EXAMINATION OF THE LEVEL OF ADOPTION OF OPPORTUNISTIC BEHAVIORS IN THE SUPPLY CHAIN IN THE FOOD SECTOR: RELATIONSHIPS BETWEEN MULTIPLE RETAILERS AND SUPPLIERS

PhD Thesis
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EXAMINATION OF THE LEVEL OF ADOPTION OF OPPORTUNISTIC BEHAVIORS IN THE SUPPLY CHAIN IN THE FOOD SECTOR: RELATIONSHIPS BETWEEN MULTIPLE RETAILERS AND SUPPLIERS

(Τίτλος στην Ελληνική: Εξέταση του βαθμού υιοθέτησης οπορτονιστικών συμπεριφορών στην εφοδιαστική αλυσίδα στον κλάδο τροφίμων: Σχέσεις επιχειρήσεων λιανικής πώλησης και προμηθευτών)

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PhD Thesis

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Georgios Maglaras

April, 2013
ABSTRACT

Purpose:
Retailing in the food sector is characterized by increased concentration. This resulted to the creation of multiple retailing companies with high market power that dominate supply chains. These organizations contributed to the increased competitiveness of supply chains according to consumers’ preferences. Nevertheless, there is a raising concern about multiple retailers’ practicing in their relationships with suppliers. Indications of retailers’ questionable behaviors have been reported. In some cases, multiple retailers may behave opportunistically against their suppliers. This could negatively impact suppliers’ operations. However, the concern was mainly raised because this kind of practicing could negatively affect the operations of the whole supply chain in the food sector, its competitiveness and in the long term even consumers’ welfare. Even though the issue is of high importance no studies have attempted to examine it empirically in the past. The aim of this study is to investigate potential multiple retailers’ opportunism in the supply chain in the Greek food sector. For this reason a conceptual model describing the creation of multiple retailers’ opportunism was developed.

Research approach:
A combination of qualitative and quantitative research methods was applied in order to confirm the conceptual model. In-depth interviews with practitioners preliminarily confirmed the model and gave valuable contextual specific information. A large scale survey in a sample of 398 food suppliers gave significant results concerning multiple retailers’ opportunistic behaviors. Important findings regarding opportunism’s most frequent manifestations and its most significant determinants were obtained as well. A structured questionnaire was used for data collection and Structural Equation Modeling was applied for data analysis.

Findings:
The study confirmed the developed model and showed that in some cases retailers may adopt opportunistic practices. Goal incompatibility between the exchange
partners and suppliers’ dependence on their big customers are the most important factors creating opportunism. Informational asymmetry between the two parties and retailers’ behavioral uncertainty are affecting it as well. In addition, the study found that small suppliers and suppliers who compete with own brand products face higher levels of opportunism. Excessive payments to retailers, agreement violations and negotiation pressures are the three emerged underlying dimensions of retailers’ opportunism.

**Limitations:**
The examination of opportunism in terms of suppliers’ perceptions and the fact that the data were obtained from the Greek market are the main limitations of our study. However, they are also significant routes for future research.

**Implications:**
The findings of our study can be used by suppliers for mitigating retailers’ opportunistic behavior and also for increasing their awareness concerning the requirements of such a relationship. In addition, retailers could obtain significant insights for the suppliers’ perceptions concerning their relationships.

**Originality:**
This is the first research attempt which develops a model that explains the creation of multiple retailers’ opportunism in the supply chains in the food sector. It is the first study which empirically investigates the widely reported indications concerning multiple retailers’ questionable behavior in their relationships with suppliers. In addition, specific supply chain practices as manifestations of opportunism are examined for the first time. Finally, empirical confirmation of the role of own brands in supplier-multiple retailer relationships is made for the first time as well.
Στους γονείς μου Χρήστο και Πολυξένη
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CHAPTER 1: INTRODUCTION

This thesis examines supplier-multiple retailer relationships in the supply chain in the Greek food sector. In particular, it focuses on the potential occurrence of multiple retailers’ opportunistic behavior against their suppliers. In some cases, multiple retailers may try to exploit their partners in order to achieve higher benefits from their relationships at the expense of the suppliers. The study implements a qualitative (in-depth interviews with practitioners) and a quantitative approach (survey in a large sample of firms) in order to examine the phenomenon. This chapter makes an introduction to the subject of the thesis. The first section of this chapter presents an overview of the subject and then demonstrates in summary the rationale and motivation for conducting the research, as well as the problem statement and the objectives of the study. The final section of the first chapter presents the thesis outline and structure.
1.1 OVERVIEW OF THE SUBJECT

Interaction among firms, especially in the supply chain, is necessary for business process execution and occurs frequently. Such interactions are dependent and dynamic. The behavior or practicing of one firm affects the other exchange parties. Competition is now elevating from inter-company competition to inter-supply chain competition (Chen & Paulraj, 2004). Therefore, collaborative relationships are a prerequisite for surviving and succeeding under competitive market conditions. Literature has mainly focused on this collaborative notion of exchange relationships (Morgan et al., 2007). Nevertheless, one phenomenon that spans firms’ interactions is opportunism.

Opportunism is defined as self-interest seeking behavior with guile (Williamson, 1975). It differs from the plain self-interest seeking behavior due to its guileful characteristic. Therefore, this kind of behavior is not only selfish but also causes harm to another party. The management of opportunism has been studied by scholars for over two decades. It is very significant because it may result in premature termination of the relationship or could lead to suboptimal relationship outcomes (Parkhe, 1993). Opportunism includes behaviors such as cheating, stealing and breaching contracts (Hawkins et al., 2008). Past research has mainly utilized Transaction Cost Analysis (TCA) theory and Agency theory in order to explain opportunism in business relationships.

Opportunism is not a typical behavior in inter-firm relationships. It reflects the notion that businesses and individuals will sometimes seek to exploit a situation to their own advantage and hence, it is a variable to be explained (Wathne & Heide, 2000). Therefore, it is potential in business relationships. Opportunism refers not only to hazardous behaviors against formal agreements but also to practicing against informal parts of a relationship (Luo, 2007). It is characterized by calculated and not accidental efforts and it has detrimental effects on others (Das & Rahman, 2010; Hawkins et al., 2008). Its consequences include: negative impact on performance, increased costs, and lack of trust, commitment and satisfaction inside the exchange relationship (Hawkins et al., 2008).
Past empirical studies mainly focused on governance mechanisms such as relational norms or formalization which can mitigate opportunism in business relationships (Hawkins et al., 2008). On the other hand, dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty are presented as important factors that contribute to the creation of opportunism (Das & Rahman, 2010; Hawkins et al., 2008).

The thesis examines opportunism in the context of supply chain relationships in the supply chain in the food sector. During the last years, supply chains in the food sector have faced significant structural changes. One of them was the high concentration rates in the retailing sector. Most of the developed countries such as the USA and the UK present high consolidation in the food retailing sector. Few multiple retailers are dominating the market accounting for significant market shares (Hingley et al., 2006). These organizations have taken initiatives towards the modernization and the optimization of the supply chains. Their attribute as the main gateway to the final consumer makes them accustomed to consumers’ preferences. Therefore, retailers are able to organize supply chains in a way that could better satisfy the changing consumer needs. As a result supply chains in the food sector have evolved to retailer-driven chains (Burt, 2000). These structural changes gave multiple retailers the upper hand in the supply chain. Some important characteristics in the supplier-multiple retailer relationships are the size difference between the exchange partners and own brand products. The first case refers to the fact that due to consolidation in the retailing sector many exchange relationships are taking place between multiple retailers of big size and small suppliers (Fassin, 2005). The second refers to the success of own brand products and their increasing market shares (Collins & Burt, 2006). These issues enhanced the position of multiple retailers in the supply chain relationships.

The imbalanced supplier-multiple retailer relationships raised concerns about retailers’ behavior against their suppliers. Literature reports some questionable retailers’ practices which put high pressures on the suppliers. Abuse of retailers’ power was indicated in a significant number of reports and concerning many
developed countries (e.g., European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; ICAP, 2007). Transfer of costs and risks, financial pressures and unreasonable demands are forms of these practices. In some cases, these behaviors encompass the notion of guile and manifest as opportunistic supply chain practices. There is a concern that these opportunistic behaviors could negatively affect suppliers. However, the raising concern of various bodies, such as the European Parliament or the UK Competition Commission, mainly focuses on the impact of the retailers’ behavior in the long term. Retailers’ questionable behavior and even opportunistic tensions, when occur, could impact the competitiveness of the supply chain in the long run and hence, the welfare of the final consumer could be affected as well (European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008). High pressures and painful trade terms could negatively affect suppliers in many ways. Significant losses in suppliers’ profitability could result in reduced innovation and even lower product quality. In addition, these pressures could result in higher final prices for the products because the suppliers don’t want to see their revenues being reduced due to retailers’ behavior. Thus, they increase product prices. All the above significantly impact consumers’ welfare (European Commission, 2009). Therefore, the examination of this phenomenon is highly important because its consequences may expand the dyadic relationship and could affect the supply chain as a whole and the society as well. It must be ensured that this issue won’t evolve to a problem in supplier-multiple retailer relationships.

1.2 AIM & RESEARCH OBJECTIVES

Opportunism is a widely researched concept in literature. Nevertheless, its frequency in business relationships and its complexity as a concept indicate that there is room for further empirical investigation (Hawkins et al., 2008). Opportunism has a highly contextual character (Rindfleisch et al., 2010). This means that it should be examined under the perspective of the context in which occurs. Supply chain relationships is a context in which opportunism hasn’t been thoroughly examined (Ketchen & Guinipero, 2004). In particular, very few studies have examined
opportunism in the supply chain in the food sector (Morgan et al., 2007; Vázquez et al., 2007). In addition, there is a raising concern regarding multiple retailers’ potentially opportunistic practices in the supply chain in the food sector and many studies have reported it (European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; ICAP, 2007; Dobson, 2005, Fearne, 2005; Towill, 2005; Duffy et al., 2003). Nevertheless, there are no past studies that empirically examined it.

On the other hand, past studies mainly examined opportunism as a general concept. Therefore, a gap in the literature concerning the empirical examination of opportunism in the form of specific behaviors has emerged (Rokkan et al., 2003). Different kinds of opportunistic behavior should be distinguished according to the context in which we examine the phenomenon.

Opportunism is a complex phenomenon and its formulation is unique for every context. Understanding its creation could give valuable information about the ways in which it could be limited (Luo, 2006). Different factors could determine it under different circumstances. In addition, it is possible that some of the theoretical assumptions don’t hold in every examined business relationship and therefore, contextual specific knowledge should be obtained.

According to the aforementioned, the aim of the thesis is to empirically examine potential multiple retailers’ opportunism in the supply chain in the food sector. Since no past research examined the phenomenon empirically, this study focuses on the creation of opportunism in the specific context by investigating its most significant determinants. For this reason, a conceptual model is developed. Another novel characteristic of the thesis is that it detects specific supply chain practices in the market which are potential multiple retailers’ opportunistic practices. These practices might be used by retailers in some of their relationships. Then, it employs them for examining opportunism instead of using general abstract constructs. In addition, the thesis investigates whether contextual specific characteristics (i.e., suppliers’ size and own brand products) are affecting the levels
of opportunism in supplier-multiple retailer relationships. The above could give us a first picture of the occurrence of the phenomenon.

The supply chain in the Greek food sector has been utilized as the vehicle to examine multiple retailers’ opportunism and fulfill the study’s objectives. The Greek food sector follows the general trends of the characteristics of the supply chain in the food sector. High retailing concentration, the presence of big multinational companies in both the retail and the supply tier of the chain and the rapid growth of own brand products are some examples of similarities which justify our choice. Therefore, generalizability of results could be achieved in a certain degree.

A combination of qualitative and quantitative research methodologies was implemented in order to examine the phenomenon. In-depth interviews with practitioners gave valuable contextual information that improved the model and preliminary confirmed the suggested factors affecting opportunism. In addition, a realistic view of multiple retailers’ opportunism and insights for its specific manifestations were derived. Then, a large scale survey on a sample of approximately 400 suppliers was conducted. The examination of multiple retailers’ opportunism was based on suppliers’ perceptions of the phenomenon. The data analysis was based on Confirmatory Factor Analysis, Structural Equation Modeling and Invariant Latent Mean Structures.

The findings of this study could give significant insights for the supplier-multiple retailer relationships and propose areas of improvement. The perceptions of suppliers from the Greek market confirm the concerns regarding multiple retailers’ opportunism. They believe that the phenomenon is real. Specific areas of supplier-multiple retailer relationships where opportunism emerges are identified. Factors which significantly affect it are also detected. These findings could be used by exchange partners and policy makers in order to mitigate the phenomenon. It must be ensured that it won’t have consequences on the competitiveness of the supply chain as a whole and on the consumers’ welfare in the long run.
It should be highlighted that the thesis doesn’t aim to generally criticize multiple retailers’ behavior in the supply chain relationships in the food sector. Their contribution to the improvement of the supply chain’s competitiveness and efficiency is proved and beyond doubt. In addition, opportunism is not typical in supplier-multiple retailer relationships. However, the raising concern about some opportunistic practices should be investigated and this thesis gives valuable insights to this issue.

1.3 THESIS OUTLINE

The thesis is set out in eight chapters which constitute the two basic parts of the thesis. The first part includes this introduction, the literature review, the research objectives, the hypotheses and the model of the thesis and the sector analysis. The methodology section, the results and the final conclusions constitute the second part of the thesis.

More specifically, after this introduction, the second chapter presents a review of the relevant academic literature. The literature review covers the issues of describing the general concept of supply chain management and critical subjects regarding opportunism in business relationships. It presents an overview of the phenomenon and demonstrates key characteristics of the definition of opportunism. In addition, the second chapter presents the most significant empirical studies which examine opportunism and its determinants. Finally, significant issues in the supply chain relationships in the food sector are discussed. The current status of supplier-multiple retailer relationships is analyzed and some concerns about retailers’ behavior which may encompass the notion of opportunism are detected.

The third chapter presents the research objectives of the study. It highlights future research suggestions of past studies and detects gaps in the literature. These lead to the establishment of the study’s research objectives. In order to fulfill the research objectives specific hypotheses are developed. The hypotheses result in the
development of a conceptual model describing the creation of multiple retailers’ opportunism in the supply chain in the food sector.

The fourth chapter provides an overview of the supply chain in the food sector and detects the trends concerning its structure and the relationships’ status in it in a global and a European scale as well. Then the Greek supply chain in the food sector is presented and its representativeness as a context for examining opportunism is demonstrated.

The fifth chapter discusses the methodologies utilized to obtain the data of this research. In particular, the justification of using a combination of qualitative and quantitative approaches in the study is presented. The research tools (i.e., the questionnaires), the samples used and the procedure of both the qualitative and the quantitative parts of the research are thoroughly discussed.

The sixth chapter presents the results of the qualitative part of the study. It gives a realistic picture of the examined phenomenon according to the practitioners’ point of view. In addition, the developed model is confirmed in a preliminary way and valuable contextual specific information is provided as well.

The seventh chapter of the thesis presents the results from the quantitative part of the study. In particular, the chapter presents the descriptive statistics, the results of the Exploratory and the Confirmatory Factor Analysis, the Structural Equation Modeling and the Multi-group analysis.

Finally, the eighth chapter presents the discussion of the results, the summary of the tested hypotheses and the conclusions accompanied with the theoretical, managerial and policy implications of the study, its limitations and suggestions for future research.
CHAPTER 2: LITERATURE REVIEW

This chapter presents an extensive review of the literature that is relevant to the study. First, an overview of the concept of supply chain management is presented. Then, the basic concepts of the literature of opportunism are analyzed. In particular, a general description of the concept of opportunism, an analysis in the definition of opportunism, its theoretical foundation and its relevancy to supply chains are presented. In addition, the empirical studies examining the relationship of opportunism with its most significant determinants are demonstrated. Finally, an introduction to the relationships of multiple retailers and suppliers in the supply chain in the food sector is made. Potential of opportunistic behavior in them is investigated as well.
2.1 SUPPLY CHAIN MANAGEMENT

Modern developments in business operations have minimized time losses, costs and waste of resources in intra-firm operations. Firms are now seeking further efficiencies in inter-firm relationships (Taylor, 2004). The whole supply chain has to be made competitive. It is now evident that Supply Chain Management (SCM) is the key factor for building sustainable competitive edge for organizations’ products and/or services in an increasingly crowded marketplace (Li & Lin, 2006). Therefore, SCM is a rapidly evolving area of interest for academics and practitioners as well (Hobbs, 1996).

“A supply chain is a network of materials, information and services processing links with the characteristics of supply, transformation and demand” (Chen & Paulraj, 2004, p. 132). It could be described as a network of firms which are directly inter-linked with up-stream or down-stream product, services, information and cash flows from a source to a customer (Mentzer et al., 2001). The aim of the supply chain is to resource raw materials, to transform them to final products and then to deliver them to the final customers/consumers through distribution/retailing channels (Beamon, 1998). In addition, the supply chain is not limited to product movement but also encompasses value adding activities in every chain tier. A firm could be a member of numerous different supply chains (Mentzer et al., 2001).

The concept of SCM is relative new in literature. It was firstly introduced in the logistics field as an inventory management approach with an emphasis on the supply of raw materials. Now, the concept of SCM has evolved and is at the confluence of many disciplines. It is placed at the core interface between marketing, logistics and operations fields. This view is supported by most marketing, logistics, operations and SCM scholars (see Jüttner et al., 2010; Boyer & Hult, 2005; Ellinger, 2000; Lambert and Cooper, 2000; Mentzer et al., 2001). It is defined as the “integration of key business processes from end user through original suppliers that provide products, services and information that add value for customers and other stakeholders” (Lambert and Cooper, 2000, p.66). It involves “the systematic strategic coordination of the traditional business functions and the tactics across these business functions
within a particular company and across businesses within the supply chain, for the purpose of improving long-term performance of the individual companies and the supply chain as a whole” (Mentzer et al., 2001, p.18). Two important characteristics of SCM should be highlighted: i) it involves a cross-functional integration (between marketing, logistics and operations functions) and ii) it advocates the need to extend integration between processes from a single company (inter-firm level) to various companies (intra-firm level) within the same supply chain to achieve a sustainable (long-term) competitive advantage (Ellinger, 2000). Successful SCM includes the integrated processes of: i) Customer Relationship Management, ii) Customer Service Management, iii) Demand Management, iv) Order Fulfillment, v) Manufacturing Flow Management, vi) Supplier Relationship Management, vii) Product Development and Commercialization, viii) Returns Management (Lambert & Cooper, 2000).

One of the core issues in successfully implementing SCM is supplier-buyer relationships in the supply chain. Supply chain performance is highly linked to successful relationships between supply chain tiers (Chen & Paulraj, 2004). In particular, supplier base reduction, long-term relationships, increased communication, information sharing and suppliers’ involvement in key processes of the buyer are key success factors for every supply chain (Chen & Paulraj, 2004). Collaborative relationships with supply chain partners result in higher efficiency and flexibility and stronger competitive advantage as well. Unique value that neither partner could achieve independently is the reason for such collaborations (Nyaga et al., 2010).

Nevertheless, conflict of interests may also rise in the complex supply chain relationships. In these cases, trust could be undermined between chain members (Kwon & Suh, 2005). A relevant concept affecting supply chain relationships is opportunism which may severely damage supply chain relationships (Hawkins et al., 2008). It refers to self-interest seeking behaviors encompassing the notion of guile. Supply chain relationships often involve high interdependencies between chain members. Therefore, opportunistic behaviors could result in significant inefficiencies (Carter & Rogers, 2008). In the next section the concept of opportunism in business relationships will be thoroughly described and analyzed.
2.2 OPPORTUNISM IN BUSINESS RELATIONSHIPS

2.2.1 The concept of opportunism

Supply chain management and business to business marketing literature has focused on collaborative relationships which allow exchange parties to gain mutual economic benefits that they wouldn’t be able to obtain separately. However, this notion of business relationships disregards the prediction of Transaction Cost Analysis (TCA) theory regarding opportunism (Morgan et al., 2007). Even though competitive market conditions demand strong business relationships and high collaboration, there are some cases when firms behave in a questionable manner against their partners (Moberg & Speh, 2003). In business relationships, exchange partners may sometimes act in a pure self-interest seeking behavior that could negatively impact the other party. In a business to business context this is phrased as opportunistic behavior (Hawkins et al., 2009).

Opportunism is a key assumption of the TCA theory that was developed by Williamson (1975). It is defined as “self-interest seeking with guile” and includes various types of behaviors such as cheating, stealing, breach of contracts and many more (Hawkins et al., 2008). With this definition, Williamson argues that businesses and individuals will sometimes seek to exploit a situation to their own advantage. According to the concept of opportunism, there is a risk that one party may behave opportunistically in business relationships. Sometimes some business entities will try to act opportunistically to alter the terms of the business relationship to their own advantage (Hobbs, 1996). In short, opportunism is aggressive selfishness and disregards the impact of the firm’s actions on others (Hawkins et al., 2008).

Opportunism is mostly viewed as an unethicall act; nevertheless, it does occur in inter-organizational relationships (Provan and Skinner, 1989). It negatively impacts business relationships and many studies have examined and confirmed its consequences (e.g., Mysen et al., 2011; Dahlstrom and Nygaard, 1999; Gassenheimer et al., 1996; Parkhe, 1993). Examples of the consequences of opportunism are: low performance, increased costs, conflict, terminated
relationships, uncertainty and lack of trust, commitment, satisfaction and motivation (Hawkins et al., 2008). Consequently, many researchers have stressed their concern on the phenomenon of opportunism (e.g., Mysen et al., 2011; Hawkins et al., 2008; Parkhe, 1993).

2.2.2 Definition of opportunism

Opportunism may take various forms and includes a wide range of potentially different behaviors (Tangpong et al., 2010). The studies examining opportunism presented numerous examples of opportunistic behaviors. Hence, opportunism includes behaviors such as: lying, cheating, being dishonest, acting in untrustworthy and fraudulent manner, deceiving, bluffing, falsely threatening or giving promises to the other party, cutting corners, shirking, poaching, covering things up, withdrawing commitment, calculated efforts to mislead, distorting, obfuscating or otherwise confusing, disguising, misrepresenting, not fully disclosing information, withholding valuable information, misappropriating, manipulating, stealing, taking advantage of holes in the contracts, breaching informal agreements, breaking promises, subtle forms of violation of agreements, using unexpected events to extract concessions, grafting joint earnings, adverse selection, moral hazard, sub-goal pursuit, free riding, etc. (Lumineau & Quélin, 2012; Handley & Benton, 2011; Das & Rahman, 2010; Liu et al., 2010; Liu et al., 2009; Hawkins et al., 2009; Hawkins et al., 2008; Luo, 2007; Vásquez et al., 2007; Cavusgil et al., 2004; Grover & Malhotra, 2003; Jap, 2003; Jap & Anderson, 2003; Li, 2002; Skarmeas et al., 2002; Wang, 2002; Lee et al., 2001; Lee, 1998; Moore, 1998; Rindfleisch & Heide, 1997; Johnson et al., 1996; Heide & John, 1992; Hill, 1990; Anderson, 1988; John, 1984).

Other authors presented more specific examples of opportunistic behaviors such as: quality shirking, misrepresentation or exaggeration of capability, violation of promotion agreements, not sharing resources or facilities as per agreement, falsification of expense reports, breach of distribution contracts, failing to deliver the promised action and resources on a fairly systematic and sustained basis,
expropriating proprietary technology, falsely suggesting that the competition is offering concessions and misrepresenting costs (Tangpong et al., 2010; Brown et al., 2000; Wathne & Heide, 2000; Deeds & Hill, 1999; Joshi & Arnold, 1997; Gassenheimer et al., 1996; Hobbs, 1996). We should also mention the meta-analysis of conducted by Hawkins et al. (2009) which was focused on the construct of opportunism. The authors examined 131 scale items across 31 empirical studies and summarized them in the following behaviors: lying, shirking obligations, taking advantage of, exaggerating, misleading, breaching agreements (formal and/or informal), withholding information, negotiating in bad faith, deceiving, failing to adjust, interfering, self-interested behavior, compromise ethics, disregarding trading partner, unfair behavior, abdicating responsibility, behavior requiring monitoring and perfunctory role performance.

Concluding the above, it is clear that opportunism manifests in a limitless number of forms and some of them may encompass others. However, there are also disagreements whether some of these behaviors are truly opportunistic or not. For example withholding information is frequently presented as a form of opportunism (Hawkins et al., 2008; Carson et al., 2006; Das, 2004; Skarmeas et al., 2002; Brown et al., 2000). On the contrary, Wathne & Heide (2000) argued that withholding information can’t be labeled as opportunism unless it causes harm to the partner or there is a norm of sharing information in the relationship. Hence, we must be careful in designating a behavior as opportunistic. An opportunistic behavior should satisfy some specific criteria derived from the definition of the concept.

Williamson (1975) defined opportunism as a lack of candor or honesty in transactions, to include self-interest seeking with guile. Das & Rahman (2010) highlighted the parsimonious character of the above definition and pointed out that the majority of scholars accept it for describing opportunism. However, the authors argued that this definition refers to only two attributes of opportunism (i.e., self-interest and guile) while the concept includes more facets. A quick view in the relevant literature shows that the concept of opportunism has more aspects. These facets will be presented in the following part of the study. Based on the
identification of these aspects we will be able to tell whether a behavior is opportunistic or not.

