Joint strategy setting		35	Arjal Inteplastico MCG	BF SSG	Ficocables Gametal Simoldes				
				Arjal Inteplastico MCG	BF SSG	Ficocables Gametal Simoldes				
				Arjal MCG	BF Inteplastico	Gametal		Ficocables Simoldes SSG		
	Joint planning	Joint adjustments to marketplace conditions	38	Arjal BF Gametal MCG		Ficocables Inteplastico Simoldes SSG				
					Arjal	BF Delphi Ficocables Huf Inteplastico SSG	MCG Gametal Simoldes			
			39							

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
COORDINATION	Joint planning	Planning product mix	40	Ficocables Gametal SSG	Arjal BF Inteplastico	MCG Simoldes				
		Management of capacity	41		Arjal Inteplastico	Simoldes	BF Ficocables MCG SSG	Delphi Gametal Huf		
		Cost reduction projects / Target costs	42	Arjal SSG	BF Ficocables Simoldes	Gametal Inteplastico MCG				
	Joint R&D	Joint value analysis	34	Arjal MCG	BF Gametal Inteplastico	Ficocables Simoldes SSG				
		Joint product development	53		Arjal Inteplastico MCG			BF Gametal		Ficocables Simoldes SSG
		Joint design	54		Arjal Inteplastico MCG			BF Gametal		Ficocables Simoldes SSG
		Prototyping	55		Arjal Inteplastico MCG			BF Gametal		Ficocables Simoldes SSG

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
COORDINATION	Two-way communication		31						Arjal Inteplastico MCG	BF Delphi Ficocables Gametal Huf Simoldes SSG
									BF Delphi Ficocables Huf SSG	Arjal Gametal Inteplastico MCG Simoldes
									BF Delphi Ficocables Huf Simoldes SSG	Arjal Gametal Inteplastico MCG

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Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
JOINT PROBLEM SOLVING	Willingness to help one another		1						Ajjal BF Delphi Ficocables Huf Inteplastico MCG SSG	Gametal Simoldes
								Ajjal Huf	Delphi Ficocables Inteplastico MCG SSG	BF Gametal Simoldes
						Arjal Inteplastico	Delphi Huf	Simoldes	Ficocables Gametal MCG	BF SSG

Continued on next page

Table 5-3: Profile of inter-firm collaborative practices according to PBDS

Continued

Dimension	Characteristic	Indicator	Question	Intensity of inter-firm collaborative practices						
				Very Low	2	3	Medium	5	6	Very High
JOINT PROBLEM SOLVING	Personnel allocation		24	Huf	Delphi Inteplastico	Arjal Ficocables		Gametal	MCG Simoldes	BF SSG
			25		Delphi Ficocables	Huf	Arjal MCG	Gametal Inteplastico	Simoldes	BF SSG
FLEXIBILITY	Conflict resolution		26					Arjal	Delphi Gametal Huf Inteplastico Simoldes	BF Ficocables MCG SSG
			15		Huf		MCG	Arjal	BF Delphi Ficocables Gametal Inteplastico Simoldes SSG	
	Two-way flexibility	Flexibility in agreements	61					Arjal	BF Delphi Inteplastico Simoldes	Ficocables Huf MCG SSG
		Flexibility in delivery								

The exploratory data analysis, which the researcher made based on the quantitative evidence, is summarised in Table 5-4. This summary uncovers the intensity levels of inter-firm collaborative (IFC) practices that apparently are established between the buyer (whose responsibilities are divided between OP, OS and OG) and its PBDS. The findings show a focal organisation that is very transaction oriented, with little emphasis on the implementation of joint activities and sharing of resources. Collaboration occurs mainly in logistics, with varying degrees of intensity. Qualitative evidence, which will be presented and discussed in the next section, focusing on the characteristics of IFC, will contribute to a deeper understanding of the answers obtained from the questionnaires and to a clarification of the findings the researcher got so far.

Table 5-4: Intensity of inter-firm collaborative practices between the buyer and PBDS: Summary

Dimension	Characteristic	Intensity of IFC
COMMITMENT	Formal commitment/ Partnering agreements	Different levels of intensity; thus partnering agreements established with some suppliers only.
TRUST	An inherent trust	An inherent trust is lower than higher taking into account that: (a) type of contracts, negotiation and ordering procedure indicate low intensity, (b) technology transfer indicates lower than higher intensity, and (c) the buyer seems to disclose information driven by its own interests.
WIN-WIN	Sharing of risks	Intensity in sharing risks concerning fluctuations in prices of raw materials and in currency is low. Intensity in sharing risks concerning delivery is lower than higher. Various scenarios in risk sharing concerning (a) investments in equipment and tools, and (b) defective VM's final products.
	Sharing of benefits	Intensity is lower than higher
	Increase in joint competitiveness	Intensity is higher than lower

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Table 5-4: Intensity of inter-firm collaborative practices between the buyer and PBDS: Summary

Continued

Dimension	Characteristic	Intensity of IFC
LONG-TERM ORIENTATION	Expectation of continuity	Inconsistencies are evident. On the one hand intensity looks like being higher than lower (questions 52 and 57). On the other hand it looks like lower than higher (questions 12, 13 and 47).
	Continuous improvement focus	Intensity is not too low or too high, leaving the impression that there is space for improvement (e.g. payment) and joint work (e.g. cost reduction projects). Suppliers seem to be treated differently (e.g. supplier development programmes).
COORDINATION	Joint strategy setting	Intensity is lower than higher with a few exceptions (see question 37).
	Joint planning	Intensity is lower than higher concerning most indicators with the exception for management of capacity, which is higher than lower.
	Joint R&D	Evidence reveals several scenarios from which the researcher infers that joint R&D concerns mainly product development issues, as well as involvement of some suppliers.
	Two-way communication	Intensity is high
JOINT PROBLEM SOLVING	Willingness to help one another	Intensity is higher than lower
	Personnel allocation	Different levels of intensity from very low to very high
	Conflict resolution	Intensity is high
FLEXIBILITY	Two-way flexibility	Intensity is higher than lower

5.3.2 Analysis of qualitative evidence

The interview time spent with each supplier allowed the researcher to realize that the questionnaires had been answered having in mind the relationships PBDS (including other sites within the respective multinational networks, if the case), were establishing with Opel (and particularly OG, OS and OP) regarding the products supplied to OP. According to the interviewees it was not reasonable to think of the relationships between OP and its PBDS without taking into account OS and OG, as the processes concerning the components supplied to OP also involved these subsidiaries. The qualitative evidence gathered gave the researcher the possibility to clarify the data patterns the researcher had found in the quantitative data analysis stage and to bring forward key features of the relationships established between PBDS and OP. These key features will now be presented and discussed.

Formal Commitment

It was said, by the interviewees, that partnering arrangements exist between Opel and some of its suppliers established at the level of OG (IE.4). The details of such contracts were not mentioned.

An inherent trust

The suppliers that were interviewed observed that a few years ago production could start based on informal and verbal orders from OP, but procedures had been changed. B1, B2 and B3 confirmed that OP, in the sequence of Opel's internal procedures, could not order items without formalizing the demand.

Interviewees at BF and SSG noted that technology transfer between Opel (i.e. staff at OG) and their companies had occurred in the past. These interviewees believed that it would occur again in the future. For instance, the interviewee at SSG told the researcher the case that Opel had pressurised SSG to get a new technology this supplier had developed and gave it afterwards to a competitor of SSG. He went on

saying that this was a way for Opel to push prices down. The interviewee said that SSG, after developing a new technology, had two years for recovering the investment before the technology would get into the hands of competitors. In the view of the interviewee this was happening because there were only a couple of suppliers Opel could play with.

Interviewee from Huf told that, most times, the items supplied to OP were not inspected at the delivery point. He explained this was because the company was known for its quality performance. He believed that being part of a German Group could make a difference.

The researcher noticed that information disclosure was asymmetric. The information disclosure was likely to be more unilateral from the supplier to the assembler. More information was provided by the supplying companies rather than by the buyer. The PBDS provided OP with details of their costs, manufacturing and other process steps. They knew that the implementation of both the sequence line and JIT systems (IB.9), by OP, required intensive exchange of information. However, OP often did not provide the PBDS with timely information (ID.3) to allow an efficient planning of production capacity. Because of this, suppliers often ended up maintaining a non-specified level of stocks (ID.8). In addition, suppliers saw that the buyer, instead of using historical data for the establishment of a dialogue, with mutual goals in mind, used it to ensure compliance with its own interests (IB.8). Suppliers suspected that the buyer was asking them to share sensitive information on costs, for the sole purpose of cutting prices. The behaviour of the buyer did not leave a favourable impression on the supplier, making him suspicious. As a consequence, suppliers were not fully transparent in disclosing information to the buyer (e.g. information on their suppliers, as demonstrated by the answers to the questionnaire), because they did not trust him.

Sharing of risks

Interviewees confirmed the data obtained from the questionnaires regarding the sharing of risks. The buyer did not share risks relating to raw commodity price

fluctuations, currency, inflation, or increase in salaries (IB.11). BF mentioned that some exceptions had occurred in the past concerning fluctuations in prices of raw materials and in currency. According to BF's interviewee, this behaviour depended on who was the responsible for purchasing. As BF's interviewee stated, Opel had various purchasers, one per class of products.

Ficocables and SSG confirmed that Opel used penalty clauses due to delivery problems. Penalties were not much applied to their companies because they were having lesser problems with delivery.

The behaviour of Opel towards joint investments in equipment varied in relation to companies and along time. BF's interviewee told of case that Opel had accepted joint investments in equipment because BF was not willing, at the time, to invest in such equipment just for one customer. BF did not want to take such risk as Opel did not give enough guarantees of future business.

Most tools were bought by Opel and given to the supplier for the time needed. MCG told the case that once Opel had bought tools, which were picked up after some time, to be given to another supplier, before the end of the contract.

MCG told that Opel would share risks related to VM's final products. In the view of this interviewee Opel was as able of asking for penalties as willing to share these types of risks if it was realised that Opel was the main party responsible.

Sharing of benefits

The sharing of benefits, which might include, for example, the equitable sharing of improvement benefits, would rarely occur with the buyer (B1, B2 and B3).

Increase in joint competitiveness

For Arjal, Gametal and MCG doing business with Opel had improved their relative position in the market sector. MCG mentioned that OP and OS helped the company in improving its quality performance and thus become more competitive. Other interviewees shared the belief that the relationships were mutually beneficial. Ficocables told that OP, on its own (i.e. without taking into account that is a subsidiary of GM), was not an interesting customer because the volumes demanded were very low in comparison to other customers. However it was the strategy of Ficocables to keep OP as a customer for the opportunities this subsidiary could bring in association, and because the prices negotiated were quite reasonable. B1, B2 and B3 recognised that doing business with PBDS was quite beneficial for OP because of their geographical proximity, flexibility in delivery, willingness to help and prices offered. In the view of B1, B2 and B3 the number of years OP and PBDS were doing business was a “good” sign.

Expectation of continuity

On the one hand, suppliers were confident in maintaining a relationship with OP on a long-term basis, which was based upon their perceived importance to OP. This perception was based on their geographical proximity (IE.8), flexibility in delivery (IE.8), capacity for innovation (IE.13), capacity to solve technical problems (IF.1), and quality of product or service (IC.3). For suppliers, these factors appeared important enough to attract the interest and loyalty of the buyer. However, Opel’s policy on outsourcing created doubts for the suppliers; that Opel lacked commitment to long-term relationships. In their every-day business life, suppliers observed that: (a) despite their investment in new tools, directly related to products for OP, the supplier could be replaced by another competitor (IA.19, IB.12, ID.13), and (b) when a competitor offered a lower price for a product of equal quality, the buyer might pressurise the supplier, with the threat of re-sourcing the product, into reducing their price. Therefore, to minimise the possibility of being replaced by competitors, some PBDS sited an agent in Germany (IA.21). These suppliers believed that this

commercial strategy would bring them closer to the central purchasing department of Opel, which was responsible for the procurement and supplier selection for Europe, and therefore exert some influence upon the purchasing staff. The type of supply contracts for OP, were reassuring: although supply contracts were initially awarded for a finite period of time, it was not unusual for contracts to be extended (IA.8).

Continuous improvement focus

A continuous improvement focus is measured by the existence of multi-functional teams for joint quality improvement, and of cost reduction projects. Evidence (IA.13, IB.6) indicates that OP and its PBDS did not work together to: (a) remove wastage from the systems connecting them; (b) incrementally improve operations, and (c) propose fundamental restructuring of the interactions between them. Instead, the buyer expected suggestions from its suppliers as to how products could be improved and costs cut (IC.6). The imposition of target costs (ID.4) showed how far Opel could go in its quality improvement policy. This shows a very one-sided relationship, in which there was no space left for multi-functional teams. For example, in an attempt to improve engineering processes and reduce costs, a multi-functional team was created between one PBDS and OP; after some time, having achieved good results, OG, unilaterally ended this co-operation. This one-sided relationship type also manifests itself through Opel's policy on quality. If, during the manufacturing process, a component was found to be defective, it would be sent from Portugal to Spain for analysis. The supplier was then given the results so as to make changes to the component (IA.14). OP does not have enough freedom to make decisions on such activities such as supplier selection and quality management, although it might exert some influence upon OG and OS (e.g. recommendation of suppliers).

Supplier development programs are significant resources, which Opel was willing to offer to certain suppliers. The program was a means of providing technical support to the supplier, so that he became capable of meeting Opel's requirements. So far, one PBDS had been considered, at the request of top management at OP (B1, B2 and B3), for one of these development programs (B2.5). For this particular supplier, the supplier development activities included on-site training in areas such as quality and

engineering, in Spain. This opportunity had left the supplier with a high expectation of continuing a relationship with OP in particular and with Opel in general. This perception is understandable, as it was believed that Opel would not spend such resources if it had in mind a short-term perspective of business with that supplier.

Joint strategy setting

A strategy, including commercial issues, was not jointly defined between OP and its PBDS (B1, B2 and B3). This can be explained by the low level of autonomy of OP in making decisions, which seemed to be determined by the European co-ordination centre of GM in Zurich (GME). OP was dependent on OG and OS in the management of most of its activities (see Table 5.1 in Section 5.2). For suppliers who were subsidiaries of foreign owned MNC, it was possible to identify those who did not have the autonomy to establish their own strategies, and those who participated in the definition of the strategies for which they, as part of the MNC, were involved. Moreover, for both OP and its PBDS, there was no viable ground for a joint strategy setting.

Joint planning

Joint planning concerns the co-ordination of work planned into the future. OP and its PBDS did not jointly develop a plan (B1, B2 and B3) concerning issues such as adjustments to market place conditions (marketing plan), production planning (production schedules), management of capacity (planning of production volumes) and cost planning (technique associated to new product development). As observed, suppliers followed the production schedules established by OP (ID.3, IE.5). Once more, there are signs of a one-sided relationship type, dominated by the buyer. In addition, the buyer forced suppliers into keeping unspecified levels of stock, thus creating added difficulties for the suppliers. Ficocables' interviewee believes that sharing operational information would lead both parties into operating efficiencies. OP's inefficient disclosure of information relating to production volumes, production schedules and volume of stocks, did not allow the supplier to plan in advance, thus reducing supplier confidence. In the view of BF and SSG it is hard to believe that OP,

and ultimately Opel, were not aware of the consequences stemming from their managerial practices in terms of performance and cost management.

Joint R&D

Joint R&D means joint action on behalf of the buyer and the supplier to perform the tasks necessary for development of new components (Bello, Lohtia and Dant, 1999). It includes product design at the concept stage, prototyping, product manufacturing process and product development. The resources available to OP, and the implementation of its activities (Table 5.1 in Section 5.2), provide evidence that there were no joint R&D activities between OP and its PBDS. Instead, some companies had established joint R&D with OG (IC.7, ID.10, IE.10), where significant resources had been allocated by GME. Some suppliers had been involved with the buyer in the early stages of new product development (IE.4). Some PBDS have an R&D laboratory in Portugal, oriented to the international and local markets. Others rely on resources retained by the headquarters or by other units of the respective MNC (IC.7, ID.10, IE.10).

These findings suggest that there may be advantages in keeping R&D activities confined to locations close to potential partners who possess in-house R&D. It is possible that R&D tasks, justify by themselves, a geographical closeness. There is no evidence of how Opel and suppliers work together on the component development tasks. Buyer and supplier may perform their respective development activities autonomously. Essentially, Opel and suppliers can divide up the development project in several stages, which can be performed, separately, by buyer and suppliers. This would be a disjoint approach to task development. On the contrary, Opel and suppliers can be highly intertwined in their collaborative use of R&D personnel, and equipment, among other resources.

Two-way communication

Impersonal channels of communication characterise the relationships between OP and its PBDS. The electronic format, the most used channel of communication, was seen

as facilitating communication between companies (ID.15). In addition, electronic data interchange (EDI) was established with some suppliers. The researcher assumes that not all suppliers used EDI because the situation did not justify its use or because the necessary investment was not viable. The relationships between OP and its PBDS are also characterised by a high degree of formality in the establishment of contacts (IE.7). This high degree of formality was expressed in written procedures, established by Opel (IE.6), and a formal vendor rating system, which evaluated supplier performance, mainly on quality and delivery, on an ongoing basis (Ficocables). Supplier evaluation and performance measurement mechanisms were in place, not as a diagnostic mechanism that continuously identified potential areas of improvement in quality, service and cost, but instead, as unilateral and rigid mechanism of control. Information exchange on production and delivery seems to dominate the extent of contacts between OP and its PBDS (IE.8). Informational disclosure reflects the operational pressures within the interaction process. Because the social dimension of the exchange was not encouraged by the buyer, opportunities to build personal relations were considerably reduced. This is patent, for example, in the frequency of interaction: often OP did not contact a supplier for many weeks (IC.5). Also, the frequent turnover of OP's staff, imposed by OG, at the top management level, did not facilitate the establishment of strong personal links (IE.7): the buyer often replaced its representative, just as strong links had been developed. Findings provide evidence that most PBDS were experiencing a number of communication difficulties with the buyer. There were those who found Opel a very bureaucratic company, which made effective communication difficult (IE.20). The allocation of different responsibilities and activities to OG, OS or OP, might create difficulties for the suppliers (B1, B2 and B3). For example, a supplier might receive a quotation request directly from Germany (IA.3) and, to avoid conflicts, needed to send a quotation to both OG and OS (IA.15). Moreover, communication difficulties might arise due to differences in participants' cultural background.

Willingness to help one another

From interviews with suppliers and OP's staff, it can be implied that OP's PBDS show a willingness to help OP. This was particularly evident when difficulties arose in

the implementation of the just-in-time (JIT) delivery system. However, there were limits to this willingness. For example, in one company, due to cultural characteristics, it was difficult to implement more than two shifts (IA.22) and therefore was a limitation to the supplying company's ability to respond to unexpected OP's demands and, ultimately, on the flexibility of delivery.

Personnel allocation

Some interviewees noted that transfer of OP's personnel to their company did not happen as problems that might occur did not justify it. This was confirmed by B1, B2 and B3.

Conflict resolution

Opel has been known as a quarrelsome buyer (IC.11) and difficult customer to work with (ID.11). On occasion, individual staff of the buyer had created problems where none-existed (ID.11). The researcher believes that disagreements could arise as a result of divergent interests due to incompatible goals. Perhaps if the levels of trust between buyer and suppliers were higher, then both parties could work out their disagreements amicably and even accept a low level of conflict as more or less routine. In addition, there was the perception, among interviewees, that the behaviour of individual staff at Opel, across different units, was not consistent (IE.11). According to IC.11, the attitudes of individual purchasers would vary. However, it was believed that Opel was applying direct or indirect pressure upon its staff, to induce conformity: in this case, corporate culture prevails over individual culture.

Findings, concerning conflict resolution, show that, when problems arose, OP and its PBDS did not work together to identify and solve problems. For example (see IA.14), during the manufacturing process, if a component was found to be defective, it would be sent from Portugal to Spain for analysis. The supplier was then given the results so as to make changes to the component. Some suppliers, in order to ensure timely resolution of problems, had appointed executives as key account managers of Opel to establish links with the buyer.

Two-way flexibility

Delivery is a critical issue in the relationships between OP and its PBDS (B1, B2 and B3). During the interviews it was observed that of all the issues affecting the operations of OP, the most important was the timely delivery of supplied components (IA.16). OP practised both the sequence line and JIT forms of delivery (IB.9). OP looked mainly for reductions in lead times, decreases in inventory levels and decreases in inventory holding costs. In order to avoid a disruption in the purchasing/supply process the buyer demanded that suppliers maintain a safety stock (ID.8). Some of the supply companies kept safety stocks in warehouses, close to OP's premises, where pre-assembly was practised (IE.8). It seems that the benefits of JIT and sequence line purchasing, favour more the buyer than the supplier. These practices were likely to demand substantial efforts on behalf of the supplier, such as investment in warehouses and inventory stocks, within a context of uncertainty in ordering (ID.8). These practices exclude any form of support and commitment from the buyer. When a tight and complex synchronisation should have been established between OP and its PBDS, for effective practices of JIT and sequence line systems, OP was not even paying particular attention to the sharing of demand forecasts and detailing a minimum amount for safety stocks. It seems that delivery was practised in a context where OP was seeking some advantages and influence over suppliers. In addition, it seems that OP was attempting to optimise its performance at the expense of its suppliers (IA.11), who tried to be flexible and thus satisfy the customer.

OP was not responsible for the negotiation process with suppliers, including the establishment of contracts. These occurred with Opel in Germany or Spain. Thus, the investigation of the content of the relationships in regard to flexibility of agreements between OP and its PBDS, does not apply to this context.

5.3.3 Inter-firm collaborative practices and partnering between OP and its PBDS: Summary of quantitative and qualitative analysis

This research attempts to capture how inter-firm collaboration and partnering operate between a subsidiary of a motor vehicle manufacturer (i.e. OP) and its PBDS (see research objective 1, Section 1.4). In order to explore these issues, the researcher collected and analysed both quantitative and qualitative evidence. As the researcher expected (see Section 4.2.4), both approaches allowed: (a) to cross-check data, (b) to fill gaps in knowledge about inter-firm collaborative practices, (c) to produce a general picture by revealing underlying patterns, (d) to provide a substantial body of description, and (e) to bring complementary interpretations. Findings are now summarised under the umbrella of the defining dimensions of inter-firm collaboration and partnering. These are: commitment, trust, win-win, long-term orientation, coordination, joint problem solving and flexibility.

Commitment

Some PBDS directly or indirectly through other subsidiaries of the respective multinational networks establish partnering agreements with OG. These agreements are formalised through contracts. They are made with specific purposes, such as R&D. A partnering agreement for R&D, on its own, is not a sign that the manufacture of the items will be given to that supplier that was involved in the new product development.

Trust

In this case study, trust is defined as a firm's belief that another will perform actions that will result in positive outcomes for the firm and not take unexpected actions that result in negative outcomes.

There is evidence of low levels of trust on the suppliers' side. There seems to exist considerable barriers to the development of trust between the buyer, and suppliers. It does seem that buyer's behaviour did not facilitate the development of trust between the parties. PBDS seemed much more suspicious regarding to OS and OG than to OP.

Win-Win

The win-win construct reflects the mutual benefits that two parties may obtain by establishing a partnering relationship. The win-win construct includes the sharing of risks and benefits, and the increase in joint competitiveness.

The rationale for the buyer maintaining a relationship might differ from suppliers' rationale. These could offer OP a positive reputation, and reliability concerning quality and delivery. Suppliers seemed to seek, in their relationship with OP, the possibility of network access to other Opel units, maintenance or even increase in their market share and reputation. Suppliers seemed to be aware that a positive reputation was a valuable intangible resource that allowed them to establish a sustainable competitive advantage. Moreover, there are signs that a relationship with the buyer helped some suppliers to improve their technology and the quality systems in place. In this case, technological development emerges as an adaptation of production technology to meet Opel's requirements. Despite the relationships between OP and its PBDS are mutually beneficial, there is evidence that suppliers are taking risks, which are not shared by the buyer. The researcher believes that on a long-term basis this may create dissatisfaction and a rethinking of relationship strategy.