The traditional view of opportunism is based on the early TCA theory and its behavioral assumption that if given the possibility, individuals will act in a deceitful, self-serving manner (John, 1984). This means that individuals or businesses will sometimes seek to exploit a situation to their advantage (Hobbs, 1996). Opportunism is, thus, a widespread phenomenon (Ross et al., 1997). This earlier view of opportunism sees it as an exogenous variable and argues that given the chance people will behave opportunistically (Lai et al., 2005). Of course, the above doesn’t imply that all individuals behave guileful all the time but some individuals are opportunistic some of the time (Wang, 2002). On the other hand, it is difficult and costly for an individual to identify a priori who is trustworthy and who is not and thus, an exchange partner behaves as if all the potential partners were opportunistic (Lado et al., 2008). This early view of the universal opportunism led to strong disagreement between scholars and the critics argued that exchange relationships may be characterized by trust instead of opportunism (Ross et al., 1997). The general assumption of the underlying opportunistic propensity in any individual was questioned (Parkhe, 1993). In fact, individuals may not behave in such a Machiavellian way, especially in long term relationships (Morgan & Hunt, 1994). In addition, literature is not clear concerning the extent of opportunism in exchange relationships (Rindfleisch & Heide, 1997). The traditional view of opportunism did not interpret well the phenomenon (Lai et al., 2005). Another point of view emerged and described opportunism as a variable to be explained (Wathne & Heide, 2000). The current TCA theory posits that opportunism is an endogenous variable and not a fixed condition in business relationships (Rindfleisch & Heide, 1997). Thus, opportunism manifests under certain conditions and as a result various studies tried to examine it empirically (Lai et al., 2005). According to Wathne & Heide (2000), the approach that opportunism is neither ubiquitous nor very unusual is the most useful perspective of the concept. Consequently, we could assume that an individual may behave opportunistically in some of its exchange relationships and with some of its partners according to the characteristics of the specific relationships.
The second aspect of the traditional view of opportunism is the notion that an action is described as opportunistic if it violates explicit contractual obligations (Wathne and Heide, 2000). This is the strong view of opportunism (Lumineau & Quélin, 2012) and refers to the partner’s failure to honor a contract (Wathne and Heide, 2000). However, today’s exchange relationships, and especially the supply chain ones, are becoming less formal and more flexible under the notion of mutual interest (Nunlee, 2005). According to Wathne & Heide (2000), formal contracts may play limited role in today’s business to business relationships. However, this lack of formality may result in opportunistic behaviors by the exchange parties (Nunlee, 2005). A more recent view of opportunism designates a behavior as opportunistic also in the case when it violates the common understanding between the exchange partners which is not thoroughly written in a formal contract (Lumineau & Quélin, 2012). Opportunism is the case when a partner behaves contrary to the other party’s understanding of their contract (Lai et al., 2005). Thus, opportunism refers to the violation of explicit as well as implicit agreements (Hawkins et al., 2009). These implicit agreements are called relational contracts and encompass the common understanding of the various aspects of the relationship between the trading partners (Wathne & Heide, 2000). Hence, opportunism makes relational contracts hazardous (Luo, 2007). This is the weak form of opportunism and refers to the violation of the general spirit of agreement (Lumineau & Quélin, 2012). In summary, opportunism encompasses those behaviors that break the contracts or agreements (formal or informal) that were previously made by the exchange partners (Wathne & Heide, 2000) and occurs in the case when a partner acts conversely to his appropriate behavior (Skarmeas et al., 2002).

The element that distinguishes opportunism from the natural and legitimate self-interest seeking behavior in exchange relationships is the notion of guile (Wathne & Heide, 2000). Guile was presented in the Williamson’s initial definition of opportunism (Williamson, 1975). The author specified guile as involving “incomplete or distorted disclosure of information and especially calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse” (Williamson, 1985). Guile refers to an individual’s behavior of taking advantage of opportunities with little regard for
principles or consequences (Wathne & Heide, 2000). Thus, the fundamental part of opportunism is the element of deceit (Lee et al., 2001) and the intentional character of the violation of agreements (Gilliland & Manning, 2002). The violation of the implicit or explicit agreements may be considered as opportunism only if it is deceit-oriented (Achrol & Gundlach, 1999). This means that opportunism is not accidental but requires calculated efforts (Das & Rahman, 2010).

In the case of self-interest seeking behavior, individuals make their intentions clear to their partners while in the case of opportunism they attempt to hide the actual motives (Das & Rahman, 2010). Hence, opportunistic behaviors have a strategic nature (Carson et al., 2006). Similarly, Provan & Skinner (1989) argued that an organizational advantage may be accredited to opportunism only if it encompasses strategic manipulation of information or the misrepresentation of intentions. Thus, hidden motives and hidden intentions are another significant aspect of opportunism. However, according to Jap (2003) an individual is typically not capable of proving that a partner is behaving opportunistically or else he would hold back from the relationship. Hence, the author focused on the perceived opportunistic behavior. On the contrary, Hawkins et al. (2009) wondered if there are situations that opportunism is expected and accepted from the vulnerable party or if there are cost-benefit tradeoffs that force an exchange party to sustain a relationship with an opportunistic partner.

Another important aspect of the concept of opportunism is the fact that opportunistic behavior is practiced by an individual at the expense of others (Swanson et al., 1997). A self-interest seeking action or a behavior that does not adversely affect the exchange partner doesn’t constitute opportunism (Das & Rahman, 2010). According to Hawkins et al. (2008) opportunism encompasses behaviors of aggressive selfishness that disregard their impact on the exchange partners. More specifically, opportunism may result in the transfer of wealth from the exchange partner to the opportunistic one (John, 1984). Hence, opportunistic actions redirect profits from vulnerable partners to the opportunists (Carson et al., 2006). An opportunist tries to reach his individual goals regardless the harm he may cause to his partners (Lai et al., 2005). Thus, opportunistic behavior imposes
detrimental consequences on the exchange partner and could significantly increase its costs and decrease its revenues (Wathne & Heide, 2000). In other words, opportunistic behavior doesn’t only enhance the opportunist’s gains at the expense of others but it also damages others in a significant degree. However, it should be clarified that the focus of an opportunistic act is to advance the individual’s self-interest and not harming the partners (Lee, 1998).

As alluded to earlier, a behavior could be labeled as opportunism only if it bears specific characteristics. However, we should also highlight those behaviors that are easily mistaken as opportunistic but they aren’t. Provan & Skinner (1989) referred to the case of power which similarly to opportunism allows one of the partners to gain an advantage against the others. However, the authors distinguished power from opportunism based on two significant differences that they have. The first one is the fact that the short-term gains from opportunism may significantly exceed the effects of power. In addition, the gains of practicing power concern only the powerful partners while in the case of opportunism any party may try to cheat its partner and hence, weak partners may also behave opportunistically. John (1984) argued that behaviors such as hard bargaining, intense and frequent disagreements and other similar behaviors that lead to conflict can’t be labeled opportunism. Those behaviors don’t encompass the notion of guile and thus, they don’t constitute opportunism (Provan & Skinner, 1998). Wathne & Heide (2000) further distinguished opportunism from situations when exchange partners agree to modify their agreements due to changes in the environment or when one of the partners receives a mutually agreed compensation. In addition, they argued that cases when partners a priori adjust contract terms in anticipation of shirking don’t postulate opportunism. Moreover, Hawkins et al. (2009) highlighted that in the case of relational contracts opportunism exist only when there is a norm that prohibits the behavior.

According to the above mentioned, opportunism refers to self-interest seeking behaviors with the following characteristics: a) these behaviors are neither ubiquitous nor very unusual in business relationships and they are explained by the characteristics of the relationships in which they occur; b) they break a formal or an informal agreement made between exchange partners; c) they are intentional, not
accidental and they encompass the notion of guile; d) their actual motives are hidden and e) they are practiced at the expense of others and they have detrimental consequences for them.

2.2.3 Theoretical foundation of opportunism

As previously mentioned opportunism is a key assumption of the TCA theory. Most studies examining opportunism have utilized TCA theory and Agency theory frameworks. According to Bergen et al. (1992) these two theories have a common conceptual ground. In this section we will review the two theories and we will also present how opportunism is linked to other exchange theories as well.

2.2.3.1 Transaction costs analysis theory and opportunism

TCA is a highly-influential, interdisciplinary theory of economic organizations and combines aspects of institutional economics and organizational legal analysis. The work of Williamson around transaction costs puts the notion of “transactions” or units of exchange as the focal point in the theory. In TCA theory specific government structures (market versus hierarchical governance structures) are proposed as alternatives for completing a set of transactions (Grover & Malhotra, 2003). The theory argues that under certain conditions, the cost of conducting economic exchanges (i.e., the transaction costs) in a market may exceed the cost of organizing the exchange within a firm. In this case, organizing the economic transaction within the firm (i.e., hierarchy governance structure) might be superior than organizing it in the market (i.e., market-based governance structure) (Hawkins et al., 2008; Grover & Malhotra, 2003).

TCA theory is based on the early work of Coase (1937) who gave insights concerning why some transactions occur within a firm while others occur between firms. Based on this conceptualization of governance structures and transaction costs, Williamson (1975) developed the TCA theory. In particular, he argued that firms organize their exchange relationships in a way that minimizes transaction costs
that arise due to the difficulty of evaluating the goods or services exchanged. Two were the proposed mechanisms for this: i) markets where the transactions are governed through market competitive pressures that guarantee that the value of the goods or services exchanged is accurately reflected in their price and ii) hierarchies where the minimization of transaction costs is achieved through vertical integration. Later, Williamson proposed hybrid forms of these two mechanisms as potential governance structures (e.g., long-term contracts) (Williamson, 1993). Transaction costs refer to: i) information costs which are the costs of searching information concerning products, prices, inputs and buyer/sellers; ii) negotiation costs which are the costs of the physical act of the transaction such as negotiating and writing contracts and iii) monitoring costs which are the costs derived from monitoring the exchange partner in order to ensure that the terms of agreement are met (Hobbs, 1996).

TCA theory has five major concepts: asset specificity, business related environmental uncertainty, behavioral uncertainty, bounded rationality and opportunism. Transaction specific assets (TSA) refer to financial and/or human investments made specifically for the relationship (Anderson, 1985). High level of asset specificity means that the specific investment has limited value outside the specific relationship (Joshi & Stump, 1999). Business related environmental uncertainty refers to the dynamism of the business environment that surrounds exchange relationships (Rindfleisch & Heide, 1997). On the other hand, behavioral uncertainty refers to uncertainties derived from the partner’s performance (Crosno & Dahlstrom, 2008). Bounded rationality is the assumption that individuals have limited cognitive abilities in evaluating all possible decision alternatives although they intend to make the best rational decision (Hobbs, 1996). Bounded rationality combined with business related environmental uncertainty and behavioral uncertainty results to incomplete contracts. Incomplete contracts can’t specify a priori all possible contingencies in the exchange relationship (Sako & Helper, 1998). Therefore, contracts can’t thoroughly safeguard the relationship from the second assumption of TCA theory; opportunism. According to the assumption of opportunism, individuals will sometimes seek to exploit a situation to their own
advantage such as is the case of incomplete contracts. TSA investments in the relationship make it vulnerable to opportunistic tensions (Hobbs, 1996). Literature has proposed various safeguarding mechanisms against opportunism (Hawkins et al., 2008).

TCA theory posits that the appropriate selection of the exchange relationship governance form is based on the levels of potential opportunism in the relationship. The role of transaction costs and opportunism in exchange relationships has attracted the interest of many researches and scholars in the past and a lot of discussion was raised concerning its explanatory power (e.g., Rindfleisch et al., 2010; Liu et al., 2009; Macher & Richman, 2008; Geyskens et al., 2006; Lai et al., 2005; David & Han, 2004; Grover & Malhotra, 2003; Rindfleisch & Heide, 1997).

2.2.3.2 Agency theory and opportunism

Agency theory focuses on agency relationships where one party (the principal) depends on another party (the agent) to perform some action on the principal’s behalf (Bergen et al., 1992). It aims to determine efficient contracts given the characteristics of the exchange parties and environmental constraints (Crosno & Dahlstrom, 2008).

Agency theory is based on four assumptions: i) the self-interest seeking nature of individuals; ii) the risk averse nature of individuals that refers to outcome uncertainties arising from external influences (e.g., economic climate, competition, government policies, etc.); iii) the informational asymmetry between the principal and the agent which refers to the inability of the principal to possess perfect information ex ante (i.e., whether the agent has the desired qualifications) and ex post (i.e., concerning the agent’s activities) and iv) the fact that the principal may purchase information concerning the agent’s performance according to the obligations of the agreement by means of monitoring. The combination of these assumptions result in two problems: i) adverse selection which is a pre-contractual problem and refers to the situation where the agent misrepresents its true abilities to the principal who is unable to verify them due to lack of perfect information and
ii) moral hazard which is a post-contractual problem and refers to the situation where the agent doesn’t perform according to the principal’s desires due to goal incongruence, differences in risk preference or environmental uncertainty (Bergen et al., 1992). These two problems are forms of opportunism and Agency theory recognizes monitoring and incentives as a solution for mitigating them (Whipple & Roh, 2010).

2.2.3.3 Relevant exchange theories and opportunism

Apart from TCA theory and Agency theory past studies have used a number of relevant exchange theories in order to explain opportunism (Crosno & Dahlstrom, 2008). We should mention the case of Social exchange theory (SET) which also plays an important role in explaining exchanges and it is frequently used in studies examining business relationships (Hawkins et al., 2008). According to Lambe et al. (2001) exchanges may involve both social and economic outcomes. Positive outcomes increase trust and commitment and, over time, the parties of the exchanges tend to rely more on trust, commitment, cooperation, satisfaction and relational norms than strictly on written contracts. Since the exchange partners’ relationships are based on trust the role of opportunism in SET is questionable. However, the existence of opportunistic behavior helps us distinguish relational exchange relationships from those governed according to TCA theory in which opportunism is likely to occur. Therefore, when an exchange partner acts opportunistically then the social (and perhaps economic) benefits of the exchange relationship will fade (Hawkins et al., 2008).

Resource dependence theory is another theory related to opportunism. According to it, when asymmetric dependence exists between exchange parties then opportunism may emerge from the less dependent party (Crosno & Dahlstrom, 2008).

In summary, exchange theories recognize opportunism as a significant aspect of business relationships. They offer a wide range of viewpoints of its creation and of governance mechanisms for mitigating it. However, it is the context in which the
relationships occur that will determine the relevancy of the theoretical suggestions (Morgan et al., 2007). As a result, we have to acquire context specific information concerning the examined relationships in order to confirm a theoretical relationship.

2.2.4 Opportunism in supply chains

Competition is moving towards supply chains versus supply chains. Therefore, firms focus their interest on the effective management of their supply chains. One of the major characteristics of supply chain management is its collaborative strategic character. Supply chain members collaborate with its other in order to deliver values to end customers. Nevertheless, it is possible that some chain members will opportunistically try to take advantage of the supply chain agreements at the expense of other chain members (Simatupang & Sridharan, 2002). In supply chains, sometimes some of the chain members may try to opportunistically pursue short-term goals at the expense of other chain members and neglect long-term supply chain collaboration benefits (Ketchen & Hult, 2007a).

Supply chains include complex and numerous trade deals between exchange partners (Bernstein & Federgruen, 2005). It is possible that congruence in interests won’t be achieved in all these deals between supply chain members. Therefore, conflicts of interest may emerge and managers will have to face the dilemma of a decision that benefits their firm versus a decision that benefits the supply chain as a whole. In a situation like this most managers will choose a course of action that benefits their organization because their primary loyalty lies with their firm (Ketchen & Hult, 2007b).

In addition, supply chain partnership promises mutual benefits for the partners but those benefits are rarely realized due to differences in interest. As a result, supply chain members may seek their own profit instead of the overall supply chain profit. In this situation, supply chain members habitually work as individual firms based on local perspective and opportunistic behavior. However, local perspective and opportunistic behavior of maximizing individual profit often occurs at the
expense of other members and works against the overall supply chain profitability. Therefore, in supply chains there is also the threat of opportunism by other chain members and sometimes monitoring is needed (Carter & Rogers, 2008).

Fear of opportunism in supply chains is common (Ketchen & Hult, 2007b). For instance, we find examples about powerful customers using contractual means to push risk associated with inventory management, technology or new product development back up the chain to weaker suppliers who are less able to shoulder the burden (Peck, 2005). Due to local perspective and opportunistic behavior, products or services are unlikely to flow properly to end customers, which results in an underperforming supply chain (Simatupang & Sridharan, 2002). Low levels of supply chain performance result in significant costs for supply the chain and its members (Morgan et al., 2007). According to Whipple & Roh (2010), there are examples of supply chains where their members have failed to follow the normal, expected and planned schedules and activities due to opportunistic behavior. This behavior decreased the costs and increased the profits of the opportunistic members at the expense of the other chain members. For example, in case a chain member tries to reduce the product’s quality for decreasing his costs this may result in increased added costs for the whole chain due to quality issues of the product that reaches the final consumer (Whipple & Roh, 2010). Some examples of opportunistic behavior in the supply chain are quality shirking, exaggeration of capabilities, contract breaching or violation of promotion activities. Opportunistic activities in supply chains could even cause disruption in the production process, supply chain inefficiencies and have significant economic consequences for the supply chain in general (Tangpong et al., 2010; Morgan et al., 2007). These negative consequences of opportunism emphasize the need for controlling it in business relationships (Tangpong et al., 2010).

Opportunism could negatively impact supply chain’s competitiveness by reducing the levels of the value created in it (Hawkins et al., 2008). On the other hand, supply chains with low levels of opportunism are characterized by high levels of supply chain performance in key competitiveness areas such as speed, quality, cost and flexibility (Ketchen & Hult, 2007a). Nevertheless, the examination of the
phenomenon in the supply chain context has been neglected (Hawkins et al., 2008). Relationships in the supply chain should be managed in a way that fosters cooperation. Opportunism is an obstructive force towards this objective. The deeper understanding of the creation of opportunism and its determinants could contribute to finding solutions for mitigating the phenomenon (Luo, 2006).
2.3 EMPIRICAL STUDIES EXAMINING OPPORTUNISM AND ITS DETERMINANTS

The past literature presents many empirical studies examining governance mechanisms against opportunism (e.g., Liu et al., 2009; Carson et al., 2006; Lai et al., 2005; Cavusgil et al., 2004; Brown et al., 2002) or mixed antecedents that govern a relationship and increase or decrease opportunism (e.g., Wang, 2002; Sako & Helper, 1998; Provan & Skinner, 1989; John, 1984). On the other hand, there is dearth of studies empirically examining the creation of opportunism and its determinants (Handley & Benton, 2011). The most significant past empirical studies that examine opportunism are presented in detail in Appendix I. Our study is mainly focused on the creation of opportunism and therefore, we will concentrate on the presentation of the most significant determinants of opportunism according to relevant exchange theories.

Dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty are presented as highly significant determinants of opportunism in the relevant literature (Das & Rahman, 2010; Crosno & Dahlstrom, 2008; Hawkins et al., 2008). In this part of the study we will analyze each one of them by describing their concepts, the theoretical premise behind their relationship with opportunism, their occurrence under the perspective of supply chains and by presenting the most significant empirical studies that examined their relationship with opportunism.

2.3.1 Opportunism and dependence

Dependence between exchange partners is one of the factors that literature reports as important in understanding opportunism (Morgan et al., 2007). In fact, Hawkins et al. (2008) argued that dependence is the “predominant construct affecting opportunism, pp. 897”. Dependence exists in a relationship if the goals of a partner are received in the specific relationship and there are few or no alternative options for him outside of it (Hawkins et al., 2008). When a firm is dependent to its partner, the firm’s effectiveness is linked to the performance of the partner (Hawkins
et al., 2009). In other words, dependence refers to the firm’s motivational investment in goals mediated by its exchange partner and the potential to receive those goals outside the relationship (Crosno & Dahlstrom, 2008).

When an exchange relationship lacks of dependence between partners then the possibility of opportunistic behaviors is limited (Joshi & Arnold, 1997). The relationship between the concepts of dependence and opportunism is differentiated according to which partner is dependent to the other and according to which partner’s opportunism we examine. Thus, according to the TCA theory a dependent partner is more likely to face opportunism and not to behave opportunistically while a less dependent partner is more likely to behave opportunistically and not to face opportunism (Hawkins et al., 2009; Joshi & Stump, 1999). Another theory that describes the dependence-opportunism relationship is the Resource dependence theory. According to this theory dependence between two exchange partners could take two forms: i) balanced dependence when the two parties have much to lose in case of conflict between them and ii) asymmetric dependence when one of the partners has a dependence advantage (Crosno & Dahlstrom, 2008). In the first case, exchange partners avoid behaviors such as opportunism. In the second, the less dependent party is more likely to behave opportunistically in order to expropriate resources from the more dependent party while the more dependent party will avoid acting opportunistically in order to secure the relationship with its valuable partner (Roemer, 2006; Noorderhaven et al., 1998). On the other hand, Reactance theory posits that when a firm is highly dependent on one of its exchange partners then it may try to balance the relationship through opportunistic behavior against its partner (Joshi & Arnold, 1997). Therefore, there is some contradiction in the theory concerning the dependence-opportunism relationship. We should examine the context in which relationships takes place in order to conclude which is the most relevant theoretical argument (Moon, 2012; Morgan et al., 2007)

Hawkins et al. (2009) argued that dependence can take many forms such as ownership positions, switching costs, the ability of alternatives etc. Two forms that need further explanation are TSA which were analyzed in section 2.1.3.1 and power. A construct which is highly related to dependence is TSA. In comparison with general
purpose assets which can be used in all exchanges, TSA are invested for the purpose of transacting with a particular user (partner) (Anderson, 1985). In the case of high asset specificity, the assets are not readily transferable to alternative users without losing a significant amount of value (Wang, 2002). Thus, TSA have limited value outside their intended use. A firm will be reluctant in terminating a relationship with considerable amount of specific investments due to the switching costs which are created. In particular, a firm that has invested in specific assets dedicated to a specific partner will face dependence on that partner (Joshi & Stump, 1999). In some studies TSA are reported as a form of dependence (e.g. Hawkins et al., 2009) but they are rather an antecedent than a form of dependence. Thus, according to Stump & Heide (1996) when TSA create a form of dependence on a particular partner then the firm is vulnerable to the partner’s opportunistic actions. In addition, Ting et al. (2007) distinguished TSA and dependence as different but highly correlated constructs. Moreover, Mysen et al. (2011) showed that dependence is a mediating construct between the positive relationship of TSA and opportunism.

On the other hand, dependence and power have a less distinguishable effect on opportunism. Thus, Hawkins et al. (2009) claim that power and dependence are conceptually inseparable. According to Morgan et al. (2007), when a firm is dependent to its partner then that partner’s power is increasing. Similarly, Provan & Skinner (1989) claimed that the opportunistic behavior between two exchange partners is a matter of power and dependence. Consequently, the less powerful partner is more dependent to the other exchange member and therefore more vulnerable to its opportunistic behavior (Hawkins et al., 2009). Concluding, the effects of power and dependence on opportunism are combined in this study.

Concerning supply chains, Morgan et al. (2007) argued that dependency dynamics developed in a supply chain determine the behavior of the chain members. In addition, Provan (1993) argued that one of the basic characteristics of supply chains is interdependence which mitigates opportunistic behaviors. However, Provan (1993) claimed that power inequalities may also appear in chains creating conditions for opportunistic actions. Thus, some supply chain partners appear less irreplaceable than others or more dependent to others (Spekman et al., 1998). In order to protect
themselves from dependency consequences, supply chain members focus their interest on collaboration (Simatupang & Sridharan, 2002). In the case of buyer dominated chains (e.g., supply chains in the food sector which are frequently dominated by multiple retailers) a dependent supplier will be discouraged to behave opportunistically (Provan, 1993). Similarly, in the case when the buyer is not dependent to the supplier then supplier’s opportunism is mitigated due to fact that the buyer can easily switch to another supplier (Joshi & Arnold, 1997). On the other hand, low levels of buyer’s dependence on supplier may increase buyer’s opportunism due to the easy shift towards another supplier (Provan & Skinner, 1989).

In literature, we identify various studies empirically examining the dependence-opportunism relationship on various combinations regarding the balance of dependence between the exchange partners and the source of opportunistic actions (Moon, 2012; Wang et al., 2012; Handley & Benton, 2011; Mysen et al., 2011; Caniëls & Gelderman, 2010; Brown et al., 2009; Liu et al., 2009; Morgan et al., 2007; Ting et al., 2007; Vázquez et al., 2007; Lai et al., 2005; Rokkan et al., 2003; Schilling & Steensma, 2002; Wang, 2002; Brown et al., 2000; Joshi & Stump, 1999; Sako & Helper, 1998; Joshi & Arnold, 1997; Provan & Skinner, 1989). In the above studies we also included empirical studies examining the TSA-opportunism relationship due to the high relationship of the TSA and dependence constructs. The studies that empirically examine the dependence-opportunism relationship are presented in Table 2.2. Table 2.2 presents the authors, date, the main aim of the study, its methodology, the specific dependence-opportunism relationship that examines, the key findings (i.e., whether the hypotheses were supported or not) and its future research proposals concerning the examination of opportunism and its relationships.