Long-term orientation

A long-term orientation is defined through constructs such as expectation of continuity, a continuous improvement focus, and supplier development. Expectation of continuity is defined as the supplier's belief that there is a high probability that it will continue to provide products and services to the customer for more than three years (Sako, Lamming, Helper, 1994). A continuous improvement focus means that the stress for competing for business is followed by a mutual stress to support the relationship and to improve their competitive position in an ongoing process of improvement and redefinition (Macbeth, 1998). Supplier development, in this study, is defined as any effort of a buying firm with its supplier to increase the performance and/or capabilities of the supplier and meet the buying firm's short and/or long-term supply needs (Krause and Ellram, 1997). Implicitly, there is a long-term component

within these three constructs. For this reason they have been used to measure the long-term orientation of a buyer's business with its suppliers.

On the one hand, Opel seems to prefer a short-term supply strategy, as evident by its policy of substitutability of suppliers, one-year contract for PBDS, and a lack of joint continuous improvement focus. On the other hand, there are signs of commitment to longer-term relationships with PBDS, with whom it had established a satisfactory relationship. However, in general, Opel does not show commitment to trade in the long run. Although suppliers' relationship specific investments (e.g. modifications to the product, production methods, delivery, pricing) might be quite extensive, Opel does not show signs of making efforts to ensure the continuity of relationships. In sum, relationships between OP and its PBDS are developed within a context of short-term contracts and a long history of trading.

Coordination

Collaboration manifests itself in the way exchange activities are co-ordinated (Young and Wilkinson, 1997). For example, joint strategy setting, joint planning and joint R&D. Communication appears as the mechanism for co-ordinating these activities, and for transmitting information (Wren and Simpson, 1997). Communication includes information exchange activities, the associated channels of communication (e.g. EDI), and frequency of interaction.

The relationships between OP and its PBDS are based on low levels of coordination. Findings show that joint activities did not occur in the areas of strategy, planning and R&D, between OP and its PBDS. However, in the field of logistics, there are signs of high levels of information disclosure and consequently, higher levels of co-ordination and collaboration. The relative importance in the disclosure of information on logistics related issues seems to dominate the extent of contacts. Communication is a critical issue in the focal dyadic relationship. Communication is very much based on the use of information technology and rigid written procedures. There are low levels of inter-personal communication, as demonstrated by the scarce visits made by OP to most suppliers. This does not help the establishment of collaborative relationships

(Langfield-Smith and Greenwood, 1998). Because the buyer does not encourage the social dimension of the exchange, opportunities for personal relationship building between OP and its PBDS are considerably reduced. Difficulties in establishing close contacts are increased by staff turnover. Findings show that OP, purposely or not, keeps the suppliers at a distance. This behaviour seems to create considerable barriers to the development of trust between the parties. Even if a non-collaborative behaviour between OP and its PBDS seems to be dominant, there are signs of collaborative and friendly attitudes between people. This is illustrated by the request made by a top manager at OP for a PBDS to be integrated in a supplier development program developed by OS. Suppliers appear to be strongly committed to improving communications with the buyer. Moreover, members of the staff at OP have shown an openness to reciprocate. Therefore, it should be possible to reduce the number of identified communication problems.

Joint problem solving

In this study, joint problem solving is defined as a willingness to work together to find answers to problems. In this study, joint problem solving activities are measured through three constructs: willingness to help, personnel allocation and conflict resolution. Willingness to help is a commitment to help each other maintain their respective competitiveness (Hendrick and Ellram, 1993), and conflict resolution means how the extent, and intensity, of disagreements between companies are solved (Young and Wilkinson, 1997).

PBDS seem quite willing to help OP. Personnel allocation between these parties is not favoured by Opel. Moreover, potential conflicts are rather solved between PBDS including other subsidiaries of the respective multinational network if it is the case, and OS and OG. OP does not have enough autonomy to solve potential conflicts with PBDS of components.

Flexibility

Flexibility, in terms of flexibility in delivery and flexibility in agreements, is seen as an important success factor in a Partnering relationship (see Section 2.8.4). There is evidence that PBDS show flexibility towards OP, which is not reciprocal. It appears that OP does not have enough autonomy to implement activities the way it would like, to improve its relationships with suppliers, and be flexible when needed.

5.3.4 Discussion

The aims of this section are to generate new knowledge by exploring and discussing the outcomes of previous sections with reference to the literature.

The initial quantitative evidence on inter-firm collaborative practices between the buyer (i.e. OP and the subsidiaries it depends on and it is linked with), and some of its PBDS, acted as a starting point for the exploratory study, around which a great deal of conversation was held during a series of face-to-face interviews. The interviewees were keen to discuss the relationships established. The flexibility of the interview structure allowed them to bring insights on the inter-firm collaborative practices and partnering and to explore their influencing factors. Consequently, it is the belief of the researcher that an alternative set of interviews would have resulted in the production of very similar outcomes.

The research process had been driven by the objectives; consequently the findings specifically explore how inter-firm collaboration and partnering operate. Although inevitable shaped by the researcher, the findings represent the perspectives of those involved. This means that the picture created is not a complete explanation of all the aspects occurring in the relationships; rather it is a snapshot of experiences and perspectives. The findings are more likely to represent the emphases in those aspects that the interviewees find particularly relevant to their experiences of the everyday operation of the relationship. The result will be a deeper understanding of inter-firm collaborative practices and partnering, not an explanation or a theoretically complete framework.

Intensity of inter-firm collaboration

Evidence indicates that collaboration does not play a major role in the relationships between OP and its PBDS. Collaboration occurs mainly in logistics, with varying degrees of intensity. Moreover, there is not a high level of integration between OP and its PBDS. It appears that each side considers only their own goals and, does not share the same expectations about the demands of collaboration. Thus, the collaborative features of the relationships are such that each firm seems to gain different ends from the same means. For example, most suppliers seem to seek relationships with OP to gain network access to other Opel units and reputation. Meanwhile, OP seeks flexibility in delivery (through delivery on time) and reliability in quality and service. Some suppliers thought that collaboration between OP and its PBDS was low because Opel disperses its functions, such as purchasing, R&D and production, between its many subsidiaries.

The researcher found that findings are not consistent with the view of partnering as defined by Cousins (2002). Cousins claimed that partnering does not exist rather there are ranges of varying collaborative relationships. From the interviews undertaken within this study, it has emerged that the interviewees were aware of differences between inter-firm collaboration and partnering arrangements, to the extent that they were able to recognise the importance of these arrangements in order to accomplish joint involvement of buyer and supplier in R&D projects. Their observations were supported with examples of partnering agreements established in other points of the respective organisational networks, rather than between OP and PBDS.

Inter-firm collaboration pattern

Although there is evidence that are differences among the various focal relationships (i.e. relationships between OP and its PBDS, directly or indirectly through OG and OS), certain collaborative aspects of these relationships can be categorised and generalised. Hence, a pattern can be identified when looking at the data in the light of the activities-actors-resources (AAR) model (Hakansson and Johanson, 1992; Hakansson and Snehota, 1995).

The AAR model has the potential to describe complex business networks (Easton, 1992), and capture the nature of dyadic business relationships. This model is framed at a high level of generality and its complexity derives from the conceptual interdependence between its constituent elements (Araujo and Easton, 1996). It describes how a business relationship can be analysed through its individual substance layers: actor bonds (AB), activity links (AL) and resource ties (RT). AB describe the connections between the actors, either individual or organisational, through their perceptions of each other. AL describe the connections formed by activities and business processes, which the actors develop with each other. RT describe the organisational connections that are developed through resource inputs and outputs.

In order to analyse the strength of actor bonds activity links and resource ties, the researcher integrated the partnering categories of the initial framework for understanding partnering (see Table 3-3, Section 3.4.3) into those considered in the AAR model. In collaboration with Ivan Snehota (Uppsala University), Wensley Johnston (Georgia State University) and Sharon Purchase (University of Western Australia), data was re-arranged according to these new categories in the process of searching for meaning in this new data set formed by actor bonds, resource ties and activity links. The strength of AB, AL and RT is illustrated in Table 5-5.

Table 5-5: Inter-firm collaborative practices and strength of actor bonds, resource ties and activity links between OP and its PBDS

Inter-firm Collaboration Indicator	Inter-firm Collaboration Intensity		Substance Layer	Bond Strength
	Supplier Perspective	Buyer Perspective		
Commitment	Low	-----	Actor Bonds	Weak
An inherent trust	Low	Low		
Willingness to help	High	Low		
Personnel allocation	Low	Low		
Expectation of continuity	Medium	Medium		
Flexibility in agreements	None	None		
Information disclosure	High	Low	Resource Ties	Mostly weak with exception in regard to delivery
Sharing risks	None	None		
Sharing benefits	None	None		
Flexibility in delivery	High	-----		
Continuous improvement	None	None	Activity Links	Weak
Joint strategy setting	None	None		
Joint planning	None	None		
Joint R&D	None	None		
Conflict resolution	Low	Low		
Two-way communication	Low	Low		

The analysis of the findings, in the light of such a framework shows that AB, AL and RT, are, in general, weak. Detailed observations not only show stronger AL related to logistics issues, but also stronger RT. It should be appreciated that the strong RT underpin the strong AL. AB appear to be weak: the development of strong bonds with PBDS is perceived to be a low priority for OP. OP's organisational methods and behaviour seem to conflict with their high propensity for flexibility and willingness to help. Except for delivery, RT are mostly weak. The resource dimension of business relationships, appear not to be fully exploited between the parties. ALs seem to be mostly weak. This is because OP generally operates on its own, rather than working closely with its suppliers.

According to Gadde and Hakansson (2001), a focal dyadic relationship, which establishes low levels of either AB, RT or AL, is characterised as a low-collaboration relationship-type. These relationships are handled with limited coordination and adaptations. Here, adaptations occur at the level of physical transfer of products or execution of services.

Characterisation of business relationships

Based on the data and their interpretation, the researcher infers that buyer-supplier relationships are complex, asymmetric and heterogeneous.

The data demonstrates the complexity of relationships between OP and its PBDS, when showing, for example: (a) varying degrees of intensity of inter-firm collaboration concerning the same construct (e.g. joint R&D), and (b) the development of relationships between multiple parties (i.e. more than OP and a PBDS) concerning a certain item/component or business process (e.g. quality assessment). Ultimately complexity arises from the varied nature of the buyer-supplier relationships, which are multi-dimensional, directional, structural and variable (Cheung and Turnbull, 1998).

Multi-dimensionality appears as the consequence of the companies' interactions. In this case, multi-layered relationships can be observed, in which collaborative and non-collaborative components may coexist. For example, collaboration at the operational level occurs between OP and its PBDS, when these companies implement a JIT system. A non-collaborative behaviour is evident when OP pressurises suppliers into giving historical cost information, which then will be given to OS and OG. Multi-dimensionality also appears as the result of the companies' multi-functions. Here, the companies have different roles and operate in different geographical areas. As a result of the multi-dimensional nature of companies, complementary organisations appear. For example, while a subsidiary in Portugal is dedicated to production, the HQ may be responsible for the R&D activities and the negotiation process with OG (e.g. Huf).

The relationships are directional, as a result of being interdependent, and showing certain directions of dependence of interactions. Interdependency occurs because a given relationship may have an effect on itself and on other relationships (McLoughlin and Horan, 2000). The interdependence is associated with the fact that the dyadic focal relationships are influenced by dyadic partners with whom they have a direct relationship. For example, OP is dependent on OG and OS for the implementation of activities and resources. This affects OP's operations. At the same time, OP depends on its PBDS for both JIT and sequence line delivery. Also some PBDS depend on other companies for human and technological resources (e.g. SSG).

Opel's supply contracts provide the structural nature to the relationships between OP and its PBDS. Supply contracts are written contracts for the life of the product, although these can be renewed. Evidence shows that most of the contracts are not mutually negotiated.

Variability is the result of the various interaction processes between buyer and its PBDS, which give rise to a variety of relationships. This variability arises from: (a) differences in the customised products offered by the suppliers, and (b) differences in the level of collaboration between OP and suppliers, related to different supplier distribution systems (e.g. not all suppliers have implemented JIT systems). According to Zolkiewski and Turnbull (2000), this variability leads to the existence of a network as a set of portfolios of customers and suppliers.

Complexity increases at an international level (Johnston, Lewin and Spekman, 1999). From an industrial network perspective, internationalisation of the firm means that the firm establishes and develops network positions in foreign markets (Johanson and Mattsson, 1988). For example, PBDS, directly or indirectly (through other units of the MNC they are part of), establish contacts with Opel subsidiaries in foreign countries. The international character of business relationships also applies to those alliances established between PBDS and companies located in foreign countries. In the international business context, business transactions are embedded in networks of relationships that cut across cultural boundaries (Fletcher and Barrett, 2001).

Relationships are asymmetrical as evidence uncovers a one sided relationship where the final assembler, directly or indirectly (through OG and OS), dictates its supply organisations. The findings lead the researcher to think that the final assembler plays a game based on its bargaining power, which can be related to the concentration effect verified among final assemblers (see Section 2.4.3). Fewer buyers in the market may result in more competition among suppliers. Perhaps, despite the difficulties and problems between PBDS and the buyer, this one expects that they will keep supplying. On the one hand as everybody is aware, it is not easy to change, and on the other hand switching costs can be high. The researcher wonders to what extent this situation can be sustained. Low levels of trust, uncertainty of future business with the buyer, high levels of risk sharing and low sharing of benefits may, at a certain stage, be so unsatisfactory for suppliers that, those less dependent on the buyer, may change their strategy regarding Opel.

The heterogeneity is associated with the variety of resources, used to create products and services, and the variety of existing firms, in terms of structure, history, investments and skills, to name a few aspects.

Classification of business relationships

The relationships between OP and its PBDS can be classified according to various frameworks, as proposed in the literature, which describe the nature of buyer-supplier relationships. Without being exhaustive, some classifications for the dyadic business relationships encountered, will now be discussed. Thus, business relationships between OP and its PBDS are:

- Mostly of the arm's length (ACR), rather than the obligational contract type (OCR), as defined by Sako (1992). For example, by almost not disclosing information, and by keeping frequency of contact with suppliers to a minimum, OP is establishing an arm's length type of relationship. Like Gadde and Hakansson (2001), the researcher sees Opel's arm's length approach as a means of avoiding three types of dependency and thus, getting three benefits. These are: (a) the avoidance of transaction uncertainty, or in other words, the uncertainty as to whether or not the supplier will be able to fulfil its obligations; (b) the avoidance

of the possibility of being linked into a specific relationship and loose enhanced technological flexibility, and (c) opportunities for price pressure and for playing off suppliers one against the other.

- Traditional, as defined by Wilson and Vlosky (1997), as they tend to be short-term and relatively adversarial in nature. The short-term orientation is revealed through the existent type of supply contracts. The adversarial nature is manifested in an atmosphere of pressure over the supplier.
- Transitional, as defined by Patterson, Forker and Hanna (1999). This means that although the terms of the buyer-supplier relationships are heavily governed and enforced through extensive and formal contractual arrangements, they include sufficient shared interests to continue the exchange relationships overtime. There seems to be several reasons for the buyer to keep doing business with PBDS for longer periods than those established by contract. Firstly, the close proximity of suppliers to OP's plant facilitates business relationships. Secondly, the reputation, already acquired by suppliers, brings less need for changes, which means savings in the search for alternative sources of supply. For suppliers, continuity of business with OP brings the possibility of access to other markets through OP's network, reputation, and even increases in the volume of sales.
- Competitive-coercive, as defined by Hendrick and Ellram (1993). These two categories are seen as two extremes in a continuum of relationship-types. A competitive-coercive behaviour is evident by OP's focus on transactions rather than in relationships themselves. However, the delivery practices are more in line with the cooperative – collaborative relationship.
- Close but adversarial, as defined by Mudambi and Mudambi (1995). This is because even in a context of non-collaborative behaviour, there are forms of collaboration between OP and its PBDS, such as improved information flow for logistics, which may benefit both buyer and suppliers. The adversarial model is evident by a lack of commitment shown by OP in areas such as planning.

These classifications and associated features, suggest that there exists a mixed form of relationship, characterised by the existence of collaborative and non-collaborative elements. The multi-dimensional continuum of relationships, which the researcher has used to classify the relationships between OP and its PBDS, differs from the continuum of relationships defined by authors such as Sako (1992) and Wilson and Vlosky (1997). These authors have mentioned a continuum of relationships with two opposite extremes. Instead, and similarly to Young and Wilkinson (1997), the researcher has inferred from the findings that “cooperation and competition” emerge as separate dimensions rather than opposite poles of the same dimension. This notion suggests that relationships comprise different mixes of each dimension rather than being one or the other. However, the researcher has expanded the view expressed by Young and Wilkinson (1997) by observing that a relationship can be characterised by several dimensions, each of which can be a combination of collaborative and non-collaborative elements. This, according to Gadde and Hakansson (2001), is what gives multi-dimensionality to relationships.

Major finding 1:

Relationships can be characterized by several dimensions, each of which is a mix of collaborative and non-collaborative elements

The reasons of such multidimensionality in relationships will be explored in the next section. A number of reasons may exist, including differences in size of firm, managerial competence, organisation strategy and organisation structure. In the next section, those factors that influence the nature of the business relationships between OP and its PBDS, inter-firm collaboration and partnering, will be explored.

5.4 Influencing factors on inter-firm collaboration practices and partnering between OP and its PBDS

This research attempts to capture not only how inter-firm collaboration and partnering operate between OP and its PBDS, but also to identify the contextual factors that influence the establishment and development of collaborative practices (see research objective 2, Section 1.4). In Section 5.3.4 it was shown that relationships between OP and its PBDS ranged from a non-collaborative to a more collaborative mode, on a multi-dimensional continuum of relationships. In this continuum, the prevalence of collaborative indicators was relatively low. The only collaborative practices were those associated with delivery. The predominant form of collaboration was usually formal and enforceable through the existing contracts established between the HQ of OP and suppliers. It is the purpose of this section to identify the contextual factors shaping the dyadic processes, and to explain the diversified nature of the dyadic business relationships, and the collaborative practices between the parties under investigation. In order to explore these factors in-depth interviews were undertaken (see Section 4.3.3.3).

5.4.1 Influencing factors identified

A wide variety of factors shaping dyadic processes have emerged from these interviews. These will be now presented.

National culture

National cultural differences were referred to as having an impact on the establishment of partnering agreements and on the development of trust between companies (e.g. IC.12). These issues were also emphasised by Ficocables for whom Germans were not much inclined to collaborative practices as being too proud of their technical capacity and know-how.

Corporate culture

Like Campbell (1997), the researcher believes that dyadic behaviour is shaped by relationship norms and the inherent social control mechanisms arising from each firm's own traditions and values. These norms, traditions and values are part of what is designated as corporate culture. Opel has a culture that distinguishes it from other automotive manufacturers. For example, in comparison with Fiat culture, Opel is characterised by a greater willingness to invest in R&D (Ficocables). Also, Opel is willing to pay a premium for the supplier's development of new products (IE.3). Opel works according to rigid rules and procedures, which influences the way Opel relates to suppliers and the level of social links it establishes (IC.19). As a result, Opel's suppliers often have a less than positive attitude towards Opel. Suppliers often find Opel's rules unnecessary and time consuming, and as a result, wasteful. The researcher believes that these rules and procedures affect the actions and perceptions of the parties involved in a relationship.

Strategy of buyer

As stated in Section 5.1, OP is regarded as a subsidiary of GM, which is a MNC. OP has links to OG and OS, from including the definition and implementation of strategies, which are the responsibility of GME (see Section 5.1). GME is the European division of GM. Internationalisation, production, purchasing, R&D and relationship strategies, have emerged from the interviews, as influencing factors of buyer-supplier relationships.

The internationalisation of GM is taking place largely within the context of the creation of regional groupings (Freysenet and Lung, 2000), which themselves form the structure of GM's network. GME is at the forefront of GM's worldwide expansion planning, taking the lead in a number of ventures, and involving facilities across several countries, both in and outside Europe. The basis of GME's formation is the decrease of GM's dependence on exchange rate fluctuations and on import barriers and tariffs, and ultimately, the fulfilling of cost reduction objectives. GME is often identified as Opel, which emerges as the major brand in GM's global strategy. The

Opel brand has been the cornerstone of GM's internationalisation (Clifton, 1999). This was confirmed by an interviewee who pointed out that Opel is seen as a European manufacturer with a European style, knowing how to give a national and regional brand image to a vehicle (IC.9).

Opel, in order to strengthen its competitiveness, is putting pressure on suppliers to improve their technological competence, to innovate and to lower their costs (Freysenet and Lung, 2000). Opel's production strategy has been aimed at reducing costs and increasing flexibility (Storey, 1998). The desire for decreasing costs influences Opel's behaviour during the negotiation process with its suppliers. The desire for high supplier flexibility impacts on the delivery systems it practices, and ultimately, on the levels of coordination between parties.

The increasing demand for modules and systems solutions (IA.7) and the reduction of the supply base (IA.6), have been two main objectives of Opel's purchasing strategy. This has directly influenced the role, and technological behaviour, of the direct component suppliers. As a result, Opel has become increasingly reliant upon its direct suppliers for new product development; because of this, a high level collaboration between Opel and its direct suppliers should be expected. Purchasing strategy not only affects the relationship, but also impacts on the way in which each party operates (Wren and Simpson, 1997). Evidence shows that Opel's use of centralised purchasing has induced some suppliers into creating account managers who work directly with the centralised purchasing department in Germany (e.g. Ficocables). According to Gametal, despite the trend towards global sourcing, Opel still relies heavily on their traditional supply chains.

Opel has been reluctant to accept suppliers' involvement in R&D (B2.7). This behaviour was expected by IC.12 who saw Germans as having a tradition of not entering into collaborative relationships with suppliers. Recently, there have been attempts to change this state of affairs. Due to the increased risk and complexity of product development activities, collaboration is increasingly being used as a way for Opel and suppliers to develop new products. There are signs of increased supplier

involvement in product development, but not in efforts towards improved internal processes (B2.7).

Historically, GM has taken an arm's length approach towards supplier relations (Kim and Michell, 1990). Also Opel, following GM's footsteps, takes an arm's length approach to its relationship strategy. This affects relationships with suppliers, which are characterised by a combination of non-collaborative and collaborative features (as demonstrated in Table 5-3, Section 5.3.1). The fact that Opel is reluctant to disclose information to its suppliers and by engaging in hard commercial bargaining, to obtain desired prices, provides evidence of their non-collaborative behaviour. Collaboration appears imposed rather than negotiated with suppliers. This behaviour is characteristic of a customer dominant relationship-type. The PBDS see Opel using collaborative practices more for its own strategic benefit. According to BF, Opel seems to reduce transaction uncertainty by having a number of alternative suppliers to secure supply. Furthermore, this interviewee argued that Opel aggressively plays off suppliers against one another to minimise direct procurement cost. In addition he mentioned that a major advantage, for Opel, of an arm's length approach to relationships, is that this gives the company freedom to pursue its own interests as circumstances change. Opel has been adopting a low involvement relationship strategy, characterised by low relationship handling costs and limited specific investments. Opel may avoid involvement because either the costs of involvement are higher than the corresponding benefits, or it sees advantages in replacing suppliers. However, the level of involvement in relationships with suppliers varies with individual suppliers. It is possible to observe a variety in the supplier portfolio of Opel. Higher levels of involvement were noticed when R&D was at stake. At the local level (i.e. Portugal), relationships are characterised by low involvement with a high degree of continuity. OP seems to have reduced its transaction uncertainty by establishing relationships with PBDS on a long-term basis, but without major relationship-specific investments.

Strategy of supplier

There are two groups of suppliers in this study: those, which are subsidiaries of MNCs, and those which are single units and Portuguese owned. Despite both types of company operating in the same environment, their organisational strategies are not the same.

Competition between automotive manufacturers has resulted in great pressure to reduce the costs and thus the extent of their supply base (Freysenet and Lung, 2000). Major supply MNCs, under the pressure of automotive assemblers (e.g. GM) to lower costs, have relocated labour intensive activities to countries and regions with low wage costs, such as the peripheries of Western Europe (Freysenet and Lung, 2000). Moreover, multinational supply companies have tried the following strategies: continuous improvement, increase in the number of services supplied, new and stronger positioning by moving up in the hierarchy (to move from the manufacture of components towards manufacture and assembly, and from this last phase to system production and finally module production) and by consolidating their position (this involves the permanent search for product development). A number of these multinational supply companies are located in Portugal, and supply OP. Some of these, in order to become established in Portugal or eliminate competition, have purchased existing Portuguese plants (e.g. BF, Ficocables, Gametal, Huf, SSG). This approach utilises the existing structure, and thus, benefits from the existing experience and knowledge of the workforce (IC.14). The acquisition by an MNC, enabled European periphery suppliers to meet the changes in assemblers' and systems suppliers' strategies (Aller, Ubillos, Beldarrain and Garcia, 1999). This represented an arrangement of interests that benefited both parties. Other local suppliers have, in order to maintain their position of direct suppliers to OP, opted for rapid growth and/or strategic alliances with foreign companies (e.g. MCG). These alliances gave the suppliers several benefits, including an international outlook and an opportunity for technological transfer.

PBDS, directly (through OP) or indirectly (through OG and OS), suffer strong pressures to develop their technological competence, to innovate and to lower costs. Some PBDS undertake R&D activities oriented to the international and/or local markets. Others, without R&D, are often experts in a particular process. Other suppliers rely on R&D resources, concentrated at the HQ, or at other units of the MNC to which they belong to.

PBDS are often faced with a high behavioural uncertainty from Opel. Suppliers, who are part of Opel's policy of substitutability of suppliers, know that Opel may at any moment end their business relationship. Moreover, this possibility is increasing, as competition in the components industry increases (Lamming, 1993). The existence of alternative sources puts the current supplier in a weak position (IA.25). Despite Opel's lack of commitment to long-term trade (see Section 5.3.1, 5.3.2 and 5.3.3), suppliers still make investments with a long payback period. These findings support the view of Saxton (1997), who argues that relationship specific investments alone do not explain a firm's behaviour, because firms exist in a system of markets beyond each individual transaction. Despite the difficulties suppliers may experience with Opel, this company remains a strategic customer for suppliers, because Opel is part of GM, which is a worldwide manufacturer (ID.14). Furthermore, relationship specific investments serve to signal, to the buyer, their short and long-term intentions of business (IE8). For some suppliers, technological development has emerged as an adaptation of their production technology to OP's requirements.

Policies

The automotive manufacturer's supplier management is often reflected in their supplier selection criteria (Ficocables). Opel shows a very complex policy for selection of suppliers (IB.1). Price, R&D capability, delivery, quality, service, concern for the environment, and management commitment to excellence, were criteria mentioned by interviewees (IC.3, IE.2, IE.3, B1.6). The perception is that, although Opel weighs up several criteria, price plays the dominant role. Opel has adopted the "Lopez system", under which, intensive international competition, on the basis of price and quality, is created between prospective suppliers (Brennan, 1997). Opel's

approach to pricing, as encountered by suppliers, was explored during the interviews in order to determine the extent to which competitive bidding was the major pricing mechanism. Target vehicle price (ID.4) and competitive bidding (IB.3), were found to have an important influence. A supplier engaging in regular competitive bids for Opel may, possibly, win an increasing volume of business if it practices cost reductions, shows process improvements, better quality and better delivery performance (Brennan 1997). The researcher believes that, Opel, by giving a new design, developed by a major supplier, to the lowest bidder, takes the risk of shutting down an innovation channel. This is an example of the exit-type of supplier relations (Helper, 1991). A major problem with the exit-type of relationship is that a lack of incentive to innovate may arise (Helper, 1991).

In the view of IB.2 in regard to the negotiation process, there is no mutual negotiation between Opel and suppliers. The practice of cost transparency has gained a doubtful reputation among suppliers, who see, in its use, an attempt by Opel to control the supply chain. Opel's behaviour neither helps the development of trust among suppliers, nor the suppliers' information disclosure.

Formal arrangements, in the form of written contracts are used. These contracts cover the lifetime of a product (IC.4), R&D and supply (IE.4). Although supply contracts are initially awarded for a finite period of time (1 year for supply contracts to OP), it is not unusual for contracts to be extended (IA.8). An atmosphere of disapproval, amongst the PBDS, in the manner in which Opel awards contracts, was captured during the interviews. Contracts between Opel and suppliers have penalty clauses (IA.9). This measure was seen as a mechanism for exerting pressure, which in turn was provoking a generalised negative reaction among suppliers, including lack of trust.

Opel is known to have implemented an environmental policy. This affects the selection of suppliers and the specifications of the products (B2.1). It was pointed out that, increasingly, Opel not only looks for a recyclable product, but also for ones that have already been recycled (IE.3). Suppliers did not think it fair the way in which

Opel imposed this requirement. Once more, Opel's behaviour is not contributing to an atmosphere of closeness and trust in the relationships it establishes.

The large majority of the PBDS believed that if a competitor appeared with comparable quality and a lower price, Opel would switch as soon as technically feasible, rather than working with them to match or better the competitor (IB.10, IB.12). This is why some suppliers, in an attempt to minimise the possibility of being replaced by competitors, have placed an agent in Germany (e.g. Ficocables). It was expected that this agent might have opportunities to influence the decision-making processes related to purchasing.

The evaluation scheme, applied by Opel's purchasing professionals, was seen by IB.13, as spoiling the relationships between the buyer and the suppliers. This is because the scheme was indirectly used to induce suppliers into reducing their costs and, ultimately, their own profit margins.

Employment system links

The turnover of top management staff was a regular practice within OP (IB.7). This did not support the establishment of strong personal links between the parties (IE.7) and consequently, the development of trust.

The nature of contractual relationships, between the firm and employees, was seen as affecting the suppliers' flexibility to meet unexpected OP's requirements (IA.20). This was the case at MCG where employees did not accept to have the night shift, which had implications on the flexibility of the company to answer unexpected OP's orders.

Organisational structure of buyer

Petitt (1992) described organisational structure as the extent of centralisation, specialisation and formalisation. Centralisation reflects the degree to which decisions are shared or controlled in an organisation. Specialisation refers to the differentiation and presence of a range of skills in the organisation. Formalisation represents the

degree to which activities, such as purchasing, are controlled by rules and procedures. Therefore, organisational structure has the potential to influence both those persons involved in customer and supplier handling, and the methods they are free to adopt (Hakansson (ed.), 1982).

GM has established European HQ (GME) to coordinate, and control, its regional operations. Thus, geographical decentralisation of HQ has occurred. GME, better known as Opel, has a high degree of autonomy from its HQ in USA. This is probably due to the reputation it has acquired, and the results obtained in previous years (B1.1). Certain decisions are delegated to the regional HQ in Germany and in Spain. These are both coordinating mechanisms within GME and also some important parts of GM's information gathering-system.

Opel follows a divisional form of organisational structure, as it adopts either a product based or area based organisational structure. Each product division is responsible, separately, for its own functions, particularly of production (B1, B2 and B3). Each product division acts as a separate profit centre (B1, B2 and B3). This is exemplified by Opel's unit in Portugal. OP exclusively produces the Corsa Combo (see Section 5.1). OP is a final assembler, with links to OS and OG, from whom it depends on significant resources (see Section 5.1). For this reason, it has been regarded more as a branch affiliate (Dickens, 1998) than a subsidiary, generally reporting to OS, which in turn, reports to OG.

Opel has adopted a hybrid structure; a mixture of the classic global and complex global organisation models (Dickens, 1998). Opel has adopted the classic global model in the sense that there is a tight centralisation of assets and responsibilities in which the role of the units in Portugal and Spain is to assemble and sell final products, and to implement plans and policies developed at the co-ordination centre. These subsidiaries are not free to create new products, to define new strategies or to modify existing ones. This model of organisation capitalises on scale economies and on centralised knowledge and expertise. This implies that OP has little freedom in making decisions (B2.6), that the local market conditions in Portugal tend to be ignored, and that the possibility of local learning is excluded. Opel has adopted the

complex global model in the sense that the company is characterised by an integrated network configuration, with a capacity to develop processes, both inside and outside the firm, through a complex network of inter-firm relationships. Despite the low decision-making autonomy of OP, this subsidiary took self-directed initiatives directed to the local market, such as the investment in a new painting line. This process involved considerable effort by OP's management to get it accepted by OG. Despite this initiative, OP's role is still assigned by its regional HQ: OP has little freedom to enhance its local responsiveness. This constrains the type of relationships OP establishes with its PBDS. Also, the majority of OP's production is exported. All these factors are associated with a highly hierarchical structure and dependence on the regional HQ decisions and directives (Tavares and Pearce, 2001). Moreover, OP is the smallest of Opel's subsidiaries in Europe, which may explain its dependence, lack of autonomy and low importance within the multinational network. Opel's structure appears to be of the formal hierarchical type (Egelhoff, 2002) as it relies on formal communications to co-ordinate its units' operations.

Opel has adopted a combined centralised and decentralised form of organisation (B1.2). This is demonstrated by the existence of a central purchasing department in Germany (IA.1, IC.2), and smaller purchasing departments in Spain and in Portugal (IA.2). With the increasing practice of global sourcing (B1.5), the purchasing departments in Spain and Portugal have become part of a chain with a low added value (IC.1). The purchasing department of OS acts as an intermediary between Portugal and Germany (IA.4). In certain situations, contract negotiations for the PBDS are undertaken in Spain (ID.1, IE.1).

Opel's structure not only shapes and influences its subsidiaries' behaviour, but also its suppliers' organisation; those persons involved in customer and supplier handling, and the methods they are free to adopt (Hakansson (ed.), 1982); OP's capacity to process information (Egelhoff, 2002), and the type of knowledge which resides in OP.

Organisational structure of supplier

The organisational structure of the PBDS differs from one supplier to the next. Multinational subsidiaries do not have the same level of autonomy in regard to the definition of strategies and the negotiation process with Opel. The degree of autonomy of these companies ranges from a high level, to a total dependence on their HQ decisions (IC.15, IC.16, ID.1, IE.1). It is possible that a home country's culture and institutions affects the structures selected by the MNCs (Peng, 2002) established in Portugal. In this study, MNCs are considered as multi-centre structures, where firm-specific advantages have been transferred to those subsidiaries (Forsgren and Johanson, 1992) located in Portugal. The activities of these Portuguese based units are interdependent with those of the global network. There is evidence of flexible and co-operative interaction, between managers of different subsidiaries, within an MNC. With such an organisational climate, some of the Portuguese subsidiary managers come to dominate operational and often strategic decisions (Taggart, 2001). Within Portuguese based subsidiaries, hierarchical authority co-exists with significant local autonomy (e.g. Ficocables). These are several cases of local and global market initiatives among the Portuguese based subsidiaries. The local initiatives have been inspired by local market product and/or market needs. Here, on the basis of its worldwide customer base, the subsidiary may develop a product, identify additional opportunities in related areas, and then further develop the product for the global market (e.g. Ficocables).

Actors

In this case study, actors are the individuals, within an organisation, who are involved in activities, which convert resources into finished goods and services for consumption by end users. Through the interview process it became apparent that, an individual's personality, capabilities (e.g. management style, knowledge, skills) and culture, impacted on the interaction process between buyer and supplier. Corporate culture was recognised as an important influencing factor in buyer-supplier relationships (e.g. Gametal). However, just as important in influencing this culture are the characteristics (IG.2) and management styles (IC.10) of individuals, within the

organisation. For example, Jose Lopez, influenced the purchasing strategy of Opel for a number of years (IF.3). The German management style, characterised by a concern for competitiveness, based on technology (IC.10), impacted on problem solving (IC.18, ID.11) and flexibility (IC.18). The Portuguese, in turn, give importance to the establishment of personal relations (IG.3). Portuguese were also characterised by their individuality at work, and thus, not so willing to participate in teamwork. The skills of individuals (e.g. the languages they could speak (IA.22), and the capacity for innovation (IE.13)) were also considered as important factors.

Resources

The value of resources depends on their use, spread and coordination among the providers and users (Hakansson and Snehota, 1995). There is interdependence between the development of activities and the availability of resources. To develop activities there is a requirement for resources. However, activities generate resources.

OP is dependent on OG and OS for many of its resources (B1.7, B1.8, B2.5) (see Section 5.1). However, the rationalisation and modernisation (equipment, process and human resources) undertaken in the last decade, has left OP with resources that enable the plant to produce products that match the most demanding European standards in quality and reliability. OP's dependence on resources, limits the activities it implements, and the actions it undertakes, internally and externally, with suppliers.

Opel bases its selection of suppliers on the following criteria: technical, (e.g. the capacity for innovation and for solving technical problems) (IE.13, IF.1), technology and financial resources. Not all PBDS have the necessary resources in-house, to satisfy Opel's requirements; some resources (e.g. R&D) are secured from other units their respective MNCs established (e.g. BF). Some suppliers, through the establishment of alliances, secure resources (e.g. licence agreements) from third parties (e.g. MCG). There are PBDS who perceive Opel as a demanding counterpart who will induce the suppliers into developing its products and services.

Activities

The activities undertaken, at both OP and suppliers' premises, are dependent on the availability of resources and on the capabilities of the individuals. It seems that, for OP, production activities are of primary concern. The activity structure of OP reflects the availability of resources, including the availability of technology (e.g. painting pre-treatment line). The interdependence of activities, between OP and its PBDS, was particularly evident. OP is increasingly dependent on JIT and sequence line systems practised by its PBDS. OP and suppliers are also dependent on the activities of other companies: OS and OG for OP, and other subsidiaries within the MNC, for some of the PBDS. For example: the main activities, between OS and OP's suppliers, concern the exchange of product specifications, quality related issues and negotiation processes; the Iberian commercial division of a PBDS and OS (ID.1), may undertake the PBDS's negotiation process. Joint R&D occurs, directly or indirectly (through other subsidiaries of the MNC they belong to), between OG and some suppliers. In addition, joint R&D and partnering arrangements, between supplier and buyer, were established, through which significant resources were shared (IC.7, IC.8).

Linking activities often entail adjustments to companies (Hakansson and Snehota, 1995) and thus, reallocation of activities between units within the same MNC. For example, because the quantity of components for OP may not be enough to make the necessary investment viable, a multinational supplier may redistribute the production quantities for Opel between its units (ID.8).

Through the establishment of relationships, the activities of a company are embedded in a broader activity pattern that lays the ground for what a company can do and how it can relate to others (Hakansson and Snehota, 1995). In this case study, the OP's dependence from other Opel subsidiaries, limits the activities it implements, and the actions it undertakes, internally and externally, with suppliers.

The manufacturing process

The characteristics of the manufacturing process, such as production cycles and long stoppages, due to changes in model, limit a plant's flexibility and therefore, the ability to respond to the buyer's needs (IE.14). Moreover, the manufacturing of a given product, impacts on the organisation and distribution of production amongst the several subsidiaries of a multinational supplier (IE.15).

Product

The type of product exchanged is likely to have a significant effect on the interaction process between buyer and supplier (IF.5). A product type is defined by its physical characteristics (e.g. size), its complexity, and its strategic function in the final product (IF.4). The physical characteristics of a product type may impact on the location of supplier (Ficocables). Location becomes more important when the item is big (IF.6). This is true for a module (e.g. door panel, dash board). In this case, geographical proximity to the buyer becomes important because it facilitates flexibility in delivery (IE.16). It was noted here that there are several types of product complexity, such as functional, manufacturing and specification complexity (IG.5). Complexity was seen as a relative concept, dependent upon a company's experience (IF.8). The complexity of a component was also seen to depend on its stage of development and on its associated manufacturing process (IG.4). Also, complexity affects the level of collaboration between buyer and supplier (IF.9). High levels of collaboration should not be expected when a company acts as a mere distributor of complex components (IG.5).

For the interviewees, customised products led to more collaborative relationships and partnering arrangements (e.g. IF.7, IE.18). The exchange of technical specifications does not in itself lead to high levels of collaboration, and intense ties, between buyer and supplier (IG.7). All the items supplied by the PBDS to OP, are customised: these may be either simple components or complex systems. Some items are developed in accordance with product specifications provided by OS, whilst others, at the request of OG, are developed according to supplier's in-house designs. The capacity to tailor a

product to customer needs was seen as an increasingly important source of differentiation (IG.6).

In addition, it was reported that various levels of collaboration were required during the life of a product/component (from the several stages of product development up to its manufacture) (IE.17). It was observed that some components, such as brakes, get to a mature stage in their product life cycle and thus, will not evolve (Ficocables). These items, then, become commodities and as such, high levels of collaboration, between buyer and supplier, should not be expected (IF.10).

To conclude, collaborative relationships are most suitable for complex, high-technological customised components. In this case study companies such as SSG produces such type of products.

Interviewees, in supply companies, mentioned the use of auctions by Opel. They explained that auctions involved the buyer developing detailed drawings over which competing suppliers would bid for the opportunity to manufacture the component. Interviewees did not believe that auctions were suitable for customised products. They felt that such a mechanism was demotivating (e.g. supplier's willingness to innovate). Besides, if auctions were based on improper specifications, this would lead to troublesome post-purchase negotiations and the potential for large losses when the need to incorporate new part features arose midstream. It was explained that this was particularly critical when components were interdependent (e.g. components for a door panel). For the interviewees, in this scenario, it was almost impossible to effectively provide complete and accurate part design and specifications in advance.

Service

As competition intensifies, firms are increasingly emphasising the service component of their business (IF.11). This was exemplified by one interviewee who believed that his company had been chosen, not for its expertise in manufacturing a product, but instead, for the service it provided (IC.3). In addition, the service offered was recognised as having an impact on the quality of the relationships (B2.9).

Information disclosure

A number of dimensions (e.g. type and amount of information shared) relating to information disclosure should be regarded as critical not only to the conduct of the relationship, but also as a sign of the preparedness of either party to invest in the relationship (Petitt, 1992). Technical, design, cost, quality and schedule are all types of information, which were exchanged between OP, OG and OS, and their suppliers. However, there is evidence that this information disclosure is often unilateral or heavily biased against the supplier (see Section 5.3.1 and Section 5.3.2). Moreover, suppliers were not fully transparent, because they did not trust the buyer. This lack of trust arises through past relationships between Opel and suppliers, and through Opel's reputation for using suppliers' information for its own interests (IB.8). Like Leverick and Cooper (1998), the researcher believes that information disclosure on costs, future strategies, and strategies for improvements in processes will not occur if trust is not developed to a level whereby the parties are comfortable enough to share key information. It is also believed that trust could be facilitated by the disclosure of commercial information (Leverick and Cooper, 1998), but Opel did not provide this type of information.

Finance

The volume of sales impacts on the level of dependency: the higher the volume, the greater the dependency (Ficocables). If dependency is measured as the volume of sales, as a percentage of total sales, dedicated to OP, then there are PBDS who are more dependent on OP than others (e.g. MCG as shown in Table 5.2, Section 5.3.1).

Personal relations

The researcher shares the view of Metcalf, Frear and Krishnan (1992) that social exchange facilitates problem solving and is particularly important in overcoming barriers to communication. Moreover, personal relations, between members of the buying and supplying firms, help building mutual trust, which serves as a risk

reduction mechanism (Metcalf, Frear and Krishnan, 1992). In addition, personal relations facilitate the exchange of information.

Here the opportunities to build personal relations and hence, develop trust, is low. This is due to low levels of interaction (IC.5), the high turnover of Opel's staff (IE.7) and the dispersal of supplier contacts between the three subsidiaries of Opel (IG.3). Opel's behaviour towards its suppliers was not seen as compatible with the Portuguese culture, which is typically expressed in the development of personal relations (IG.3).

It has been suggested that suppliers, in their marketing strategy, should ensure that personal relations are maintained (Campbell, 1985). Such strategy has been difficult to implement, by PBDS, due to the dispersed organisational structure of Opel, and the rigid behaviour and arm's length attitudes adopted by Opel in its relationships with suppliers (SSG).

Communication

The issues relating to communication between companies were also explored in Sections 5.3.1, 5.3.2 and 5.3.3. The degree of communication linkages depended upon the stage of product development and manufacturing process (IG.11). During the early stage of product development, more intense communication, between Opel and component suppliers, exists. It is recognised that a joint program of work is not something which can be imposed from above, when people do not have the necessary communication skills (IG.8). Difficulties in communication between buyer and suppliers were seen as a barrier to the development of trust, and as having a direct impact on problem solving and coordination between activities, such as production planning. Impersonal channels of communication characterise the relationships between Opel and its PBDS. The electronic format was the most used channel of communication. It was believed that informality, between buyer and supplier, was important in the communication process and could help parties get closer (IG.9) and thus, improve their relationships.

Relationship specific investments

Relationship specific investments are defined as those investments where actions and resources are planned and implemented with a specific customer in mind. In the view of Ficocables, parties involved in such investments need to adjust their physical product flow (e.g. delivery) and/or execution of services (e.g. payment schemes). The investment in resources takes one of two forms: tangible (e.g. buildings, tooling, customised processes) and intangible (e.g. time and effort spent on learning about the buyer's business practices and routines).

Examples of relationship specific investments, for the buying organisation, include modifications in product requirements, the price it is willing to accept (according to IE.2, Opel was willing to pay a premium for the development of a new product) and policies on levels of stocks (OP, contrary to other subsidiaries within the Opel network, often maintains a level of in-house component stock).

Although a supplier's relationship specific investments may be of great value (IE.8), Opel shows no signs of making efforts to ensure the continuity of relationships (see Sections 5.3.1, 5.3.2 and 5.3.3), which goes against what has been advocated and expected in the literature on buyer-supplier relationships (e.g. Metcalf, Frear and Krishnan, 1992). Suppliers did not believe that relationship specific investments would refrain Opel from pressurising suppliers into making decisions, which only benefited Opel. Suppliers' investment strategy can be explained by the strategic importance of Opel (ID.14). Furthermore, these investments signal to the buyer, the suppliers' long-term commitment to the continuation of business. In addition, there are suppliers who have had to adapt their production technology in order to produce products for Opel. These suppliers' investments are both costly and risky (BF). They are risky, due to uncertainty in Opel's behaviour (BF).

Relationship specific investments appear to have an impact on the development of trust, flexibility, and ease of communication and information flows (this is the case of investments in EDI).

Trust

Some evidence has been found that suggests that high-trust relationships do not develop between Opel and its PBDS (see Sections 5.3.1, 5.3.2 and 5.3.3). Formal commitment, between the parties, has not been accompanied by the development of mutual trust. This can be explained in several ways. Firstly, there have been the decades of adversarial relationships imposed by Opel (BF). Secondly, Opel's short-term economic goals lead to an undermining of the trust between the buyer and the supplier (SSG). Thirdly, Opel, by keeping suppliers at a distance, seems to create considerable barriers to trust development (Simoldes). Finally, trust is not embedded in Portuguese society (Gametal). The lack of high levels of trust may compromise levels of collaboration, and ultimately may endanger relationship quality. The difficulties in the development of trust, between parties, were recognised by the suppliers. The buyer's confrontational behaviour was not helping to develop trust. Moreover, the weakness of personal relations did not engender a willingness to resolve problems amicably. Despite the difficulties, it was suggested by Ficocables that the supplier could conquer the customer's trust by demonstrating a good performance. Trust appears to play an important role in shaping buyer-supplier relationships. The level of trust appears to influence information disclosure (Mittila, 2000), communications (Dwyer, Schurr and Oh, 1987) and the current level of collaborative behaviour (Anderson and Narus, 1984). In fact, the links between these variables and trust appears to act iteratively, in that the level of trust influences, and is influenced by each of the other variables (Petitt, 1992). The researcher believes that trust is largely facilitated by the expectations of continuity in a relationship (Patterson, Forker and Hanna, 1999), and by the establishment of personal relations between the individuals of the two parties (Petitt, 1992). Like Petitt (1992), the researcher also believes that trust would be important in reassuring those contemplating a relationship that involves significant relationship specific investments.

Climate of pressure

Sufficient empirical evidence was gathered, which suggests that Opel uses pressure in its relationships with suppliers. For example, Opel exerts pressure when dealing with such issues as: (a) contract negotiations (IA.9, IA.17); (b) requests from suppliers in areas such as quality (B2.2), environment (B2.1, IE.3), delivery (ID.8), information (IB.8), cost and price (ID.4, ID.9, IE.23), and (c) the negotiation process, in which it engages in a hard commercial bargain to obtain desired prices (ID.9, IE.23). Opel has the ability to dictate to suppliers, a one-way flow of resources. Suppliers seem to be unable to resist the pressure exercised by Opel. Opel's impositions seem to endanger the level of satisfaction in present and future relationships.