In general, we could argue that empirical studies (e.g., Wang et al., 2012; Mysen et al., 2011) favored the theoretical suggestions of TCA and Resource dependence theory. Concerning the opportunism of a dependent firm, dependence is negatively correlated with opportunism. While concerning the opportunism of a non-dependent firm, dependence is positively correlated with opportunism (Hawkins
et al., 2009). Nevertheless, there were cases that these suggestions weren’t confirmed (e.g., Schilling & Steensma, 2001; Sako & Helper, 1998) or cases when the suggestions of Reactance theory were confirmed (e.g., Wang, 2002). Therefore, we have to rely to context specific information in order to suggest the way dependence and opportunism are linked.
<table>
<thead>
<tr>
<th>Authors/ Date</th>
<th>Aim</th>
<th>Methodology</th>
<th>Relationship between dependence and opportunism</th>
<th>Supported/ Not supported</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moon, 2012</td>
<td>Examination of the factors influencing manufacturer’s opportunism towards small- and medium-sized suppliers.</td>
<td>Sample: 131 small &amp; medium sized suppliers Industry: Not specified Analysis: Structural equation modeling</td>
<td>• Manufacturer’s dependence on the supplier → (+) Manufacturer’s opportunism</td>
<td>• Not supported</td>
<td>• Examination of the study’s relationships in samples across diverse industries.</td>
</tr>
<tr>
<td>Wang, et al., 2012</td>
<td>Examination of the interplay of drivers and deterrents of opportunism in buyer-supplier relationships.</td>
<td>Sample: 400 manufacturing firms Industry: Various Analysis: Structural equation modeling</td>
<td>• Manufacturer’s dependence on the supplier (in the form of TSA) → (+) Supplier’s opportunism</td>
<td>• Supported</td>
<td>• Examination of the study’s relationships through dyadic data. • Examination of other determinants of opportunism.</td>
</tr>
<tr>
<td>Handley &amp; Benton, 2011</td>
<td>Examination of the influence of exchange hazards and power on opportunism in outsourcing relationships.</td>
<td>Sample: 102 dyadic relationships Industry: Various Analysis: Hierarchical linear regression</td>
<td>• Buyer’s dependence (in the form of TSA) → (+) Provider’s opportunism (in the form of shirking) • Buyer’s dependence (in the form of TSA) → (+) Provider’s opportunism (in the form of poaching) • Provider’s dependence (in the form of TSA) → (-) Provider’s opportunism (in the form of shirking) • Provider’s dependence (in the form of TSA) → (-) Provider’s opportunism (in the form of poaching)</td>
<td>• Supported • Not supported • Supported • Not supported</td>
<td>• Examination of other determinants of opportunism. • Examination of other forms of opportunism.</td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Sample Size</td>
<td>Industry</td>
<td>Analysis Method</td>
<td>Results</td>
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<tr>
<td>Mysen et al., 2011</td>
<td>Examination of the key role of opportunism in business relationships relative to environmental uncertainty (i.e., competitive intensity and market turbulence), bonding structure (i.e., specific assets and dependence), and relationship quality (i.e., trust and commitment).</td>
<td>212</td>
<td>Various</td>
<td>Structural equation modeling</td>
<td>• Manufacturer’s dependence on the supplier (\rightarrow) (+) Supplier’s opportunism</td>
</tr>
<tr>
<td>Caniëls &amp; Gelderman, 2010</td>
<td>Examination of the safeguarding effect of administrative control, a dominant power position and relational norms on opportunistic behavior of suppliers.</td>
<td>624</td>
<td>Various</td>
<td>Multiple regression analysis</td>
<td>• Supplier’s dependence (in the form of buyer’s power) (\rightarrow) (-) Supplier’s opportunism</td>
</tr>
<tr>
<td>Brown et al., 2009</td>
<td>Examination of the efficacy of influence strategies for managing opportunism in marketing channels.</td>
<td>367</td>
<td>Lodging</td>
<td>Moderated regression analysis</td>
<td>• Supplier’s dependence (\rightarrow) Supplier’s opportunism</td>
</tr>
<tr>
<td>Liu et al., 2009</td>
<td>Examination of the roles of transactional and relational mechanisms in hindering opportunism and improving relationship performance in an emerging economy (i.e., China)</td>
<td>225</td>
<td>Household appliance</td>
<td>Hierarchical multivariate regression analysis &amp; Semi-partial correlation analysis</td>
<td>• Dependence (in the form of bilateral TSA) (\rightarrow) (-) Partner’s opportunism</td>
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</table>

Examination of the study’s relationships through dyadic data.
• Examination of other determinants of opportunism.
• Examination of the study’s relationships between other supply chain members.
• Examination of the study’s relationships with all size of businesses and in additional countries other than Norway.
| Morgan et al., 2007 | Examination of the antecedents and consequences of category level focal supplier opportunism. | Sample: 49 managers (qualitative fieldwork) & 75 supermarket store managers (survey)  
Industry: Supermarket  
Analysis: Structural equation modeling (PLS) | • Retailer’s dependence $\rightarrow$ (+) Supplier’s opportunism  
• Supplier’s dependence $\rightarrow$ (-) Supplier’s opportunism | Not supported | • Examination of the study’s relationships through data obtained from multiple informants of the firm.  
• Examination of the study’s relationships in other product categories.  
• Longitudinal examination of the study’s relationships.  
• The impact of retailer’s relationships with the focal supplier on the retailer’s relationships with other suppliers.  
• Examination of retailers’ monitoring capabilities in a supplier network context. |
| Ting et al., 2007 | Development and empirical examination of a model linking opportunism and its antecedents and consequences | Sample: 200 retailers  
Industry: Computer industry  
Analysis: Hierarchical regression analysis | • Dependence (in the form of own TSA) $\rightarrow$ (-) Self opportunism | Supported | • Examination of more antecedents of opportunism.  
• Examination of the study’s relationships in a larger sample.  
• Examination of the study’s relationships in other industries and countries.  
• Examination of inter-relationships between the antecedents of opportunism. |
| Vázquez et al., 2007 | Examination of the impact of the partner’s TSA and relational norms as mediators in the effect of the firm’s TSA on partner’s opportunism. | Sample: 479 dyadic manufacturer-distributor relationships  
Industry: Food industry  
Analysis: Structural equation modeling | • Dependence (in the form of own TSA) $\rightarrow$ (-) Partner’s opportunism under the condition of high partner’s TSA | Supported | • Examination of antecedents of opportunism in other sectors. |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Supported/Not supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lai et al., 2005</td>
<td>Examination of the employment of selection, TSA and relational norms respectively and simultaneously as mechanisms in order to mitigate supplier’s opportunism.</td>
<td>Sample: 131 manufacturers Industry: Semi conductor industry, information/ telecommunication industry and electronics industry</td>
<td>Multiple regression analysis</td>
<td>• Supplier’s dependence (in the form of supplier’s TSA) $\rightarrow$ (-) Supplier’s opportunism</td>
<td>• Supported</td>
</tr>
<tr>
<td>Rokkan et al., 2003</td>
<td>Examination of the TSA’s bonding effect and its negative impact on opportunism under the conditions of extendedness and solidarity norms.</td>
<td>Sample: 198 dyadic buyer-supplier relationships Industry: Building industry</td>
<td>Ordinary least squares regression analysis</td>
<td>• Dependence (in the form of own TSA) $\rightarrow$ (-) Partner’s opportunism under the condition of high levels of relationship extendedness • Dependence (in the form of own TSA) $\rightarrow$ (+) Partner’s opportunism under the condition of low levels of relationship extendedness • Dependence (in the form of own TSA) $\rightarrow$ (-) Partner’s opportunism under the condition of high levels of solidarity norms • Dependence (in the form of own TSA) $\rightarrow$ (+) Partner’s opportunism under the condition of low levels of solidarity norms</td>
<td>• Supported</td>
</tr>
<tr>
<td>Schilling &amp; Steensma, 2002</td>
<td>Examination of the impact of characteristic of technology (i.e., uniqueness, barriers to imitation, commercial uncertainty, technological</td>
<td>Sample: 127 top managers Industry: Various</td>
<td>Structural equation modeling</td>
<td>• Dependence (in the form of partner’s uniqueness) $\rightarrow$ (+) Partner’s opportunism</td>
<td>• Not supported</td>
</tr>
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</table>

Examination of the examined mechanisms under various moderating variables. Examination of the study’s relationships through dyadic data. Longitudinal examination of the study’s relationships. Examination of the mechanisms’ effect in mitigating various forms of opportunism. Examination of specific types of opportunism and not the general phenomenon. Further empirical examination of the study’s relationships.
<table>
<thead>
<tr>
<th>Study</th>
<th>Title</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Findings</th>
</tr>
</thead>
</table>
| Wang, 2002 | Examination of the impact of transaction attributes (i.e., contractor reputation, TSA and uncertainty) on the consequences of outsourcing practices (i.e., opportunism, outsourcing success) | 163 top managers | Manufacturing, service and financial sector | Exploratory factor analysis & Multiple regression analysis | • Dependence (in the form of TSA) → (-) Partner’s opportunism  
• Dependence (in the form of TSA) → (+) Partner’s opportunism |
<p>| Brown et al., 2000 | Examination of three governance mechanisms (i.e., ownership, TSA and relational norms) and their various combinations against opportunism. | 395 general hotel managers | Lodging industry | Ordinary least squares regression analysis | • Dependence (in the form of own TSA) → (-) Self-opportunism |
| Joshi &amp; Stump, 1999 | Examination of the impact of TSA, business related environmental uncertainty and relational norms on commitment and opportunism; Examination of dependence and long term orientation as mediators to the above relationships. | 168 purchasing managers | Various | Structural equation modeling | • Manufacturer’s dependence → (-) Manufacturer’s opportunism |
| Sako &amp; Helper, 1998 | Examination and differentiation of the determinants of trust and opportunism. | 675 first-tier suppliers in the US &amp; 472 first-tier suppliers in Japan | Automotive suppliers industry | | • Supplier’s dependence (in the form of TSA) → (+) Buyer’s opportunism |</p>
<table>
<thead>
<tr>
<th>Source</th>
<th>Analysis: Multivariate Regression Analysis</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Supported</th>
<th>Notes</th>
</tr>
</thead>
</table>
| Joshi & Arnold, 1997           | Examination of the impact of buyer dependence on opportunism against the supplier under the moderating role of relational norms. | 148 industrial purchasing agents | Electronic equipment manufacturing | Structural equation modeling | • Buyer’s dependence $\rightarrow$ (+) Buyer’s opportunism under the condition of low relational norms  
• Buyer’s dependence $\rightarrow$ (-) Buyer’s opportunism under the condition of high relational norms | Supported | Examination of the study’s relationship by measuring the actual opportunistic behavior and not the intention for opportunism. |
| Provan & Skinner, 1989         | Examination of the impact of inter-organizational dependence and control over decisions on opportunism. | 226 dealers | Farm and power equipment | Multiple regression analysis | • Buyer’s dependence $\rightarrow$ (-) Buyer’s opportunism | Supported | |
2.3.2 Opportunism and goal incompatibility

Goal incompatibility refers to the situation when the pursuit of one exchange member hinders the pursuit of the others (Das & Rahman, 2010). According to Yi et al. (2010) goal incompatibility occurs when two exchange partners have dissimilar goals. When partners believe that their goals are incompatible, then they may demonstrate self-interest seeking opportunistic behavior (Wong et al., 2005). Goals between exchange partners don’t have to be similar but only compatible. In this way both the objectives of every partner and the objectives of the relationship between them will be achieved (Batt, 2003).

Self-interest seeking is a reasonable behavior of business entities. When goals between exchange partners are compatible, then partners try to accomplish their own interests without hurting the others’. However, when goals are not compatible then a partner may try to pursue its own goals in an opportunistic manner (Das & Rahman, 2010). Therefore, the more compatible the goals are the lower the level of opportunism (Wang & Young, 2013). Similarly, Jap & Anderson (2003) argued that compatible goals may curb opportunism and enhance the outcomes of the exchange relationship. When goals between partners are positively related and cooperative then opportunism is minimized. On the other hand, when goals between partners are incompatible and competitive then opportunistic tensions may rise (Wong et al., 2005). According to the aforementioned, literature is quite clear concerning the relationship between partners’ goals and opportunism (Luo, 2006). Compatible goals mitigate opportunism and have positive effects on relationships’ outcomes while goal incompatibility increases the likelihood of opportunism (Batt, 2003). In the case of supply chains, goal incompatibility refers to the degree of goal disagreement between supply chain members (Cao & Zhang, 2011). Goal incompatibilities between chain members are a primary source of conflict inside the supply chain (Webb, 2002). Conflict and opportunism are highly related concepts in literature (Jap & Anderson, 2003). Therefore, goal incompatibility may increase opportunistic behavior inside the supply chain.
Empirical investigation of the relationship between goals and opportunism is mainly focused on the case of goal compatibility as a mechanism against opportunism (e.g., Anderson, 1988). The studies empirically examining the goal incompatibility-opportunism relationship are presented in Table 2.3. Table 2.3 includes the studies examining the goal incompatibility-opportunism relationship and those examining the goal compatibility-opportunism relationship as well. This is based on two reasons. The first is the fact that there is a lack of studies empirically examining the goal-incompatibility relationship in literature. Secondly, the relationship between goal and opportunism is quite clear in literature as seen earlier. Therefore, the examination of studies investigating the goal compatibility-opportunism relationship could give us valuable information for the goal incompatibility-opportunism relationship as well. In addition, we also included some studies examining the goal-conflict relationship due to the highly correlation between the concepts of conflict and opportunism. Table 2.3 presents the authors, date, the main aim of the study, its methodology, the specific goal-opportunism relationship that examines, the key findings (i.e., whether the hypotheses were supported or not) and its future research proposals concerning the examination of opportunism and its relationships.

Although there is limited number of empirical studies examining the goal incompatibility-opportunism relationship, their results come in agreement. Table 2.3 clearly shows that all empirical studies confirmed that goal incompatibility increases opportunism (or goal compatibility decreases opportunism). Therefore, we could conclude that when goals between partners are incompatible then opportunism may rise. Contextual specific information could give us valuable insights whether goal incompatibility occurs in specific relationships.
Table 2.2: Key empirical studies examining the opportunism-goal incompatibility relationship

<table>
<thead>
<tr>
<th>Authors/Date</th>
<th>Aim</th>
<th>Methodology</th>
<th>Relationship between goal incompatibility and opportunism</th>
<th>Supported/Not supported</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yi et al., 2010</td>
<td>Examination of the determinants of potential opportunism (in the form of conflict) between co-marketing alliance partners and of the means for managing the relationship more effectively.</td>
<td>Sample: 178 executives Industry: Credit card industry Analysis: Structural equation modeling</td>
<td>- Goal incompatibility $\rightarrow$ (+) Partner’s opportunism (in the form of conflict)</td>
<td>Supported</td>
<td>- Examination of the study’s relationships in a larger sample, across countries and across industries - Examine of other determinants of opportunism (in the form of conflict).</td>
</tr>
<tr>
<td>Wong et al., 2005a</td>
<td>Development and empirical examination of a model linking shared visions with compatible goals (in the form of competitive goals) and incompatible goals (in the form of competitive goals) and opportunism in organizational partnerships in China.</td>
<td>Sample: 103 dyadic customer-supplier relationships Industry: Various Analysis: Structural equation modeling</td>
<td>- Goal incompatibility (in the form of competitive goals) $\rightarrow$ (+) Partner’s opportunism - Goal compatibility (in the form of cooperative goals) $\rightarrow$ (-) Partner’s opportunism</td>
<td>Supported</td>
<td>- Examination of the study’s relationships through data obtained from multiple informants of the firm. - Examination of the study’s relationships across countries and cultures.</td>
</tr>
<tr>
<td>Jap &amp; Anderson, 2003</td>
<td>Examination of the moderating role of opportunism on several exchange relationships.</td>
<td>Sample: Over 300 dyadic supplier-buyer relationships Industry: Various Analysis: Structural equation modeling</td>
<td>- Goal compatibility $\rightarrow$ (+) Exchange outcomes under the condition of high opportunism</td>
<td>Supported</td>
<td></td>
</tr>
<tr>
<td>Ross et al., 1997</td>
<td>Examination of how performance is influenced by the belief of asymmetrical commitment to the</td>
<td>Sample: 255 dyadic agent-provider relationships Industry: Insurance</td>
<td>- Goal compatibility $\rightarrow$ (-) Opportunism (in the form of conflict)</td>
<td>Supported</td>
<td></td>
</tr>
</tbody>
</table>
| Anderson, 1988 | Examination of the determinants of opportunism in sales forces | Sample: 169 sales districts  
Industry: Electronic components industry  
Analysis: Ordinary least squares regression analysis | • Goal compatibility $\rightarrow$ (-) Opportunism  
• Supported  
• Examination of the study’s relationships across industries. |
2.3.3 Opportunism and informational asymmetry

Literature describes informational asymmetry as a significant driver of opportunistic behavior and pays high attention in propositions regarding relationship mechanisms whose primary cause is to decrease informational asymmetry and thus opportunism between partners (e.g., Heiman & Nickerson, 2004; Wathne & Heide, 2000; Sako & Helper, 1998). Informational asymmetry may rise in a variety of settings and it is based on the fact that markets for information are imperfect (Ting et al., 2007). Many business relationships take place under the condition of incomplete levels of information which all companies face. However, informational asymmetry occurs when part of this imperfect information is available only to a limited number of parties (Hobbs, 1996). In this case, one of the exchange parties has better knowledge of a transaction that could significantly change the other party’s evaluation of the exchange outcomes (Griesinger, 1990). The partner possessing more information could use it to his advantage in his relationships with other business entities (Ting et al., 2007).

Informational asymmetry increases perceptions of opportunism from the exchange party that possesses less information. For example when suppliers provide much more information to buyers than buyers provide to suppliers then perceptions of customers’ opportunism may rise (Sako & Helper, 1998). In addition, informational asymmetry decreases the ability of the less informed party to detect opportunistic behavior (Kirmani & Rao, 2000). On the other hand, when exchange partners share large amounts of information then informational asymmetry is reduced and hence, opportunism is reduced as well (Dyer, 1997). In this case, information takes the form of mutual hostage and therefore, opportunism is decreased (Wu, 2008). However, when during negotiations one exchange party provides more information than the other then the other party may expropriate it (Gundlach et al., 1995).

In TCA theory informational asymmetry is described as a key factor that increases opportunism (Dyer, 1997). Agency theory also postulates that informational asymmetry enhances the likelihood of agents’ opportunistic actions.
Informational asymmetry may enhance opportunistic behavior twofold. Firstly, it may rise ex ante opportunism with the phenomenon of adverse selection where the firm examines whether a potential partner has the characteristics that the firm is seeking (Bergen et al., 1992). In many cases, the firm won’t be able to possess all the necessary information regarding the potential partner’s capabilities. Then the potential partner may try to exploit this informational asymmetry and opportunistically hide information regarding its capabilities from the firm (Hobbs, 1996). For example, a partner could claim that he possesses the necessary skills to supply quality products without actually having those (Kirmani & Rao, 2000). Secondly, informational asymmetry may cause moral hazard; another form of opportunism which refers to ex post opportunism and post contractual problems (Bergen et al., 1992). In this case, parties choose to hide some of their actions in order to increase their economic welfare (Hobbs, 1996). Information sharing is according to SET theory a significant social construct in exchange relationships (Kwon & Suh, 2005). Therefore, relational exchange relationships, where opportunism is minimized (Hawkins et al., 2008), are characterized by information sharing and lack of informational asymmetry. In summary, theory posits that the concepts of informational asymmetry and opportunism are positively linked.

In many cases, supply chain members hide information (e.g., regarding cost or demand) and there is no member that has access to this kind of information for the whole chain (Corbett, 2001). Informational asymmetry in the context of supply chain management could also increase opportunistic tensions (Kwon & Suh, 2005). Information sharing is a crucial element in business relationship and especially in supply chain coordination (Fiala, 2005). However, sharing confidential information with the partner makes a firm vulnerable. In particular, when the flow of information is one way then a supply chain member could be suspicious for another partner’s opportunism (Sako & Helper, 1998). Similarly, according to Carter & Rogers (2008) information transparency is a critical issue in supply chains but make chain members vulnerable to opportunistic behavior due to informational asymmetry reasons (Heiman & Nickerson, 2004). In the case of informational asymmetry between supply
chain members, supply chains are vulnerable to deceptions and opportunistic actions that threaten their operations (Roth et al., 2008).

Informational asymmetry as discussed above is one of the most significant factors causing opportunism in exchange relationships and hence the literature has highlighted its role (e.g., Crosno & Dahlstrom, 2008; Paché, 2007; Hobbs, 1996; Bergen et al., 1992; Griesinger, 1990). However, the empirical confirmation of informational asymmetry’s impact on opportunism is rather limited. The studies that empirically examine the informational asymmetry-opportunism relationship are presented in Table 2.4. In Table 2.4 studies examining the informational sharing-opportunism relationship are also presented because informational sharing indicates low levels of informational asymmetry. Therefore, informational sharing decreases informational asymmetry and hence, opportunism. Table 2.4 presents the authors, date, the main aim of the study, its methodology, the specific informational asymmetry-opportunism relationship that examines, the key findings (i.e., whether the hypotheses were supported or not) and its future research proposals concerning the examination of opportunism and its relationships.

Although there is limited number of empirical studies examining the informational asymmetry-opportunism relationship, their results come in high agreement. Table 2.4 clearly shows that most of the empirical studies confirmed that informational asymmetry increases opportunism. Therefore, we could conclude that when one of the partners possesses more information than the other, then he may try to exploit it in his favor and against the other party. Of course this applies to exchange relationships where opportunism may occur. Contextual specific information could give us valuable insights whether informational asymmetry occurs in specific relationships.
Table 2.3: Key empirical studies examining the opportunism-informational asymmetry relationship

<table>
<thead>
<tr>
<th>Authors/Date</th>
<th>Aim</th>
<th>Methodology</th>
<th>Relationship between informational asymmetry and opportunism</th>
<th>Supported/Not supported</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caniëls &amp; Gelderman, 2010</td>
<td>Examination of the safeguarding effect of administrative control, a dominant power position and relational norms on opportunistic behavior of suppliers.</td>
<td>Sample: 624 information and communication technology managers Industry: Dutch municipalities Analysis: Multiple regression analysis</td>
<td>● Information sharing ⇒ (-) Supplier’s opportunism</td>
<td>● Not supported</td>
<td>● Examination of the study’s relationships in a larger dataset. ● Examination of other mechanisms safeguarding opportunism. ● Examination of the study’s relationships through dyadic data.</td>
</tr>
<tr>
<td>Ting et al., 2007</td>
<td>Development and empirical examination of a model linking opportunism and its antecedents and consequences.</td>
<td>Sample: 200 retailers Industry: Computer industry Analysis: Hierarchical regression analysis</td>
<td>● Informational asymmetry ⇒ (+) Self-opportunism</td>
<td>● Supported</td>
<td>● Examination of more antecedents of opportunism. ● Examination of the study’s relationships in a larger sample. ● Examination of the study’s relationships in other industries and countries. ● Examination of inter-relationships between the antecedents of opportunism.</td>
</tr>
<tr>
<td>Kwon &amp; Suh, 2005</td>
<td>Examination of the relationship between trust and several relevant constructs from TCA theory and SET theory.</td>
<td>Sample: 171 supply chain practitioners Industry: Various Analysis: Structural equation modeling</td>
<td>● Information sharing ⇒ (-) Partner’s opportunism</td>
<td>● Supported</td>
<td></td>
</tr>
<tr>
<td>Heiman &amp; Nickerson, 2004</td>
<td>Examination of the tension between knowledge sharing and knowledge expropriation in collaborations.</td>
<td>Sample: 36 surveys Industry: Various Analysis: Ordinary least squares regression analysis</td>
<td>● Informational asymmetry (in the form of knowledge management practices) ⇒ (+) Partner’s opportunism</td>
<td>● Supported</td>
<td>● Examination of the study’s relationships in a larger sample.</td>
</tr>
<tr>
<td>Study Authors</td>
<td>Research Focus</td>
<td>Sample Details</td>
<td>Findings</td>
<td>Support</td>
<td></td>
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</tr>
<tr>
<td>Sako &amp; Helper, 1998</td>
<td>Examination and differentiation of the determinants of trust and opportunism.</td>
<td>Sample: 675 first-tier suppliers in the US &amp; 472 first-tier suppliers in Japan Industry: Automotive suppliers industry Analysis: Multivariate Regression Analysis</td>
<td>• Informational asymmetry → (+) Buyer’s opportunism</td>
<td>Supported</td>
<td></td>
</tr>
<tr>
<td>Joshi &amp; Arnold, 1997</td>
<td>Examination of the impact of buyer dependence on opportunism against the supplier under the moderating role of relational norms.</td>
<td>Sample: 148 industrial purchasing agents Industry: Electronic equipment manufacturing Analysis: Structural equation modeling</td>
<td>• Buyer’s dependence → (+) Buyer’s opportunism under the condition of low relational norms (in the form of information sharing) • Buyer’s dependence → (-) Buyer’s opportunism under the condition of high relational norms (in the form of information sharing)</td>
<td>Supported</td>
<td></td>
</tr>
<tr>
<td>Ramaswami et al., 1997</td>
<td>Examination of the explanatory power of Agency theory and Social exchange theory regarding Informational asymmetry.</td>
<td>Sample: 154 salespeople Industry: Agricultural industry Analysis: Ordinary least squares regression analysis</td>
<td>• Informational asymmetry → (+) Opportunism (in the form of dysfunctional behavior)</td>
<td>Supported</td>
<td></td>
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</table>

- Examination of the study’s relationship by measuring the actual opportunistic behavior and not the intention for opportunism.
- Examination of contextual factors affecting the informational asymmetry-opportunism relationship.
- Examination of the informational asymmetry-opportunism relationship in inter-organizational contexts.
2.3.4 Opportunism and business related environmental uncertainty

Business related environmental uncertainty is an important factor that could impact an exchange relationship and could take various forms (Wang, 2002). According to Li (2002), uncertainty could be the cause of organizational opportunism. Similarly, Lee (1998) argues that the possibilities of a firm to behave opportunistically against its partner are higher in the case of uncertainty.

Business related environmental uncertainty refers to unanticipated changes in circumstances surrounding an exchange (Grover & Malhotra, 2003; Rindfleisch & Heide, 1997). It is often synonymous with volatility and dynamism and its effects are context specific (Luo, 2007). Business related environmental uncertainty could arise due to a number of different causes such as social, economic or technological trends (e.g., the cost of raw materials or the future trajectory of new technology) or regulation and competition conditions (Joshi & Stump, 1999; Sako & Helper, 1998).

Environmental uncertainty is manifested in many forms in the literature such as: environmental volatility (Carson et al., 2006), market uncertainty (Manolis et al., 1997), industry structural instability (Luo, 2007) or technological uncertainty and dynamism (Handley & Benton, 2011; Schilling & Steensma, 2002). Nevertheless, all these forms of uncertainty arise from the dynamic external environment due to the unpredictability of events which occur outside an exchange relationship (Joshi & Stump, 1999).

Business related environmental uncertainty has attracted high attention in the literature of opportunism (Hawkins et al., 2008). Due to uncertainty, contracts between exchange partners will be almost always incomplete. Incomplete contracts could be exploited by exchange parties and opportunistic behavior could be emerged (Sako & Helper, 1998). Due to uncertainty contractual safeguards can’t be thoroughly developed and business relationships are vulnerable to opportunism (Handley & Benton, 2011). Therefore, when the business environment is uncertain, the firm’s tension to opportunistically exploit its partner may increase (Das & Rahman, 2010).
A basic assumption in TCA theory is that of bounded rationality. According to it the human rationality in making decisions is physically limited (Hobbs, 1996). Bounded rationality combined with business related environmental uncertainty limits the ability of developing contracts that take into account unforeseen circumstances in the exchange relationships in order to govern these relationships. Therefore according to TCA theory contract adaptation problems may occur and hence, opportunism may emerge (Crosno & Dahlstorm, 2008).

Rindfleisch & Heide (1997) reported that there are two basic operationalizations of business related environmental uncertainty in literature. The first one focuses on the unpredictable nature of the external environment and the second one examines both unpredictability and complexity. An important point for consideration about which operationalization fits better in a specific occasion is the study context. Accordingly, the first operationalization is usually employed in domestic exchange relations context where complexity could be managed while the second one is commonly used in the examination of international exchanges where complexity could be much higher (Rindfleisch & Heide, 1997). We will focus on the first operationalization since our aim is to examine supplier-multiple retailer relationships in the supply chain in the Greek food sector.

Today’s business environment is characterized by high uncertainty and according to Fynes et al. (2004) supply chains should learn to live with it. These high levels of business related environmental uncertainty make supply chain relationships difficult to manage and maintain (Ellram, 1991). The complex and dynamic relationships between supply chain members increase the unpredictability in supply chain operations even more (Sun et al., 2009). Supply chains should be designed in a way that could help them deal with uncertainty or else significant operational inefficiencies will lead to poor performance (Santoso et al., 2005; Fynes et al., 2004). According to Ellram (1991), formal agreements are a common method of managing relationships in a supply chain. Further, the author posits that one of the biggest supply chain challenges is countering opportunism while business related environmental uncertainty makes supply chain relationships difficult to monitor since formal contracts have to include more and more explicit terms (Ellram, 1991).
Nevertheless, due to bounded rationality opportunism may appear in areas the contracts fail to cover. In the case of high uncertainty only chains with low levels of opportunism and close trustful relationships may present enhanced performance (Fynes et al., 2004). Wathne & Heide (2000) argued that opportunism may appear also in the case of informal agreements and this is very crucial since a significant part of supply chain transactions is also based on informal relationships (Stonebraker & Liao, 2004).