Geographical location

GM consists of a group of geographically dispersed and goal-disparate organisations, which includes its HQ in US, and the different regional and national subsidiaries. GM is a MNC which, for the purposes of this study, is dispersed as an internally differentiated inter-organisational network, which is embedded in an external network consisting of all other organisations such as customers and suppliers, with which its different units must interact (Ghoshal and Bartlett, 1990). GME, the coordination centre of GM in Zurich, are handlers, processors and transmitters of information to and from other parts of the MNC. They are also responsible for the definition of major strategies that shape and direct units inside and outside Europe. Regional HQ constitutes an intermediate level in the corporate hierarchy, each of which has a sphere of influence encompassing several countries. OG coordinates and controls the activities of OS and OP and, as such, in this case study, is the parent unit. OS is also considered a regional unit, which acts as a channel of communication, transmitting instructions between OG to OP. OS has a certain level of autonomy whereas OP is a final assembler subordinate to OG and OS. The distribution of functions between OG, OS and OP, define their particular locational requirements in terms of a strategic location as well as transport and communications networks (Dickens, 1998). Opel has a network form of organisation, in which functions appear to be geographically dispersed, which affects the interdependence and relationships among network

members. Opel is connected with a variety of other firms. It is through such interconnections that firms in one country may be directly linked into a global production network. Such inter-relationships between firms of different size and types increasingly extend across national boundaries and in doing so, create a set of “geographical nested relationships from local to global scales” (Dickens, 1998: 223).

Both Portuguese and foreign owned companies are part of a network form of organisation. The foreign owned companies are subsidiaries of MNCs, geographically scattered in different units throughout several countries. Some subsidiaries have their HQ in Germany. Others, in order to be close to the R&D centre and the central purchasing departments of Opel, have placed agents in Germany (e.g. Ficocables). Some MNCs have units located in Spain and some others have units in both Spain and Germany. Cultural (IC.13, IA.24) and geographical proximity (IA.19) to Opel were important factors, as identified by the interviewees, in influencing buyer-supplier relationships. Geographical proximity could help obtain contracts from OP’s head purchasing department. Also, the geographical location of suppliers could facilitate the implementation of JIT and sequence line systems (ID.8).

Network positioning

In this study, a firm’s network position is its location, within the network, which affords it opportunities and limitations, through activities and availability of resources, in establishing, maintaining and terminating business relationships (Low, 1997).

According to Araujo (1990), the concept of a firm’s network position is closely related to the role concept. Here, the role of OP is based on the characteristics of its internal resources, its relationships with OG and OS and its business context (Andersson and Forsgren, 2000), in which PBDS play an important part.

In order to follow general tendencies in the European automotive industry (see Chapter 2 for examples), and to meet assemblers’ requirements, some Portuguese owned suppliers opted to be acquired by an MNC. Here, the local suppliers ensured their continuity as first-tier suppliers, because the MNC afforded conditions needed to

meet assemblers' (i.e. Opel) demands (e.g. product development and production capacity). Others opted to establish alliances with foreign companies, which resulted in the sharing of tangible and intangible resources (e.g. reputation). A third group of suppliers underwent rapid growth (e.g. Simoldes). In the view of the interviewees the closer the supplier is to the VM the more advantages it gets in terms of potential contracts and negotiation power

Intra-organisational relationships

Opel is not a monolithic entity, but is both an organisational network (Birkinshaw, 2000) and a web of differentiated inter and intra-firm relationships. Within this network, the internal activities and functions, allocated to the various European plants, interact with each other (B1.4). Internal relationships, within Opel, seem to have been poor due to departmental, functional and professional separation (BF). IA.10 pointed out that many of Opel's problems arose through a lack of synergy between departments and units. This means that departments operated in isolation and cross-functional teams did not exist (IA.12). It was stated that, in terms of cost management objectives, a conflict of interest existed between departments within Opel (IB.4). Moreover, when mistakes did occur, there was a tendency to protect one's own position by blaming others (MCG). It was also noted that Opel had fallen victim to corporate politics. It was believed that this would influence the performance of the company and the development of buyer-supplier relationships (IG.1). By insisting suppliers provide goods and services at reduced cost, instead of optimising internal processes and paying careful attention to the management of changes in engineering, Opel was seen as attempting to optimise its performance at the expense of its suppliers (IA.11).

The business network of Opel Portugal

OP, irrespective of the type of MNC it belongs to, has its own business network of relationships (Andersson and Forsgren, 2000). The dyad-network embeddedness of OP is illustrated in Figure 5.1. It is evident from this figure that OP is inseparable from its network, which supports the view of Hakansson and Snehota (1995). In accordance with Cook, Emerson, Gilmore and Yamashigi (1983), the researcher views the network as a structure of dyadic exchange relationships, tied together in series, consisting of groups of independent firms co-ordinating their activities and resources. The findings show a variety of complex intra and inter-organisational networks. These intersect with geographical networks, structured around clusters of activities and resources.

This figure presents an overview of OP's business network. It is a simplified scenario, as the number of identified companies and network linkages, is limited. This is because: (a) not all the PBDS of OP have participated in this research; (b) the investigation of networks was not within the scope of this research, and (c) the views of more distant parts of the network were rather unclear. This figure shows that each company is part of a complex network of actors, resources and activities (Hakansson and Snehota, 1995). The actors are the organisations in question. Here, OG, OS, OP, the PBDS and respective MNCs, when this applies, are the actors represented. Each has an identity and a position within the network, defined by the relationships it has with other actors within the network (Low, 1997). These actors form the organisational set or, in other words, the focal net (Ghoshal and Bartlett, 1990) of OP. Actors, are also defined by the activities they perform and the resources they control (Hakansson and Snehota, 1995). Therefore, actors are both resource holders and resource users. They possess different resources, which depend upon the nature of the global environment that they are working in, and the position they hold, within the network (Harland, 1996). A series of activities are carried out at several points in the network. As shown in Figure 5-1, numerous interactions occur within dispersed organisational structures.

OP's network is unique because it comprises a specific set of direct and indirect relationships (Andersson and Forsgren, 2000). The combination of various direct and indirect network relationships creates a highly complex, geographically dispersed structure. OP has relationships backwards to suppliers and sideways to complementary subsidiaries, in Germany and in Spain. Furthermore, this uniqueness arises because each relationship has a specific operational importance for OP. Moreover, these operations are dependent upon relationship specific investments, by both sides (OP and suppliers), in terms of products, production, technology and administrative systems. Viewed in this way, OP sits at the interface between three markets: (a) the local market in Portugal, consisting of competitors, suppliers, customers and regulatory bodies in the host country; (b) the internal market, comprised of head office operations in Zurich, and the corporate-controlled affiliates in both Germany and Spain, and (c) the global market, consisting of competitors, customers, and suppliers, that fall outside the local and internal markets. The

boundaries of OP are difficult to establish because both resources and activities are controlled by OG and OS.

PBDS also have direct and indirect relationships. Indirect relationships are the means by which PBDS gain access to resources (e.g. R&D resources) and, at the same time, provide the context for direct relationships. Amongst the PBDS, some have formed technical alliances with foreign companies (e.g. Simoldes). These alliances can provide access to new markets, knowledge beyond the firm's boundaries and complementary skills. Others (e.g. MCG) have established subcontractor arrangements to intermittently complement their production capacity, and thus satisfy OP's needs. Portuguese based supply subsidiaries are nested within inter-organisational networks. In most of the Portuguese based supply subsidiaries, hierarchical authority coexists with significant local autonomy (e.g. Ficocables). These MNCs are formed by inter-related actors whose primary purpose appears to be the sharing of resources, and the implementation of complementary activities. To be part of a MNC is an important competitive advantage over those competitors who stand on their own (IC.13, IE.13). These MNCs are physically dispersed in environmental settings, which represent different economic, social and cultural characteristics (e.g. BF has production sites in Portugal, Spain and France, among other countries). They appear internally differentiated in complex ways. These supply subsidiaries have a very diverse mix of MNC structures and strategies. This is probably in order to respond to both environmental and organisational differences relating to business and geographical location. The researcher believes, in accordance with Dickens (1998), that these diverse structures and strategies reflect firm and country-specific influences. Three types of Portuguese based automotive subsidiaries can be identified: (a) those who rely on R&D activities undertaken in the respective supply networks; (b) those who happen to be resource-rich and control linkages both in Germany and Spain, and (c) those who undertake downstream functions of production, while other functions, such as the negotiation process, are undertaken by other units within the supply network in either Spain or Germany.

Every actor in OP's network is, by nature, involved in supply chain relationships with other actors (Lambert and Cooper, 2000). The configuration of OP's supply network is illustrated in Figure 5-1, in which it is possible to identify specific supply chain members (e.g. OG, OS, OP, and the PBDS), some links between them, and a few business processes or activities across them. The way in which the production chain is organised within OP's network, seems extremely fluid. This can be explained by the nature of the automotive industry, which offers the possibility of organisational separation of individual processes prior to final assembly (Dickens, 1998).

5.4.2 Summary of influencing factors and their direct impacts

The most influential factors of inter-firm collaborative practices between OP and its PBDS, which emerged during the face-to-face interviews, as a result of interviewees' and researcher's interpretations, will be now summarised (in Table 5-6) and compared (in Table 5-7) to factors mentioned in previous studies as explainers of the dynamics and processes associated with buyer-supplier interaction. There are constructs (e.g. commitment, power and competition) mentioned in the literature as relevant factors influencing buyer-supplier relationships, which were not highlighted during the interviews. This is understandable in the light of the explanation given by Rui Pinho (managing director and coordinator of several international units of Group Ficosa): "Business relationships vary in their characteristics. There is no rule to explain that diversity. A diversified scenario of relationships can be explained by the different combinations of several factors, some of which are more significant than others. Each company will have to weigh each factor and hierarchise it in terms of its importance". This idea supports the view of Anderson, Hakansson and Johanson (1994), who claimed that to understand business dyads, attention must be directed to the embedded context in which dyadic business relationships take place.

Major finding 2:

A diversified scenario of relationships can be explained by the different combinations of several factors; the importance of each needs to be weighted and hierarchised.

Table 5-6: Summary of major influencing factors and variables they impact on

Influencing factor (s)		Variable (s) they impact on
National culture		Type of contracts Trust
Corporate culture	Norms Traditions Values	Joint R&D Actor bonds (i.e. social links) Rigidity of organisation
Strategy of buyer	Internationalisation	Network of actors Network of activities Network of resources
	Production	Coordination Flexibility in delivery
	Purchasing	Supplier's organisational structure
	R&D	Supplier involvement
	Relationship	State of collaboration – non collaboration Supplier's commitment
Strategy of supplier	Internationalisation	Organisational structure Network of actors Network of activities Network of resources Network positioning
	Production	Adaptations
Buyer's policies	Substitutability of suppliers	Supplier's organisational structure Expectation of continuity
	Purchasing / type contracts	Relationship specific investments Trust
	Supplier assessment	Product Trust Atmosphere in the relationship
Employment system links	Staff turnover	Actor bonds Trust Flexibility

Continued on next page

Table 5-6: Summary of major influencing factors and variables they impact on

Continued

Influencing factor (s)		Variable (s) they impact on
Organisational structure		Activities Actors Resources
Actors	Management style Individual's skills Organisational experience Individual's personality Individual culture Individual's knowledge	Relationship
Resources		Internal activities External activities Organisational structure
Activities		Adaptations
Manufacturing process		Flexibility Network of activities
Product	Physical characteristics Complexity Strategic function in final product Customisation	Supplier's geographical location Flexibility in delivery
Service		Quality of relationships
Information disclosure		Commitment Trust
Finance	Volume/ Value of sales	Dependency
Personal relations		Problem solving Communication Trust Information disclosure
Communication		Trust Problem solving Coordination

Continued on next page

Table 5-6: Summary of major influencing factors and variables they impact on*Continued*

Influencing factor (s)	Variable (s) they impact on
Relationship specific investments	Trust Flexibility Communication
Trust	Quality of relationships Information disclosure
Climate of pressure	Satisfaction in relationships
Geographical location	Flexibility in delivery
Network positioning	Activities Power
Intra-organisational relationships	External relationships
Network	Relationships Partnering

Table 5-7: Comparison of emerging factors with some literature

Emerging Factor	Hakansson (ed.) (1982)	Campbell (1985)	Hakansson & Johanson (1992)	Petitt (1992)	Sako (1992)	Lamming (1993)	Hakansson & Snehota (1995)	Wren & Simpson (1996)	Cheung & Turnbull (1998)
National culture									
Corporate culture	Institutionalisation								
Employment system links					Employment system links				
Strategy	Strategy	Interaction strategy		Relationship strategy	Corporate strategy			Purchasing strategy	Strategic approach
Policies		Centralisation policies							
Organisational structure	Structure							Buying centre structure	Rigidity of organisations
Actors	Individuals' experience	Individuals' style	Actors				Actors	Individuals' characteristics	Individual's action
Resources			Resources				Resources		Resources
Activities			Activities				Activities		Organisational activities

Continued on next page

Table 5-7: Comparison of emerging factors with some literature

Continued

Emerging Factor	Hakansson (1982)	Campbell (1985)	Hakansson & Johanson (1992)	Pettit (1992)	Sako (1992)	Lamming (1993)	Hakansson & Snehota (1995)	Wren & Simpson (1996)	Cheung & Turnbull (1998)
Product	Product exchange	Product characteristics		Product					Nature of product
Service	Service exchange								
Information disclosure	Information exchange	Information exchange				Information exchange			
Finance	Financial exchange								Value of sales/purchase
Manufacturing process									Production process
Communication				Communication				Communication	
Personal relations	Social exchange	Personal contact patterns		Personal contact patterns					
Trust		Trust		Trust	Trust			Trust	

Continued on next page

Table 5-7: Comparison of emerging factors with some literature

Continued

Emerging Factor	Hakansson (1982)	Campbell (1985)	Hakansson & Johanson (1992)	Petitt (1992)	Sako (1992)	Lamming (1993)	Hakansson & Snehota (1995)	Wren & Simpson (1996)	Cheung & Turnbull (1998)
Climate of pressure									
Relationship specific investments				Investments	Asset specificity				Specific assets
Network positioning	Position in the manufacturing channel								
Geographical location									Spatial location
Intra-organisational relationships									

Continued on next page

Table 5-7: Comparison of emerging factors with some literature

Continued

Emerging Factor	Hakansson (1982)	Campbell (1985)	Hakansson & Johanson (1992)	Pettit (1992)	Sako (1992)	Lamming (1993)	Hakansson & Snehota (1995)	Wren & Simpson (1996)	Cheung & Turnbull (1998)
Network of actors							Network of actors		
Network of resources							Network of resources		
Network of activities							Network of activities		
Embeddedness									
Connectedness									
Interdependence									

5.4.3 Discussion

The researcher claims that of all the uncovered factors, some have a higher impact on the observed levels of collaboration between OP and its PBDS and on partnering, than others. These are: the network, the corporate strategy-structure of the companies involved, individual management styles and ultimately, Opel's institutional framework. This belief is partially shared by Tomas Moreira (Managing director of Gametal), who observed: "The different types of relationships, and the different levels of collaboration, between buyer and suppliers, are determined by the combination of strategies, policies and individuals".

The network

Opel has adopted a highly hierarchical structure in which a parent-subsidary relationship is multifaceted, as varying across business units (Bartlett and Ghoshal, 1993). OP is dependent on Opel's decisions and directives, and is under the control and co-ordination of OG and OS. According to Stopford and Wells (1972), a MNC's organisational structure needs to fit the relative size of foreign sales. Perhaps this principle was adopted by Opel, when OP's structure was defined. This structure is characterised by a low level of autonomy and a limited range of functions and tasks. It has been assumed that the logic behind this type of structure lies in the concentration of a firm's limited international expertise so that it may attain a critical mass, and level of specialisation, which can be efficiently focused on a relatively small set of operations (Wolf and Egelhoff, 2002). There is no clear evidence that this kind of logic is at the basis of the design of OP's structure. OP's structure influences the levels of collaborations, and the collaborative practices, between parties.

OP's role is assigned by the parent company, which in this case is Opel. Taggart (2001) found clear indications that subsidiary managers, who are suitably motivated, may, over time, strategically reposition their subsidiaries through a combination of maintaining competitive edge and negotiating with headquarters. Evidence gathered, suggests that OP's initiatives were inspired by improvements in plant performance (e.g. new painting line), and internally focused towards the promotion of new

activities. These initiatives involved considerable effort on behalf of OP's management team, who showed a potential to drive the local responsiveness of the MNC. However, as the failure to implement joint continuous improvement with PBDS, demonstrates, there were signs that the local management team had little possibility in increasing its bargaining power with the parent company. Local managers' ability to influence the development of OP, via a deliberate course of action, within parameters set by the parent company, may be limited by the degree of importance of local markets, as defined by the MNC's overall objectives: these objectives were not identified in this case study.

OP and its PBDS are embedded in relationships. Embeddedness has been measured by the degree of adaptation of the buyer and supplier to one another (Andersson and Forsgren, 2000). In this case study, there is not enough evidence to estimate the adaptation undertaken by the parties and thus, to estimate the companies' degree of embeddedness of their networks. However, it was recognised at Simoldes that OP and the suppliers had to adapt to each other.

Within the framework of a dyadic business relationship, a complex set of interdependences evolves (Hakansson and Snehota, 1989). OP, for example, has a high interdependency with OG and OS. This is partly due to not being completely autonomous in the implementation of many of its activities. A further example, illustrating the interdependency between OP and supplier, at the dyadic level, is JIT delivery, which is only possible if relationship specific investments, such as warehouses location near OP's plant, are made by the PBDS (e.g. Simoldes).

Interdependences can be considered at the dyadic level, and also in a more extended view, in relation to the network. In the case of a MNC, international interdependence has been defined as the condition in which one subsidiary relies on the activities and resources of other subsidiaries, located in other countries, in order to perform its role effectively (O' Donnell, 1999). Findings show that Portuguese based subsidiaries rely on other subsidiaries' activities, such as R&D, sales and marketing. In addition, OP relies on other sub-units as provider and user of their resources. The researcher believes, in accordance with Cheung and Turnbull (1998), that OP's dependence on

the network affects the company's operations and, at the same time, that OP influences the network. This can be understood when taking into account both the variety of and number of activities implemented at OP and OP's reliance on suppliers for delivery of products using JIT. In this case study, two types of interdependences, associated with supply chains and supply networks, can be identified: one sequential, between Opel and PBDS, which is associated with vertical ties, and the other reciprocal, between suppliers, which is associated with horizontal ties.

OP's network is characterised by the connectedness of its relationships (Halinen and Tornroos, 1998; Ritter, 2000). Connectedness exists when a given relationship affects, or is affected by other relationships (Hakansson and Snehota, 1995). Here, the connectedness between relationships is demonstrated by: (a) the purchasing systems in practice (e.g. the existence of a central purchasing department, sited in Germany, and smaller purchasing departments sited in Spain and Portugal (IA.1, IA.2, B1.3); (b) combination advantages, which occur when production is distributed among units of the same MNC (IE.15), and (c) lobbying (e.g. in an attempt at establishing a first contact and initiate a negotiation process, firms have placed agents in Germany (IA.21). It is through such interconnections that local companies in Portugal may gain access to wider international production networks, such as Opel's. Connectedness, of business relationships, links firms into a form of structure (Hakansson and Snehota, 1995). The network structure of business relationships, as partly shown in Figure 5.1, forms the reality in which OP operates. Due to mainly weak bonds (exceptions are bonds associated with product development and logistic issues), and ill-defined activities (e.g. purchasing), OP's network appears to be loosely structured. Moreover, because OP and its PBDS have been trading for many years, the network appears to have reached relative stability. However, due to Opel's policy of substitutability of suppliers, it should not be considered static. Stability may not be manifested in the longevity of relationships between companies, because suppliers may be replaced by alternative sources, see their position in the network changed, or may in themselves change (e.g. through restructuring or mergers and acquisitions). These findings support the view of Easton (1992), who sees networks as stable, but not static.

In conclusion, the researcher sees that mainly due to OP's low level of autonomy in the decision making process, the range and type of functions it performs, and because it is dependent on the resources of other Opel subsidiaries, there are limits as to what both OP and PBDS can achieve in terms of joint activities (i.e. inter-firm collaboration) and partnering relationships.

Major finding 3:

The wider network affects inter-firm collaboration and partnering both to enable and constrain the freedom of action at the level of the customer supplier dyad

Major finding 4:

Partnering is contingent on the position, role and influence level at different points in the network

The corporate strategy-structure of the companies involved

Opel's production and relationship strategies were ultimately established with cost reduction objectives in mind. Flexibility was also an important objective for Opel to achieve. These strategies seem to affect the collaborative and non-collaborative practices between OP and its PBDS. One way to understand the reality of OP, is to look at the motivations underlying the establishment of this subsidiary in Portugal (Tavares and Pearce, 2001). Particular support was found for Opel's market-seeking (Portugal emerged as an export platform) and efficiency seeking-motivations (associated to low input costs), which is consistent with the results advanced by Buckley and Castro (1998). OP specialised in the supply of vehicles for the export market, has a narrow product range, but a broad market scope. As discussed in Section 5.1, GME decided to exclusively produce the Corsa Combo, at its Portuguese plant. Moreover, most of the vehicles assembled in this plant are exported. In addition, OP established, with its PBDS, relatively high levels of collaboration regarding operational goals. In the case of OP, modes of collaborations, as required by delivery

needs, are market oriented. OP, through the implementation of JIT and sequence line systems, is saving costs by reducing its inventories. Relationships between OP and its PBDS are characterised by a low OP involvement with a high degree of continuity. An example of low involvement is demonstrated, by low relationship specific investments. OP seems to have reduced its transaction uncertainty by establishing relationships with suppliers on a long-term basis. OP, in terms of production capacity, is regarded as a small plant, and as such, is perceived by large supply companies as being an unattractive customer, and therefore, may become dependent and vulnerable. OP's operational dependence appears to be closely connected to the difficulty of finding alternative suppliers, willing to supply the volumes required by the plant.

In contrast to Opel's relationship strategy, the suppliers' customer handling strategy tends to be reactive and often compliant. However, from a responsive perspective, a number of strategic options emerged from the research, such as relationship specific investments. Suppliers may be motivated by differing sets of collaboration considerations with OP. Collaboration is a consequence of strategic goals, such as gaining access to markets, to technical information (e.g. via supplier development) and the maintenance of a position in the network.

Individual management styles

Management style may be an influential determinant in successful suppliers' development and its impact should not be underestimated (Taggart and Sanderson, 2001). As it was observed by Rui Pinho (managing director and co-ordinator of several international units of Group Ficos), "individuals have the potential of influencing the strategy of a company".

Institutional framework

An institutional framework is defined as the set of political, social and legal ground rules that form the basis for production exchange and distribution (Davis and North, 1971). Opel developed its own institutional identity which reflects its experiences in multiple locations, strategy over time (Almeida, Grant and Phene, 2002) as well as its

norms, values and assumptions about what constitutes appropriate economic behaviour (Peng, 2002). Perhaps, as believed by Almeida, Grant and Phene (2002), the institutional framework has affected both the strategy and structure selected by Opel. It has been argued that any strategic choice a firm makes is inherently affected by the formal (e.g. contracts, rules and procedures) and informal (e.g. social norms of behaviour, which are embedded in culture) constraints of the given institutional framework (North, 1990; Oliver, 1997; Peng, 2002). There is not enough evidence to strongly support the impact of the institutional framework on the definition of Opel's strategy and even structure. However, interviews indicated that: rules and procedures were largely influencing Opel's relationships with suppliers (IC.19, IE.6); amongst German managers there was not a tradition of establishing collaborative relationships (IC.12) and that Opel, because they take a long time to adopt new methods and concepts, is not a flexible company (IE.12). The researcher sees these observations as examples of how Opel's institutional framework influences Opel's organisational behaviour, including its decision making process.

An adaptation of Opel's institutional framework and strategy seems to be the frame within which the suppliers of OP have been operating. Nevertheless, there were signs that some suppliers were acting proactively in these buyer-dominated relationships. Some of the PBDS were recognised as being leaders in matters such as product innovation. Others are part of complex networks, both vertically and horizontally, which means that initiatives are both channelled and delimited by inter-actor ties (Dacin, Ventresca and Beal, 1999).

5.5 Summary

This chapter has presented and analysed quantitative and qualitative evidence of how inter-firm collaborative practices and partnering between OP and some of its PBDS operate and the factors shaping the dyadic processes between these parties. The exploratory nature of this study resulted in the emergence of a number of issues, which are of significance both empirically and technically. These will be discussed and emphasised in the next chapter, which draws together the researcher's main findings, conclusions, contributions, implications and recommendations.

Chapter 6

Conclusions, Contributions, Implications and Recommendations

Chapter five presented, discussed and summarised the major findings from the case study research. The aim of this chapter is to summarise the approach taken, the overall contribution to knowledge made, and to provide recommendations for further research and for practitioners. This chapter will therefore briefly highlight the conclusions drawn and outline the researcher's own view on the strengths and weaknesses of her approach.

6.1 Research project: Overview

The thesis was constructed in a series of steps that provide increasing focus to the research.