Business related environmental uncertainty is one of the most significant determinants of opportunism and has been widely researched in literature (Hawkins et al., 2008). In addition, literature presents many studies that empirically examined the business related environmental uncertainty-opportunism relationship. These studies are presented in Table 2.5. Table 2.5 presents the authors, date, the main aim of the study, its methodology, the specific business related environmental uncertainty-opportunism relationship that examines, the key findings (i.e., whether the hypotheses were supported or not) and its future research proposals concerning the examination of opportunism and its relationships.

Table 2.5 shows that empirical studies have confirmed the positive link between business related environmental uncertainty and opportunism. However, there are studies which failed to confirm this relationship. In general, it is indicated that when exchange relationships occur in highly uncertain business related environmental conditions then the propensity of opportunism is high. Contextual specific information could give us valuable insights whether specific relationships are encompassed by business related environmental uncertainty.
<table>
<thead>
<tr>
<th>Authors/ Date</th>
<th>Aim</th>
<th>Methodology</th>
<th>Relationship between business related environmental uncertainty and opportunism</th>
<th>Supported/ Not supported</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handley &amp; Benton, 2011</td>
<td>Examination of the influence of exchange hazards and power on opportunism in outsourcing relationships.</td>
<td>Sample: 102 dyadic relationships  Industry: Various  Analysis: Hierarchical linear regression</td>
<td>• Business related environmental uncertainty (in the form of technological uncertainty) → (+) Provider’s opportunism (in the form of shirking)  • Business related environmental uncertainty (in the form of technological uncertainty) → (+) Provider’s opportunism (in the form of poaching)</td>
<td>• Not supported  • Not supported</td>
<td>• Examination of other determinants of opportunism.  • Examination of other forms of opportunism.</td>
</tr>
<tr>
<td>Mysen et al., 2011</td>
<td>Examination of the key role of opportunism in business relationships relative to environment uncertainty (i.e., competitive intensity and market turbulence), bonding structure (i.e., specific assets and dependence), and relationship quality (i.e., trust and commitment).</td>
<td>Sample: 212 small &amp; medium manufacturers  Industry: Various  Analysis: Structural equation modeling</td>
<td>• Business related environmental uncertainty (in the form of market turbulence) → (+) Supplier’s opportunism</td>
<td>• Supported</td>
<td>• Examination of the study’s relationships through dyadic data.  • Examination of other determinants of opportunism.  • Examination of the study’s relationships between other supply chain members.  • Examination of the study’s relationships with all size of businesses and in additional countries other than Norway.</td>
</tr>
<tr>
<td>Luo, 2007</td>
<td>Examination of the impact of various aspects of environmental uncertainty (i.e., industry structural instability, information unverifiability, and law</td>
<td>Sample: 188 joint ventures  Industry: Various  Analysis: Hierarchical regression analysis</td>
<td>• Business related environmental uncertainty (in the form of industry structural instability) → (+) Partner’s opportunism  • Business related environmental opportunism</td>
<td>• Not supported</td>
<td>• Further examination of the mediating role of opportunism in the business related environmental uncertainty-performance relationship.  • Examination of the study’s relationships with multi-country data.</td>
</tr>
<tr>
<td>Study</td>
<td>Description</td>
<td>Sample</td>
<td>Industry</td>
<td>Analysis</td>
<td>Findings</td>
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</table>
- Business related environmental uncertainty (in the form of unpredictability of the decisions’ consequences) $\Rightarrow$ (+) Self-opportunism  
- Business related environmental uncertainty (in the form of no confidence of the decision maker) $\Rightarrow$ (+) Self-opportunism |
| Carson et al., 2006 | Examination of the impact of formal and relational contracting on opportunism under conditions of volatility and ambiguity | Sample: 125 top managers | Industries: Various | Analysis: Maximum-likelihood probit analysis & Ordinary least squares regression analysis | - Business related environmental uncertainty (in the form of environmental volatility) $\Rightarrow$ (+) Supplier’s opportunism under the condition of formal contracting  
- Business related environmental uncertainty (in the form of environmental ambiguity) $\Rightarrow$ (+) Supplier’s opportunism under the condition of relational contracting |

- Supported  
- Examination of different opportunistic behaviors and different areas where opportunism manifests.  
- Examination of more antecedents of opportunism.  
- Examination of the study’s relationships in a larger sample.  
- Examination of the study’s relationships in other industries and countries.  
- Examination of inter-relationships between the antecedents of opportunism.  
- Further examination of the impact of different business related environmental uncertainty’s aspects on opportunism.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Study</th>
<th>Sample</th>
<th>Industries</th>
<th>Analysis</th>
<th>Results</th>
</tr>
</thead>
</table>
| Schilling & Steensma, 2002      | Examination of the impact of characteristics of technology (i.e., uniqueness, barriers to imitation, commercial uncertainty, technological dynamism) on opportunism, sustainable advantage and the probability of acquisition vis-à-vis licensing agreement. | 127 top managers | Various                              | Structural equation modeling | • Business related environmental uncertainty (in the form of commercial uncertainty) \(\rightarrow\) (+) Partner’s opportunism  
• Business related environmental uncertainty (in the form of technological dynamism) \(\rightarrow\) (+) Partner’s opportunism  
• Not supported |
| Skarmeas et al., 2002           | Examination of the drivers of commitment and its impact on performance in cross-cultural buyer-seller relationships. | 216 importers | Various                              | Structural equation modeling | • Business related environmental uncertainty \(\rightarrow\) (+) Partner’s opportunism  
• Supported |  
• Further examination of the business related environmental uncertainty-opportunism relationship by implementing better measures. |
| Wang, 2002                      | Examination of the impact of transaction attributes (i.e., contractor reputation, TSA and business related environmental uncertainty) on the consequences of outsourcing practices (i.e., opportunism and outsourcing success) | 163 top managers | Manufacturing, service and financial sectors | Multiple regression analysis | • Business related environmental uncertainty \(\rightarrow\) (+) Partner’s opportunism  
• Supported  
• Further examination of the study’s relationships on small sized companies.  
• Further examination of the study’s relationships by implementing better measures.  
• Examination of the study’s relationships through dyadic data. |
| Joshi & Stump, 1999             | Examination of the impact of TSA, business related environmental uncertainty and relational norms on commitment and opportunism; Examination of dependence and long term orientation as mediators to the above relationships. | 168 purchasing managers | Various                              | Structural equation modeling | • Business related environmental uncertainty (in the form of technological unpredictability) \(\rightarrow\) (-)  
• Long term orientation \(\rightarrow\) (-) Manufacturer’s opportunism  
• Supported |
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Study Title</th>
<th>Sample</th>
<th>Findings</th>
<th>Methodology</th>
<th>Additional Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lee, 1998</td>
<td>Examination of opportunism’s determinants (i.e., decision making uncertainty, cultural distance and economic ethnocentrism) and its impact on relational exchange. Examination of the impact of relational exchange, exporting performance and the duration of the business relationship on exporters’ intentions to form strategic alliances.</td>
<td>Sample: 105 top managers</td>
<td>• Business related environmental uncertainty (in the form of decision making uncertainty) $\rightarrow$ (+) Exporter’s opportunism</td>
<td>Analysis: Structural equation modeling</td>
<td>• Supported • Examination of the study’s relationships through dyadic data. • Longitudinal examination of the study’s relationships. • Examination of the study’s relationships in other countries.</td>
</tr>
<tr>
<td>Anderson, 1988</td>
<td>Examination of the determinants of opportunism in sales forces</td>
<td>Sample: 169 sales districts</td>
<td>• Business related environmental uncertainty (in the form of environmental unpredictability) $\rightarrow$ (+) Opportunism</td>
<td>Industry: Electronic components industry Analysis: Ordinary least squares regression analysis</td>
<td>Not supported • Examination of the study’s relationships across industries.</td>
</tr>
</tbody>
</table>
2.3.5 Opportunism and behavioral uncertainty

Behavioral uncertainty is another form of uncertainty which could affect exchange relationships. In contrast with environmental uncertainty that derives from exogenous sources, behavioral uncertainty arises due to the individual motivations of the partner (Hawkins et al., 2008). In the case of behavioral uncertainty it is the exchange partner that increases the degree of uncertainty with unpredictable actions (Sako & Helper, 1998) and in view of the potential for opportunistic behavior (Zaheer & Venkatraman, 1995).

Behavioral uncertainty comes from the difficulties in monitoring the contractual performance of exchange partners (Williamson, 1985). It refers to the ability to verify ex post compliance to contracts and includes performance evaluation and informational asymmetry problems (Grover & Malhotra, 2003). Rindfleisch & Heide (1997) argued that behavioral uncertainty is fundamentally a performance assessment problem and has to do with the difficulties in verifying whether compliance with established agreements has occurred. According to Wang (2002), this difficulty of ascertaining adherence to contractual agreements is reflected in the post-contractual opportunism of the exchange partners.

The two basic theories behind behavioral uncertainty and its connection to the concept of opportunism are TCA theory and Agency theory (Crosno & Dahlstrom, 2008) which according to Bergen et al. (1992) have a common conceptual ground. Agency theory argues that information asymmetries along with difficulties in evaluating ex post partner’s performance and compliance to the established agreements (behavioral uncertainty) could lead to opportunistic behavior (Crosno & Dahlstrom, 2008; Wang, 2002). In this case and according to Agency theory, when one party (i.e., the agent) undertakes a job for another party (i.e., the principal) then the principal has imperfect and incomplete knowledge about the agent’s actions on the job which could lead to the agent’s opportunistic behavior (Bergen et al., 1992). Similarly, TCA theory posits that when a firm is unable to fully evaluate its partner’s behavior then partner’s opportunism may emerge (Crosno & Dahlstrom, 2008).
However, we should take into consideration the doubts of Niesten & Jolink (2011) regarding the conceptualization of behavioral uncertainty as performance ambiguity. According to the authors, this approach presumes the dependence of behavioral uncertainty to the relationship’s governance structures (e.g., ex post monitoring) and thus, behavioral uncertainty loses its independent character as a transaction attribute. In addition, Niesten & Jolink (2011) posited that opportunism leads to behavioral uncertainty and proposed incentives alignment as a better measure of behavioral uncertainty. Our focus is the examination of the most significant drivers of opportunistic behavior and their interrelationships. According to the aforementioned it is evident that behavioral uncertainty in the form of performance ambiguity clearly impacts opportunism (mainly in the form of ex post opportunism) and hence, we will follow the specific conceptualization.

Trust plays a significant role in the successful implementation of supply chain management and in strong supply chain relations. A significant factor that negatively affects trust in supply chain relationships is behavioral uncertainty (Kwon & Suh, 2005). Therefore, performance evaluation problems created by supply chain partners could result in opportunism from the part of supply chain partners.

As we previously saw, environmental uncertainty has been widely examined as a determinant of opportunistic behavior. However, there is lack of studies examining the other form of uncertainty, behavioral uncertainty and its conceptualization (Niesten & Jolink, 2011). The literature conceptually confirms the potential of partner’s opportunism due to behavioral uncertainty (e.g. Crosno & Dahlstrom, 2008; Maitland et al., 1985). Nevertheless, the attempts to empirically confirm this relationship are rather limited. Table 2.6 presents the studies that empirically examined the behavioral uncertainty-opportunism relationship. We also included the study of Stump & Heide (1996) which examined the behavioral uncertainty-monitoring relationship. Monitoring enhances the firm’s ability to detect opportunism and reduces opportunistic tensions (Stump & Heide, 1996). Therefore, if the ability of monitoring is decreased then, opportunism may emerge (Kidwell et al., 2007).
Table 2.6 presents the authors, date, the main aim of the study, its methodology, the specific business related environmental uncertainty-opportunism relationship that examines, the key findings (i.e., whether the hypotheses were supported or not) and its future research proposals concerning the examination of opportunism and its relationships. Table 2.6 shows that empirical studies have confirmed the positive link between behavioral uncertainty and opportunism and therefore, they have demonstrated empirical proof of the strong suggestions of the theory concerning this relationship. Contextual specific information could give us valuable insights whether behavioral uncertainty characterizes specific relationships.
Table 2.5: Key empirical studies examining the opportunism-behavioral uncertainty relationship

<table>
<thead>
<tr>
<th>Authors/Date</th>
<th>Aim</th>
<th>Methodology</th>
<th>Relationship between behavioral uncertainty and opportunism</th>
<th>Supported/ Not supported</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wang, et al., 2012</td>
<td>Examination of the interplay of drivers and deterrents of opportunism in buyer-supplier relationships.</td>
<td>Sample: 400 manufacturing firms Industry: Various Analysis: Structural equation modeling</td>
<td>Supplier’s behavioral uncertainty → (+) Supplier’s opportunism</td>
<td>Supported</td>
<td>Examination of the study’s relationships through dyadic data. Examination of other determinants of opportunism.</td>
</tr>
<tr>
<td>Stump &amp; Heide, 1996</td>
<td>Examination of the interdependencies between opportunism’s control mechanisms (i.e., buyer’s TSA, supplier’s TSA, technological unpredictability, qualification of supplier motivation, qualification of supplier ability, behavioral uncertainty, purchase importance and monitoring).</td>
<td>Sample: 164 manufacturers Industry: Chemical manufacturing industry Analysis: Structural equation modeling</td>
<td>Supplier’s behavioral uncertainty → (-) Ability to monitor the suppliers</td>
<td>Supported</td>
<td>Examination of the manufacturers’ opportunism as well. Examination of the study’s relationships through data obtained from multiple informants of the firm.</td>
</tr>
<tr>
<td>Anderson, 1988</td>
<td>Examination of the determinants of opportunism in sales forces</td>
<td>Sample: 169 sales districts Industry: Electronic components industry Analysis: Ordinary least squares regression analysis</td>
<td>Behavioral uncertainty → (+) Opportunism</td>
<td>Supported</td>
<td>Examination of the study’s relationships across industries.</td>
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</table>
2.4 SUPPLIER-MULTIPLE RETAILER RELATIONSHIPS IN THE SUPPLY CHAIN IN THE FOOD SECTOR

2.4.1 Relationships in the supply chain in the food sector

Supply chain in the food sector connects three important economic sectors: agriculture, food manufacturing industry and distribution. Its performance has fundamental impact on societies in terms of health, employment and societies’ welfare (European Commission, 2009). Supply chain operations in the food sector move away from commodity handling activities to added value operations that follow consumers’ preferences. Therefore, today’s relationships in the supply chain in the food sector are evolving; the commodity spot markets like relationships are now becoming tighter and more closely specified linkages between tiers in the supply chains (Hobbs & Young, 2000). Smooth operating and high performing supply chains in the food sector are characterized by long term, large scale, information sharing, trustful and transparent supply chain relationships (Bourlakis & Weightman, 2004).

Retailers and their initiatives (e.g., advances in logistics operations) played a significant role in the evolvement of supply chains in the food sector (Bourlakis & Weightman, 2004). This could be attributed to the structural changes in the retailing sector. In the past decades, the food retailing sector was characterized by high concentration rates (Fearne et al., 2005; Burt & Sparks, 2003; Patterson & Richards, 2000; Howe, 1998) that led to the creation of huge multiple retailers with high market power (Fassin, 2005). Retailing concentration is a characteristic of all the developed countries and some of the world’s largest and most successful grocery retailers (e.g., Tesco and Carrefour) are members of the supply chain in the European food sector (Dobson et al., 2000). Hingley (2005) reported that there is evidence of the food retailer’s power growth in the United States as well. Due to their size, multiple retailers have the role of the main gateway to consumers and also that of the gate-keeper between producers and consumers (Hingley, 2005). They also possess valuable information concerning consumers’ preferences, product
movement and generally market conditions (Burt, 2000) that could benefit the optimization of the supply chain’s operations.

The above characteristics of the retailing sector have introduced considerable changes in the way supply chains operate within the food sector. According to the traditional character of the supply chains in the food sector, it was manufacturers who drove distribution by using a network of wholesalers and retailers to distribute their branded products. However, modern supply chains in the food sector are driven by retailers and particularly by multiple retailers. They possess increased capabilities in logistics and warehousing and in this way they can by-pass wholesalers (Dobson, 2002).

These structural changes in the supply chains in the food sector changed the balance of power between chain members. Power is now skewed towards multiple retailers. In some cases, they dominate the supply chains and they are holding the upper hand in supply chain relationships (Hingley, 2005; Dobson, 2002). In most cases, this imbalance of power didn’t have consequences in the operation of supply chains since the other chain tiers continued gaining reasonable profits. Therefore, suppliers of multiple retailers are willing to enter in asymmetric relationships with their buyers because they are still the widest and most profitable path that reaches the final consumer (Hingley, 2005).

Multiple retailers are frequently competing for significant shares of national markets (Dobson, 2002). As a result, a small number of multiple retailers dominate most national markets (Fassin, 2005). According to Lynch-Wood et al. (2009) multiple retailers are still growing and smaller retailers of the same markets face high competitive pressures whilst their viability is questioned. In this way, suppliers have even lesser corporate customers available. This fact further enhances the current status of supply chain relationships in the food sector. Towards this notion, multiple retailers enhance their position in the supply chain when they use the knowledge they possess for their own interest and they don’t share it freely with their suppliers (Vieira & Ferreira, 2006). The introduction and continuous grow of own brand products also affected the balance in supply chain relationships in the
food sector in favor of multiple retailers. Their low price and their ability to substitute branded products significantly strengthened the position of multiple retailers in the supply chain (Vander-Stichele & Young, 2009). In addition, retailing concentration resulted in transactions often being conducted between firms with big size differences. Multiple retailers are frequently dealing with small national food companies. In these cases, retailers may be accountable for a large share of the suppliers’ turnover (Fassin, 2005) and hence, suppliers’ dependence on them is increased (Vander-Stichele & Young, 2009).

The structural changes in the retailing sector due to consolidation had significant benefits for the whole supply chain in the food sector. Heavy investments made by multiple retailers resulted in economies of scale and sophisticated logistics and distribution systems. All the above favored the final consumer in terms of product variety, product quality and prices (Dobson et al., 2000). The current status of relationships in the supply chain in the food sector gave multiple retailers an advantage in trading with other chain members where they can achieve very favorable terms (Lynch-Wood et al., 2009). These terms and conditions are more favorable than those available from other smaller retailers; they wouldn’t have been achieved under a different relationship status in the food chain and they could result in low prices for the final consumer (Dobson et al., 2000).

2.4.2 Concerns in the supplier-multiple retailer relationships in the supply chain in the food sector

Multiple retailers have positively affected supply chain’s efficiency and service in the food sector. Nevertheless, their domination in the supply chain relationships has raised some concerns regarding their exercise of power in their relationships with suppliers (Dobson et al., 2000). There is evidence that multiple retailers have advantageous asymmetric relationships with at least some of their suppliers (UK Competition Commission, 2008). Of course big suppliers with branded products of high market shares are excluded from this category. The advantageous position of
multiple retailers gave them the opportunity to achieve very favorable agreement terms with suppliers. Suppliers have to comply with these conditions and also with various restraints imposed by retailers (Dobson, 2002). Multiple retailers are continuously demanding more from their suppliers and at the same time they are paying less (Hingley et al., 2006). The upstream supply chain members have raised concerns about some questionable multiple retailers’ practices whose occurrence increases as the retailing sector further consolidates (Patterson & Richards, 2000). The concerns are primarily focused on the food sector (Vander-Stichele & Young, 2009).

In some cases, multiple retailers try to gain a disproportionate share of resources from their suppliers by using questionable practices (Duffy et al., 2003). There is a raising concern that these practices may negatively affect suppliers’ welfare (Fearne et al., 2004). In most cases, they have to do with the unbalanced sharing of costs and risks between multiple retailers and suppliers in favor of the retailers (Hingley et al., 2006). Due to the current status of supply chain relationships in the food sector it is multiple retailers who set the terms, conditions and prices in their agreements with suppliers (Ganesh, 2010). In some cases, suppliers may face financial pressures and various questionable demands and short term relationship orientation from the part of multiple retailers (Towill, 2005). This kind of behavior is enhanced by the fact that multiple retailers have a triple role in their relationships with suppliers; they are their customers, their competitors (due to own brand products) and their suppliers (i.e., they are supplying their store shelves to them) as well (Dobson, 2005). In addition, the concurrence of the global economic crisis may increase the emergence of these practices since managers get severe pressures for achieving better margins (Fassin, 2005). When relationships are unbalanced in a high degree then, collaborative spirit in supply chain decision making could fade and selfishness may rise in the supply chain in the food sector. Nevertheless, very unbalanced relationships are a typical state in supply chain relationships in the food sector (Hingley, 2005).

When multiple retailers’ questionable practices occur, they could take many forms and could refer to several areas of activities in the operation of the supply
chain (European Commission, 2009; UK Competition Commission, 2008; Towill, 2005). For this reason, they are frequently reported as questionable supply chain practices (UK Competition Commission, 2008). The possible areas of such activities are so many that they are practically unlimited (Ganesh, 2010). In some cases, these multiple retailers’ practices may encompass the notion of guile and have the characteristics of opportunistic behavior (Kumar et al., 2001) as discussed in section 2.2. A typical example of such a behavior was that of the chain Safeway in 1999 in the UK (Fearne et al., 2004). The chain aimed to pass the costs of in-store promotion onto suppliers which were asked to pay a £20,000 donation per product line and thus the total cost could reached several hundred thousand pounds. In addition, in some cases aggressive bargaining or even threats may be applied by multiple retailers in order to solve conflicts of interest between them and their suppliers (Fearne et al., 2004). In many cases, high financial pressures are put on suppliers aiming to reduce the price of the purchasing products from the part of multiple retailers (Towill, 2005). The reasonable reaction of suppliers in these practices is to deny them. However, in many cases suppliers fear that unless they don’t satisfy multiple retailers’ requirements their relationship will be terminated (Dobson et al., 2000). For many suppliers, multiple retailers constitute a significant share of their turnover and they can’t risk losing such customers (Fassin, 2005). In general, suppliers raise concerns regarding the growing retailers’ opportunism (Kumar et al., 2001). The detailed analysis of multiple retailers’ questionable practices will be presented later in our study.

Of course this kind of practicing is not typical from the part of multiple retailers. Nevertheless, the raising concern regarding it may indicate that it is becoming a significant issue in supply chain relationships in the food sector. The European Parliament, the U.S. Department of Justice and the Federal Trade Commission and the UK Competition Commission are some of the most important bodies that raised questions about retailers’ practices (Ganesh, 2010). Vander-Stichele & Young (2009) showed that cases of such practices were reported in at least 17 European Union members (i.e., Denmark, Finland, Sweden, Austria, Belgium, France, Germany, Italy, Ireland, Hungary, Latvia, the Netherlands, Poland, Romania,
Slovakia, Spain, and the UK). The markets of these countries were all characterized by high retailing concentration rates and unbalanced supply chain relationships in favor of retailers. The authors also argued that these cases raised the concern of competition authorities, governments, suppliers and the media. Hingley et al. (2006) also reported that in UK there was critic concerning some cases of multiple retailers’ behavior against their suppliers. Patterson & Richards (2000) also reported similar concern for the US market and supply chains in the food sector. In addition, Moberg & Speh (2003) argued that multiple retailer’ questionable practices are not uncommon in supply chain relationships in the food sector.

The issue of multiple retailers’ questionable and potentially opportunistic behavior is further intensified due to the fact that these practices are difficult to prove and also because suppliers hesitate to make complaints for not harming their relationship with retailers (Dobson, 2002). In addition, lack of protection from relevant regulation that could mitigate the phenomenon is reported (Vander-Stichele & Young, 2009).

Supplier-retailer relationships in the supply chain in the food sector significantly differ according to which parties engage in the exchange (Fearne et al., 2005). The raising concern regarding multiple retailers’ opportunistic behavior mainly concerns their relationships with smaller suppliers because in many cases they are unable to resist the retailers’ agreement conditions (Duffy et al., 2003; Dobson, 2002). Smaller suppliers are usually dependent on one or two key retailers and even though retailers may easily substitute their suppliers, suppliers may lose substantially if their relationship with retailers is terminated (Dobson, 2002). Similarly, Fassin (2005) argued that size matters in the relationships in the supply chain in the food sector and large multinational companies with high market power are more likely to exploit smaller suppliers. In addition, it is more likely that smaller suppliers will be affected more from high financial pressures than the larger ones and even their viability may be questioned (Dobson, 2005; Patterson & Richards, 2000). Larger suppliers will probably be troubled only concerning the amount of profit reduction due to financial pressures. Accordingly, Vander-Stichele & Young (2009) argued that large brand manufacturers may be less concerned for retailers’
actions than SMEs suppliers. Hence, even big strong manufacturers can’t avoid these pressures but they are probably more capable of dealing with them than the smaller ones (Dobson, 2005).

Own brands are a powerful tool of retailers in gaining competitive advantage and positioning the retailer as a brand in the market (Collins & Burt, 2006). However, own brands also affected the supplier-retailer relationship and enhanced the unbalanced relationships between multiple retailers and suppliers in supply chains in the food sector. Accordingly, own brands also played role in the level of occurrence of multiple retailers’ questionable practices. The reason is that own brands can substitute suppliers’ products; especially the smaller ones which are consequently more eager to accept painful terms posed by multiple retailers (Vander-Stichele & Young, 2009). Therefore, suppliers of unbranded or lower awareness products are more vulnerable (Vander-Stichele & Young, 2009; Hingley, 2005). On the contrary, suppliers of “must-stock-products” are in a better position against multiple retailers’ questionable practices (Vander-Stichele & Young, 2009).

The above indicate that there is a raising concern regarding supplier-multiple retailer relationships in the supply chain in the food sector. The concern refers to some cases of multiple retailers’ questionable practices. Sometimes some multiple retailers may engage in questionable practices against their suppliers and these practices may encompass characteristics of opportunistic behaviors. Smaller suppliers seem to be more vulnerable while own brand products also play an important role in the retailers’ questionable behavior. In the next section we will present which are the most significant questionable practices according to literature.

2.4.3 Multiple retailers’ questionable/potentially opportunistic supply chain practices

Supply chain relationships include a large number of interactions between chain members. It is possible that partners will try to exploit this complexity by acting in a questionable manner (Moberg & Speh, 2003). Previous examination of
supplier-multiple retailer relationships reported evidence of multiple retailers’ questionable practicing concerning supply chain operations in the supply chain in the food sector (e.g., Vander-Stichele & Young, 2009; UK Competiision Commission, 2008; Towill, 2005; Dobson, 2005). Suppliers may complaint for many aspects of multiple retailers’ behavior which could negatively affect their interests (Reardon & Hopkins, 2006). In some cases, characteristics of opportunistic behavior are detected on them (Kumar et al., 2001). Nevertheless, not all questionable behaviors could be characterized as opportunistic unless they encompass the features of opportunism (e.g., the notion of guile) as described earlier in its definition (section 2.2.2). Therefore, questionable practices are just potential forms of opportunism.

In this part of the study we will report the most significant multiple retailers’ questionable supply chain practices that were identified in the relevant literature. The identification of all the possible questionable practices would be impossible or quite lengthy at least. Supply chain relationships are very complex and partners willing to behave opportunistically could be very creative in finding ways of taking advantage of their partners (Towill, 2005; Moberg & Speh, 2003). Therefore, we distinguished the supply chain practices that were most widely reported in literature, those which had the higher impact on the supplier and those that had the most clear opportunistic characteristics according to the earlier described definition and the features of opportunism (section 2.2.2). These practices are not typical in supplier-multiple retailer relationships but they might be used in them in some cases.

The detailed presentation of each practice is beyond the scope of this thesis. The described supply chain practices are often part of complex agreements between the supplier and the multiple retailer. Issues such as slotting allowances or listing fees are well described in literature (e.g., Dobson, 2005; Desiraju, 2001; Bloom et al., 2000). However, it would be quite lengthy to thoroughly present them here. We will try to focus on the basic characteristics of each practice and whether it encompasses the notion of opportunism. In addition, we avoided using the various terms of practices that were used in literature (e.g., slotting fees, facing allowances, listing fees) because there was inconsistency in their definition. For example, according to Dobson (2005), listing fees refer to payments that should be given to multiple
retailers before goods are purchased by them. On the other hand, Dulsrud & Jacobsen (2009) used the term for describing payments paid from suppliers to multiple retailers for stocking goods. Moreover, there were cases when these terms referred to a family of practices (Bloom et al., 2000). Hence, we tried to be as much specific as we could in giving titles on the practices examined in our study. The titles given are small representations of each practice. The most significant multiple retailers’ questionable practices as identified in literature are described next. The title, a small description and the opportunistic characteristics for each of the 32 identified practices are presented.

1) **Questionable practice: Favoring own brands against branded products**

*Description:* Market shares of own brand products are increasingly growing and this results in high revenues for the retailers. Naturally, retailers try to promote them as much as they can (Vander-Stichele & Young, 2009). In most cases, it is multiple retailers who decide which products will take which place in the shelves of their stores. In some cases, own brands are better promoted or they are occupying the best in-store point of sales or the space devoted to them is larger than their corresponding market share. In these cases, the branded products are in disadvantage (Vander-Stichele & Yung, 2009; Gómez & Rubio, 2008; UK Competition Commission, 2008; Dobson et al., 2000).

*Opportunistic characteristics:* This practice could be perceived as opportunistic because it is an unfair behavior against suppliers’ branded products. It encompasses the notion of guile because it aims to increase multiple retailers’ revenues at the expense of the suppliers’ ones.

2) **Questionable practice: Unreasonably high payments as condition for stocking goods**

*Description:* A common practice in supply chain relationships in the food sector is when suppliers pay fees to multiple retailers in order to gain space in the retailers’ shelves (Poddar & Donthu, 2011; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; ICAP, 2007; Reardon & Hopkins, 2006; Dobson, 2005; Towill, 2005; Burt & Sparks, 2003; Moberg & Speh, 2003; Dobson, 2002;
Patterson & Richards, 2000; Whysall, 2000; Brookes, 1995). The amount of money required is usually related to the number of different products that will be stocked and to the number of stores in which they will be stocked (Moberg & Speh, 2003). This practice usually concerns new products that enter multiple retailers’ stores for the first time (Patterson & Richards, 2000). The main reason behind the requirement of these fees is the cost and risk sharing of the introduction of a new product in a store between the retailer and the supplier (Bloom et al., 2000). Literature reports that in some cases these fees are really high (ICAP, 2007).

**Opportunistic characteristics:** When these payments are unreasonably high, then we could assume that they encompass the notion of guile and that multiple retailers are behaving in opportunistic manner.

3) **Questionable practice:** *Unreasonably high payments for the products’ better in-store positioning*

**Description:** Another common practice in supplier-multiple retailer relationships is when suppliers pay fees to retailers to place their products in prime shelf-space (e.g., at the end of the aisle) (UK Competition Commission, 2008; Towill, 2005; Dobson, 2002; Brookes, 1995). The main reason behind this requirement is the limited prime shelf-space that every store has. This space is desired from all suppliers since it increases suppliers’ volume sales. Therefore, multiple retailers require fees for it (Wilkie et al., 2002).

**Opportunistic characteristics:** When these payments are unreasonably high, then we could assume that multiple retailers are behaving in opportunistic manner.

4) **Questionable practice:** *Unreasonably high payments for new store openings, store refurbishment and anniversaries*

**Description:** This case refers to the requirement for suppliers’ contribution to the costs of store refurbishment or the opening of a new store or in cases of opening anniversaries (UK Competition Commission, 2008; Reardon & Hopkins, 2006; Towill, 2005; Arruñada, 2000). Again the logic in which this practice is based is that in all these cases, the retailer expects higher consumer traffic and
hence, supplier’s sale volumes will increase. The retailer requires a proportion of these extra revenues in order to cover part of his costs for the new store or store refurbishment or anniversary.

**Opportunistic characteristics:** Again the opportunistic notion appears when these payments are unreasonably high.

5) **Questionable practice:** *Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)*

**Description:** Promotional activities such as “buy one get one free” are perceived very favorably from the consumer and increase earnings for both multiple retailers and suppliers (Raghubir, 2005; Smith & Sinha, 2000). Nevertheless, in many cases the contribution to the funding of this promotional activity is imbalanced against the supplier (UK Competition Commission, 2008; Towill, 2005).

**Opportunistic characteristics:** The specific practice encompasses the notion of opportunism because retailers enjoy the gains of the promotional activity without contributing to its costs. We could assume that this is a form of free riding.

6) **Questionable practice:** *Financial support for matching competing retailer’s lower price*

**Description:** Literature reports the case when multiple retailers ask from their suppliers to financially help them in order to match the lower price of competing retailers (UK Competition Commission, 2008; Towill, 2005). Retailers play significant role in determining the final price of the products (Desiraju, 2001). However, when a multiple retailer finds out that one of his competitors offers a product in a considerably lower price than he does then he assumes that the low price is resulted from better trade terms offered to the specific retailer. As a result he may put pressures on the supplier for matching the specific low price.

**Opportunistic characteristics:** A low price could be determined due to the initiatives of the multiple retailer. When other competing retailers put pressures on the supplier in order to achieve better terms, this could be perceived as a guileful act because there is no proof that the supplier offered better trade
terms to the multiple retailer. In this case, competing retailers use an unexpected event (i.e., the significantly lower price offered by the competing retailer) in order to gain concessions.

7) **Questionable practice: Payments for entering and remaining in the retailer’s list of suppliers**

*Description:* These payments are commonly called “listing fees” or “pay to stay fees” and refer to annual lump sum payments that suppliers sometimes have to pay to some multiple retailers for being on their list of potential suppliers. (Poddar & Donthu, 2011; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; Dobson, 2005; Mills, 2003; Dobson, 2002; Patterson & Richards, 2000). Listing charges are paid by suppliers before retailers choose to purchase products from them (Dobson *et al.*, 2000).

*Opportunistic characteristics:* The fact that these fees are paid before the products have been stocked is an unfair act and encompasses the notion of opportunism (Mills, 2003).

8) **Questionable practice: Compensation for not meeting target profits**

*Description:* According to the literature, in case the sales volumes of a product don’t meet expectations or a promotional activity fails to meet the aimed targets then, it is possible that the multiple retailer will require compensation from the supplier (UK Competition Commission, 2008). This compensation hasn’t been expressed in advance as a possible required payment from the supplier to the retailer for covering retailer’s profit losses.

*Opportunistic characteristics:* This practice is an unfair action that disregards the trading partner and is also a case of breach of the agreement between the two parties. Therefore, this practice has opportunistic characteristics.

9) **Questionable practice: Upfront lump sum payment for in-store promotions**

*Description:* According to the literature, in supplier-multiple retailer relationships some retailers require from their suppliers up front financial contribution in order to promote their products within the store during the year (UK Competition Commission, 2008; Towill, 2005).
Opportunistic characteristics: Requirement for up-front payments could be perceived as unfair behavior against suppliers. Therefore, this practice also has opportunistic characteristics.

10) Questionable practice: *Charges for consumer complaints/returns*

*Description:* Multiple retailers may levy charges on their suppliers for consumer complaints and return of products. In some cases, multiple retailers could levy charges that exceed the actual costs (UK Competition Commission, 2008). In other cases, the complaints could be resulted from other sources than the suppliers’ fault (UK Competition Commission, 2008; Towill, 2005). Moreover, there are situations when the multiple retailer fails to provide written information to the supplier for the returns (UK Competition Commission, 2008).

*Opportunistic characteristic:* In case the charges exceed the actual cost or the supplier had no responsibility for the issue then the charges are not justified and could be perceived as a guileful behavior.

11) Questionable practice: *Fines for unproven specification shortfalls*

*Description:* Another case of questionable behavior is when multiple retailers levy charges on their suppliers for not meeting product specifications. There are cases that this is done without proof that the problem was the supplier’s fault or it hadn’t been caused by the retailer’s actions (e.g., product mishandling, poor stock rotation) (UK Competition Commission, 2008; Towill, 2005).

*Opportunistic characteristic:* When no proof is given, then suspicion of opportunistic behavior may rise.

12) Questionable practice: *Requirement for suppliers’ contribution to retrospective supply chain costs and services*

*Description:* Multiple retailers may require from suppliers a range of post-harvest services regarding packaging and distribution which were not specified in the initial agreement (UK Competition Commission, 2008; Reardon & Hopkins, 2006). Similarly, multiple retailers may require from suppliers to bear various retrospective supply chain costs (e.g., changes in supply chain procedures, various supply chain discrepancies, product wastages, bar-code changes and
reduce price-marked packs) (UK Competition Commission, 2008; Towill, 2005). For example, multiple retailers may require from their suppliers to pay fines for supply discrepancies even though there was no proof for the source of the discrepancies (UK Competition Commission, 2008). Moreover, multiple retailers could require from their suppliers payments for product wastage (Towill, 2005). Similarly, suppliers have to bear the whole cost for bar-code changes or reduce price-marked packs (Towill, 2005). These requirements haven’t been expressed in advance as potential costs that should be covered by suppliers.

**Opportunistic characteristic:** These requirements are outside of the initial agreement and therefore they could be perceived as a form of opportunism.

13) **Questionable practice:** *Requirement for suppliers’ contribution to various multiple retailers’ costs*

**Description:** According to the literature, there are cases when multiple retailers require from their suppliers to contribute to various costs of theirs. Examples of such costs are: artwork and packaging design, consumer panels, market research or even money for charities (UK Competition Commission, 2008; Towill, 2005).

**Opportunistic characteristic:** In this practice, suppliers are required to bear costs which are outside of the initial agreement with multiple retailers and in addition, the charges are not directly connected with the supplier-multiple retailer relationships. Therefore, opportunistic tensions could be detected in the specific behavior.

14) **Questionable practice:** *Requirement for retrospective discounts*

**Description:** Retailers require from their suppliers retrospective discounts which reduce the agreed product price (UK Competition Commission, 2008; Towill, 2005; ICAP, 2007; Dobson, 2002). A usually practiced discount is when retailers require discount as bonus for their increased sales (ICAP, 2007; Dobson, 2002). We refer to discounts which are not included in the initial agreement.

**Opportunistic characteristic:** The retrospective character of the practice could be perceived as opportunistic because it is a case of retailers’ grafting joint earnings.
15) **Questionable practice: Requirement for suppliers’ contribution to multiple retailers’ losses**

*Description:* Literature reports the case when multiple retailers require from their suppliers to contribute to costs and losses created due to in-store thefts or accounting errors of which the retailer was responsible (Ganesh, 2010). This requirement refers to costs and losses occurred after the delivery of products to the multiple retailer. Hence, the supplier wasn’t responsible for them.

*Opportunistic characteristic:* This practice is unfair for the supplier and encompasses the notion of opportunism because it refers to requirements beyond the agreement’s obligations.

16) **Questionable practice: Fail to compensate suppliers for costs and profit losses caused by the retailer’s actions**

*Description:* The supplier-retailer relationships may result in unexpected costs or profit losses for the supplier (Vander-Stichele & Young, 2009). However, there are cases when the sources of these losses are the retailer’s actions such as retailer’s forecasting errors or order changes or product mishandling which might have originated at the store or poor stock rotation (Vander-Stichele & Young, 2009). Nevertheless, some multiple retailers may refuse to compensate their suppliers (UK Competition Commission, 2008).

*Opportunistic characteristic:* The above practice refers to a situation when multiple retailers abdicate their responsibilities at the expense of the suppliers. Therefore, this behavior has opportunistic characteristics.

17) **Questionable practice: Add-hoc unilateral changes to agreement**

*Description:* Literature reports cases of unexpected unilateral changes on the terms to the agreement from the part of multiple retailers (European Commission, 2009; UK Competition Commission, 2008). This practice refers to subsequent changes made by the multiple retailer on a concluded agreement made with the supplier for the supply of products. Unilateral variation to terms over quantity and quality is a common example of such cases. Multiple retailers sometimes may change the quantities or the specification of a product previously agreed with the suppliers without prior notice and without
compensating the suppliers for any losses incurred (UK Competition Commission, 2008; Towill, 2005; Duffy et al., 2003; Carter, 2000).

Opportunistic characteristic: In this case, the changes have not been expressed in advance in the form of possible retroactive adjustments of the agreements (UK Competition Commission, 2008). Therefore, this is a situation of breach of the terms of the agreement and could encompass the notion of opportunism.

18) Questionable practice: Buy back unsold products outside of the agreement
Description: Another questionable practice reported in literature is when retailers require their suppliers to buy back unsold products outside a “sale or return” agreement. Retailers may also falsely claim that the products were old or damaged or lately delivered and because of these reasons they remained unsold (UK Competition Commission, 2008; Towill, 2005; Moberg & Speh, 2003).
Opportunistic characteristic: The notions of breaching the agreement and of false claims that this practice encompasses are characteristics of opportunistic behavior.

19) Questionable practice: Obscure terms of agreement
Description: In some cases, multiple retailers are using obscure contract terms to gain competitive advantage over their suppliers (Hill et al., 2009; Carter, 2000). The ambiguous terms used by the retailer force suppliers to operate in unspecified conditions (Reardon & Hopkins, 2006). Multiple retailers could use obscure contract terms in order to shirk obligation during the agreement implementation.
Opportunistic characteristic: Using obscure contract terms in the agreements in order to take advantage of them later is a characteristic of opportunistic behavior. In addition, shirk of obligations is a typical form of opportunism.

20) Questionable practice: Payment delay without good cause
Description: A quite common practice in supplier-multiple retailer relationship is when retailers delay payments to the suppliers outside the agreed contractual periods and without good excuses (Meryem, 2011; UK Competition Commission, 2008; ICAP, 2007; Reardon & Hopkins, 2006; Dobson, 2005; Fassin, 2005; Towill,
2005; Dobson, 2002; Arruñada, 2000; Brookes, 1995). Multiple retailers frequently require from their suppliers longer credit times and especially from the smaller ones (ICAP, 2007). In this way the suppliers improve their cash flow (Fassin, 2005) while suppliers become lenders for the retailers which can use the cash to finance their operations (Reardon & Hopkins, 2006).

**Opportunistic characteristic:** Payment delay is a clear case of agreement violation with detrimental impact for the supplier. In some cases this behavior is not justified by multiple retailers’ financial difficulties and hence, it encompasses the notion of guile.

21) **Questionable practice:** *Discrimination between suppliers concerning credit periods*

*Description:* According to the literature, multiple retailers sometimes use different credit period policies for different suppliers. Suppliers perceived from the retailer as more important are more likely to be paid first (UK Competition Commission, 2008; Towill, 2005).

**Opportunistic characteristic:** The specific behavior encompasses the notion of opportunism because it is unfair for the lately paid supplier. The lately paid supplier could face significant disadvantages against his competitors.

22) **Questionable practice:** *Termination of the relationship or parts of it without prior notice or further explanation*

*Description:* Literature reports the case when sometimes multiple retailers terminate the relationship with suppliers or parts of it (e.g., reducing the range and depth of the supplier’s product that they are going to stock) without prior notice or without giving further explanation to the supplier (Duffy et al., 2003). Hence, there is no security of supply and the supplier face high levels of uncertainty that could significantly affect his operations.

**Opportunistic characteristic:** Again, this practice disregards the supplier and could have significant consequences on him. In this case, multiple retailers withhold valuable information from suppliers and they behave opportunistically.

23) **Questionable practice:** *Low promotion pass-through*
Description: This is a common reported case of multiple retailers’ practicing. Suppliers frequently offer their products to multiple suppliers in discount that is passed to the final consumer in order to increase sales volumes. Nevertheless, in some cases multiple retailers may choose not to pass the discount to the final consumer but instead they offer the product in the normal price. In this way, his profit margin increases (Poddar & Donthu, 2011; Nijs et al., 2009; Ailawadi & Harlam, 2009; UK Competition Commission, 2008; Sudhir & Datta, 2008; Towill, 2005; Kumar et al., 2001; Murry & Heide, 1998; Walters, 1989).

Opportunistic characteristic: The practice of low promotion pass-through refers to the situation in which the multiple retailer increases his profits at the expense of the supplier by violating their agreement. This kind of behavior has the notion of guile. We should note that Kumar et al. (2001) specifically describe this practice as a form of opportunism.

24) Questionable practice: Forward buying

Description: A similar practice with the previous one is that of forward buying. In particular, when suppliers offer their product in discount then, multiple retailers buy large quantities of it in order to benefit from the discount. The questionable version of this practice is the case when retailers stock the surplus quantities and sell them later in normal prices (Poddar & Donthu, 2011; Ailawadi & Harlam, 2009; Sudhir & Datta, 2008; UK Competition Commission, 2008; Towill, 2005; Simatupang & Sridharan, 2002; Kumar et al., 2001).

Opportunistic characteristic: Again this kind of behavior increases the multiple retailer’s profits at the expense of the supplier’s gains and therefore, has opportunistic characteristics.

25) Questionable practice: Requirement for designating the discount price as the normal price

Description: When multiple retailers make high volume orders then, suppliers may offer discounts to them (UK Competition Commission, 2008). Literature reports some cases when multiple retailers required from suppliers to permanently reduce prices in the discount levels even though the order volumes
were subsequently reduced after the initial high volume order (UK Competition Commission, 2008; Towill, 2005; Moberg & Speh, 2003).

**Opportunistic characteristic:** This requirement is unfair and disregards the partner. Therefore, it encompasses the notion of guile.

26) **Questionable practice:** *Requirement for purchasing goods or services from designated companies*

**Description:** In some cases multiple retailers require from their suppliers to purchase goods or services from designated companies such as hauliers, packaging companies or labeling companies. The possibility of the multiple retailers receiving payments from the designated companies can't be rejected (UK Competition Commission, 2008; Towill, 2005; Duffy et al., 2003).

**Opportunistic characteristic:** This practice could have the characteristic of sub-goal pursuit from the part of the multiple retailer and at the expense of the supplier. Hence, it entails the notion of opportunism.

27) **Questionable practice:** *Requirement for exclusive supply of a product*

**Description:** Cases when multiple retailers require exclusive supplying arrangements from their suppliers have been also reported in literature (UK Competition Commission, 2008; Duffy et al., 2003; Burt & Sparks, 2003; Dobson & Waterson, 1999). According to this practice, the multiple retailer may require from the supplier to exclusively supply him and no other retailers.

**Opportunistic characteristic:** Again, the characteristic of retailers’ sub-goal pursuit at the expense of suppliers is detected in this practice. Hence, it encompasses the notion of guile.

28) **Questionable practice:** *Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases*

**Description:** Forcing suppliers’ prices down is a common practice of multiple retailers’ because they fear that higher prices will decrease their revenues (Fassin, 2005). This is reasonable; nevertheless, in some cases, multiple retailers put pressures on suppliers to lower their prices even in uneconomic levels (Fearne et al., 2005; Fassin, 2005; Duffy et al., 2003). In this way suppliers are
not able to cover the fixed costs but only the marginal costs (Dobson, 2002). Similarly, in some cases multiple retailers refuse to accept justified price increases (e.g., increases in raw material or oil) from their suppliers (Fearne et al., 2005).

**Opportunistic characteristic:** By refusing a justified price to the supplier the retailer disregards his partner. This is an unfair action for the supplier who won’t be able to operate with losses. Especially in the case of sudden cost increase, unwillingness to adjust to the new conditions demonstrates opportunistic behavior from the part of multiple retailers.

29) **Questionable practice:** *Falsely suggesting that competitive supplier is offering better trade terms*

**Description:** The specific practice doesn’t apply only on supplier-multiple retailer relationships but in many supplier-buyer relationships (Hill et al., 2009). It describes the situation when during negotiation the multiple retailer argues that a made up second source of supply is offering better trade terms to him and therefore the supplier has to match this offering in order to choose him as a supplier (Carter, 2000).

**Opportunistic characteristic:** The specific behavior has the characteristics of lying, bluffing and aims to taking advantage of the supplier. Hence, it encompasses the notion of guile.

30) **Questionable practice:** *Delisting threat in order to improve terms and decrease supplier’s prices*

**Description:** Past studies reported that multiple retailers sometimes threat their suppliers with delisting. The threat aims to better trade terms and prices that will be agreed during negotiations. Multiple retailers withdraw the threat of terminating the relationships as soon as suppliers satisfy their demands (UK Competition Commission, 2008; Towill, 2005; Duffy et al., 2003; Howe, 1998).

**Opportunistic characteristic:** The specific behavior includes the notion of threat which is an a priori characteristic of opportunism.
31) **Questionable practice: Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions**

**Description:** Again, the specific practice doesn’t apply only on supplier-multiple retailer relationships but in many supplier-buyer relationships (Hill et al., 2009). In this case, multiple retailers may falsely exaggerate the seriousness of problems that his company faces in order to demand further concessions from their suppliers (Hill et al., 2009; Lund, 2008; Carter, 2000; Cooper et al., 1997).

**Opportunistic characteristic:** The specific behavior has the characteristics of lying, bluffing and aims to taking advantage of the supplier. Hence, it encompasses the notion of opportunism.

32) **Questionable practice: Optimistic sales forecasts for gaining concessions from suppliers**

**Description:** This is another case of a practice that could be applied in many supplier-buyer relationships (Carter, 2000). In many supplier-buyer relationships, the supplier gives incentives to retailers for volume discounts as the size of the order increases (Hallsworth, 1995). In some cases, multiple retailers intentionally make very optimistic sales forecasts which are unlikely to be achieved. In this case, suppliers who don’t have the ability of accurate forecasting (especially the smaller ones) could be persuaded and give further concessions and make special offers due to high sales orders (Phillips & Caldwell, 2005; Högberg, 2002). In most cases, the sales volumes will be significantly lower than the predicted and the retailer will use various excuses to justify the difference (e.g., business related environmental uncertainty).

**Opportunistic characteristic:** This practice is a multiple retailer’s calculated effort to mislead the supplier. Therefore, it is a guileful act.

All the described supply chain practices are presented in Table 2.1. They are all practices that put high pressures on suppliers and they present opportunistic characteristics. According to Rindfleisch et al. (2010) opportunism should be examined under a different perspective according to the context in which it
manifests. In addition, opportunism can be examined under two perspectives according to the frame of reference: a) self-reported opportunism and b) partner-based opportunism (Crosno & Dahlstrom, 2008). In the first case, issues of social desirability bias may rise while in the second opportunism is examined as perceptions of one partner for the opportunistic behavior of the other (Crosno & Dahlstrom, 2008). The above indicate that further confirmation should be needed for the identified questionable supply chain practices.

Table 2.6: Multiple retailers’ questionable/ potentially opportunistic supply chain practices identified in literature

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<th>Practice</th>
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In summary, the current status of relationships in the supply chain in the food sector indicates the dominant role of multiple retailers in them. Multiple retailers have significantly improved the efficiency of supply chain operations. Nevertheless, in some cases the unbalanced relationships between some suppliers and some of the multiple retailers resulted in retailers’ questionable practices which may encompass the characteristics of opportunism. It should be highlighted that this is not the typical behavior for multiple retailers. For example, Fearne et al. (2004) presented suppliers’ perceptions concerning many cases of good practicing from the part of multiple retailers. However, literature indicates a raising concern about these questionable practices (e.g., European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; Hingley, 2005).

Suppliers are complaining for many multiple retailers’ practices (Reardon & Hopkins, 2006). Some of these complaints are not always justified. Some practices are frequently referred as mechanisms for increasing multiple retailers’ wealth and for enhancing their position in the supply chain. However, they may contribute to the supply chain efficiency in indirect ways. An example is the case of the fees the retailers require from their suppliers for stocking their products (Towill, 2005). Even though this practice significantly benefits retailers it could increase supply chain’s efficiency as well by signaling and screening successful products and by decreasing prices for the final consumer (Bloom et al., 2000). In addition, a new product entry in the retailer’s shelf has significant chances of failure. In this case the retailer must
bear the costs of removing the product, reshelving an alternative, discounting holdover inventory and he must also bear the opportunity costs of lost sales from other more successful products (Patterson & Richards, 2000). If we take into consideration the amount of entering products in a retailer’s stores, then these costs may be significant enough to justify the retailers’ demand for various fees from the suppliers (Patterson & Richards, 2000). Therefore we should be careful when evaluating multiple retailers’ practices concerning their ethical dimensions.

Towards this notion, it should be highlighted that the high pressures put by retailers on suppliers can’t be easily criticized since they may positively affect consumers’ welfare. Thus, if multiple retailers achieve very favorable terms of agreements from suppliers and purchase their products in low prices they can pass these low prices to the consumers in favor of the public interest (Dobson et al., 2000). In this way, multiple retailers may also counter the power of some big manufacturers that could exercise it by increasing their prices (Dobson et al., 2000). In addition, it should be underlined that it would be unrealistic to assume that in supplier-multiple retailer relationships in the supply chain in the food sector, retailers are the only party that behaves opportunistically. On the contrary, suppliers may be untrustworthy partners as well (Fearne et al., 2004). In particular, Zsidisin (2003) presented supply chain practices where supplier’s opportunism may emerge (e.g., product quality issues and capacity issues).