The thesis began with a thorough review of the literature on the automotive industry, tracing its history, main characteristics and trends. This review, which highlighted major changes in the industry, included the automotive industry in Portugal. A similar view of changes in relationships between VMs and suppliers was presented, from de-integration of skilled partners to vertical integration and ownership by the VM, from vertical integration to increased outsourcing and from adversarial to collaborative outsourcing approaches. The perspective of the researcher is not one of change from one state to another. Such view would be simplistic and would ignore the characteristics that endure each transition. However, changes presented in this way facilitate description and characterisation.

The second step was to review the literature on inter-firm collaboration and partnering, generating a framework for understanding the term partnering (seen as a type of relationship with the highest level of inter-firm collaboration and as an ideal type against which inter-firm collaborative practices can be measured) and how it is used. The review highlighted the general lack of understanding of partnering of “what is going on” (New, 1996) in relationships between an automotive subsidiary and its direct suppliers, from the perspective of those involved. Partnering has not yet been operationalised into a framework where the ownership ties of a subsidiary of a multinational corporation are taken into account.

The researcher therefore identified the following objectives for the work: (1) to explore how inter-firm collaboration and partnering operate between a subsidiary of a motor vehicle manufacturer and its Portuguese based direct suppliers and (2) to explore the influencing factors on inter-firm collaboration and partnering between a subsidiary of a motor vehicle manufacturer and its Portuguese based direct suppliers.

These objectives were used to drive the research design. The research was conducted in two stages. Stage one resulted in the gathering of quantitative evidence through a self-administered mailed questionnaire in order to get a description of inter-firm collaborative and partnering practices. These were further explored in Stage two through in-depth interviews. The qualitative evidence of Stage two allowed the researcher to understand the rationale underlying inter-firm collaborative practices revealed by the quantitative evidence and to get an idea of the most relevant factors influencing these practices. Major findings and conclusions are presented in the next section.

6.2 Major findings and conclusions

Major findings from this thesis uncovered in Section 5.3.4 and Section 5.4.2, are:

Major finding 1:

Relationships can be characterized by several dimensions, each of which is a mix of collaborative and non-collaborative elements

Major finding 2:

A diversified scenario of relationships can be explained by the different combinations of several factors; the importance of each needs to be weighted and hierarchised.

Major finding 3:

The wider network affects both to enable and constrain the freedom of action at the level of the customer supplier dyad

Major finding 4:

Partnering is contingent on the position, role and influence at different points in the network.

These findings, that evolved from the study and which take the form of assertions, correspond to what some qualitative researchers have designated by naturalistic generalizations (see Section 4.4 about generalizability), in the sense that that they speak specifically for the population from which it was derived.

The findings highlight the complexity and variety of relationships between OP and its PBDS, which may be characterised by the existence of collaborative and non-collaborative elements, in which the predominant collaboration form was usually formal and enforceable through contracts. These relationships were not the responsibility of this subsidiary in full. In this study there was no demonstration of partnering concerning the items supplied to OP, as defined in Section 3.4.3, albeit its defining constructs were useful in determining the extent to which, if at all, the parties were moving in the direction of a more integrated and mutually considerate process. Partnering agreements were rather established between Opel Germany - where a centralised purchasing department and R&D facilities are located – and the suppliers' division or specific people charged with the negotiation of these types of contracts. This study has revealed that, for the buyer, drivers for partnering agreements were the access to innovative technologies and capital, while for the suppliers were the increasing stability in supply and the gaining of access to the market. This study has also shown that project-based partnering relationships were much more common than partnering relationships with a long-term horizon.

When considering the complexity demonstrated in OP's focal network and its links back to the US, it is clear that the network effects are significant. Of importance is that the nature of the MNC decision processes and structures have enabling (or in this case more often constricting) influences on the freedom of action of their Portugal based branch. Thus it comes as little surprise that the journey along the path to a more explicitly partnering relationship has a limited and insignificant status. The local management, even if they wished to get closer and become more integrated with local suppliers, were not empowered through their parent company network to commit to such processes. The role of OP was also constrained through the level and location of decision-making authority across the European network. These are structural and procedural issues within the customer organisation about which local suppliers (i.e.

PBDS) can do little at their level. One however has to recognise that some of the PBDS are of themselves part of more extended networks including MNCs. As such they have alternative influencing routes. Local suppliers, without the backing of their own MNCs, in order to influence decisions at a distance have opted for strategic alliances and/or agents close the customer's purchasing decision centre (i.e. in this case Germany).

6.3 Major contributions

A review of literature on inter-firm collaboration and partnering, originated from several fields of research (e.g. supply chain management, industrial marketing and purchasing (IMP)), has shown a wide range of work. The researcher noted that, to add to problems in conceptualisation and lack of clarity of these concepts, there has been inadequate characterisation of real-life collaborative relationships. This research contrasts with much of the existing literature, and its contributions can be summarised in the following: (a) insights on inter-firm collaboration and partnering between an automotive subsidiary with a relatively small scale of production and its direct suppliers; (b) the creation of new connections between conceptual ideas on inter-firm collaboration and partnering through the development of a conceptual framework; (c) a framework of factors influencing business relationships to assist businesses analyse their relationship strategies and assist them determine how they can operate within their business network; (d) an unusual methodological approach to the study of inter-firm collaboration and partnering based on the combination of a postpositivist and constructivist philosophical views and on a triangulated research design (i.e. including quantitative and qualitative evidence); (e) evidence on the role and development of the subsidiary as integration takes place within the European Union, and (f) a network vision of relationships, which can be useful for the actors involved in this thesis and for those companies working at an international level.

6.3.1 Insights on inter-firm collaboration and partnering

Despite the extensive work on inter-firm collaboration (IFC) and partnering, a review of literature revealed that most studies have focused on IFC and partnering without taking into account the ownership ties of firms, which is the case of the MNC and respective subsidiaries. Largely missing from the literature is a clear understanding of how IFC and partnering are implemented at different points within a MNC network. This research, by exploring these subjects within the context of a an automotive subsidiary in Portugal of which no study has been developed yet, has brought some context specific insights which allow a better understanding of real-life practices on the referred subjects. As observed by Rui Pinho (managing director of Group Ficosa): *“The understanding of the partnering concept is important for the manager’s decision making process”*.

6.3.2 A conceptual framework on partnering

Findings, by revealing that the multinationals involved represented a network effect, have shown to the researcher that, the framework on partnering used as a basis for the empirical work (Table 3-3, Section 3.4.3), was not adequate to capture the network elements of business relationships. This recognition led the researcher to conceive a conceptual framework on partnering, which attempts to overcome some limitations of most analytical tools available to understand partnering within a network context. Existing literature was for the researcher a source of inspiration. Thus the development of this framework was based: (a) on the views of Anderson, Hakansson and Johanson (1994) on dyadic business relationships in industrial markets; (b) on the views of Lambert and Cooper (2000) and Lambert, Cooper and Pagh (1998) on supply chain management; (c) on the views of Ghoshal and Bartlett (1990) who saw some potential in combining the network approach with the MNC theory; (d) on the views of Lazzarini, Chaddad, and Cook (2001) who saw potential for creating bridges between the network and the supply chain analysis; (e) on the actors-activities-resources (AAR) model by Hakansson and Snehota (1995), and (f) on the concept of partnering (translated into the constructs displayed in Table 3-3, Section 3.4.3).

Like Anderson, Hakansson and Johanson (1994), the researcher views that the primary functions of the relationships corresponding to actors, resources and activities are: (a) efficiency through interlinking of activities; (b) creative enhancement of resource heterogeneity, and (c) mutuality based on self-interest of actors. The researcher claims that these functions have common features with those associated to the partnering concept.

For the development of this conceptual framework, the perspective of Lambert and Cooper (2000), on supply chain management (SCM), as the management of multiple relationships across the supply chain, capturing the synergy of intra and inter-firm integration has been followed. Also, very influential is the SCM conceptual framework by Lambert, Cooper and Pagh (1998). This framework articulates the inter-related nature of supply chain management, which includes three inter-related elements: (a) the structure of the supply chain; (b) the supply chain business processes, and (c) the supply chain management components. The supply chain structure consists of the network of members and links between the firms. Business processes are the activities that produce a specific output of value to the customer. The management components are the managerial variables by which the business processes are integrated and managed across the supply chain.

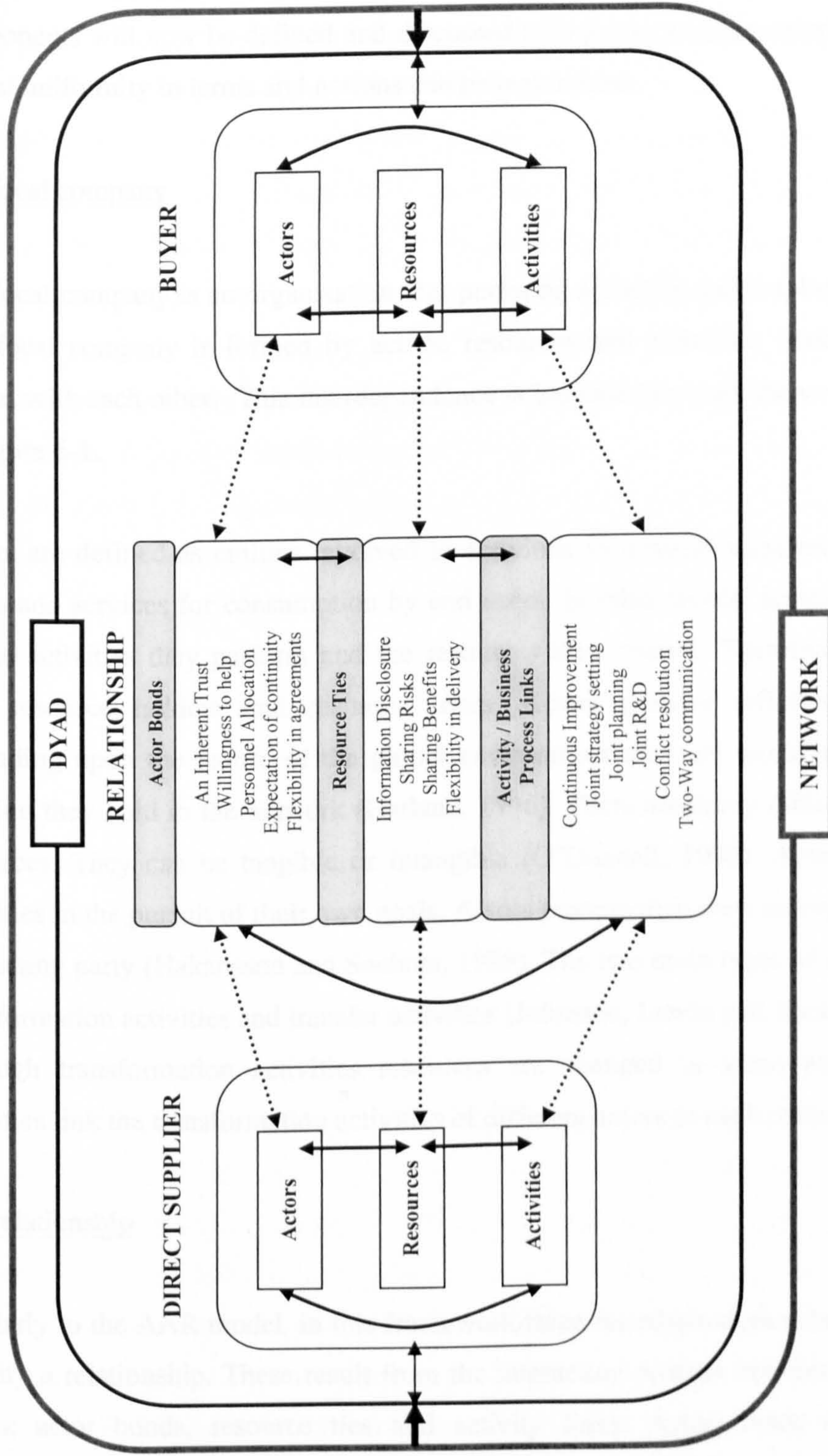
Partnering, which appears as a central construct in supply chain management (SCM) domain, has been used in the dyadic relationship perspective, but not used in the network perspective. In the framework that the researcher proposes, partnering provides a bridge between the dyadic and the network perspectives. This is done by structuring the defining characteristics of partnering in such a way that they are translated into actor bonds, resource ties and activity links, which are concepts associated with the network approach.

The researcher used the AAR model as an example, because it has the potential to describe complex business networks (Araujo and Easton, 1996; Easton, 1992), and capture the nature of dyadic business relationships (as already mentioned in Section 5.3.4). Actors, resources and activities are three central dimensions in this model. The AAR model describes how a business relationship can be analysed through its

individual substance layers: actor bonds, resource ties and activity links. This model is framed at a high level of generality and its complexity derives from the conceptual interdependence between its constituent elements (Araujo and Easton, 1996).

To this end, Figure 6-1 was conceived o bring together the partnering and the AAR model into one conceptual framework. The researcher claims that by using this framework it is then possible to investigate business relationships, and partnering in particular, as the network effects are reflected through the use of actor bonds, the resource ties and activity links. The interpretation of the case study data in Section 5.3.4, in the light of the AAR model, has demonstrated that the defining constructs of partnering bring to life the concepts of actor bonds, resource ties and activity links and that they work together well as an analytic process.

Figure 6-1: A conceptual framework to analyse inter-firm collaboration in industrial markets



The main components of this conceptual framework are: (a) the focal company; (b) the relationship; (c) actor bonds; (d) resource ties, and (e) activity links. These components will now be defined and discussed taking into account existing literature so that uniformity in terms and notions can be maintained.

The focal company

The focal company is an organisation that performs activities and employs resources. The focal company is formed by actors, resources and activities, which are inter-related with each other. This interdependence is indicated through the vertical arrows in Figure 6-1.

Actors are defined as entities involved in activities to convert resources to finished goods and services for consumption by end users. In other words, actors are defined by the activities they perform and the resources they control. Therefore, actors are both resource holders and resource users. Actors possess different resources, depending upon the nature of the global environment they are working in and the position they hold in the network (Harland, 1996). There are many different types of resources. They can be tangible or intangible (O'Donnell, 1999). Actors carry out activities in the pursuit of their own goals. Actors possess their own perceptions of the interacting party (Hakansson and Snehota, 1989). The two main types of activities are transformation activities and transfer activities (Johnston, Lewin and Spekman, 1999). Through transformation activities resources are changed in some way. Transfer activities link the transformation activities of different actors to each other.

The relationship

Similarly to the AAR model, in this framework three interdependent substance layers identify a relationship. These result from the interaction process between two dyadic actors: actor bonds, resource ties and activity links. Actor bonds describe the connections between the actors, either individual or organisational, through their perceptions of each other. Resource ties describe the organisational connections that are developed through resource inputs and outputs. Activity links describe the

connections formed by activities and business processes, which the actors develop with each other. There is a large variety in the substance, which depends on the existence, type and strength of actor bonds, resource ties and activity links. The differences may reflect the type of industrial activity or company specific circumstances. The functions of a relationship can be formulated in terms of the effects produced by the relationship on the dyad, on each of the involved parties, and on third parties. Relationships make it possible for an organisation to access, and exploit, the resources of other parties, and to connect the parties' activities together.

The substance layers are inter-related with each other, implying that an occurrence in one substance layer will affect other substance layers, as indicated by the vertical arrows in Figure 6-1. The connectedness of the focal relationship with other actors is indicated by outward facing horizontal arrows from each substance layer.

Actor bonds

Actor bonds occur when two actors interact with each other through an exchange process (Hakansson and Snehota, 1995). The following partnering characteristics are used as a measure of actor bonds: an inherent trust, willingness to help one another, personnel allocation, expectation of continuity and flexibility in agreements.

Resource ties

The researcher considers resources as including all assets, capabilities, organisational processes, and information knowledge, controlled by the firm, and which enable it to conceive and implement strategies that improve its efficiency and effectiveness. Resources are also seen as commodities that actors use during activity links to produce their goods and/or services. Ties are created through the production process as resource inputs and resource outputs go from one company to another. Through inter-firm linkages, firms can obtain access to assets that create value, that are not available for purchase in the market, and that require time to build up. Thus, a firm can use inter-firm linkages to access assets stocked by other firms, and share its assets.

The following partnering characteristics are used as a measure of resource ties: information disclosure, the sharing of risks and benefits, and flexibility in delivery.

Activity links

Activity is assumed to be a sequence of acts directed towards a purpose (Hakansson and Snehota, 1995). Activity becomes the generator of a continuously emerging context. The activity link construct includes the actions done together by the actors, through the exchange process (Hakansson and Johanson, 1992). According to Hakansson and Snehota (1995), activity links in a dyadic relationship are affected by adjustments in the activity structures of the companies involved. In addition, activity links affect the activity structures of the buyer and the supplier, as well as the activity pattern in the business network. The following partnering characteristics are used as a measure of activity links: continuous improvement, joint strategy setting, joint planning, joint R&D, conflict resolution and two-way communication.

6.3.3 Contextual factors framework

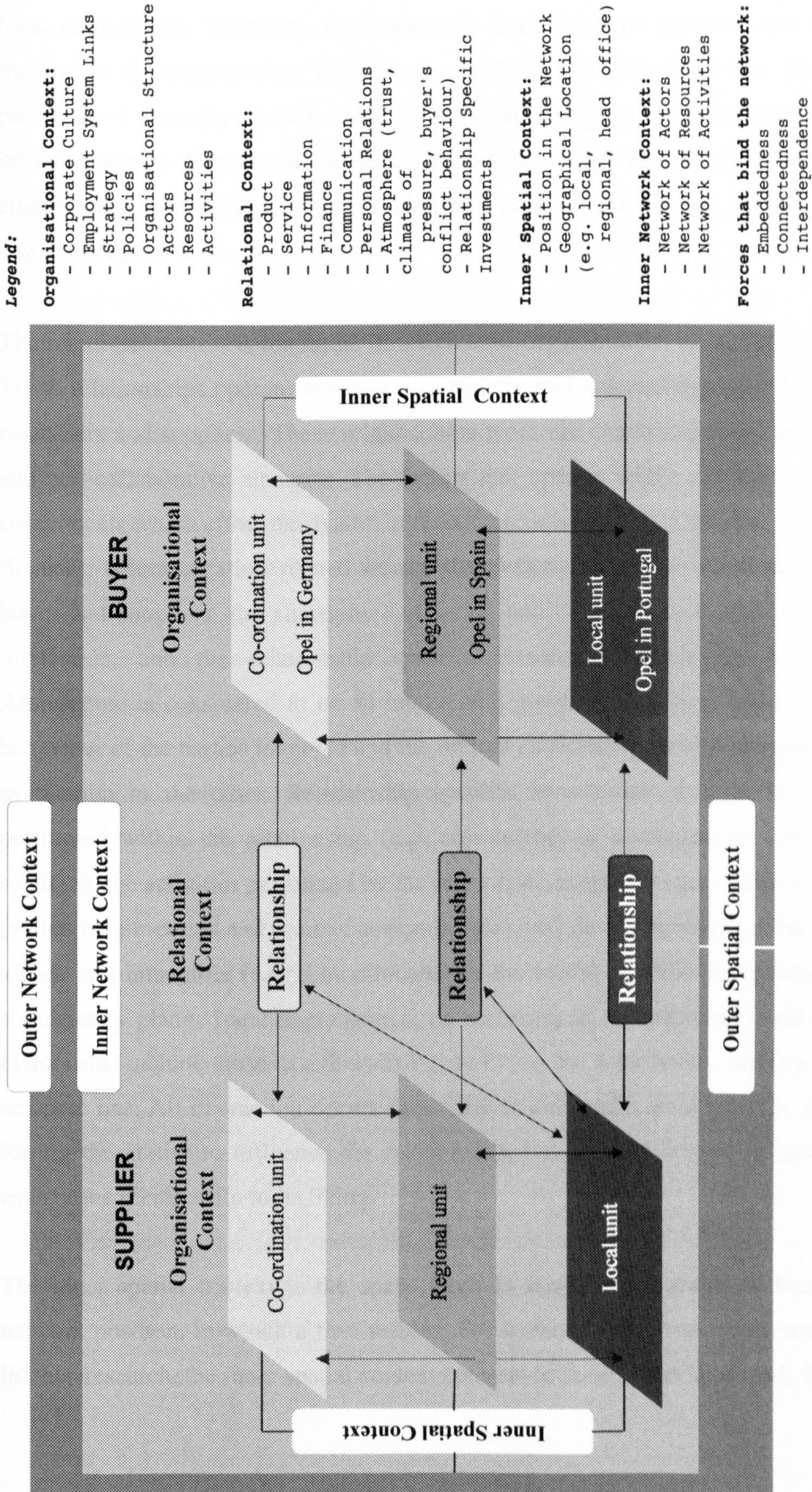
As findings have shown, relationships can vary. The researcher has found that various factors influence inter-firm collaborative relationships between OP and its PBDS and that these factors did not have the same importance for all companies. Based on this, the researcher infers that various combinations of factors can explain the variety of inter-firm collaborative relationships, which companies may implement. Findings and conclusions led the researcher to develop a framework, which includes a number of factors that can be used to analyse varying relationship types when the actors involved are subsidiaries of a MNC and/or actors in a network. Although these factors are context specific (the reason why the framework has been conceived as a contextual factors framework), the researcher claims that these factors can be used as explainers of the dynamics and processes associated with buyer-supplier interaction. This claim is based on the fact that most of the factors that came out from the case study are mentioned in the literature, albeit in a scattered and fragmented view.

One implication from the framework is that it combines both inter-organisational and intra-organisational relationships. The researcher claims that both perspectives are needed to develop a thorough understanding of relationship strategies undertaken by actors. The IMP researchers have concentrated on the inter-organisational aspects and MNC researchers have looked mainly at the intra-organisational aspects. This framework combines the two streams of research to develop a holistic picture of relationship development by MNC subsidiaries. The literature relating to contextuality (e.g. Mittila, 2000) was of great influence in the development of the framework. As mentioned in Section 4.4, the researcher does not suggest that this framework has the power to explain all buyer-supplier relationships within a multinational network context. However, the merit of this framework should be seen in the light of its ability to speak specifically for the population from which it was derived and in the light of the understanding one can get from it.

Bringing together both inter and intra organizational relationships, the framework develops a wider network perspective than previously considered at the start of the research project. The wider network perspective is particularly applicable to the automotive industry where MNC's dominate the assembly processes through multiple plants and utilizing large numbers of suppliers through a number of different tiers. As in the case illustrated in this study, the parent headquarters may be some distance (geographically and structurally) from the subsidiary and therefore an intra-organisational approach is necessary.

By bringing the inter and intra-organisational aspects of relationships, it can be seen that actors operate within four contexts: (a) organisational context; (b) relational context; (c) spatial context, and (d) network context. These groups and their linkages are illustrated in Figure 6-2.

Figure 6-2: Contextual Factors Framework



The organisational context refers to the specific features of a company that affect the focal relationship. Therefore, this context is limited by the activities and resources internal to the organisation. Hakansson and Ford (2002) indicate that the internal processes of the actor are influenced by the relationships it has and it also influences its relationships. Factors that operate within this context include: corporate culture, employment system links, strategy, subsidiary policies and strategy, actors, resources and activities.

The relational context is the frame in which inter-organisational relationships develop. These relationships operate between a subsidiary and external dyad partners such as customers and suppliers. These relationships types are characterised by collaborative and non-collaborative elements. The factors that operate within this context include: components which effect the dyadic interaction process (product, service, information, finance), communication related issues, the personal relations established between buyer and suppliers, the atmosphere affecting and being affected by buyer-supplier interaction, and the relationship specific investments made by both parties. Atmosphere is considered to be an intervening group of variables, which reflect the behaviour of the parties involved and the mutual expectation each of the parties holds, in relation to the other. Relationship specific investments include, the activities performed within the relationship (e.g. adjustments in transportation and payment routines), the activities performed by the respective companies (e.g. reallocation in the production processes and product customisation), and those tangible (e.g. building and tools), and intangible (e.g. time allocated to the buyer) specific investments, either strategically planned and implemented, or occurring in an unconscious manner. The factors also include those described in Figure 6-1 as the actor bonds, activity links and resource ties. All interaction occurs externally at the dyadic level with the subsidiary having the ability to influence the relationship, but perhaps limited in its ability to control the relationship to its liking.