On the other hand, when multiple retailers exercise their power in a high degree then concerns about supplier’s welfare, supply chain competitiveness and even consumers’ welfare may rise (Vander-Stichele & Young, 2009; UK Competition Commission, 2008). Towards this notion, the UK Competition Commission stated that “...our concern is not with the transfer of risks or costs per se between grocery retailers and suppliers, but with the transfer of excessive risks or unexpected costs that may affect suppliers’ willingness to invest or innovate” (Competition Commission, 2008, p.168). Hence, the focus is not on the supplier-multiple retailer relationships alone but on their potential effects on the consumers’ welfare as well. When multiple retailers put high pressures on suppliers and don’t pass part of the
benefits obtained to consumers in the form of lower prices, then competition problems may rise.

Questionable and potentially opportunistic practicing could also lower suppliers’ profitability in a high degree. In some cases, this could result in suppliers’ low investment in new product development. Issues of product diversity and product quality could be raised. In this way consumers’ welfare is negatively affected (European Commission, 2009). Towards this notion, there is also concern regarding the extensive use of own brand products (European Commission, 2009; Vander-Stichele & Young, 2009). Own brands continuously gain larger shelf space in the retail stores. However, this may result in the exclusion of branded products due to limited shelf space. Consequently, fewer choices may be available for the final consumer (European Commission, 2009). On the other hand, suppliers may try to pass the pressures they face to their suppliers which are mainly the primary producers. This case may also question supply chain’s competitiveness (Vander-Stichele & Young, 2009; Fearne et al., 2005).

The aforementioned highlight the significant impact that multiple retailers’ opportunistic practices could have not only on the supplier but also on society in general. Consequently, the research in the specific area is crucial. The examination of this impact is beyond the purpose of this study. Our focus is limited to the supplier-multiple retailer relationships and to the phenomenon of opportunism in them.
In this chapter, we identify gaps in the literature which justify our research. Based on future research suggestions from past studies examining opportunism and supplier-multiple retailer relationships in the supply chain in the food sector we develop our research objectives. The research objectives drive us to develop hypotheses for examining the determinants of opportunism. The resulting conceptual model that describes the creation of opportunism in the supply chain in the food sector is presented as well.
3.1 RESEARCH OBJECTIVES

Literature presents a modest number of empirical studies examining opportunism (Moon, 2012; Wang et al., 2012; Chung & Jin, 2011; Dev et al., 2011; Handley & Benton, 2011; Mysen et al., 2011; Caniëls & Gelderman, 2010; Tangpong et al., 2010; Liu et al., 2009; Luo, 2007; Morgan et al., 2007; Ting et al., 2007; Vázquez et al., 2007; Carson et al., 2006; Dickson et al., 2006; Kwon & Suh, 2005; Lai et al., 2005; Nunlee, 2005; Wong et al., 2005; Cavusgil et al., 2004; Heiman & Nickerson, 2004; Rokkan et al., 2003; Gilliland & Manning, 2002; Li & Ng, 2002; Schilling & Steensma, 2002; Skarmeas et al., 2002; Wang, 2002; Lee et al., 2001; Brown et al., 2000; Gruen & Shah, 2000; Achrol & Gundlach, 1999; Dahlstrom & Nygaard, 1999; Deeds & Hill, 1999; Joshi & Stump, 1999; Joshi & Arnold, 1998; Joshi & Arnold, 1997; Lee, 1998; Sako & Helper, 1998; Weaver & Dickson, 1998; Joshi & Arnold, 1997; Johnson et al., 1996; Gundlach et al., 1995; Parkhe, 1993; Ping, 1993; Provan & Skinner, 1989; Anderson, 1988; John, 1984). Nevertheless, according to Hawkins et al. (2008) who synthesized studies investigating opportunism, opportunism is a concept not completely understood and yet so common. Similarly, Wang (2012) argued that the complexity of managing opportunism has left room for further examination of the phenomenon. Mysen et al. (2011) posited that even though opportunism is a common issue in business relationships and its detrimental effects on relationships’ outcomes are frequently reported, the concept of opportunism itself has attracted little attention and should be further empirically researched. According to Macher & Richman (2008), opportunism hasn’t been empirically examined in a sufficient degree. In addition, literature presents contradictions concerning the extent of opportunism in business relationships (Rindfleisch & Heide, 1997). Therefore, past research suggests that further empirical examination of the concept of opportunism is needed in order to obtain a better understanding of this complex phenomenon.

The context in which the exchange relationship takes place may affect the manifestation of opportunism considerably (Rindfleisch et al., 2010). Hawkins et al. (2008) underlined the fact that there is a lack of studies examining opportunism in the context of supply chains. Accordingly, Ketchen & Guinipero (2004) suggested
that future research should focus on the conditions under which a supply chain member is likely to attempt to exploit other members. Similarly, Grover & Malhotra (2003) suggested that future research should examine various elements of TCA theory, such as opportunism, under the supply chain perspective. Mc Carter & Northcraft (2007) also proposed that supply chain characteristics are a factor that should be taken into consideration when examining opportunism. The above indicate that literature suggests that future research should focus on the examination of opportunism in the supply chain context.

As mentioned before, Rindfleisch et al. (2010) highlighted the fact that context plays a significant role in the occurrence of opportunism. Similarly, Macher & Richman (2008) argued that there is lack of empirical examination of the prevalence of opportunism in different contexts. A sufficient number of studies and reports indicated that there are many cases of potentially opportunistic behavior in the supply chain relationships in the food sector (European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; ICAP, 2007; Dobson, 2005, Fearne et al., 2005; Towill, 2005; Duffy et al., 2003). In particular, literature raised concerns mainly regarding retailers’ potentially opportunistic behavior against their suppliers and specifically distinguished the behavior of multiple retailers as the most questionable. However, Kumar et al. (2001) reported that although practitioners have raised such concerns there is a lack of studies addressing this issue. Similarly, Ganesh (2010) argued that even though there is indication of the phenomenon, further investigation is needed. Towards this notion, Hingley et al. (2006) proposed that the unrest supplier-retailer relationship in the supply chain of the food sector needs further investigation. According to Fearne et al. (2005) there is evidence of both good and bad retailers’ practicing in the supply chain in the food sector. However, Moberg & Speh (2003) argued that there is a lack of studies that empirically measure this practicing. Hence, its level of occurrence isn’t known. On the other hand, the few empirical studies (Morgan et al., 2007; Vázquez et al., 2007) examining opportunism in the food sector didn’t focus on retailers’ opportunism. Considering the above, we can conclude that retailers’ opportunism hasn’t been thoroughly examined in the context of supply chain in the food sector. Nevertheless,
there is a clear indication of it in supplier-multiple retailer relationships. Thus, there is a gap in the literature concerning the empirical examination of this phenomenon and the identification of its level of adoption in the context of supply chain in the food sector. According to the literature future research should focus on the supplier-multiple retailer dyad of the supply chain in the food sector.

There are many studies that examine the general concept of opportunism; nevertheless, the construct of opportunism has not yet attracted the proper attention (Wathne & Heide, 2000). Jap (2003) highlights the fact that there are few empirical studies in the issue despite its prominence in the literature and in the marketplace. Towards this notion, Das & Rahman (2010) reported that the basic concept of opportunism hasn’t been thoroughly examined. The vast majority of empirical studies examining opportunism treat it as a general concept and not as manifestation of specific behaviors (Dev et al., 2011; Mysen et al., 2011; Tangpong et al., 2010; Liu et al., 2009; Morgan et al., 2007; Vázquez et al., 2007; Dickson et al., 2006; Lai et al., 2005; Nunlee, 2005; Wong et al., 2005; Cavusgil et al., 2004; Rokkan et al., 2003; Skarmeas et al., 2002; Wang, 2002; Achrol & Gundlach, 1999; Dahlstrom & Nygaard, 1999; Joshi & Arnold, 1998; Weaver & Dickson, 1998; Joshi & Arnold, 1997; Johnson et al., 1996; Gundlach et al., 1995).

In addition, Rokkan et al. (2003) suggested that future research should encompass more detailed conceptualizations of opportunism. Das (2006) argued that one of his study’s limitations while examining opportunism was the fact that he didn’t distinguished different kinds of opportunistic behavior. According to Wathne & Heide (2000) opportunism, as currently used in the literature, includes a broad range of potentially different behaviors and as a concept is not yet clearly understood. As a result, it is difficult to deploy the right strategy in order to manage opportunism while its possible outcomes remain ambiguous. Similarly, Moberg & Speh (2003) posited that literature lacks of studies that empirically measure specific behaviors in supply chain relationships. In addition, literature raised concerns concerning specific supply chain practices which are considered questionable and potentially opportunistic (European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; ICAP, 2007; Dobson, 2005, Fearne et al.,
2005; Towill, 2005; Duffy *et al.*, 2003). According to the above, literature suggests that future research should empirically examine opportunism in the form of specific opportunistic behaviors and more specifically in the form of opportunistic supply chain practices.

The early TCA theory viewed opportunism as an exogenous variable; however, the more recent view of opportunism describes it as a variable to be explained (Wathne & Heide, 2000). Rindflesch *et al.* (2010) also argued that opportunism is a complex construct and even though it has received substantial research attention, future research should be focused on the further understanding of its formulation. Similarly, Ting *et al.* (2007) highlighted the need to understand how opportunism is formed. Luo (2006) argued that understanding the creation of opportunism is very crucial in order to mitigate it but this remains a gap in the literature. According to Handley & Benton (2011) empirical research on the drivers of opportunism is rather limited. Das (2006) also argued that there is inadequate awareness of the antecedents of opportunism.

In addition, Das & Rahman (2010) argued that there is need for further examination of the determinants of opportunism in different situations. Different conditions may affect the significance of each determinant. Hawkins *et al.* (2009) argued that literature shows lack of consistency concerning the role of various antecedents of opportunism and the possible effect of contextual factors should be examined. Morgan *et al.* (2007) posited that many assumptions of organizational theories concerning the formulation of opportunism do not hold in every context. Therefore, contextual specific information is needed in order to specify the determinants of opportunism in each case. Handley & Benton (2011) also argued that since opportunism is a context specific concept we should try to investigate the factors that significantly affect it in each context.
Based on the above gaps in literature and the research suggestions from past studies examining opportunism and supplier-retailer relationships in the supply chain in the food sector, our study has the following research objectives:

1) The empirical examination of determinants in relation to potential multiple retailers’ opportunism, manifested in the form of supply chain practices, in the supply chain in the food sector.

2) The identification and the examination of multiple retailers’ supply chain opportunistic practices in the food sector.

3) The examination of the effect of supplier’s size and competition from own brand products on the level of multiple retailers’ opportunism in the supply chain in the food sector.
3.2 HYPOTHESES

Based on the developed research objectives and the earlier presented extensive literature review in the field of opportunism we built the following research hypotheses concerning the creation of multiple retailers’ opportunism in their relationships with suppliers in the supply chain in the Greek food sector.

As previously mentioned, recent studies describe opportunism as a variable to be explained but its determinants may vary according to the context of the examined relationships. In section 2.3.1 we saw that the relationship between the constructs of dependence and opportunism is not very clear and it depends on the contextual characteristics of the relationship. Nevertheless, many studies confirmed the theoretical suggestion that a firm’s high dependence on its partner could increase partner’s opportunism. In particular, Wang et al. (2012) confirmed that manufacturer’s dependence on their supplier (in the form of manufacturer’s TSA) increases supplier’s opportunism. Similarly, Handley & Benton (2011) confirmed that buyer’s dependence on the outsourcing provider (in the form of buyer’s TSA) increases provider’s opportunism and specifically provider’s shirking. Mysen et al. (2011) also empirically confirmed the positive relationship between manufacturers’ dependence on suppliers’ with suppliers’ opportunism by examining the perceptions of small and medium manufacturers. Rokkan et al. (2003) also confirmed the relationship between dependence and partner’s opportunism but under the conditions of low levels of relationship extendedness and low solidarity norms.

High retailing concentration rates led to the creation of huge multinational multiple retailers with large market power (Fassin, 2005). These retailers have the role of the main gateway to the final consumers (Hingley, 2005). Their domination in the supply chain in the food sector increases the supplier’s dependence on them (Vander-Stichele & Young, 2009). It is frequent that retailers may be accountable for a large share of supplier’s turnover (Fassin, 2005). The dependency increases in the case of smaller suppliers who are usually dependent on one or two key multiple retailers (Dobson, 2002). Fassin (2005) argued that suppliers’ dependence may give the opportunity to multiple retailers to squeeze their partners in order to lower their
prices and increase their own margins. Towill (2005) also argued that this dependence could result in multiple retailers’ unreasonable demands.

The literature of opportunism and the studies examining supplier-multiple retailer relationships indicated a positive link between suppliers’ dependence on multiple retailers and multiple retailers’ opportunism. To assess the impact of suppliers’ dependence on multiple retailers’ opportunism the following hypothesis is put forth:

\[ H1: \text{Suppliers’ dependence on multiple retailers enhances multiple retailers’ opportunistic behavior in the supply chain in the food sector.} \]

The objectives between suppliers and buyers are in most cases at odds (Jap & Anderson, 2003). Nevertheless, firms are seeking for cooperative relationships with their exchange partners for achieving higher mutual benefits (Jap & Anderson, 2003). When goals between exchange partners are not compatible then self-interest seeking may turn to opportunism (Das & Rahman, 2010). Wang & Yang (2013) in their meta-analysis on the antecedents of opportunism and its effect on performance showed that goals have a significantly high effect on opportunism. Literature mainly examines goal compatibility as a significant factor that mitigates opportunism (Hawkins et al., 2008) while there is lack of studies empirically examining the goal incompatibility-opportunism relationship. However, we are examining the most significant determinants of opportunism and hence we will focus on goal incompatibility as a predictor of opportunism. Wong et al. (2005) presented one of the few studies that empirically examined and confirmed this relationship. Yi et al. (2010) while examining conflict in the context of credit card industry showed that goal incompatibility significantly affects conflict. The fact that opportunism is a concept which is highly related with conflict (Jap & Anderson, 2003) could indicate that goal incompatibility increases opportunism. Anderson (1988) examined and confirmed the negative effect of goal compatibility on opportunism in the case of sales forces. This could indicate that goal incompatibility increases opportunism. In the work of Jap & Anderson (2003), opportunism is a moderator on exchange
relationships. The authors examined and confirmed that goal compatibility enhances exchange outcomes under the condition of high opportunism. Therefore, they indicated that goal compatibility decreases opportunism and similarly that goal incompatibility increases opportunism.

Goals between suppliers and multiple retailers should be aligned and should be focused on the final consumer (Hingley, 2005). Nevertheless, the supplier-multiple retailer relationship has unavoidable inherent goal conflicts on the fundamental issue of achieving profits (Magrath & Hardy, 1989). Multiple retailers have a triple role in their relationship with suppliers. They are suppliers’ customers because they buy their products and then, they resell them to the final consumer; they are suppliers’ competitors due to the launching of private label products and they are also suppliers’ suppliers because they sell them shelf space. These three roles could result in incompatibility in the financial objectives between multiple retailers and suppliers (Dobson, 2005). Morgan et al. (2007) also supported this notion. Hingley et al. (2006) argued that goals between retailers and suppliers aren’t necessarily mutual in the supply chain in the food sector. This goal incompatibility between multiple retailers and suppliers could result in high pressures on suppliers (Dobson, 2005; Towill, 2005).

The literature of opportunism and the studies examining supplier-multiple retailer relationships indicated a positive link between goal incompatibility (and especially financial goal incompatibility) and multiple retailers’ opportunism. To assess the impact of goal incompatibility on multiple retailers’ opportunism the following hypothesis is put forth:

H2: Goal incompatibility between suppliers and multiple retailers enhances multiple retailers’ opportunistic behavior in the supply chain in the food sector.

Information sharing is a significant factor of success in exchange relationships (Heide & John, 1992). Nevertheless, informational asymmetry occurs frequently between partners and in this situation one of the partners possesses more
information than the other. This could result in the emergence of opportunism from the part of the more informed party (Sako & Helper, 1998). This fact is confirmed by studies that empirically examined the informational asymmetry-opportunism relationship. Ting et al. (2007) examined some of the antecedents and consequences of opportunism in computer industry and found that informational asymmetry significantly raised entrepreneur’s opportunistic behavior. In addition, Sako & Hekper (1998) examined the differences in the determinants of opportunism and trust in the automotive suppliers industry and found that the difference between the amounts of information provided by the exchange partners increased the perceptions of opportunistic behavior. Heiman & Nickerson (2004) argued that knowledge transparency through knowledge management practices could result in a situation when one of the exchange partners possesses significant information about the other. They showed that this situation between collaborators could result in increased opportunism from the part of the more informed partner. Ramaswami et al. (1997) showed that when salespeople perceived that they had better information regarding their performance and its outcomes they acted more opportunistically. On the other hand, Kwon & Suh (2005) examined the case of low informational asymmetry between exchange partners. They showed that information sharing between exchange parties decreased opportunism. In addition, Joshi & Arnold (1997) investigated the role of information sharing as a moderator in the dependence-opportunism relationship. They showed that under the condition of high information sharing and therefore, low informational asymmetry, dependence decreased opportunism. According to the aforementioned, it is clear that all past studies that examined informational asymmetry-opportunism relationship confirmed the positive linkage between them.

In successful supply chain partnerships, parties exchange information concerning operational and financial data (e.g., cost of goods) and strategic related issues (e.g., forecasting, strategic goals) as well (Kwon & Suh, 2005). Sharing information concerning issues such as market and competitive conditions that could be very useful for the partner is a signal of a close relationship (Gundlach et al., 1995). Multiple retailers may possess significant information concerning consumer
purchases and preferences and information concerning product movement within the supply chain (Burt, 2000). When this information is distributed to the supplier it could favor its operations in a high degree (Dobson et al., 2000). Multiple retailers’ market and consumer data are not always available to suppliers. This information is usually accessed by larger or important suppliers and in some cases suppliers can buy it from retailers (UK Competition Commission, 2008; Duffy et al., 2003). There are also cases of discrimination between suppliers concerning the amount of information that would be given to them by multiple retailers (UK Competition Commission, 2008). In this case, it is clear that there is informational asymmetry between the multiple retailer and some of his suppliers. Hingley et al. (2006) argued that multiple retailers acquire from suppliers more information than they give and they may use it in their favor. Towill (2005) argued that sometimes multiple retailers sought information for the suppliers’ relationships with other retailers as well. Literature indicates that the amount of information possessed between suppliers and multiple retailers is imbalanced and this could be used by retailers for achieving better trade terms and put high pressures on suppliers (Vander-Stichele & Young, 2009; Hingley, 2005). According to the aforementioned, it is clear that sometimes multiple retailers may choose to withhold market information from suppliers in order to use it in their favor and achieve better agreements. This could be seen as a form of opportunism. However, Wathne & Heide (2000) argued that such behaviors can’t be labeled as opportunistic unless there is a norm of information exchange between the partners. In addition, we should also note that there are also cases when suppliers withhold information from multiple retailers (e.g., regarding their costs, product quality, etc.) (Ting et al., 2007). Of course this situation could also result in supplier’s opportunism. However, our aim is to examine multiple retailers’ behavior and therefore we focus on it.

The literature of opportunism and the studies examining supplier-multiple retailer relationships indicated a positive link between informational asymmetry and multiple retailers’ opportunism. To assess the impact of informational asymmetry on multiple retailers’ opportunism the following hypothesis is put forth:
**H3: Informational asymmetry between suppliers and multiple retailers enhances multiple retailers’ opportunistic behavior in the supply chain in the food sector.**

Exchange relationships are often developed under conditions of high business related environmental uncertainty and organizations have to adapt their strategies and structures to these conditions (Ting et al., 2007). High business related environmental uncertainty is related with higher potential of opportunistic behavior (Lee, 1998). In literature we find numerous conceptual studies that report the positive effect of environmental uncertainty on partner’s opportunistic behavior (e.g. Das & Rahman, 2010; Enderwick, 2009; Crosno & Dahlstrom, 2008; Li, 2002; Moschandreouas, 1997; Nooteboom, 1996). In addition, there are also a significant number of papers that empirically confirmed this relationship. Mysen et al. (2011) confirmed the relationship in a sample of small and medium manufacturers of various industries. In his work, Luo (2007) gave insights regarding the impact of business related environmental uncertainty to partner’s opportunistic behavior in the case of joint venturing in an emerging economy. He found that some aspects of uncertainty (information unverifiability and law enforceability in particular) significantly increased perceived opportunistic behavior. It should be highlighted the mediating role that opportunism played between the impact of uncertainty on performance. Ting et al. (2007) clearly showed that retailers’ opportunistic behavior is positively linked to environmental uncertainty in the case of computer industry. All the three examined uncertainty forms (inadequacy of available information, unpredictability of the decisions’ consequences and no confidence of the decision maker) significantly affected opportunism. Carson et al. (2006) found that business related environmental uncertainty is positively linked to supplier’s opportunism but they showed that different governance contracting could affect differently the various aspects of uncertainty which increase opportunism. The work of Schilling & Steensma (2002) showed that uncertainty in technological environment can also positively influence perceived opportunistic behavior. Skarmeas et al. (2002) examined opportunism in the context of importers-exporters relationships and came
to the conclusion that uncertainty in the environments of both the exchange partners increased opportunistic behavior. Wang (2002) examined opportunism in the software outsourcing context and also confirmed the positive relationship between business related environmental uncertainty and perceived partner’s opportunism. The author also showed that high levels of TSA strengthen the positive effect of uncertainty on opportunism. Joshi & Stump (1999) also confirmed the positive impact of technological uncertainty on self opportunism but the linkage was indirect and it was mediated by long term orientation. Lee (1998) showed that the uncertainty faced by decision makers increased their opportunistic behavior in the case of international strategic alliances. In the work of Sako & Helper (1998) it is showed that uncertainty positively impacts customers’ opportunism in the case of automotive industry exchanges. However, this effect presumed the existence of TSA in the relationship.

Market conditions are changing quickly and in a high degree and this put significant pressures on organizations (Fassin, 2005). These pressures create risks in the operations of business entities. In the case of supplier-multiple retailer relationships, examples of increased risks due to uncertainty include the risk of increased costs, the risk of product failures, sudden demand fluctuations etc. (Patterson & Richards, 2000). Multiple retailers are frequently unwilling to face this uncertainty and these risks (Dobson, 2005). In these cases unfair balance of risk between suppliers and multiple retailers could be detected (Hingley, 2005). 

Literature indicates that in some cases multiple retailers opportunistically transfer the risk that emerged from business related environmental uncertainty to suppliers by putting high pressures on them or by imposing hard terms of agreements (Vander-Stichele & Young, 2009; UK Competition Commission, 2008; Fearne et al., 2005).

The literature of opportunism and the studies examining supplier-multiple retailer relationships indicated a positive link between business related environmental uncertainty and multiple retailers’ opportunism. To assess the impact of business related environmental uncertainty on multiple retailers’ opportunism the following hypothesis is put forth:
H4: Business related environmental uncertainty enhances multiple retailers’ opportunistic behavior in the supply chain in the food sector.

Uncertainty in business relationship may occur not only due to business related environmental conditions but due to individual motivations as well (Hawkins et al., 2008). This form of uncertainty is called behavioral uncertainty and refers to the difficulties in evaluating whether the partner’s performance follows the contractual agreement of an exchange relationship (Grover & Malhotra, 2003). Although literature and theoretical arguments strongly posit that behavioral uncertainty increases opportunism, there is a dearth of studies that empirically examine this relationship. In particular, Wang (2012) confirmed that suppliers’ behavioral uncertainty increases suppliers’ opportunism in a sample of 400 manufacturing firms. In the earlier work of Anderson (1988), the author also confirmed that the difficulty of evaluating the performance of salespeople lead to increased opportunistic behavior from their part. The empirical study of Stump & Heide (1996) also indicated that behavioral uncertainty enhances opportunism.

In the supply chain in the food sector, suppliers try to monitor multiple retailers’ compliance to the agreement in the form of store audits by suppliers’ merchandisers (Murry & Heide, 1998). However, in many cases suppliers find difficulties in monitoring multiple retailers’ performance which is characterized by ambiguity (Reardon & Hopkins, 2006). In addition, supply chains in the food sector include complex relationships between suppliers and multiple retailers (O’Keefe & Fearne, 2002). As a result, many suppliers and especially the smaller ones don’t have the ability or it would be very costly for them to monitor multiple retailers’ performance in all the aspects of their commercial agreements. Multiple retailers could take advantage of this situation and opportunistically shirk their obligations.

The literature of opportunism and the studies examining supplier-multiple retailer relationships indicated a positive link between behavioral uncertainty and
multiple retailers’ opportunism. To assess the impact of behavioral uncertainty on multiple retailers’ opportunism the following hypothesis is put forth:

\[ H5: \text{Behavioral uncertainty enhances multiple retailers’ opportunistic behavior in the supply chain in the food sector.} \]

Literature suggests that the examination of the concept of opportunism is not context free (Liu et al., 2009; Morgan et al., 2007; Jap & Anderson, 2003). This means that any attempt to understand relationships between two economic entities with the use of the concept of opportunism should take into consideration the contextual conditions under which these relationships occur. Our aim is to examine the creation of multiple retailers’ opportunism in the supply chain in the food sector. Therefore, we should also consider whether specific contextual factors could significantly affect opportunism. As we previously saw, multiple retailers’ own brands play significant role in their relationships with food suppliers and they could be a primary source of competitive advantage for retailers (Collins & Burt, 2006). The growth of own brands was one of the most significant factors that affected the shift of power which was traditionally held by manufacturers towards multiple retailers (Burt & Sparks, 2003). In addition, own brands significantly impact supplier-retailer relationships since they give to the retailer another role; the one of supplier’s competitor (Dobson, 2005). Own brand products are cheaper, they can replace branded products in the shelf and retailers can easily substitute the suppliers’ products (Vander-Stichele & Young, 2009). The success of own brands gave retailers incentives to promote them extensively (Dobson et al., 2000). In general, own brands gave multiple retailers high power (Dobson et al., 2000). According to Vander-Stichele & Young (2009) in food sectors where own brand products are present while there is lack of significant branded products retailers’ power is almost unlimited. In fact, the extensive use of own brands has also raised concerns from the part of European Commission (European Commission, 2009). According to literature, own brands could be used by multiple retailers as a mean to put high pressures on suppliers in order to achieve better trade agreements. On the other hand, suppliers that don’t face competition
from own brand products couldn’t be easily replaced in the retailers’ shelves. Therefore, multiple retailers’ opportunism could be limited in their case. To our knowledge, this is the first study that empirically examines the impact of own brand products on opportunism in supplier-buyer relationships.