The inner spatial context is the space, both in terms of geographical location and network position, in which a firm resides. For instance in the case study investigated in this research, the inner spatial context consists of three layers (Portugal, Spain and

Germany) where the buyer and its PBDS (through direct or indirect subsidiaries of their own MNC networks) undertake business relationships.

The inner network context includes the network of actors, resources and activities of a subsidiary's (i.e. focal) business network, and the intra-organisational relationships of the companies involved. The network, as configurations of actors carrying out activities, forms the contextual domain in which all the companies (i.e. buyer and suppliers) operate. Embeddedness, connectedness and interdependence, are the forces that bind the network components. *Network's influence embraces the factors, which reflect the actors' inducements, constraints, and availability of opportunities to form relationships and alliances, either vertical or horizontal.*

The inner spatial context and the inner network context correspond to the internal parts of a subsidiary's (i.e. focal) business network, rather than the MNC (e.g. GM's multinational network) in general. The external context would be formed by all organisation sets of the different units of the MNC. However, the focal subsidiary's capabilities, and therefore its position within the MNC, are primarily shaped by its role in the whole network (Andersson and Forsgren, 2000). The outer spatial and outer networks contexts include all the remaining factors that may influence the subsidiary's (i.e. focal) business network.

The external network context is the context that develops externally to the subsidiary with all external organisations, that is, its external business network. This context includes suppliers (all tiers), government departments, union organisations and customers that form part of the wider business network.

The links in the network context (i.e. internal and external) are of a relational nature with the subsidiary influencing and being influenced by the network effects that flow through the network. The factors that operate within the network context are activity patterns, web of actors and resource constellations (Hakansson and Snehota, 1995).

Each context will require a different approach to strategy development due to the differing relationships developed in each context. For example, the hierarchical relationships developed within the spatial context may require strategies aimed at changing policy development and influencing resource allocation. Measures used to achieve these aims could be through developing closer ties with regional units, indicating the subsidiaries' ability to undertake higher levels tasks and developing personal relations with employees within the closely linked units. The four contexts are not independent and consideration needs to be given to how changing aspects of one context will affect the other three contexts.

The researcher claims that different factors also differ between the varying contexts. By analysing the factors affecting each context actors' will be able to develop a greater understanding of how they can influence relationships within each context. Moreover, the ability to influence the relationships will vary between contexts. For example, the ability for an actor to exert some influence at the network level will be much less than its ability to influence the organisational context.

6.3.4 Methodological approach to the study of inter-firm collaboration and partnering

The methodological approach to the study of inter-firm collaboration and partnering based on the combination of a postpositivist and constructivist philosophical views, on a triangulated research design (i.e. including quantitative and qualitative evidence), and on grounded theory principles are highly unusual. The ability of the researcher to digress from more traditional, positivist, quantitative approaches is perhaps reflective of current debates within the academic community regarding the concept of rigour and its relationship to applicability within organisational research. Moreover, most previous research has tended mostly to focus on the perspective of one of the players. This research has explored the perspectives of a subsidiary of a major final assembler (i.e. GM) and a variety of suppliers, enabling the discussion of the viewpoints of both parties and increasing the relevance of the outcomes to the overall inter-firm collaborative relationships.

6.4 Implications for theory

This research has demonstrated that business relationships are complex and diverse. As Young and Wilkinson (1997) claimed, due to this complexity, perhaps, there is no best way of managing business relationships. However, despite this complexity, managers do have to make decisions. An understanding of the relationship decision-making process requires the analysis of the state of a relationship (i.e. the nature of a relationship, which comprises its characteristics as a result of the actions of many individuals) at any point in time (Ford, McDowell and Tomkins, 1998). This research has reinforced the view that the dyadic level of analysis is a necessary, but not sufficient, unit of analysis required to understand the nature of business relationships and buyer-supplier relationships in particular. In accordance with Anderson, Hakansson and Johanson (1994) the dyad has to be seen and analysed within a wider network context. This requires the reconciliation of the dyadic and the network perspectives on business relationships. Dyadic relationships influence the business networks in which they are embedded and in turn are influenced by them (Cheung and Turnbull, 1998). The insights gained in this study showed that all dyads are influenced through the connectedness they have with other actors in the network and that the interdependence of relationships within a network brings opportunities and constraints on the actions of individual firms. Along with Lazzarini, Chaddad and Cook (2001), the researcher claims that in order to understand business relationships the existence of both sequential interdependencies (associated with chains and emphasising vertical ties) and reciprocal interdependencies (associated with networks and emphasising horizontal ties) should be taken into account. Network analysis has been applied to contexts involving supply chains, but the comparative and simultaneous assessment of vertical and horizontal relationships has not been a main goal of most studies. This is demonstrated by the lack of analysis tools to investigate business relationships which take into account both types of relationships.

The researcher suggests that the conceptual frameworks introduced in Section 6.3.2 and in Section 6.3.3 can be used to analyse both the inter-firm relationships and the intra-firm relationships in the various spatial (e.g. domestic, international) and network contexts (e.g. multinational network and supply chain (s)) in which firms are

embedded). In the case of MNCs, geography and ownership ties are important and driven by the nature of the MNCs working through their subsidiary management units. This means that within a MNC, several organisational levels may coexist (e.g. at the local, regional, co-ordination centre and HQ levels) each with its responsibilities and level of autonomy. Within a MNC network, geography, organisational structure, strategies and policies can have an enabling or constricting effect upon the subsidiary's management in terms of its activities, resources and business relationships.

This research has also shown the complexity of inter-firm and intra-firm collaboration, both at the dyadic and network levels, and several motivations behind their implementation. The researcher claims that collaboration and partnering become additional managerial choices, contingent on the position, role, and influence level of firms at different points in the network. This contradicts the view offered by the interaction and network approaches, which assumes that there is a minimum of collaboration between firms, and that inter-firm collaboration happens more or less as a rule. Moreover, partnering is not even considered within the scope of these approaches. This view ignores the managerial aspects of the concepts and the needs of real-life situations.

6.5 Implications for practice and policy

The findings have shown some critical areas, which deserve some attention from OP and Opel in particular (seen, in this study, as the head office and maximum authority in the decision making process), from its PBDS (some of which are Portuguese owned companies while others are subsidiaries of MNCs), and from governmental institutions.

The fast changing competitive environment, with its shortened product life cycles and fast technological innovation, faced by automotive companies has created a demand for high levels of flexibility and the ability to cope with greater environmental change and uncertainty. A current issue for management is how to develop a more flexible company. Similarly to Hyun (1994) the researcher views that one way for final

assemblers to achieve this would be through the synchronisation of their activities with their suppliers' activities.

Delivery and the subsequent need for flexibility is a critical issue in the relationships between OP and its PBDS. The practices required by OP were likely to demand substantial efforts on behalf of the supplier to achieve JIT delivery but were being performed without significant support and commitment from the buyer. Delivery was practised in a context where OP and ultimately Opel, were seeking some advantages (e.g. cost reduction) and influence over suppliers. In addition, it seems that the buyer was attempting to optimise its performance at the expense of its suppliers, who were trying to accommodate the need to be flexible. Although the level of satisfaction of OP with suppliers' delivery was high it was based on a low level of synchronisation as demonstrated by the low level of coordination between parties and, in particular, by the absence of joint planning (in terms of production planning and management of capacity).

OP's inefficient disclosure of information related to production volumes, production schedules and volume of stocks required, did not allow the supplier to plan far enough in advance (e.g. production), which created difficulties for the suppliers and effected the climate of the relationship. The researcher, based on the evidence, infers that the managerial practices that Opel established for OP had effects in terms of performance, costs and ultimately competitiveness, with negative impacts for all parties involved. The researcher sees as beneficial, for both buyer and suppliers, the alignment of processes and information flows, for which joint planning, increased information sharing and improved communication channels would be fundamental prerequisites. The researcher is aware of the potential sensitivity of sharing information between the buyer and its suppliers, but recommends that there should be a balance between limiting the extent of commercially or competitively sensitive information exchange to that which is absolutely necessary while still achieving an open relationship. However, the researcher believes that a successful synchronisation of OP's activities with its PBDS' activities also depends on the synchronisation between firms within the business network of OP. This idea seems to be compatible with the view of Legendijk (1997) who claimed that an automotive subsidiary should be based on the

positive-sum type of partnership and be attuned to a full exploitation of economies of specialisation and integration throughout the production chain. It also appears that the PBDS are constrained in what they can do to synchronise their supply chains given the limited amount of information coming from OP.

Evidence has shown that the internal relationships within Opel affected the performance of both the MNC and buyer-supplier relationships. The main problems of intra-organisational relationships within Opel, felt by both OP and its PBDS, were communication, power relationships and the cultural differences between individuals. The researcher suggests that Opel should investigate its intra-organisational relationships, whose problems may be a result of the implementation of policies (e.g. human resources management) and of the perceived, unclear definition of its subsidiaries' roles (e.g. responsibilities between Opel in Spain and Opel in Germany).

The researcher has found that PBDS had a significant understanding about Opel, which could help Opel in many of its improvements. The researcher believes that Opel could benefit from being much closer to its suppliers and by establishing a more collaborative approach to them (e.g. cost reductions, knowledge transfer). Historically, GM has taken an arm's length approach towards supplier relations (Kim and Michell, 1999). Also Opel, by following in GM's footsteps, was taking an arm's length approach to its relationship strategy. Evidence has shown that Opel has been a company trying to find ingenious ways of exploiting upstream companies (i.e. first tier, second tier suppliers) and, furthermore, not looking at the opportunities offered by collaborative practices and behaviour. The logic of inter-firm collaboration is value enhancement and through collaboration there are opportunities to reduce operational costs. The researcher suggests that the leadership of Opel should be attuned to develop an overall strategic view of where the industry is going and to consider the benefits of a truly collaborative approach to business relationships. There have been strong recommendations for the final assembler to collaborate with suppliers (e.g. Testore, 1998). This need for inter-firm collaboration is driven by the challenges and numerous pressures faced by the industry (see Chapter 2 for examples), including pressure to reduce cost and increase responsiveness (this requires suppliers to achieve challenging targets, but they need help from their customer). GM and Opel have been operating

under the shadow of their collective history. The researcher believes that there is a historical legacy that must be overcome if this vehicle manufacturer is to succeed in developing more inter-firm collaborative relationships and genuine partnerships with its key suppliers. The researcher suggests that profound change within this MNC requires changes in the underlying culture. In the view of the researcher, a renewed collaborative culture needs to be created. The cultural gulf which needs to be bridged is vast, because other multinational networks need to be involved. The researcher suggests that the process of creating a cooperative inter-organisational culture, between two companies that interact at multiple levels (i.e. local, regional, head office) in different functional areas, and with individuals from different cultural backgrounds should not be under-estimated. The researcher believes that in such a process of change the suppliers may be of great help to Opel; through the understanding they have about Opel and through their self-interest in remaining, or becoming, the preferred supplier to Opel. Opel must also consider if their current behaviour supports them being a supplier's preferred customer. From findings in this study that is, at present, not likely, and whilst suppliers may not choose to refuse business from Opel, their truly innovative efforts may be directed towards other customers. This was not tested in the study but is a possibility referred to in other situations (Macbeth, 1998).

The researcher infers from the case study evidence that Opel is not getting the best effort from suppliers. Opel has been a difficult customer for many suppliers. Based on the findings, the researcher perceives Opel as forming relationships with their suppliers that are not based on trust and commitment, trust and satisfaction and on continuity. Furthermore, Opel has been relying on procedures and policies for relationship building rather than on the development of close personal relationships. Blois (1997) argued that certain relationships, such as those established by Opel, have been shown to have certain advantages such as: control over whom the company deals with, (ultimately) profit gains, and the ability to use opportunism to obtain advantage over suppliers. The researcher believes that Opel's behaviour can lead to unsustainable situations for suppliers, and to suppliers' opportunistic behaviour. Perhaps if suppliers had a better alternative they would not choose Opel as a key customer. For some PBDS, the efforts the suppliers make to please OP are notable

given the low volume of demand and turnover they get from OP in comparison to other final assemblers. In the view of the researcher the attractiveness of OP as a key customer is relative. On the one hand PBDS, through OP, can get access to other subsidiaries of Opel such as OS and OG, but on the other hand the business relationships they can build and the activities they can implement with OP are limited due to the subsidiary's boundaries. In other words, the multinational network of OP offers to PBDS opportunities and constraints. The researcher believes that the awareness of both opportunities and constraints have strategic implications for suppliers and impact on the development of their expectations. Evidence has shown that the strategy-structure strategies, defined at the coordination centre of OP and applied in cascade through OG and OS, have influenced and affected the choices of inter-firm collaborative activities and relationship interactions at the dyadic level in Portugal. Hence, the entrepreneurial initiatives of OP have been limited. This should not be surprising having taken the view of Birkinshaw (1997: 208) into account who observed that, "despite the compelling logic for tapping into local markets through the subsidiary network many corporations appear to neglect the creative potential of their subsidiaries". The researcher believes that the potential entrepreneurial initiatives of OP have been underestimated. This belief is based on the findings, which have shown, for example, that OP's initiatives for quality improvements, which were instigated by levels high in the Opel organisational hierarchy, brought positive results in the performance of both OP and PBDS. The measures that Opel applied elsewhere did not have such positive impacts on quality management. This is a sign that at the dyadic level in Portugal, performance improvement may be more dependent on Opel's internal interactions than on the locally permitted activity. When looking closely at the organisational design of the internal network of OP and specifically the linkages between OP, OS and OG, the researcher has found that Opel's practices when in managing subsidiaries in a supply chain, has been wasteful of resources and has been holding performance back. It remains a question as to what extent Opel has been aware of the impact that its strategic and dynamic allocation of resources, to different units, has been having, and to what extent performance has been properly evaluated. The researcher argues that if the collaboration effort has not been well targeted then performance levels will be impacted, at all levels of Opel's multinational network.

The researcher suggests that companies should think of measurement processes, such as performance, at the internal and external levels: a top-down and a bottom-up measurement. Such a recommendation applies to two companies interacting, or units of the MNC interacting, with each other (these can be located, for example, at the local, regional and head office levels). For such measurement both of the frameworks introduced in Section 6.3.2 and in Section 6.3.3 can be useful tools. This is because they can be applied to the analysis of dyadic relationships within a network context within which the internal and external networks, and the position of firms within such networks have been considered.

This study has shown that (ultimately) OP's initiatives are limited because it has a low level of autonomy in the decision-making process, activity structure, and resources it commands. As a result, PBDS are also limited in the activities they can implement (e.g. R&D) and the types of linkages they can establish with OP. These constraints have strategic, financial and political implications for PBDS. If suppliers want to exert some influence upon Opel they cannot do it in Portugal. They need to have structures which allow them to interact at the higher levels of Opel's hierarchy where strategic decisions are made. These structures imply that, in certain cases, companies may establish alliances with foreign companies, which has implications as to the choice of partners and cross-cultural management issues. In addition, if suppliers want to progress toward higher levels of inter-firm collaboration there will be overheads (i.e. costs) to incur. Moreover, they will have political and cultural adjustments to make when establishing themselves in foreign countries. Some suppliers have undertaken such steps on their own, whilst others, as members of a multinational network (MNC), had their paths facilitated. However, even for these Portuguese based subsidiaries there are multinational internal relationships to build and internal interacting processes to manage. This suggests a level of coordinated activity inside the supplier multinational which calls for a very clear understanding of the customer specific complexities and the allocation of effort to effect influencing processes. Whether the scale of opportunity in Portugal is sufficient to justify such actions would become one of the strategic decisions to be made, but it also implies a level of sophistication from the Portugal based managers that might not come naturally to a more operationally focused branch team. For the local supplier without the backing of its own MNC the

opportunities to influence decisions at a distance must be more limited but this may be a role for government support agencies as discussed below.

From the viewpoint of local governments interested in supporting and developing their industrial infrastructure, recognition of these wider networks and their locus of influence also become important. This can help governmental institutions to define their policies regarding, for example, foreign direct investment and the internationalization of local companies. Governmental institutions should: (a) carefully target the types of foreign investors they try to attract; (b) look carefully at the types of foreign investors they wish to give financial benefits to, and (c) think carefully about ways in which strategic sectors of the Portuguese economy (e.g. automotive) can be supported and guided. The first two suggestions imply that governmental institutions should consider the roots foreign companies and investors will establish in Portugal. The researcher believes that these will be stronger when the level of autonomy given to the Portuguese based units in the decision making process is higher and when the activities implemented are more demanding in regard to higher levels of technology (e.g. R&D), innovation and technical skills. A look at the history has shown foreign automotive investors, who received high levels of financial support from the government, leaving Portugal or not fulfilling commitments, regardless of the implications to the country or the agreements they may have made with the government. There may be a risk in PBDS supplying OP in that they see this unit closed because of strategic moves by Opel to locate in other countries. The researcher suggests that Opel should take into account the costs of closure and the switching costs associated with restructuring its network, before taking such a step. To persuade a MNC to enhance the possibilities of increased local sourcing and value adding roles, it is important that local governments exert effort in the right places and in time to influence decisions before investments are committed. In both the case of the local suppliers and the government agencies, a further difficulty is the dynamics of change in such industries and so a constant watching and evaluation process will be required.

In all cases we are faced with the truism that unless both parties to the relationship wish to cooperate and ultimately to partner then the opportunity to deliver a more integrated relationship is not going to happen. It may well be the case that the

suppliers interviewed in this study are simply providing goods and services that do not lie in the high risk high value quadrant of the relationship portfolio and that the customer has rationally decided to manage the interactions in a traditional market driven way. Thus suppliers can be expected to cooperate with an important customer but will not be able to obtain much in the way of reciprocal consideration. In such circumstances the normal recourse is for the supplier to recognize the facts and focus on others of their customers to whom they can devote more effort and innovation support. Thus the suppliers who fail to be regarded by OP as preferred suppliers should look to other customers to see if they should be their preferred customers and try to build more integrated relationships with them. If enough suppliers exercise such a choice then OP may lose their ability to demand flexibility from their suppliers who provide it to customers who consider their position more considerately

The researcher has concluded, from the interviews undertaken, that there is a lack of training in specific areas (e.g. purchasing, supply chain management (SCM)), which can be critical for companies attempting to maintain a position in the automotive industry. This may be hard to understand when the huge offers of training courses and the financial support, that has been given to their implementation are taken into account. The researcher believes that a proper evaluation of training needs has not yet been done and that training in certain areas is lacking: governmental institutions and industrial associations, in this case, can have an important role. Amongst these institutions the association of the automotive sector (i.e. AFIA) should have a role on its own, which, according to interviewees, has not been meeting the needs of the companies it purports to represent.

The management of relationships in the automotive industry is, and will always be, a relevant issue, because a vehicle is composed of thousands of separate parts (Hyun, 1994). Companies which seek to establish effective relationships should be aware that no single relationship can be understood except as a part of a portfolio of relationships (Ford, Lamming and Thomas, 1992) and that each relationship is influenced by a number of factors. These factors can be of the organisational, relational, spatial and network type (see Figure 6-2 in Section 6.3.3). The researcher recommends that managers and policy makers be aware of these factors, and their interactions, on their

role as managers in the management of inter-firm relationships, and the development of collaborative capabilities that recognise both opportunities and costs in embedded relationships. The researcher suggests that none of these factors should be underestimated, although their relative importance may differ from one company to another. The researcher believes that the problems associated with building relationships can increase as a firm becomes more international and that they can be exacerbated by the geographical and cultural distances between subsidiary and head office.

6.6 Strengths and potential weaknesses

Strengths
<ul style="list-style-type: none">• The research is designed as an exploratory study, aiming for in-depth context-specific understanding and the methodology was designed accordingly;• The overall research design, characterized by the use of triangulation and of grounded theory principles to explore inter-firm collaboration and partnering, is quite unusual;• The findings have a high degree of relevance to those involved in the research;• The emergent theory can be testable with constructs that can be readily measured;• The number of variables brought together by one single case study, which goes beyond what most studies had revealed so far

Potential weaknesses

- The findings cannot be assessed in traditional measures of reliability and validity, rather their value results from their degree of credibility to those with an interest in the area;
- The outcomes and findings should not be viewed as objective truths, but as the result of an interaction between the researcher and the researched;
- The findings do not represent a complete theory of inter-firm collaboration and partnering;
- The process of randomization followed in order to have access to interviewees did not give the researcher the opportunity to control the useful amount of data to collect (as already mentioned in Section 1.7);
- Incomplete vision of OP's business network;
- The cross-sectional design of the research, which does not take into account the dynamic characteristics of relationships;
- The causal sequences involved between variables have not been considered;

6.7 Recommendations for future research

Recommendations for future research

- A longitudinal exploratory study of inter-firm collaboration and partnering in the automotive industry in Portugal;
- An investigation of the extended networks into other territories to study the influencing potential at those locations driven by the results at the dyadic level;
- The approach followed applied to suppliers with multiple customers;
- To test the framework introduced in Section 6.3.2 and in Section 6.3.3 using other firms, other national and cultural contexts, and other types of industry;
- The investigation of intra and inter-organisational relationships in multinational corporations;
- A multi-disciplinary approach to the study of business relationships;

One of the methodological limitations of this research mentioned in Section 6.6 is related to the absence of longitudinal analysis. Further research could be developed looking at OP and its PBDS at different stages in time, which would take into account the dynamic characteristics of relationships. In this case, a multi-method approach should be adopted in which in-depth interviews and non-participant observation could be useful sources of data gathering. However, for this type of research to be successful the permission from the head office of OP to conduct research would be essential for data gathering.

On the basis of a review of research into the multinational corporation (MNC), the researcher has found that MNC theory needs to extend its scope to recognise the interaction effects with other actors in their extended network. This study has confirmed this need. For example, in the automotive industry mergers and acquisitions (which is one of the strategies followed both by final assemblers and component manufacturers) was shown to have significant implications to the readjustments MNCs had to make in order to meet the organisational changes of their counter-parts. Moreover supply multinational networks established strategies and policies and organised their regional (e.g. in Spain) and local (in Portugal) marketing departments to adjust to the organisational structure of Opel. These adjustments ultimately effect business relationships. Research on intra and inter-organisational relationships in multinational corporations should include the mapping of relationships and processes within multinational corporations, which would enhance our knowledge of the organisational design of these types of corporations, including their structural and strategic concerns.

A multi-disciplinary approach to the study of business relationships can provide us with a better understanding of relationship management (Moller and Halinen, 1999). A multi-disciplinary approach would be, for instance, to use supply chain management (SCM), industrial marketing and purchasing approach (IMP), the multinational theory and the network approach. The researcher claims, based on what this thesis has demonstrated, that that these three academic research traditions have much to offer both theory and practice, but taken together they offer even more.

6.8 A final comment

This research has been conducted with the aim of extending the knowledge on inter-firm collaboration and partnering through an exploratory study of business relationships between a subsidiary and its Portuguese based direct suppliers. This thesis has successfully concluded that relationships are a mixture of collaborative and non-collaborative features to which a number of factors contribute. It is the strong belief of the researcher that the findings, concepts and frameworks that have been reached, explored and developed in this thesis and which have brought insights into the topics with theoretical, methodological and managerial implications, bring important contributions to scientific knowledge.

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Appendix 1

Questionnaire (original version)

Secção I

PERFIL DA EMPRESA

1. Denominação social :
2. Número de Empregados :
- Volume de Vendas (em milhares de contos)
- 1995 :
3. 1996 :
- 1997 :
- 1998 (Previsão) :
- Capital social
4. Nacional : %
- Estrangeiro : %

CARACTERÍSTICAS DA RELAÇÃO COMERCIAL COM A OEM

5. Descreva o(s) item(s) / classe(s) de produto(s) que a Empresa fornece a OEM
 - a)
 - b)
6. Ha quanto tempo é Fornecedor da OEM? (Indique com uma cruz à quadricula correspondente)
< 1 ano 1 2 anos 2 5 anos 5 8 anos >8 anos
- Qual a percentagem, relativamente ao Volume Total de Vendas
- 1995 : __%
7. 1996 : __%
- 1997 : __%
- O que fornece depende tecnologicamente de terceiros ?
(Indique com uma cruz à quadricula correspondente)
8. a) Sim Não Em parte
b) Em caso afirmativo
Pagamento de Royalties
Outras situações (Especifique) _____

9. Classifique o(s) item(s) / classe(s) de produto(s) que a Empresa fornece à OEM quanto a :
(Indique com uma cruz a quadricula correspondente)

a	Produto não standard (produto feito com base em especificações da OEM)	<input type="checkbox"/>
	Produto Standard	<input type="checkbox"/>
b	Manutenção, Reparação	<input type="checkbox"/>
	Parte do produto final da OEM	<input type="checkbox"/>
	Capital (equipamento)	<input type="checkbox"/>
c	Produto(s) sujeito a homologação	<input type="checkbox"/>
	Produto(s) não sujeito a homologação	<input type="checkbox"/>
d	Componente(s)	<input type="checkbox"/>
	Modulo(s)	<input type="checkbox"/>
	Sistema(s)	<input type="checkbox"/>
e	Peças de reposição	<input type="checkbox"/>
	Peças de primeiro equipamento	<input type="checkbox"/>

10. A Empresa tem acordos técnicos relativamente ao item(s) / classe(s) de produto(s) que fornece a OEM ?

a) Sim Não

- b) Em caso afirmativo, tem alternativas rapidas de fornecimento ?