The above indicate that multiple retailers’ opportunistic tensions may be higher in the case of suppliers who face competition from’ own brands than in the case of suppliers who don’t face such competition. To assess the above difference the following hypothesis is put forth:

\[ H6: \text{Multiple retailers’ opportunistic behavior will be higher in the case of suppliers who face competition from own brand products than in the case of suppliers who don’t in the supply chain in the food sector.} \]

Differences in size between exchange partners could lead to differences in the balance of power in a relationship and hence, to different degrees of opportunism (Vázquez et al., 2007). Researchers took into consideration the relative size of the exchange partners in many studies that examined opportunism (e.g., Vázquez et al., 2007; Rokkan et al., 2003; Brown et al., 2000; Deeds & Hill, 1999). However, their results varied and therefore the effect of size on opportunism should be examined in the contextual characteristics of the relationship.

High concentration rates in the retailing sector led to the creation of huge multinational supermarkets. These business entities are often dealing with small national food companies. In these cases, retailers may be accountable for a large share of the suppliers’ turnover (Fassin, 2005). According to Dobson (2002), the concern regarding multiple retailers’ opportunism is mainly focused on their relationships with smaller suppliers because they are frequently unable to resist retailers’ terms and conditions. Small suppliers are usually dependent on one or two key retailers and even though retailers may easily substitute their suppliers, suppliers may lose a substantial proportion of their income if they become delisted (Dobson et al., 2000). Similarly, Vander-Stichele & Young (2009) posited that smaller
suppliers are more eager to accept retailers’ terms and conditions. According to Dobson et al. (2000) there is a clear difference between the behavior of retailers towards small food manufacturers and towards larger ones. Accordingly, Vander-Stichele & Young (2009) argued that large brand manufacturers may be less concerned about retailers’ actions than SMEs suppliers are. The above indicate that multiple retailers’ opportunistic tensions could be higher in the case of smaller suppliers than in the case of larger ones.

To assess the above difference the following hypothesis is put forth:

*H7: Multiple retailers’ opportunistic behavior will be higher in the case of small suppliers than in the case of larger ones in the supply chain in the food sector.*
3.3 CONCEPTUAL MODEL

The aim of this study is to examine potential multiple retailers’ opportunism in their relationships with suppliers in the supply chain in the food sector. Drawing on relevant exchange theories such as TCA theory and Agency theory and insights from past studies that investigated these relationships we developed a conceptual framework which models the creation of multiple retailers’ opportunism and intends to contribute to the existing knowledge for opportunism in exchange relationships by fulfilling the previously analyzed research objectives. The conceptual model incorporates schematically the hypotheses presented in the previous section.

In summary, the conceptual model suggests that multiple retailers’ opportunism is determined by five main factors: suppliers’ dependence on multiple retailers, goal incompatibility between suppliers and multiple retailers, informational asymmetry between suppliers and multiple retailers, business related environmental uncertainty and multiple retailers’ behavioral uncertainty. Multiple retailers’ opportunism is examined in the form of retailers’ supply chain practices. Finally, two contextual factors (i.e., suppliers’ size and competition from own brands products) may affect the level of retailers’ opportunism.

Figure 3.1: Conceptual model
It should be highlighted that opportunism is not typical for every business relationship. Therefore, the conceptual model indicates that opportunism may emerge in some supplier-multiple retailer relationships and only some of the times.

As mentioned in the literature review section, the impact of multiple retailers’ questionable, and potentially opportunistic, behavior against their suppliers is yet unclear concerning its outcomes for the whole supply chain in the food sector and for consumers’ welfare (European Commission, 2009; UK Competition Commission, 2008). Only indications of this impact have been made. However, there is evidence of a raising concern about this behavior and its consequences (European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission).

Our study which is based on the previously presented research objectives, the seven hypotheses and the developed conceptual model could give valuable insights concerning the magnitude of the phenomenon and its creation. This could be a significant starting point for the empirical examination of the phenomenon since according to the previously mentioned literature gaps there is a lack of studies that examine it empirically. The impact of multiple retailers’ practicing can’t be thoroughly investigated unless an adequate understanding of this behavior is achieved. The significance of the study is high because it contributes considerably to this understanding.

The examination of the impact of retailers’ behavior is a complex subject and demands research in a wide scale. This is beyond the purpose of this study. We focus on the occurrence of opportunism in the supplier-multiple retailer relationships. The fact that the examined phenomenon may have considerable impact on the operation of the suppliers, the competitiveness of the supply chain in the food sector as a whole and on consumers’ welfare in the long term also indicates the high significance of our study.

In addition, the previously identified gaps in the literature showed that opportunism hasn’t been thoroughly investigated in the supply chain. However, there is an early indication of the negative impact of opportunism on the supply
chain competitiveness (Tangpong et al., 2010; Morgan et al., 2007). This is another point that enhances the concern about the consequences of multiple retailers’ opportunism. The conceptual model could give valuable information concerning the creation of opportunism in the supply chain in the food sector and therefore, it could reveal insights for its mitigation.

In this chapter we developed the research objectives and hypotheses of our study and also the conceptual model that describes the creation of multiple retailers’ opportunism in the supply chain in the food sector. A closer look to the context of the examined phenomenon will give valuable information for the phenomenon. In the next chapter, an analysis of the supply chain in the food sector is conducted. The aim is to identify key trends in supplier-multiple retailer relationships in the global and European supply chains in the food sector. Afterwards, the case of Greece will be presented as well.
CHAPTER 4: SECTOR ANALYSIS

A sector analysis is conducted in this chapter. First, the global trends in the supply chain in the food sector are presented. An introduction to its characteristics and to the status of relationships in it is made. Then, the relevant European trends are presented. This section gives more detailed information for the characteristics of the supply chain in the food sector and for the role of multiple retailers in it. Finally, the Greek case is analyzed. The general characteristics of the Greek food sector, its key players and their relationships are demonstrated.
4.1 SUPPLY CHAINS IN THE FOOD SECTOR: GLOBAL TRENDS

Recent global trends such as globalization, urbanization and agro-industrialization have put increasing demands on the management of supply chains in the food sector. The traditional supply chain in the food sector was characterized by autonomy and by chain members who operated independently. The modern supply chain in the food sector is moving toward globally interconnected systems with a large variety of complex relationships (Ruben et al., 2006). Demand and supply are no longer restricted to specific regions; they have become international processes and even perishable foods can now be delivered from halfway around the world at competitive prices (Van der Vorst et al., 2007). On top of the agenda are now issues imposed by consumers’ concerns such as food quality and safety and the sustainability of food production and of the handling methods used (Ruben et al., 2006). Distinct characteristics of the supply chain as a whole and of each chain tier as well demonstrate significant challenges for the supply chain operation in the food sector. These are presented in Table 4.1.

<table>
<thead>
<tr>
<th>Supply chain tier</th>
<th>Distinct characteristics of the supply chains in the food sector</th>
<th>Challenges</th>
</tr>
</thead>
</table>
| Overall           | • Shelf-life constraints for raw materials, intermediates and finished products | • Timing constraints  
|                   |                                                               | • Information requirements |
| Producers         | • Long agriculture production times  
|                   | • Seasonality in production  
|                   | • Variability of quality and quantity of supply | • Responsiveness  
|                   |                                                               | • Flexibility in process and planning |
| Manufacturers     | • High volume production systems  
|                   | • Capital intensive machinery leading to the need to maintain capacity utilization  
|                   | • Variable process yield in quantity and quality due to biological variations, seasonality, weather and biological hazards  
|                   | • Necessity of traceability of work in progress due to quality and environmental requirements and product responsibility | • Importance of production planning and scheduling focusing on high capacity utilization  
|                   |                                                               | • Flexibility of recipes  
|                   |                                                               | • Need for configurations that facilitate tracking and tracing |
| Wholesalers/ Retailers | • Variability of quality and quantity of supply of farm-based inputs  
|                          | • Seasonal supply of products requires global sourcing  
|                          | • Requirements for conditioned transportation and storage means | • Pricing issues  
|                          |                                                               | • Timing constraints  
|                          |                                                               | • Need for conditioning  
|                          |                                                               | • Pre-information on quality status of products |

Adapted from: Van der Vorst et al., 2007
Supply chains in the food sector link producers and food manufacturers from developing countries with retailers and consumers in urban centers (Ruben et al., 2006). The above developments resulted in fundamental changes in the organization of supply chains in the food sector. A very significant one is the rapid consolidation of the retailing sector and the creation of multiple retailers with large market shares. Multiple retailers take initiatives concerning the supply chain’s orientation towards product homogeneity, continuous deliveries, quality upgrading and stable shelf life according to consumers’ demands (Ruben et al., 2006).

Food retailing accounts for approximately 40% of all the retail sales worldwide (FAO, 2009). The modern retail trade generally includes four types of food retailers: i) hypermarkets with a sales area of over 2,500 m² and with at least 35% selling space devoted to non-food items; ii) supermarkets with a sales area of 400 to 2,500 m² and with at least 70% of its selling space devoted to food products; iii) discounters with sales area of 300-900 m², with less than 1000 product lines and with selling prices which are lower than those of the traditional retail stores and iv) convenience stores which sell a wide range of goods but have a little product variety and extended open hours (FAO, 2009). World food retail sales reached 110 billion € in 2007. Europe and North America are the two most important regions for retail sales accounting for approximately 60% of the global retail sales. The US company Wal-Mart is the largest retailer in the world with 345 billion $ annual sales in 2007. The French company Carrefour is the second largest but with far less annual sales. In general, global retail trade is characterized by increased concentration rates with few but significant exceptions such as the retailing sector of China and Russia (FAO, 2009).

The above global trends in the food sector resulted in retail-driven supply chains. Multiple retailers with global presence play a key role in the integration of production and distribution networks. In traditional supply chains, the focus was placed on production and processing. Now, market access is dependent on participating in such retail-driven networks and supply chains which seek competitive advantages that will satisfy consumer demands (Ruben et al., 2006).
A critical issue in the management of supply chains in the food sector is the coordination between chain members in order to increase the chains’ capabilities for meeting the changing global market demands. Trustful long-term relationships and loyalty is therefore, prerequisite for the efficient supply chain management. Opportunistic actions such as free riding or quality shirking may negatively affect supply chain’s capabilities in meeting safety standards and producing high quality products. On the other hand, lack of opportunism could not only affect the above chain’s capabilities but it could also result in significant cost saves since there would be no necessity for monitoring. In this way, the supply chain’s competitive advantage is further increased (Ruben et al., 2006).
4.2 SUPPLY CHAINS IN THE FOOD SECTOR: EUROPEAN TRENDS

The European Commission (2009) has stressed the high importance of supply chains in the European food sector because it connects three important sectors of its economy: agriculture, food processing industry and distribution. Supply chains in the food sector account for more than 5% of the European added value and 7% of its employment. Their efficient performance directly impacts all European consumers because food accounts for approximately 16% of the average household expenditures across the European countries (European Commission, 2009). The crucial role of supply chains in the food sector is also highlighted due to the current financial crisis. Therefore, issues such as food prices attract high attention. High food prices could put high pressures on household incomes and especially on vulnerable households who spend a considerably greater proportion of their income on food (European Commission, 2009). The objective is the achievement of higher overall supply chain competitiveness which will enhance consumers’ and firms’ welfare in the European Union.

The European trends in supply chains in the food sector generally follow the global trends. Supply chains are characterized by high diversity of actors such as primary producers, food manufacturers, traders, wholesalers and retailers and also by high diversity of firm sizes. Multiple retailers have taken initiatives in managing supply chains in a way that would better respond to the changing market demands (Burt, 2010).

High retailing concentration is also reported in the case of European supply chains in the food sector (European Commission, 2009; Vander-Stichele & Young, 2009). The emergence of multiple retailers-led supply chains have resulted in the continuing increase of market concentration because retailers are continuous seeking for economies of scale (Dawson, 2006). Table 4.2 presents the cumulative market share of the top 5 multiple food retailers in 23 European Union country members (market share in 2005). Table 4.2 clearly shows the high degree of retailing concentration in most of the European countries.
Table 4.2: Market share of the top 5 multiple retailers in 23 European Union countries (2005)

<table>
<thead>
<tr>
<th>Country-member</th>
<th>Market share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>81.8%</td>
</tr>
<tr>
<td>Slovenia</td>
<td>81.6%</td>
</tr>
<tr>
<td>Ireland</td>
<td>81.4%</td>
</tr>
<tr>
<td>Denmark</td>
<td>80.7%</td>
</tr>
<tr>
<td>Estonia</td>
<td>78.8%</td>
</tr>
<tr>
<td>Belgium</td>
<td>77.4%</td>
</tr>
<tr>
<td>Lithuania</td>
<td>75.6%</td>
</tr>
<tr>
<td>Austria</td>
<td>74.2%</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>71.6%</td>
</tr>
<tr>
<td>Germany</td>
<td>70.1%</td>
</tr>
<tr>
<td>France</td>
<td>70.0%</td>
</tr>
<tr>
<td>Portugal</td>
<td>65.3%</td>
</tr>
<tr>
<td>Spain</td>
<td>65.2%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>62.7%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>59.1%</td>
</tr>
<tr>
<td>Hungary</td>
<td>58.3%</td>
</tr>
<tr>
<td>Greece</td>
<td>46.4%</td>
</tr>
<tr>
<td>Slovakia</td>
<td>36.4%</td>
</tr>
<tr>
<td>Italy</td>
<td>35.3%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>35%</td>
</tr>
<tr>
<td>Latvia</td>
<td>32.6%</td>
</tr>
<tr>
<td>Poland</td>
<td>21.0%</td>
</tr>
<tr>
<td>Romania</td>
<td>19.2%</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>17.8%</td>
</tr>
</tbody>
</table>

Source: Vander-Stichele & Young, 2009

Due to high concentration rates multiple retailers with international presence emerged. These organizations were developed and evolved to major brands with high brand values, significant market shares and high sales. Table 4.3 presents the ten biggest European food retailers and their sales in billion $ (annual sales of 2007). Well known food retailers are also: Sainsbury, Delhaize, Marks & Spenser, Casino, Tengelmann and others.

Of course all these companies and groups are not exclusive food retailers. However, foods account for the higher proportion of their revenues.
Table 4.3: Sales of the 10 largest food retailers in Europe (2007)

<table>
<thead>
<tr>
<th>Retailer</th>
<th>Sales (billion $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrefour</td>
<td>112.604</td>
</tr>
<tr>
<td>Tesco</td>
<td>94.740</td>
</tr>
<tr>
<td>Metro</td>
<td>87.586</td>
</tr>
<tr>
<td>Schwarz Group (Lidl)</td>
<td>69.346</td>
</tr>
<tr>
<td>Aldi</td>
<td>58.487</td>
</tr>
<tr>
<td>Rewe</td>
<td>51.929</td>
</tr>
<tr>
<td>Auchan</td>
<td>49.295</td>
</tr>
<tr>
<td>Leclerc</td>
<td>44.686</td>
</tr>
<tr>
<td>Edeka Zentrale</td>
<td>44.609</td>
</tr>
<tr>
<td>ITM/ Intermarche</td>
<td>40.692</td>
</tr>
</tbody>
</table>

Source: Burt, 2010

The success of multiple retailers mainly lies in their ability to satisfy changing consumer needs which are frequently imposed by changing European consumer cultures (Dawson, 2013; Dawson, 2006). For example, during the last years former communist countries have increased their demand for products and services (Dawson, 2006). Multiple retailers from Western European countries identified these opportunities and increased their international operations towards emerging European economies (Burt, 2010). However, the continuous growth of few multiple retailers resulted to significantly decreased numbers of small and micro retailing firms (Dawson, 2006).

Another distinct characteristic of the European food retailing sector is the success of the own brand products. European supply chains have dominated the own brand products’ market with a market share of 50% and sales value of 280 billion € (ICAP, 2009). Some of the most successful own brand names in the European market are the Carrefour’s three own brands (i.e., premium: “Carrefour Agir” & “Carrefour Selection”, core brand: “Carrefour” and low cost: “Carrefour Discount”). Similarly, the UK Waitrose firm launched the own brand of “Essential Waitrose” which refers to 1450 products. Worth mentioning are also the two own brands of the UK retailer Tesco: “Tesco value” (budget brand) and “Tesco own label” (core brand) (ICAP, 2009).

A key success factor of the European food retailers is their relationships with suppliers which resulted in global sourcing arrangements and cooperation in brand
development (Dawson, 2006). Nevertheless, the balance in supplier-multiple retailer relationships favors retailers (Vander-Stichele & Young, 2009). Recently, concerns regarding multiple retailers dominating position in the supply chain in the European food sector have been raised (European Commission, 2009). Even cases of abusive retailers’ practices have been reported (Vander-Stichele & Young, 2009). Of course, these practices are a vast minority in supplier-multiple retailer relationships. However, the European Commission (2009) raised concerns regarding the impact of such practices on the competitiveness of the whole chain in the European food sector.
4.3 SUPPLY CHAINS IN THE GREEK FOOD SECTOR

4.3.1 The Greek food sector

Overall, the food sector has a significant role in the Greek economy, although it is highly fragmented with most businesses being small and medium sized enterprises (Matopoulos et al., 2007). With the term food sector we refer to both food and drink companies. Many major international manufacturers and retailers operate in the Greek food sector although national companies still command a strong presence (Bourlakis & Bourlakis 2001; Menachof et al., 2009; Tatsis et al., 2006). The importance of the sector can be evidenced by the fact that it employs approximately 25% of the national workforce and grows just under 5% on average each year (Matopoulos et al., 2007). In particular, the supply chain in the Greek food sector involves more than 1 million firms and agricultural enterprises which employee more than 2 million people and create added value of 17.3 billion € (Thomaidou & Vlachou, 2012).

Supply chain in the Greek food sector has still some traditional characteristics (Bell, 2004). However, it is worth stressing that many changes have taken place in this chain during the past two decades including the advent of many international manufacturers and retailers, the significant investment in logistics infrastructure (such as developing warehouses and using composite/ multi-temperature distribution) by the major retail multiples, the use of sophisticated systems for various purposes (e.g. traceability and inventory management) and the increased popularity of own brand products (Bourlakis & Bourlakis, 2001; Matopoulos et al. 2007). In general, the Greek supply chain in the food sector has followed the similar European and global trends. Two are the key players in this supply chain: multiple retailers and manufacturers of the food processing industry. They are characterized as key players due to their significance in the value adding activities and the supply chain’s coordination. In addition, some the largest companies of the Greek economy are included in these two supply chain tiers (Thomaidou & Vlachou, 2012; ICAP, 2007).
4.3.2 Key players in the supply chain in the Greek food sector: Multiple retailers

Retailing in the food sector is one of the most dynamic areas of the Greek economy (ICAP, 2007). During the years 2000-2006, Greek food retailers showed annual growth of over 5% in their market size (ICAP, 2007). Of course, the Greek economic recession negatively affected retailers and such growth rates are not feasible nowadays. Nevertheless, the food retailing sector showed market size growth of approximately 1% between the years 2009 and 2010 (Self-service magazine, 2011).

The Greek food retailing sector includes major international players such as the French Carrefour (It collaborated with the Greek chain Marinopoulos. At the beginning, their collaboration had the form of a joint venture. Now, the Greek chain Carrefour/ Marinopoulos is a franchisee of the French Carrefour Group) and the Belgian company Delhaize (through the acquisition of the Greek chain AB Vasilopoulos) and also local national firms such as the Sklavenitis grocery chain. During the last years the sector faced significant structural changes. The international company Aldi exited the Greek market; one major retailer (Dia Hellas) was acquired from the Carrefour/ Marinopoulos and the Greek retailer Atlantic bankrupted. All these changes accounted for 800 million € turnover (Self-service magazine, 2011). In addition, the financial crisis posed significant challenges for Greek retailers. The Greek households’ income has decreased significantly. As a result they are changing their consuming preferences towards cheaper products, they are seeking more than ever product promotions, they are consuming more own brand products’ and their purchases are made in more than one points of sales. Moreover, increased taxes in foods and increased international raw material prices put pressures on retailers to also increase their product prices. The above resulted in significant liquidity problems for the sector. Nevertheless, food retailers sector is one of the few sectors of the Greek economy that faces recession without major losses (Self-service magazine, 2011).
The Greek market included 4.057 food retailing stores in 2010 (Self-service magazine, 2011) which is a rather large number. Table 4.4 shows the development in the number of stores from 2006 to 2010. A distinction between stores of retail chains and single store retailers has also been made. It should be noted that approximately one third of the total number of stores are operating in the capital city of Greece; Athens.

<table>
<thead>
<tr>
<th>Type of store</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food retailing stores</td>
<td>3921</td>
<td>4040</td>
<td>4196</td>
<td>4370</td>
<td>4057</td>
</tr>
<tr>
<td>Stores of retail chains</td>
<td>2449</td>
<td>2518</td>
<td>2544</td>
<td>2614</td>
<td>2163</td>
</tr>
<tr>
<td>Single store retailers</td>
<td>1472</td>
<td>1522</td>
<td>1652</td>
<td>1756</td>
<td>1894</td>
</tr>
</tbody>
</table>

Source: Self-service magazine, 2011

The Greek food retailing sector includes hypermarkets, supermarkets, discounters and convenient stores according to the global trends (ICAP, 2007). The Greek retailing chains could also be categorized in the following four groups: i) retail chains with 3-5 stores, ii) retail chains with 6-10 stores, iii) retail chains with 11-15 stores, iv) retail chains with 16-20 stores and v) retail chains with more than 20 stores. Table 4.5 shows the number of retailing firms in each category and their development from 2006 to 2010.

<table>
<thead>
<tr>
<th>Number of stores</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-5</td>
<td>46</td>
<td>45</td>
<td>41</td>
<td>37</td>
<td>39</td>
</tr>
<tr>
<td>6-10</td>
<td>23</td>
<td>22</td>
<td>21</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>11-15</td>
<td>13</td>
<td>10</td>
<td>11</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>16-20</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>&gt;20</td>
<td>19</td>
<td>19</td>
<td>18</td>
<td>20</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: Self-service magazine, 2011

Table 4.6 presents the differences in the total number of stores between different retailing chains categories. Table 4.6 clearly shows that the vast majority of retailing stores belong to multiple retailers with more than 20 stores. The high reduction in the number of stores concerning the retailing chains with more than 20 stores between 2009 and 2010 has to do with the structural changes that took place in the sector and were described earlier.
Table 4.6: Number of stores per food retailing chain category in the Greek market

<table>
<thead>
<tr>
<th>Food retailing chain category</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food retailing chain with 3-5 stores</td>
<td>173</td>
<td>170</td>
<td>157</td>
<td>140</td>
<td>147</td>
</tr>
<tr>
<td>Food retailing chain with 6-10 stores</td>
<td>171</td>
<td>164</td>
<td>157</td>
<td>134</td>
<td>135</td>
</tr>
<tr>
<td>Food retailing chain with 11-15 stores</td>
<td>185</td>
<td>130</td>
<td>141</td>
<td>89</td>
<td>101</td>
</tr>
<tr>
<td>Food retailing chain with 16-20 stores</td>
<td>59</td>
<td>66</td>
<td>84</td>
<td>103</td>
<td>111</td>
</tr>
<tr>
<td>Food retailing chain with more than 20 stores</td>
<td>1861</td>
<td>1988</td>
<td>2005</td>
<td>2148</td>
<td>1669</td>
</tr>
</tbody>
</table>

Source: Self-service magazine, 2011

The Greek market includes 18 multiple retailers which are presented in Table 4.7. Of course all these companies are not exclusive food retailers. However, foods account for the higher proportion of their revenues. Table 4.7 also presents the number of stores of each multiple retailer in 2010.

Table 4.7: Number of stores of multiple retailers in the Greek market (2010)

<table>
<thead>
<tr>
<th>Multiple retailer</th>
<th>Number of stores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrefour/ Marinopoulos</td>
<td>289</td>
</tr>
<tr>
<td>Masoutis</td>
<td>210</td>
</tr>
<tr>
<td>Veropoulos</td>
<td>180</td>
</tr>
<tr>
<td>AB Vasilopoulos</td>
<td>174</td>
</tr>
<tr>
<td>Arvanitidis</td>
<td>161</td>
</tr>
<tr>
<td>Pente</td>
<td>118</td>
</tr>
<tr>
<td>Market In</td>
<td>91</td>
</tr>
<tr>
<td>Sklavenitis</td>
<td>85</td>
</tr>
<tr>
<td>Metro</td>
<td>73</td>
</tr>
<tr>
<td>Bazaar</td>
<td>49</td>
</tr>
<tr>
<td>Promitheutiki</td>
<td>38</td>
</tr>
<tr>
<td>Larissa</td>
<td>38</td>
</tr>
<tr>
<td>Chalkiadakis</td>
<td>38</td>
</tr>
<tr>
<td>Grigoriadou</td>
<td>33</td>
</tr>
<tr>
<td>INKA supermarkets</td>
<td>26</td>
</tr>
<tr>
<td>Extra</td>
<td>23</td>
</tr>
<tr>
<td>Evia top</td>
<td>22</td>
</tr>
<tr>
<td>Kantzas</td>
<td>21</td>
</tr>
</tbody>
</table>

Source: Self-service magazine, 2011

In Table 4.8 we can see the annual turnover of the largest multiple retailing companies in the Greek market. Table 4.8 shows that Carrefour/ Marinopoulos is the largest multiple retailer in the Greek market with annual turnover of over 2 billion €. The decrease in the annual turnover from 2009 to 2010 could be attributed to the acquisition of the Dia Hellas chain (Self-service magazine, 2011). AB Vasilopoulos
owns the second place in the market with annual turnover of approximately 1.5 billion €. The third largest multiple retailer is Sklavenitis with annual turnover of approximately 1.2 billion €. Table 4.8 clearly shows that Greek retailing in the food sector follows the global and European trend of high concentrated markets. In particular, the five largest multiple retailers (i.e., Carrefour/ Marinopoulos, AB Vasilopoulos, Sklavenitis, Veropoulos and Masoutis account for the 69.03 % of the Greek market). It should be noted that another significant player of the Greek market is the German firm Lidl. However, the specific firm doesn’t share any information concerning their financial results. Therefore, it is excluded from the statistical information of the sector. Comparing the data from Tables 4.8 and 4.2 we can see the increasing concentration rates in the Greek retailing sector (46.4% in 2005 and 69.03% in 2010) which follow the global trends (FAO, 2009).