Sim Não

11. A Empresa tem acordos comerciais relativamente ao item(s) / classe(s) de produto(s) que fornece a OEM ?

a) Sim Não

- b) Em caso afirmativo, tem alternativas rapidas de fornecimento ?

Sim Não

Secção II

CULTURA

Disponibilidade para a ajuda mutua

1.	Existe um espirito reciproco de disponibilidade para a ajuda mutua em caso de dificuldades	Concordo completamente	1 2 3 4 5 6 7	Discordo totalmente
2.	En que medida o Fornecedor proporciona assistência à OEM da qual não recebe uma compensação imediata ou explicita ?	Sempre	1 2 3 4 5 6 7	Nunca
3.	Em que medida o Fornecedor da prioridade à OEM em detrimento de outros Clientes, de forma a ajuda-lo ?	Sempre	1 2 3 4 5 6 7	Nunca

POLITICAS

Politica de Compras da OEM

4.	A OEM pratica um sistema de fornecedores preferenciais ?	Sim <input type="checkbox"/>	Não <input type="checkbox"/>	Não sei <input type="checkbox"/>
5.	A OEM pratica um sistema de fornecedor unico para componentes ?	Sim <input type="checkbox"/>	Não <input type="checkbox"/>	Não sei <input type="checkbox"/>
6.	E fornecedor unico da OEM para algum(s) componente(s) ?	Sim <input type="checkbox"/>	Não <input type="checkbox"/>	
7.	A Empresa fornece à OEM componentes em regime de exclusividade ?	Sim <input type="checkbox"/>	Não <input type="checkbox"/>	

Contratos e procedimentos

8.	Com que frequência a OEM utiliza uma “Carta de Intenções” para confirmar a decisão / escolha da sua Empresa como Fornecedor ?	Sempre	1 2 3 4 5 6 7	Nunca
9.	Com que frequência a OEM estabelece as condições de compra num contrato formal, detalhado ?	Sempre	1 2 3 4 5 6 7	Nunca
10.	Em que medida é que as condições de compra resultam de uma negociação mutuamente participada ?	Sempre	1 2 3 4 5 6 7	Nunca
11.	Em circunstâncias especiais com que frequência o Fornecedor dá início à produção com base em encomendas informais / verbais transmitidas pela OEM ?	Sempre	1 2 3 4 5 6 7	Nunca
12.	Com que frequência o Fornecedor estabelece com a OEM contratos sem um periodo de vigência predefinido ?	Sempre	1 2 3 4 5 6 7	Nunca
13.	Quando um concorrente propõe um preço mais baixo para um produto de igual qualidade, com que frequência a OEM opta automaticamente por esse fornecedor alternativo ou procura reduzir o preço de forma arbitrária ?	Sempre	1 2 3 4 5 6 7	Nunca
14.	Com que frequência existem acordos documentados aprovados pela Gestão de ambas as partes relativos à pratica de acções conjuntas ?	Sempre	1 2 3 4 5 6 7	Nunca
15.	Quando surgem situações inesperadas, em que medida as partes negociam novas condições de fornecimento num curto periodo de tempo ?	Sempre	1 2 3 4 5 6 7	Nunca

Partilha de riscos e beneficios

16.	Em que medida se partilham os riscos inerentes as flutuações dos preços das matérias - primas ?	Sempre	1 2 3 4 5 6 7	Nunca
17.	Quando surgem problemas de entregas, com que frequência a OEM aplica penalizações ?	Sempre	1 2 3 4 5 6 7	Nunca
18.	a) OEM e Fornecedor partilham beneficios resultantes de programas conjuntos de redução de custos ?	Sim <input type="checkbox"/>	Nao <input type="checkbox"/>	Nao se aplica <input type="checkbox"/>
	b) Em caso afirmativo, em que proporção ?	___ % OEM	___ % Fornecedor	
19.	Se o custo real de um projecto especifico for inferior ao custo estimado, em que medida é que so beneficios dai resultantes sao partilhados ?	Sempre	1 2 3 4 5 6 7	Nunca
20.	Em que medida é que os riscos resultantes de flutuações cambiais sao partilhados ?	Sempre	1 2 3 4 5 6 7	Nunca
21.	Com que frequência se fazem investimentos comparticipados em equipamentos ?	Sempre	1 2 3 4 5 6 7	Nunca
22.	Com que frequência se fazem investimentos comparticipados em ferramentas ?	Sempre	1 2 3 4 5 6 7	Nunca
23.	Em que medida se partilham custos relacionados com falhas do produto final ?	Sempre	1 2 3 4 5 6 7	Nunca

ESTRUTURA

Disponibilização de Pessoal

24.	Em caso de dificuldades específicas, com que frequência ha uma transferência de pessoal para resolver as mesmas ?	Sempre	1 2 3 4 5 6 7	Nunca
25.	Com que frequência ha transferência de pessoal para apoio técnico ?	Sempre	1 2 3 4 5 6 7	Nunca

Resolução de problemas

26.	Quando surgem falhas a nivel de desempenho em que medida OEM e Fornecedor colaboram para as resolver no minimo periodo de tempo ?	Sempre	1 2 3 4 5 6 7	Nunca
27.	Existe um processo acordado para a resolução de problemas ?	Sim <input type="checkbox"/>		Nao <input type="checkbox"/>

Equipas multi-functionais

28.	Com que frequência equipas com elementos de ambas as empresas identificam areas de melhoria continua ?	Sempre	1 2 3 4 5 6 7	Nunca
29.	Com que frequência equipas com elementos de ambas as empresas desenvolvem accoes de melhoria continua ?	Sempre	1 2 3 4 5 6 7	Nunca

Projectos de redução de custos

30.	Com que frequência ambas as partes implementam programas conjuntos de redução de custos ?	Sempre	1 2 3 4 5 6 7	Nunca
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TECNOLOGIA

Ligações informáticas

31.	As duas empresas têm software e hardware compatível para comunicar entre si.	Concordo completamente	1 2 3 4 5 6 7	Discordo totalmente
32.	Que tipo de Tecnologias de Informação (I.T.) o Fornecedor implementou com a OEM ? [Nota : indique com uma cruz a(s) quadricula(s) correspondente(s)]			
	a) Intercomunicação de dados por via electrónica (EDI – Electronic Data Interchange)	<input type="checkbox"/>		
	b) Pagamento de fornecimentos por via electrónica (EFT – Electronic Funds Transfer)	<input type="checkbox"/>		
	c) Correio electrónico	<input type="checkbox"/>		
	d) Colocação de encomendas por via electrónica	<input type="checkbox"/>		
	e) Intercomunicação de especificações por via electrónica (PDM – Product Data Management)	<input type="checkbox"/>		
	f) Videoconferência	<input type="checkbox"/>		
	g) Nenhuma das acima referidas	<input type="checkbox"/>		

Transferência de Tecnologia

33.	Quando a OEM dispõe de uma tecnologia nova e relevante para a sua actividade, com que frequência a disponibiliza ao Fornecedor ?	Sempre	1 2 3 4 5 6 7	Nunca
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Análise de Valor

34.	Em que medida o Fornecedor é envolvido em processos de Análise do Valor da OEM ?	Sempre	1 2 3 4 5 6 7	Nunca
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PROCESSOS DE GESTAO

Estabelecimento de Estratégias

35.	Em que medida ambas as partes estabelecem em conjunto estratégias visando aumentar a competitividade da OEM ?	Sempre	1 2 3 4 5 6 7	Nunca
36.	Em que medida ambas as partes estabelecem em conjunto estratégias visando aumentar a competitividade do Fornecedor ?	Sempre	1 2 3 4 5 6 7	Nunca

Planeamento

37.	Com que frequência o Fornecedor realiza reuniões com a OEM para discutir a nova geração de produtos ?	Sempre	1 2 3 4 5 6 7	Nunca
38.	Com que frequência a OEM discute o seus planos de Marketing com o Fornecedor ?	Sempre	1 2 3 4 5 6 7	Nunca
39.	Com que frequência o Fornecedor e a OEM discutem mudanças que possam afectar as relações futuras de ambas as partes ?	Sempre	1 2 3 4 5 6 7	Nunca
40.	Com que frequência o Fornecedor e a OEM planeiam em conjunto o « mix » do produto ?	Sempre	1 2 3 4 5 6 7	Nunca
41.	Com que frequência o Fornecedor e a OEM planeiam em conjunto os volumes de produção ?	Sempre	1 2 3 4 5 6 7	Nunca
42.	Com que frequência o Fornecedor e a OEM planeiam em conjunto “Target costs” ? (Nota : “Target Cost” corresponde a “Custo Objectivo”)	Sempre	1 2 3 4 5 6 7	Nunca

Intercambio de Informação

43.	Com que frequência o Fornecedor informa a OEM sobre estrutura total de custos do produto ?	Sempre	1 2 3 4 5 6 7	Nunca
44.	Com que frequência a OEM informa o Fornecedor sobre os seus objectivos em termos de custos ?	Sempre	1 2 3 4 5 6 7	Nunca
45.	Com que frequência a OEM faculta ao Fornecedor informação sobre os seus custos totais de compras ?	Sempre	1 2 3 4 5 6 7	Nunca
46.	Com que frequência o Fornecedor informa a OEM sobre as tendências de evolução dos custos dos materiais ?	Sempre	1 2 3 4 5 6 7	Nunca
47.	Com que frequência a OEM informa o Fornecedor sobre as tendencias do mercado relativamente às Vendas ?	Sempre	1 2 3 4 5 6 7	Nunca
48.	Com que frequência a OEM informa o Fornecedor sobre as conclusoes de acções de “benchmarking” em relação aos vossos concorrentes ?	Sempre	1 2 3 4 5 6 7	Nunca
49.	Com que frequência o Fornecedor faculta informação à OEM sobre o seus proprios fornecedores ?	Sempre	1 2 3 4 5 6 7	Nunca
50.	Com que frequência a OEM comunica ao Fornecedor as especificações do produto de uma forma standardizada ?	Sempre	1 2 3 4 5 6 7	Nunca
51.	Em que medida a OEM envia ao Fornecedor informação no formato acordado ?	Sempre	1 2 3 4 5 6 7	Nunca
52.	Com que frequência a OEM informa o Fornecedor das previsoes a longo prazo das suas necessidades de Fornecimento ?	Sempre	1 2 3 4 5 6 7	Nunca

Introdução de novos produtos

53.	Em que medida o Fornecedor é envolvido no Desenvolvimento do Produto da OEM ?	Sempre	1 2 3 4 5 6 7	Nunca
54.	Em que medida o Fornecedor é envolvido no design / concepção do produto da OEM ?	Sempre	1 2 3 4 5 6 7	Nunca
55.	Em que medida o Fornecedor é envolvido na prototipagem do produto da OEM ?	Sempre	1 2 3 4 5 6 7	Nunca

Envolvimento conjunto no processo de fabrico

56.	Em que medida o Fornecedor participa na definição dos processos de fabrico da OEM ?	Sempre	1 2 3 4 5 6 7	Nunca
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Esquemas de Avaliação

57.	A OEM avalia a capacidade de resposta do Fornecedor para ir de encontro às suas necessidades futuras ?	Sempre	1 2 3 4 5 6 7	Nunca
58.	Em que medida as avaliações feitas pela OEM se reflectem em melhorias de Desempenho do Fornecedor (nomeadamente qualidade, entrega, flexibilização) ?	Sempre	1 2 3 4 5 6 7	Nunca

Entregas e Pagamento

59.	O Fornecedor trabalha num sistema de entregas just-in-time ?	Sim <input type="checkbox"/>		Não <input type="checkbox"/>
60.	O Fornecedor efectua entregas directamente no posto de montagem ?	Sim <input type="checkbox"/>		Não <input type="checkbox"/>
61.	Em que medida o Fornecedor consegue corresponder a pedidos da OEM relativamente a alterações no volume das encomendas ?	Sempre	1 2 3 4 5 6 7	Nunca
62.	Em que medida o Fornecedor trabalha com a OEM num sistema de stocks à consignaço?	Sempre	1 2 3 4 5 6 7	Nunca
63.	A OEM tenta melhorar o relacionamento com o Fornecedor reduzindo os prazos de pagamento.	Concordo completamente	1 2 3 4 5 6 7	Discordo totalmente

Inspeção de Qualidade

64.	Com que frequência é que os fornecimentos são submetidos a inspeção de qualidade quando são recepcionados pela OEM ?	Sempre	1 2 3 4 5 6 7	Nunca
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“Melhoria do Fornecedor”

65.	A OEM implementa programas de “Melhoria de Fornecedores” para fomentar as capacidades do Fornecedor ?	Sim <input type="checkbox"/>		Não <input type="checkbox"/>
66.	Em que medida a OEM fornece apoio técnico ou tecnológico ao Fornecedor para a melhoria do produto ?	Sempre	1 2 3 4 5 6 7	Nunca
67.	Em que medida a OEM fornece apoio técnico ou tecnológico ao Fornecedor para a melhoria do processo ?	Sempre	1 2 3 4 5 6 7	Nunca
68.	Em que medida a OEM proporciona ao Fornecedor formação relativa a conceitos de Gestão?	Sempre	1 2 3 4 5 6 7	Nunca
69.	a) A OEM realiza reuniões de Fornecedores, de um ou mais dias, integradas em programa para “Melhoria de Fornecedores” (Correspondente a “Supplier day programmes”) ?	Sim <input type="checkbox"/>	Não <input type="checkbox"/>	Não sei <input type="checkbox"/>
	b) Em caso afirmativo, participa o Fornecedor nas reuniões realizadas pela OEM ?	Sim <input type="checkbox"/>	Não <input type="checkbox"/>	

RESULTADOS

Competitividade

65.	A relação Empresa – OEM melhorou a nossa posição relativa no mercado do sector.	Concordo completamente	1 2 3 4 5 6 7	Discordo totalmente
66.	A relação Empresa – OEM melhorou a nossa competitividade.	Concordo completamente	1 2 3 4 5 6 7	Discordo totalmente
67.	A OEM reduziu os seus custos de produção, com a relação Empresa – OEM.	Concordo completamente	1 2 3 4 5 6 7	Discordo totalmente
68.	A relação Empresa – OEM melhorou a nossa margem de lucro.	Concordo completamente	1 2 3 4 5 6 7	Discordo totalmente

Comentarios que gostasse de expressar relativamente a este questionario

Muito obrigada pela sua colaboração

EMPRESA :

NOME :

DEPARTAMENTO / FUNÇÕES :

OEM que esteve na base do preenchimento do questionario :

DATA :

Appendix 2

English version of the questions on inter-firm collaborative practices

Appendix 2: English version of the questions on inter-firm collaborative practices

Dimension	Characteristic	Indicator	Question No.	Question
COMMITMENT	Formal commitment	Type of contracts / Partnering agreements	14	Are there documented agreements (i.e. partnering) in place approved by both companies' top management concerning joint actions between you and the OEM?
		Type of contracts / Promise of buying	8	How much does the OEM use a letter of intent to confirm you as a decided/chosen supplier?
TRUST	An inherent trust	Type of contracts / Detailed purchasing clauses	9	How much does the OEM establish the purchasing conditions in a formal, detailed contract?
		Negotiation	10	How much are purchasing conditions a result of a two-way negotiation?
		Ordering procedure	11	Under special circumstances how much do you start production based on informal/verbal orders given by the OEM?
		Technology transfer	33	When the OEM has a new technology that is relevant to your business, how much is it made available to you?
		Quality inspection	64	How much are your products submitted to inspection when they arrive at the OEM's factory?

Continued on next page

Appendix 2: English version of the questions on inter-firm collaborative practices

Continued

Dimension	Characteristic	Indicator	Question No.	Question
TRUST	An inherent trust	Information disclosure from PBDS to VM / Total product cost structure	43	How much do you give the OEM information about your total product cost structure?
		Information disclosure from VM to PBDS / Product cost targets	44	How much does the OEM give you information about its product cost targets?
		Information disclosure from PBDS to VM / Material costs	46	How much do you give the OEM information about material cost trends?
		Information disclosure from VM to PBDS / Market sales trends	47	How much does the OEM give you information about market sales trends?
		Information disclosure from VM to PBDS / Benchmarking results of suppliers' competitors	48	How much does the OEM give you benchmarking results concerning your competitors?
		Information disclosure from PBDS to VM / About their suppliers	49	How much do you give the OEM information about your suppliers?

Continued on next page

Appendix 2: English version of the questions on inter-firm collaborative practices

Continued

Dimension	Characteristic	Indicator	Question	
WIN-WIN		Sharing risks concerning Fluctuations in raw materials' prices	16 How much are risks of raw material commodity prices fluctuations shared?	
		Sharing of risks	17 Penalty clauses due to delivery problems	17 When delivery problems occur, how much does the OEM apply penalties?
			20 Sharing risks concerning Fluctuations in currency	20 How much are benefits or risks that are a result of currency movements shared?
		21 Joint investments in equipment	21 How much are joint investments in equipment made?	
		22 Joint investments in tools	22 How much are joint investments in tools made?	
		23 Sharing risks concerning Defect VM's final products	23 How much do you share costs related with defect VM's final products?	
	Sharing of benefits	19	19 If the estimated cost of a specific project is higher than the real cost, how much are the resulting savings shared?	
		70	70 Doing business with the OEM has improved our relative position in the market sector	
	Increase in joint competitiveness	71	71 Doing business with the OEM has improved our competitiveness	
		72	72 Doing business with the OEM has reduced the OEM's product cost	
		73	73 Doing business with the OEM has reduced supplier's margin	

Continued on next page

Appendix 2: English version of the questions on inter-firm collaborative practices

Continued

Dimension	Characteristic	Indicator	Question No.	Question
LONG-TERM ORIENTATION	Expectation of continuity	Type of contracts / Length of contracts	12	How much do you get contracts with a specified length?
		Substitutability of suppliers	13	When a competitor offers a lower price for a product of equal quality, how much does the OEM automatically re-source the business or engage in arbitrary bargaining?
	-	VM's information disclosure on long-term forecasting	52	How much does the OEM provide you with long-range forecasts of supply requirements?
		Assessment schemes / Capability of PBDS meet VM's future needs	57	How much does the OEM evaluate your ability to meet its future needs?
	Continuous improvement focus	Multi-functional teams / Identification of areas for improvement	28	How much do teams with people from both companies identify areas of continuous improvement opportunities?
		Multi-functional teams / Follow up of areas for improvement	29	How much do teams with people from both companies follow up areas of continuous improvement opportunities?
		Cost reduction projects	30	How much do you and the OEM jointly implement cost reduction projects?

Continued on next page

Appendix 2: English version of the questions on inter-firm collaborative practices

Continued

Dimension	Characteristic	Indicator	Question No.	Question
LONG-TERM ORIENTATION	Continuous improvement focus	Supplier's improvement as a result of VM's assessment schemes	58	How much do the assessment schemes established by the OEM build in automatic improvements in key performance indicators (e.g. quality
		Payment performance	63	The OEM tried to improve relationships with suppliers by guaranteeing speedy payment
		Supplier development programme	66	How much does the OEM provide you with technical or technological support to improve your product?
			67	How much does the OEM provide you with technical or technological support to improve your process?
			68	How much does the OEM provide you with training regarding management concepts?

Continued on next page

Appendix 2: English version of the questions on inter-firm collaborative practices

Continued

Dimension	Characteristic	Indicator	Question No.	Question	
COORDINATION	Joint strategy setting		35	How much do you and the OEM jointly develop strategies aimed at improving the OEM's competitiveness?	
			36	How much do you and the OEM jointly develop strategies aimed at improving your competitiveness?	
			37	How much do you have meetings with the OEM to discuss the next product generation?	
	Joint planning	Joint adjustments to marketplace conditions		38	How much does the OEM discuss its marketing plans with you?
				39	How much do you and the OEM jointly discuss business changes that can affect your relationship?
		Planning product mix	40	How much do you and the OEM jointly plan production mix?	
		Management of capacity	41	How much do you and the OEM jointly plan production volumes?	
		Cost reduction projects	42	How much do you and the OEM jointly plan target costs?	
		Joint value analysis	34	How much are you involved in the OEM's value analysis?	
	Joint R&D	Joint product development		53	How much are you involved in the OEM's product development?
		Joint design		54	How much are you involved in the OEM's product design at the concept stage?
				55	How much are you involved in the OEM's prototyping?

Continued on next page

Appendix 2: English version of the questions on inter-firm collaborative practices

Continued

Dimension	Characteristic	Indicator	Question No.	Question
COORDINATION	Two-way communication		31	We have compatible software and hardware to communicate with each other
			50	How much does the OEM communicate the product specifications in a standardized form?
			51	How much does the OEM send information in an agreed format?
JOINT PROBLEM SOLVING	Willingness to help one another		1	There is a reciprocal spirit of willingness to help one another in the case of difficulties
			2	How much do you provide the OEM with assistance for which there is no immediate or explicit compensation?
			3	How much do you give the OEM priority over other buyers in an effort to help them out?
	Personnel allocation		24	In case of specific difficulties, how much is there a transfer of personnel to solve those difficulties?
			25	How much is there a transfer of personnel for purposes of technical support?
			26	When performance problems arise, how much do you work with the OEM to solve them in the minimum possible time?

Continued on next page

Table 5-3: English version of the questions on inter-firm collaborative practices

Continued

Dimension	Characteristic	Indicator	Question No. .	Question
FLEXIBILITY	Two-way flexibility	Flexibility in agreements	15	When an unexpected situation arises, how much do the parties negotiate new conditions in a minimum period of time?
		Flexibility in delivery	61	How much can you meet the OEM's demands for volume changes?

Appendix 3

Letter of invitation

Appendix 3

Letter of Invitation (original version)

Maria de Lurdes Veludo

University of Glasgow
Management Studies Department
Glasgow, Scotland
Mob: (00 351) (0) 91 784 35 80

Code:

At: "Titulo" "Nome de familia"/ Empresa

Caro "Titulo" "Nome de familia"

Encontro-me na Universidade de Glasgow, Departamento de Management Studies, a desenvolver um projecto de pesquisa para obtenção de grau de doutoramento na area da relação cliente-fornecedor na industria automovel em Portugal. Este projecto visa explorar a natureza das relações entre Opel Portugal e seus fornecedores directos localizados em Portugal bem como os factores que influenciam estes relacionamentos. Varios estudos se tem debruçado sobre o tema a que me proponho. No entanto nenhum tem dado suficiente enfase às relações que envolvem subsidiarias de empresas multinacionais. O projecto certamente contribuirá para uma melhor compreensão do tema e trará aos seus participantes oportunidades de reflexão e melhoria.

O processo de recolha e tratamento de dados decorrerá em 2 etapas principais: uma primeira com base num questionario que será distribuido por correio e uma segunda com base em entrevistas. A pessoa habilitada a responder ao questionario deverá satisfazer os seguintes criterios: (a) servir de interface com o cliente, (b) conhecer em profundidade a relação cliente-fornecedor e/ou (c) ter um conhecimento profundo do cliente e da empresa. Durante o periodo das entrevistas, e de forma a ter uma visão alargada das actividades desenvolvidas entre fornecedor e cliente, seria importante contactar com tecnicos com diferentes funções (tais como marketing, area comercial, logistica, produção). O tempo previsto de cada entrevista será de 2 horas aproximadamente. Entrevistas terão lugar junto do cliente de forma a obter a perspectiva deste.

Os dados, bem como a fonte de informação, permanecerão confidenciais. Gostaria que a sua empresa participasse no estudo que muito resumidamente apresento, sem a qual não poderei atingir os objectivos a que me proponho. Inclui um envelope devidamente selado de forma a que rapidamente possa responder a este pedido. Recebendo a sua resposta contacta-lo-ei por telefone para me apresentar pessoalmente e discutir pormenores do processo de recolha e tratamento de informação. Se entretanto tiver quaisquer questões ou comentarios não exite em me contactar.

Cordialmente

Letter of Invitation

(English version)

Maria de Lurdes Veludo

**University of Glasgow
Management Studies Department
Glasgow, Scotland
Mob: (00 351) (0) 91 784 35 80**

Code:

At: "Title" "Last name" / Company

Dear "Title" "Last name"

I am developing a research project at the University of Glasgow, Management Studies Department, on the buyer-supplier relationships in the automotive industry in Portugal in order to obtain a PhD certificate. This research aims to explore both the nature of business relationships between Opel Portugal and its Portuguese based direct suppliers, and the influencing factors of these relationships. Many studies have been developed on the topic but most of them do not take into account the ownership ties of companies and particularly the context of a subsidiary of a multinational corporation. Ultimately the research aims to highlight opportunities for both parties to improve their ability to manage and maintain their relationships.

The data gathering and analysis process will include two main stages: one where quantitative evidence will be gathered through a self-administered mailed questionnaire sent to suppliers and a second based on interviews of suppliers and Opel Portugal. Participants should fit the following criteria: (a) should represent the buyer-supplier interface, (b) should know in depth the buyer-supplier interface, and (c) would have a profound knowledge of the company and Opel as a customer. In what concerns the interviews it is interesting for this project to have a broad spectrum of views from a number of different functions. Each interview should last 2h approximately. Opel Portugal will also be undertaking the interview process, providing information from the buyer's perspective.

The data collected and the data source will be kept strictly confidential. I would like to include your company as a participant, without which I may not reach the objectives I want to reach. I would very much appreciate a reply to this request stating on the enclosed form whether or not you wish to be included in this project. I have included a stamped addressed envelope. On receiving your reply I shall telephone you to discuss the research process itself. In the meantime if you have any questions or comments please do not hesitate to contact me.

Yours sincerely

Appendix 4

Topic outline

Appendix 4

Topic outline

1. Company profile

1.1. Size

1.1.1. Number of employees

1.1.2. Gross annual sales

1.2. The main business activity

(referred to the standard industrial classification)

1.3. Type of products (Description) manufactured by the Company

1.4. Type of organisation (Enterprise, Subsidiary, Business Unit, Other)

1.5. The ownership of the organisation (% of National Capital Investment, % of Foreign Capital Investment)

1.6. Suppliers' profile

1.6.1. Total number of suppliers

1.6.2. Number of active suppliers

1.6.3. Trend in the number of suppliers

1.6.4. Number of suppliers per : main purchased products or critical inputs or representative commodities

1.6.5. The percentage of a Supplier's output in terms of main purchased products or critical inputs or representative commodities

1.6.6. Location of Suppliers (International, National, Regional, Local)

1.6.7. Subcontracting (Yes, No)

1.7. Customers' profile

1.7.1. Sector of Customers

1.7.2. Location of Customers

1.7.3. Type of end Products (Standardized, Customized,...)

2. Commercial practices

2.1. Contracts

- 2.1.1. Types of contracts (written contracts, ongoing contracts, ...)**
- 2.1.2. Length of contracts (annual contracts, ...)**
- 2.1.3. Contractualism (contingencies)**
- 2.1.4. Project length of trading (the number of years Buyer and Supplier have been working together)**
- 2.1.5. Price**
 - 2.1.5.1. Price Negotiation**
 - 2.1.5.2. Price Reviews**
 - 2.1.5.2.1. The methods**
 - 2.1.5.2.2. The frequency**
- 2.1.6. Cost Management**
 - 2.1.6.1. Cost negotiation**
 - 2.1.6.2. Cost reduction projects**
- 2.1.7. Risk**
 - 2.1.7.1. Risk sharing**
 - 2.1.7.2. Opportunistic behaviour**
 - 2.1.7.2.1. Abuse of Trust**
 - 2.1.7.2.2. Post-contractual opportunism**
- 2.1.8. Sharing of mutual benefits**

2.2. Negotiation practices

- 2.2.1. Ordering procedure**
- 2.2.2. Mode of negotiation**
- 2.2.3. Purchasing responsibility**

2.3. Communication

- 2.3.1. Communication channels**
 - 2.3.1.1. Formal channels**
 - 2.3.1.2. Informal channels**
- 2.3.2. Intensity of communication**
- 2.3.3. Information exchange**
- 2.3.4. Site visits**
- 2.3.5. Multi-functional teams**
- 2.3.6. Multi-level relationships**
- 2.3.7. Conflict resolution and problem solving schemes**
- 2.3.8. Computer linkages**
- 2.3.9. Ease of communication**
- 2.3.10. Using the same paperwork system**

2.4. Power

2.5. Trust

3. Market context

3.1. Customer market

3.1.1. Uncertainty in demand fluctuations

3.1.2. Demand growth

3.2. Supplier market

3.2.1. Inter-supplier competition

3.2.2. Supplier assessment schemes

3.2.2.1. Supplier performance reviews

3.2.3. Supplier recognition

3.2.3.1. Ranking of suppliers

3.2.3.2. Performance awards

3.2.4. Supplier selection

3.2.4.1. Basis of sourcing decisions

3.2.4.2. Frequency of changing suppliers

4. Corporate strategy

4.1. Top management commitment

4.2. Establishment of market niches

4.3. Investment strategy

4.4. Policy statement on Purchasing

4.5. The trade-off between growth and short-term profitability

5. Operational practices

5.1. Management of capacity

- 5.1.1. Production planning**
- 5.1.2. Use of production capacity**
- 5.1.3. Investment on capacity**

5.2. Delivery

- 5.2.1. JIT**
- 5.2.2. Shared transport**

5.3. Flexibility

- 5.3.1. Flexibility with production**
- 5.3.2. Flexibility with delivery**
- 5.3.3. Flexibility in attitudes**

5.4. Quality

- 5.4.1. Quality approvals**
- 5.4.2. Continuous improvement schemes**
 - 5.4.2.1. Improvement in payment performance**
 - 5.4.2.2. Working to common quality standards**
 - 5.4.2.3. Value Chain Analysis**

5.5. Asset specificity

- 5.5.1. Human asset specificity**
- 5.5.2. Site asset specificity**
- 5.5.3. Dedicated assets**

5.6. New product introduction

- 5.6.1. Ownership of intellectual property**
- 5.6.2. Product development and design**
 - 5.6.2.1. Supplier involvement**
 - 5.6.2.2. Intensity of technical support given by buyers to suppliers**
 - 5.6.2.3. Technology sharing**
 - 5.6.2.4. Technology transfer**
- 5.6.3. Innovation**
 - 5.6.3.1. Shortening product life cycle**

5.7. Technological levels of the products

- 5.7.1. High value of material traded ; critical inputs**

5.8. Supply Management

5.8.1. Supplier development : Results-oriented Supplier Development and Process-oriented Supplier development

5.8.1.1. Training of the Supplier's personnel

5.8.1.2. Investment in the Supplier's operation by the buying firm

5.8.1.3. Use of a supplier certification programme

5.8.1.4. Buyer offering specific assistance in various areas

5.8.2. Level of pressure

6. Planned relationship improvement actions

7. Government Policy and legal framework

8. Financial and employment links

8.1. The nature of contractual relations

8.1.1. External contracts between the firm and its banks and other employees

Appendix 5

Codified interviewees' statements (sample)

Appendix 5

Codified Interviewees' Statements (Sample)

Activities

Production, planning, product development and process engineering are the areas that require higher levels of collaboration between the buyer and the supplier. It is not difficult to find higher levels of collaboration in regard to the quality area.

Luis Barbosa, Procurement Department, Ford

A firm supplying an OEM or a final assembler as a first tier supplier needs to perform a certain number of activities such as process engineering, product engineering, quality management, logistics and after sales services. Production is only a small part of what the final assembler is looking for.

Fernando Cerqueira, Production Manager, Monte Meão

Communication

A joint work program is not something that can be imposed from the top. Firstly and ultimately, people need to know how to communicate.

Valente, Managing Director, Iber-Oleff

Communication and the degree of formality in relationships

The informality between buyer and supplier helps both sides to get closer.

Pedro de Carvalho, Director of the Commercial Department, M.C.G.

Communication and Intra-Organisational Relationships of Buyer

One challenge brought by globalisation and supply companies working in a global environment concerns communication inside the OEM.

Mario Silva, Managing Director, Stone Circuitos Impressos Lda.

Corporate Strategy of the Buyer

Corporate Strategy of the Buyer, in terms of global sourcing, reduction of the direct supply base, purchasing policies and quality requirements, is an important factor that influences buyer-supplier relationships.

Jorge Calado, Director of Commercial Department, SSGP

A serious desire to decrease costs ultimately will influence the levels of collaboration between the buyer and the supplier.

João Candeias, Managing Director, Rieter

The final objective of a buyer is to increase its competitiveness. The sharing of resources and a serious desire to decrease costs are two ways for the buyer to reach that objective.

Luis Barbosa, Procurement Department, Ford.

Culture

The influence of corporate culture may be stronger than the influence of individual culture, but the opposite is also true.

Rui Pinho, Managing Director, Ficocables

Corporate Culture, Individual Culture and Power

The corporate culture is an important factor not to be ignored, but at its basis are individuals who apply and recreate that culture. That's why it is important to understand the power relations within organisations, and of Opel in this case. The bigger the organisation is, the more difficult it becomes to understand the power relations within it.

Valente, Managing Director, Iber-Oleff

Individual Culture

The individual culture may influence the strategy of a company. Individuals condition organisations and are conditioned by them.

Rui Pinho, Managing Director, Ficocables

National Culture

Portuguese have difficulties in working in teams. Portuguese behaviour makes the development of trust difficult. As a buyer, I negotiate differently with other people from different cultures. Portuguese people strongly invest in personal relationships.

Rui Correia, Director of the Purchasing Department, Mitsubishi Trucks Europe

Appendix 6

Individual statements (sample)

Appendix 6

Individual Statements

IA – Director of the Commercial Department, Company A

- IA.1** There is a central purchasing department in Opel Germany
- IA.2** The purchasing departments of Opel Spain and Opel Portugal are smaller than the central purchasing department in Opel Germany.
- IA.3** Requests for quotations come directly from Opel in Germany.
- IA.4** The purchasing department of Opel Spain works as an intermediate between Portugal and Opel Germany.
- IA.5** The globalisation strategy of Opel applies only to some systems, as many companies cannot afford the high costs of developing certain components.
- IA.6** The reduction of the number of suppliers is one important point in the strategic agenda of Opel.
- IA.7** Opel is trying to increase the number of modules and systems purchased.
- IA.8** The timing of the supply contract is clear, although it may be renewed.
- IA.9** Contracts may include penalty clauses.
- IA.10** Problems occur in Opel because of the lack of synergy among departments and units.

- IA.11** Opel tries to optimise its performance at the supplier's expense. Opel is trying to overcome problems that arise by decreasing prices of purchased goods and services, instead of optimising the internal processes and paying careful attention to engineering change management.
- IA.12** There is evidence that departments operate in isolation and that cross-functional teams do not occur.
- IA.13** Multi-functional teams do not exist.
- IA.14** If a defective part is found during the manufacturing process, *the part is sent by Opel Portugal to the Spanish units for analysis. The results are then sent to the supplier who makes the required changes.*
- IA.15** As I said previously, requests for quotations are received directly from Germany. This company then sends the quotations to Opel Spain in order to avoid conflicts with the purchasing department in Spain.
- IA.16** Delivery is a critical issue for Opel Portugal. Our company keeps stocks correspondent to a few days and delivery is made accordingly to Opel Portugal ordering.
- IA.17** Opel is very bureaucratic and communicating with the many units is not easy.
- IA.18** There is an atmosphere of pressure over the supplier, which can be felt with the penalties that are applied when the amount of items that have been sent to Opel Portugal is higher than the quantity that has been ordered.
- IA.19** This company can be replaced by another competitor, in spite of investments in tools that have already been made.
- IA.20** Suppliers are charged for the costs of defective items, if they are responsible for the errors.

- IA.21 This company has an agent in Germany in order to be closer to the center of purchasing decisions of Opel. This was an attempt to increase the probability of establishing first contact and to initiate a negotiation process.
- IA.22 It is difficult to establish more than two shifts because of the reaction of the employees. At the basis of this difficulty are cultural characteristics. This difficulty impacts on the firm's capacity in answering buyers' demands when unexpected situations arise. It is flexibility that is at a stake.
- IA.23 The technology that this company uses is known in the market, which means that in our case it is not an important influencing factor.
- IA.24 The knowledge of the German language facilitates communication.
- IA.25 The domestic and international competition within this type of industry is strong. The higher the competition, the less power the supplier has to negotiate with the buyer.

IB – Account Manager for Opel, Company B

- IB.1 Supplier selection criteria is very complex and embraces several factors.
- IB.2 There is no mutual negotiation between suppliers and Opel.
- IB.3 Competitive bidding is a current practice.
- IB.4 There are signs of conflicting interests between Opel's departments in terms of cost management objectives.
- IB.5 Opel falls victim to corporate politics.
- IB.6 There are no multi-functional teams working together.

- IB.7** By the time a strong link between people begins to develop, the representative of the buying company can be replaced.
- IB.8** Opel Portugal uses historical data, not for establishing a dialogue with mutual goals in mind, but for exerting pressure on the supplier, ensuring compliance with its own interests.
- IB.9** The sequence line, which is more demanding than JIT, is practised.
- IB.10** Opel can change to an alternative supplier if this one offers a lower price. Opel may resource the business or pressure the actual supplier to lower its price when a competitor offers a lower price for a product of equal quality.
- IB.11** Opel does not share risks concerning raw material commodity prices fluctuations, inflation or increase in salaries.
- IB.12** Substitutability of suppliers is a current practice.
- IB.13** The evaluation scheme applied to the purchaser professional within Opel, spoils the relationships between parties. It is based on the profit margins that the purchaser obtains, which ultimately influences the negotiation process.

IC – Managing Director, Company C

- IC.1** When the decision to buy globally was taken, the regional purchasing departments became part of a chain with a low added value.
- IC.2** A centralised negotiation process for price and other contractual conditions is located in Germany.

- IC.3** The buyer does not choose this company for its expertise in manufacturing a product. Instead, it is the service that this company provides to the buyer that has an important weight on its decision. This company is more a service provider than a product provider.
- IC.4** There are written contracts for the life of the product.
- IC.5** If there are no quality problems, the company and Opel Portugal may not have contact for weeks.
- IC.6** Opel keeps improving the products' life. Opel expects suggestions for improvement and decreasing costs.
- IC.7** The Group to which this company belongs, establishes intensive collaborative relationships with Opel in Germany at the stage of new product development.
- IC.8** Joint investments in R&D can be made by both parties for new product development.
- IC.9** Opel is seen as an European manufacturer with a European style. Opel knows how to give a national and regional brand image to the vehicle.
- IC.10** The management style of Germans is characterised by a concern for competitiveness based on technology.
- IC.11** Quarrelsome buying behaviour may exist, but different buyers show different attitudes. Also, buyers at different times show different behaviours.
- IC.12** Germans do not have a tradition of establishing collaborative relationships.
- IC.13** To be part of an international German Group is an important competitive advantage for this unit, in comparison to other competitors that stand on their own or have not formed strategic alliances.

- IC.14** International companies have established themselves in Portugal in different ways. Some big companies preferred to start from scratch and build new plants. Some other companies bought plants located in Portugal in order to eliminate the competition. Finally, a few preferred to buy Portuguese plants in order to keep an existent human structure
- IC.15** The location of the decision center of this unit is in Germany. This makes contacts with Opel in Germany much easier and quicker.
- IC.16** The managing director of this unit is Portuguese. He is quite autonomous in making decisions in what concerns the unit's operations.
- IC.17** Opel expects suggestions on how to decrease the costs of the component parts.
- IC.18** Germans do not believe in other's opinions when situations don't follow the standards they are used to. Germans see themselves as more capable of solving situations than Portuguese workers, and this fact makes it difficult for them to change their point of view. The Portuguese find that the perceptions Germans have about them is unfair. Everyday life shows that there are situations where the Portuguese present better ways of solving problems than the Germans do. Portuguese feel bad when Germans don't accept their point of view, especially when there are signs that Germans' decisions will cause faults. The Portuguese worker is willing to accept difficulties and challenges. It is more capable of clearing obstacles than the German worker. The Portuguese worker shows flexibility, a capacity to accept change and a capacity to adapt to different environments. In a changing world, the Portuguese worker can easily adapt to different automobile manufacturers. On the contrary, Germans are more attached to their principles and discipline and that makes change difficult for them. The Germans follow a pattern in the relationships they establish and by doing so they deal with everyone in the same way.
- IC.19** Opel works according to rules and procedures. This fact has a high influence on the way Opel relates with its suppliers and on the level of social links it establishes with them.

ID – Director of the Commercial Department, Company D

- ID.1** The negotiation process is developed between Opel Spain and the Iberic Commercial Division.
- ID.2** A multi-functional team was jointly created with Opel Portugal with the objective of improving processes and achieving cost reductions. From that initial joint work good results were obtained. After some time Opel Portugal's team was stopped from abroad.
- ID.3** Opel Portugal makes forecasts of production volumes and this company follows those production plans.
- ID.4** Target costs are not jointly discussed. Instead, they are imposed.
- ID.5** Opel Portugal visits the company frequently.
- ID.6** Communication is established via Electronic Data Interchange (EDI).
- ID.7** Opel Portugal visits the company frequently
- ID.8** This company has to keep stocks at the request of Opel Portugal. Besides, we do not know exactly what the demand will be. JIT is not practised with Opel Portugal as the demand size is too small to make the necessary investment a profitable one.
- ID.9** In certain situations this company cannot decrease prices, but Opel keeps insisting. Opel pressures suppliers to decrease prices to limits the supplier cannot afford. Opel uses a dual source purchasing strategy to pressure the supplier.
- ID.10** The Group to which the company belongs to is chosen at the start of the development of a new project. Prototypes are tested at the R&D centre of the Group.
- ID.11** Opel is a difficult customer. They establish a climate in which discussion has to happen. They may know that they made an error, but their first reaction is to reject the possibility that they may have caused the problem.

- ID.12** Opel may search for potential suppliers in the middle of a contract, even in situations where the company has made specific investments for Opel.
- ID.13** It is not possible to expect continuity in a relationship when Opel does not give any kind of guarantee of future business, especially in those situations where specific investments have to be made.
- ID.14** Opel is a strategic customer for this company, in spite of all the difficulties that are felt. Opel means GM which is a very big world-wide manufacturer.
- ID.15** Computer linkages facilitate the communication between buyer and supplier.

IE – Director of the commercial department, Company E

- IE.1** Negotiations are established between Opel Spain and the commercial department of this company for the whole region of Spain and Portugal.
- IE.2** Competition is based on price and capability for R&D. Price is a very important criterion in supplier selection. However, Opel is willing to pay the supplier more for the development of the product.
- IE.3** Opel increasingly looks not only for a recyclable product, but also for one that has been recycled.
- IE.4** There is a contract established between parties at the stage of development of the product. This contract is not a guarantee that the Group will manufacture all the items Opel will need. Besides this type of contract there is also a supply contract.
- IE.5** The supplier has to adapt to the planning established by Opel Portugal.
- IE.6** Relationships between Opel and its suppliers are often based on documents and written procedures. I find it rigid and quite unnecessary taking into account the huge effort they require in terms of discipline and organisation methods.

- IE.7** Personal relations with all the divisions of Opel are not intensive. Relationships are quite impersonal. The turnover of staff, frequently in Opel Portugal, does not help the establishment of strong links between people.
- IE.8** The local warehouses have safety stocks. In those warehouses pre-assembly is practised and a sequence line system is in place. It is very rare to have stocks under a minimum, as the information flows are almost continuous and are based on the use of information technology.
- IE.9** It is very difficult to avoid ways in which contracts are written by Opel as the buyer exerts high pressure on the supplier. Contracts are written and imposed by Opel in such a way that suppliers will conform to them, with very little leeway given by Opel.
- IE.10** The group to which this company belongs to is involved with Opel at an early stage of the development of a new product. R&D occurs in Germany.
- IE.11** Members of staff in the different units of Opel show different behaviour.
- IE.12** Opel is a very good example of how new methods and new concepts take a long time to be adopted.
- IE.13** The capacity for innovation and new product development are important factors in attracting a customer such as Opel.
- IE.14** The characteristics of the manufacturing process have an impact on the supplier's flexibility to answer the buyer's needs. For instance, in the manufacture of window glass, either the production cycles or the stoppages from one model to another is long. As flexibility is low, it is rare to find two plants producing the same type.
- IE.15** The type of item impacts on the organisation of the internal production and on the distribution of production among the plants that belong to the same Group.
- IE.16** The type of item has an influence on flexibility.

- IE.17** The type of item entails different levels of collaboration at different stages of the product development. The glass manufacturer has to be involved from the first stage.
- IE.18** A customised product requires a closer working relationship between buyer and supplier.
- IE.19** There is a high level of dispersion in terms of contracts, and difficulties in establishing close contracts are evident.
- IE.20** Opel is a very bureaucratic company which makes communication a difficult process.
- IE.21** The trends in the automotive industry in regard to an increasing demand for modules and systems solution and rationalisation of the supply base, will affect a firm's position in the manufacturing chain. For instance, the supplier of window glass will move from first tier to second tier. This new positioning will demand strong collaboration with the supplier of doors.
- IE.22** The influence of the European Union policy on environmental aspects has repercussions on the relationship between Opel and its suppliers, as the automotive manufacturer pressures suppliers to use recyclable items.
- IE.23** The pressure exerted by Opel to decrease prices while maintaining high levels of quality, leaves suppliers in difficult conditions. It is a hard situation for suppliers to sustain and especially because Opel is not willing to share risks or assist suppliers in their product and process development in order to achieve the lowering of prices it demands from them.

IF – Managing Director, Company F

- IF.1** Our capacity to solve technical problems is an important factor in attracting, and gaining the trust of, customers such as Opel.
- IF.2** The behaviour of each customer varies greatly. There is a Fiat culture, and there is an Opel culture. For instance, Italians such as Fiat want to have a competitive vehicle in terms of price. Opel wants to offer another type of vehicle. This will have effects in terms of types of components and requirements. Another difference can be seen in terms of the willingness to pay for R&D. German OEMs can pay high amounts for it.
- IF.3** Portuguese culture can be characterised by a lack of quality management and difficulties with on time delivery.

IG – Managing Director, Company G

- IG.1** There are several levels of power within Opel which are not easy to identify. They influence not only the performance of the company but also the development of buyer-supplier relationships.

B1 – Purchasing Department, Opel Portugal

- B1.1** There is a high degree of autonomy in the decision making process with regard to GM in USA;
- B1.2** The autonomy of GME in the decision making process with regard to GM in USA can be explained by Opel's dimension in Europe, the reputation it has acquired, and the results obtained in previous years.
- B1.3** The structure of GME is characterised by a combined centralised and decentralised form of organisation.

- B1.4 A central purchasing division for Europe is located in Germany.
- B1.5 Internal activities and functions that are allocated to the different plants in Europe interact with each other.
- B1.6 The concept of global sourcing started to be applied by GME.
- B1.7 Price, delivery and quality are important criteria followed in the selection of suppliers.
- B1.8 Important resources of GME are concentrated in Germany.
- B1.9 There are training programs for the technical teams of all the units in Europe and some of them take place in Germany.
- B1.10 In Opel Portugal the degree of autonomy in the decision making process is low.

B2 – Purchasing Department, Opel Portugal

- B2.1 It is Opel Germany who makes the decision or who is able to supply Opel.
- B2.2 There is a concern for the environment within GME. The environmental policy that is applied affects supplier selection and product specifications.
- B2.3 Quality requirements have become more stringent.
- B2.4 There are training programs for the technical teams of all the units in Europe and some of them take place in Germany. The technical teams for the several units of Opel start their training program at Opel's development technical centres in Germany. A second part of the training program takes place in each plant, this time covering all operators.
- B2.5 Videoconference is used for training and for internal communication purposes. I find that it slows down the implementation of certain processes.

- B2.6 Computer linkages are established with Opel Spain and Opel Germany and also with suppliers.
- B2.7 There are supplier development programs. One supplier located in Opel has been chosen to be part of one of these programs.
- B2.8 Opel Portugal does not have much freedom in making most of decisions.
- B2.9 There has been an obstacle to the acceptance of supplier's involvement. However, recently, there have been attempts to change this state of affairs. There are signs of change in terms of supplier involvement in the development of the product, but not in terms of the improvement of internal processes of the organisation.