Table 4.8: Turnover of the largest multiple retailers in the Greek market (€) and their market share

<table>
<thead>
<tr>
<th>Multiple retailer</th>
<th>2009</th>
<th>2010</th>
<th>Market share in 2010 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrefour/ Marinopoulos**</td>
<td>2.308.445.000</td>
<td>2.194.504.000</td>
<td>23.24%</td>
</tr>
<tr>
<td>AB Vasilopoulos</td>
<td>1.473.130.000</td>
<td>1.574.429.000</td>
<td>16.67%</td>
</tr>
<tr>
<td>Sklavenitis</td>
<td>1.153.499.000</td>
<td>1.191.253.000</td>
<td>12.62%</td>
</tr>
<tr>
<td>Veropoulos</td>
<td>931.724.000</td>
<td>948.604.000</td>
<td>10.05%</td>
</tr>
<tr>
<td>Masoutis</td>
<td>602.181.000</td>
<td>634.632.000</td>
<td>6.72%</td>
</tr>
<tr>
<td>Pente</td>
<td>445.250.000</td>
<td>441.154.000</td>
<td>4.67%</td>
</tr>
<tr>
<td>Arvanitidis</td>
<td>243.227.000</td>
<td>239.894.000</td>
<td>2.54%</td>
</tr>
<tr>
<td>INKA supermarkets</td>
<td>142.568.000</td>
<td>139.761.000</td>
<td>1.48%</td>
</tr>
<tr>
<td>Sector</td>
<td>9.358.982.000</td>
<td>9.442.149.000</td>
<td>-</td>
</tr>
</tbody>
</table>

*Also includes the turnover of the acquired retail chain Dia

Source: Self-service magazine, 2011

The structural changes occurred in the food retailing sector brought significant improvements in the organization of the supply chain. Retailers’ initiatives in the areas of scanning (bar-coding), information sharing (electronic data interchange) and efficient consumer response increased the supply chain efficiency in the food sector. The results of these initiatives significantly decreased inventories, increased on-time deliveries and reduced the phenomenon of out of stock products (ICAP, 2007). Higher product quality and better coordination between chain tiers was achieved as well. In addition, advances in the retailing operations limited product wastage and hence, improved supply chain performance (ICAP, 2007).
Moreover, inventory management and logistics were identified as key areas of supply chain competitiveness. Third-party logistics were extensively used from retailing firms that wanted to outsource this operation. On the other hand, multiple retailers’ continuous growth and their growing expertise in supply chain management issues drove them to develop centralized warehouses and logistic operations (ICAP, 2007; Bell, 2004). Recently, Greek food retailers promoted online stores in order to satisfy the changing demands of the Greek consumer towards online buying (ICAP, 2007).

The Greek food retailing sector also followed the global and especially the European trend of own brand products. Food own brand products account for the 68.9% of the Greek own brand products’ market. The dynamic own brand products’ market penetration mainly comes from the actions of multiple retailers (ICAP, 2009). In 2010, one out of seven purchased products from Greek food retailing stores were own brand products (Self-service magazine, 2011). Table 4.9 presents the total value of the Greek own brand products’ market from 2007 to 2009 and the relevant growth rate compared to the growth rate of the grocery products in total. Table 4.9 clearly shows the aggressive market penetration of the own brands in the Greek market.

<table>
<thead>
<tr>
<th>Table 4.9: Total value of the Greek own brand products’ market</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Total value (€)</td>
</tr>
<tr>
<td>Own brand products growth rate</td>
</tr>
<tr>
<td>Total grocery products growth rate</td>
</tr>
</tbody>
</table>

Source: ICAP, 2009

Figure 4.1 presents the market share of each own brand product category in 2008. As mentioned before, food products are by far the Greek leaders in own brand products in the retailing sector.
Figure 4.1: Market shares per own brands product category (2008)

Source: ICAP, 2009

Figure 4.2 presents own brand products’ market penetration concerning retailers’ total sales in the Greek food sector. In the period 1998-1999 the relevant figures were between 4 and 6%. Hence, it is obvious that own brand products’ sales have grown rapidly during the decade of 00’s.

Figure 4.2: Own brand products’ market penetration

*estimate
Source: ICAP, 2009

Another key factor that enhanced Greek consumers’ preference in multiple retailers is their extensive promotional activity. Due to their size, multiple retailers can achieve high economies of scale and better trade terms with suppliers and hence, they can offer favorable promotions for Greek consumers (ICAP, 2007). In
In particular, multiple retailers are using the following promotional activities in order to attract more customers:

- Collaboration with suppliers for discounts/promotions through coupons
- Joint offerings of relevant or different products in the same packaging
- In store promotions with the use of stands and suppliers’ merchandisers for product sampling or for coupon offering
- Promotions such as buy one get one free
- Brochure offers
- Loyalty cards and coupons that give future discounts to consumers
- On-line promotional activity
- Prizes

The Greek food retailing sector is operating in a rather small market. The basic characteristics of the Greek population and the Greek consumers are presented in Table 4.10.

<table>
<thead>
<tr>
<th>Table 4.10: Greek population characteristics (2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Greek population</strong></td>
</tr>
<tr>
<td><strong>Gross domestic product (million €)</strong></td>
</tr>
<tr>
<td><strong>Household consumption expenditures (million €)</strong></td>
</tr>
<tr>
<td><strong>Annual consumption expenditures per person (€)</strong></td>
</tr>
</tbody>
</table>

*Source: Self-service magazine, 2011*

The average Greek household’s expenditures in food (i.e., food and drinks) account for approximately 20% of its total expenditures. Table 4.11 presents more details for the proportion of the food products’ purchasing in the total expenditures of the Greek household. Differences between urban and rural areas are also presented. In summary, Table 4.11 indicates that food expenditures account for a significant amount of the total household expenditures in the Greek market.
Table 4.11: Greek population characteristics (2010)

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Urban areas</th>
<th>Rural areas</th>
<th>Greece in total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenditures (%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total expenditures</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Food</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flour, bread and cereal products</td>
<td>3.2%</td>
<td>2.2%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Meat</td>
<td>5.2%</td>
<td>3.5%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Fish</td>
<td>1.6%</td>
<td>1.2%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Dairy</td>
<td>3.3%</td>
<td>2.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Oils and spreads</td>
<td>1.1%</td>
<td>0.8%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Fruits</td>
<td>1.3%</td>
<td>1.2%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Vegetables</td>
<td>2.2%</td>
<td>1.8%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Sugar and sweets</td>
<td>1.1%</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Other food products</td>
<td>0.3%</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Non alcoholic drinks and beverages</td>
<td>1.3%</td>
<td>0.9%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Alcoholic drinks</td>
<td>0.7%</td>
<td>0.6%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>3.6%</td>
<td>2.4%</td>
<td>2.6%</td>
</tr>
<tr>
<td><strong>Total food, drink and tobacco</strong></td>
<td>24.7%</td>
<td>18.8%</td>
<td>19.6%</td>
</tr>
<tr>
<td>expenditures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clothing</td>
<td>6.6%</td>
<td>6.2%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Footwear</td>
<td>1.7%</td>
<td>2.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Detergents</td>
<td>1.6%</td>
<td>1.1%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Personal care products</td>
<td>1.8%</td>
<td>1.9%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Toilet paper, tissues, etc.</td>
<td>0.8%</td>
<td>0.7%</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>Total grocery products expenditures</strong></td>
<td>37.2%</td>
<td>30.7%</td>
<td>31.6%</td>
</tr>
</tbody>
</table>

Source: Self-service magazine, 2011

4.3.3 Key players in the supply chain in the Greek food sector: Food manufacturers

Food manufacturers (again we refer to both food and drink companies) are the most significant suppliers of the Greek multiple retailers. The food manufacturing sector is highly significant for the Greek economy in general. It is leading in the Greek processing industry and has significant exporting operations towards other Balkan countries and Western European countries as well (Thomaidou & Vlachou, 2012). Due to the Greek economy’s recession, food manufacturers faced significant problems in terms of sales’ volumes, employment, investments, added value and financial figures in general. These problems are primarily faced by micro firms (firms employing less than 10 employees (European Commission, 2005) which account for approximately 95% of the food companies (Thomaidou & Vlachou, 2012). However, there is room for development which could give to the sector a significant role in the
Greek economy’s recovery (Thomaidou & Vlachou, 2012). The contribution of the Greek food manufacturers in the Greek processing industry in 2009 is presented in Table 4.12. The number of Greek food manufacturers is 16.695 and over 90.000 employees are working in it. Its total turnover is over 9 billion € while the added value of the sector is approximately 4.4 billion €. Finally, total investments are almost 530 million €. These numbers are excessively high compared to the total processing industry’s numbers (Thomaidou & Vlachou, 2012).

Table 4.12: Value of the Greek food manufacturing sector (2009)

<table>
<thead>
<tr>
<th>Contribution to the Greek processing industry</th>
<th>Number of companies</th>
<th>Number of employees</th>
<th>Turnover (€)</th>
<th>Added value (€)</th>
<th>Investments (€)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.3%*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.0%#</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*: Highest in the Greek processing industry
#: Second highest in the Greek processing industry. Oil processing sub-sector is first with 23.7%

Source: Thomaidou & Vlachou, 2012

Table 4.13 presents interesting information concerning the significance of different products in the food manufacturing sector in 2009. Bread and bakery products account for the 60% of the total firms and 35.5% of the total employees of the sector. Concerning turnover, dairy products and drinks (both alcoholic and non alcoholic) account for approximately 40% of the total turnover of the Greek food manufacturers. Drinks have the highest added value (27.3%) while dairy firms showed higher investment numbers (26.7%) (Thomaidou & Vlachou, 2012).

Table 4.13: Per product contribution to the food manufacturing sector (%) (2009)

<table>
<thead>
<tr>
<th>Product category</th>
<th>Number of companies</th>
<th>Number of employees</th>
<th>Turnover</th>
<th>Added value</th>
<th>Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td>3.1%</td>
<td>8.6%</td>
<td>10.0%</td>
<td>8.4%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Fish</td>
<td>0.5%</td>
<td>1.3%</td>
<td>1.2%</td>
<td>1.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Food and vegetables processing</td>
<td>4.0%</td>
<td>8.8%</td>
<td>9.0%</td>
<td>7.2%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Oils and spreads</td>
<td>12.1%</td>
<td>4.7%</td>
<td>6.6%</td>
<td>4.5%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Dairy</td>
<td>5.2%</td>
<td>14.5%</td>
<td>19.6%</td>
<td>17.0%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Flour products</td>
<td>2.0%</td>
<td>2.8%</td>
<td>4.3%</td>
<td>2.9%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Bread and bakery products</td>
<td>60.0%</td>
<td>35.6%</td>
<td>15.9%</td>
<td>17.7%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Sugar, coffee and sweets</td>
<td>6.3%</td>
<td>10.5%</td>
<td>10.3%</td>
<td>12.2%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Animal foods</td>
<td>1.3%</td>
<td>1.6%</td>
<td>3.5%</td>
<td>1.7%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Food in total</td>
<td>94.5%</td>
<td>88.4%</td>
<td>80.3%</td>
<td>72.7%</td>
<td>83.5%</td>
</tr>
<tr>
<td>Drinks</td>
<td>5.5%</td>
<td>11.6%</td>
<td>19.7%</td>
<td>27.3%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Food and drinks in total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Thomaidou & Vlachou, 2012
Major Greek food manufacturers are: FAGE S.A., Nestle Hellas S.A., Coca-Cola Tria Epsilon, Kraft Food Hellas, MEVGAL S.A. and others which are companies with significant international presence (T&P, 2012). Table 4.14 presents the top 20 food manufacturers in Greece in 2011. Information concerning their turnover and the number of employees is given as well.

Table 4.14: Top 20 manufacturers in the Greek food sector (2011)

<table>
<thead>
<tr>
<th>Company</th>
<th>Turnover (€)</th>
<th>Number of employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coca-Cola Tria Epsilon S.A.</td>
<td>537,400,000</td>
<td>2,221</td>
</tr>
<tr>
<td>Elais-Unilever Hellas S.A.</td>
<td>512,195,147</td>
<td>N.A.</td>
</tr>
<tr>
<td>Nestle Hellas S.A.</td>
<td>424,987,980</td>
<td>1,060</td>
</tr>
<tr>
<td>Athenian Brewery S.A.</td>
<td>389,331,938</td>
<td>N.A.</td>
</tr>
<tr>
<td>Friesland Campina Hellas S.A.</td>
<td>318,269,434</td>
<td>526</td>
</tr>
<tr>
<td>SOYA HELLAS S.A.</td>
<td>295,620,230</td>
<td>300</td>
</tr>
<tr>
<td>DELTA FOODS S.A.</td>
<td>284,164,000</td>
<td>1,354</td>
</tr>
<tr>
<td>Kraft Foods Hellas</td>
<td>219,030,700</td>
<td>N.A.</td>
</tr>
<tr>
<td>SOYA MILLS S.A.</td>
<td>211,598,883</td>
<td>120</td>
</tr>
<tr>
<td>FAGE S.A.</td>
<td>201,046,000</td>
<td>871</td>
</tr>
<tr>
<td>Hellenic Sugar Industry S.A.</td>
<td>190,480,316</td>
<td>288</td>
</tr>
<tr>
<td>MEVGAL S.A.</td>
<td>185,765,000</td>
<td>1048</td>
</tr>
<tr>
<td>Agricultural Poultry Farming Cooperative of Ioannina PINDOS</td>
<td>180,450,819</td>
<td>820</td>
</tr>
<tr>
<td>NIREUS AQUACULTURE</td>
<td>172,849,858</td>
<td>816</td>
</tr>
<tr>
<td>Chipita S.A.</td>
<td>146,593,000</td>
<td>930</td>
</tr>
<tr>
<td>Olympus Dairy Industry</td>
<td>141,641,324</td>
<td>345</td>
</tr>
<tr>
<td>Nitsiakos</td>
<td>138,946,008</td>
<td>480</td>
</tr>
<tr>
<td>Dairy Industry TYRAS S.A.</td>
<td>134,088,287</td>
<td>288</td>
</tr>
<tr>
<td>PETTAS, N. P., S.A.</td>
<td>130,659,888</td>
<td>49</td>
</tr>
<tr>
<td>Tasty Foods</td>
<td>121,098,657</td>
<td>815</td>
</tr>
</tbody>
</table>

N.A.: Not available information

Source: T&P, 2012

As previously seen, the investments in food manufacturing are over 500 million €. Investments are focused mainly on increasing producing capacity for the current product mix (47% of the total investments). The second target of food manufacturers’ investments is the replacement of old capital equipment (20%). In the third place there are investments referring to producing methods improvement (12%) (Thomaidou & Vlachou, 2012). The above indicate a difference in the investing orientation between multiple retailers and food manufacturers concerning supply
chain management. Contrary to retailers, food manufacturers show limited investments towards the improvement of supply chain operations.

4.3.4 Supplier-multiple retailer relationships in the supply chain in the Greek food sector

The basic characteristics of the supply chain in the Greek food sector as described earlier showed that multiple retailers and their primary suppliers (i.e., food manufacturers) are the key chain members. Therefore, we will focus on their relationships. However, we should note that in some cases the relationship is mediated by food manufacturers’ local agents (Thomaidou & Vlachou, 2012) even though the typical relationship in the Greek market doesn’t include intermediates. Another point highlighting the significance in examining the specific relationships is the fact that they affect the final product price in a high degree (ICAP, 2007). The current financial crisis further supports this argument since consumers’ welfare should be guaranteed through low product prices.

Also in the Greek case, multiple retailers have an advantageous position when dealing with their suppliers (ICAP, 2007). High concentration rates in the Greek food retailing significantly increased major retailers’ sales. The few multiple retailers are holding a large network of retailing stores in a variety of sizes across the country. Therefore, suppliers’ dependence in multiple retailers is growing. Multiple retailers also invested heavily in warehousing and logistics for increasing the whole chain’s efficiency. In addition, food manufacturing is a highly fragmented sector. As a result, in many cases, trade deals are conducted between multiple retailers with enormous market power and micro firms of low turnovers. On the other hand, there are also cases of big suppliers whose relationships with retailers are balanced, if not in their favor. In addition, own brand products are growing rapidly in the Greek market as well. The above are significant factors that enhanced retailers’ bargaining position against their suppliers in the Greek market (ICAP, 2007).
The current status in supplier-multiple retailer relationships in the supply chain in the Greek food sector let retailers put high pressures on their suppliers and achieve favorable trade terms. Of course relationships are differentiated according to the supplier. Market leaders of many food products may have the upper hand in their relationships with retailers (ICAP, 2007). In general, multiple retailers are putting high pressures on their suppliers for better prices, higher discounts and longer credit periods. In addition, there are cases when the entry fees that a supplier has to pay to Greek multiple retailers are high. One of the most significant problems in the examined relationships in the Greek food sector is the average credit period in which the retailer has to pay his suppliers which is growing and puts high liquidity pressures on suppliers. It should be noted that smaller suppliers face longer credit periods (ICAP, 2007). The above indicate that some disagreement between exchange partners in the supply chain in the Greek food sector may be present. In addition, there is high similarity with issues in supplier-multiple retailer relationships in other European countries (Vander-Stichele & Young, 2009).

As we previously saw, both retailers and suppliers face the uncertainty derived from the recession of the Greek economy. Retailers more than ever are seeking for suppliers with well established marketing strategies and with products of high quality and large variety (ICAP, 2007). High collaboration is essential for meeting the challenges that supply chain in the food sector is facing while there is room for high improvement in its performance (Thomaidou & Vlachou, 2012; ICAP, 2007). Nevertheless, lack of information sharing is detected in the supply chain despite some initiatives in this direction (ICAP, 2007). Advanced IT technology is needed in order to improve supply chain transparency and hence, supply chain efficiency in the Greek food sector (ICAP, 2007).

4.3.5 Examination of multiple retailers’ opportunism in the Greek food sector

We believe that the supply chain of the Greek food sector can be an ideal “laboratory” to examine opportunism in supplier-multiple retailer relationships. In
particular, the Greek case follows the general global and European trends. The presence of international organizations such as the retailers Carrefour and Delhaize and the food companies Coca-Cola, Nestle, Unilever and Kraft Foods in the Greek market supports this notion. In addition, the Greek case shows similarities in the structure of the supply chain with the current European and global trends. In particular, the high retailing concentration, the fact that the supply chain is retail-driven, the high market share of own brand products and the asymmetric relationships in favor of retailers are examples of such similarities.

Moreover, concerns regarding multiple retailers’ behavior in their relationships with suppliers have been raised also in Greece following some general concerns about the growing power of multiple retailers. Also in the case of Greece this concern doesn’t refer to the typical supplier-multiple retailer relationships. Of course, no past empirically study has examined the phenomenon of opportunism in the supply chain in the Greek food sector.

The sector analysis presented in this chapter gave valuable insights concerning the context of the examined phenomenon and showed that the supply chain in the Greek food sector could be utilized for the examination of multiple retailers’ opportunism. This chapter concludes the first part of the thesis. In summary, the first part of the thesis presented an extensive literature review in the fields of opportunism and supply chain relationships in the food sector. The literature review led to the development of the research objectives, the hypotheses and the conceptual model. Finally, the context of the examined phenomenon was presented. In order to confirm our model and meet our objectives we have to design a relevant research. Its methodology will be presented in the next chapter. The next chapter will be the first of the second part of the thesis which will also include the results, the discussion of the findings and the final conclusions.
CHAPTER 5: METHODOLOGY

This chapter presents the qualitative and quantitative methods employed in the current research in an attempt to address the research objectives and the hypotheses posed in the previous chapter. In particular, the justification of the chosen methodology is presented first. Then, the sample, the process and the research tool that were used in the qualitative part of the research are presented in detail. Similarly, the study population and the sampling frame, the survey tool and the survey procedure for the quantitative part of our study are presented as well. Finally, the way in which the two methods applied will help us meeting the research objectives is also demonstrated.
5.1 RESEARCH DESIGN

When choosing research strategy, the researcher has to make trade-offs between control, realism and generalizability. Quantitative research methods help the researcher to achieve higher levels of control and generalizability while qualitative research maximizes realism (Golicic et al., 2005). Recently, researchers concluded that qualitative and quantitative research approaches are complementary and a combination of them gives optimum results (Tashakkori & Creswell, 2008). Qualitative and quantitative research approaches are complementary but they are not substitutes for one another since they observe different aspects of the same reality (Mc Cracken, 1988).

Research in the area of opportunism is differentiated from other inter-firm relationships areas from the fact that it is a very sensitive subject (Carson et al., 2006; Gassenheimer et al., 1996; Anderson, 1988). Hence, accuracy of the data obtained was important in our study. Qualitative research helps the researcher to acquire knowledge regarding the way individuals are giving meaning to the examined phenomena (Creswell, 2009). A qualitative stage was deemed necessary in our study in order to acquire prior knowledge of the way opportunism is perceived by managers in the supplier-multiple retailer relationships. Our study is also exploratory and one of its objectives was to identify and examine opportunistic behaviors in food supplier-multiple retailer relationships. Since, no past study has examined the phenomenon before we don’t know whether opportunism occurs in the Greek market and in what degree. The qualitative research approach could give us a realistic image of the level of adoption of opportunistic practices from the part of the multiple retailers. However, generalized insights could be confirmed only through quantitative research.

Inter-firm relationships differ between industries and therefore, understanding the context of the phenomena being investigated is crucial (Morgan et al., 2007). Similarly, opportunism is a context specific phenomenon and it should be examined under this perspective (Rindfleisch et al., 2010). A prior qualitative approach could give us a close-up view of opportunism in the context of supply chain in the food
sector. In addition, supply chain relationships encompass many and complex interactions between chain members (Moberg & Speh, 2003). However, there was little guidance in literature regarding specific opportunistic practices. Therefore, qualitative research could help us identify specific aspects of the supplier-multiple retailer relationships where opportunism could emerge. The above arguments show that an initial qualitative study was necessary in order to generate context specific knowledge for the phenomenon of opportunism in the supply chain in the food sector.

The knowledge acquired from the qualitative stage is crucial for the optimum design of the quantitative research that will test the hypotheses as presented in the previous chapter. The purpose of this research is to confirm the developed conceptual framework of the adoption of opportunism from the part of multiple retailers in the supply chain in the food sector. Opportunism is a central element of TCA theory (Williamson, 1975) and has been widely researched (Hawkins et al., 2008). It has been fully described as a general concept but not as manifestation of specific practices. In addition, there is lack of past empirical research in the context of supplier-multiple retailer relationships in the supply chain in the food sector. The contextual information acquired from the qualitative research will allow us to design a quantitative research that will develop a general explanation of the examined phenomenon (Golicic et al., 2005). Therefore, a quantitative research approach was applied in order to explain the creation of retailers’ opportunism in the supply chain in the food sector. A quantitative approach allows us to translate theoretical concepts into specific variables and to use instruments for collecting observations that provide statistical data for testing our hypotheses (Creswell, 2009). By applying a mixed methodology of qualitative and quantitative research we can adapt well documented measures from the literature with the help of the contextual information acquired from the qualitative part of the study. The adapted measures will be used to explain relationships among variables in the quantitative part (Golicic et al., 2005). Specifically, we will try to explain the effect of various determinants on opportunism.
The following discussion first outlines the qualitative research approach and the interview process that was applied in our study. The results of the qualitative part of the study will be presented in the next chapter. Next, the process applied for the quantitative part of the study will be presented. Again, the results of the quantitative research will be presented in a following chapter.
5.2 QUALITATIVE RESEARCH

In relation to the research objectives described in section 3.1 and the relevant hypotheses developed in section 3.2 the qualitative approach will help us obtain valuable information from the Greek market concerning the following issues:

• Concerning the research objective of the examination of the determinants of potential opportunism in the supply chain in the food sector and the five research hypotheses (Hypotheses 1-5), the qualitative study will help us:
  o Confirm in an exploratory way that the examined five determinants create opportunism in the specific relationship as described in literature.
  o Acquire context specific information for the effect of the five examined determinants on multiple retailers’ opportunistic behavior.

• Concerning the research objective of the identification and the examination of multiple retailers’ supply chain opportunistic practices in the food sector, the qualitative study will help us:
  o Confirm or reject the occurrence of multiple retailers’ supply chain opportunistic practices in the Greek food sector as identified in the relevant literature.
  o Acquire accurate information in a very sensitive issue such as opportunism.
  o Take a realistic view of the level of use of multiple retailers’ opportunistic behaviors in the supply chain in the Greek food sector.
  o Identify other potential multiple retailers’ supply chain opportunistic practices which weren’t previously identified in literature.
  o Identify the most significant multiple retailers’ opportunistic supply chain practices in the Greek food sector.
  o Acquire context specific information for the occurrence of the well described phenomenon of opportunism that wasn’t examined before in the case of multiple retailers in the supply chain in the food sector.

• Concerning the research objective of the examination of the effect of supplier’s size and competition from own brand products on the level of multiple retailers’
opportunism in the supply chain in the food sector and the two research hypotheses (Hypotheses 6-7), the qualitative study will help us:

- Confirm in an exploratory way that the suppliers’ size and the competition they face from own brand products affect the level of multiple retailers’ opportunism.
- Acquire context specific information for the effect of the two contextual characteristics of the examined relationship on multiple retailers’ opportunistic behavior.

The information obtained from the qualitative study will help us clarify the research questions and the hypotheses and to create an optimum survey instrument that will be used in the quantitative part of the study. For obtaining the above information, we applied in-depth interviews with a sufficient number of practitioners from the food sector and academics as well. In-depth interviews are typical examples of methods used in a qualitative research (Golicic et al., 2005). Past studies have used in-depth interviews for obtaining context specific information in order to examine opportunism and exchange relationships (e.g., Tangpong et al., 2010; Liu et al., 2009; Morgan et al., 2007; Cavusgil et al., 2004).

5.2.1 In-depth interviews semi-structured questionnaire

A semi-structured questionnaire facilitated the interviewing process. In-depth interviews with the use of semi-structured questionnaires are a common method for obtaining context specific information for the concept of opportunism (Tangpong et al., 2010; Liu et al., 2009; Vásquez et al., 2007; Morgan et al., 2007). The semi-structured questionnaire (Appendix II a) was pre-tested via interviews with supply chain managers (three managers) and academics (three senior academics). The comments obtained mainly referred to the improvement in the questions’ wording and to the necessity of the inclusion of questions about the feelings of the respondents for the examined relationship and the various aspects of it. Additional
prompt questions were also included. The semi-structured questionnaire was improved according to the feedback from the pre-test and took its final form (Appendix II b). We will now present in detail the semi-structured questionnaire in its final form.

The questionnaire was differentiated in a small degree according to the respondent (supplying firm manager, journalist, retailer or academic). The differentiation referred to the questions’ wording and not to their subject. After a greeting and a brief introduction, each interview started with grand tour questions. Respondents were asked about themselves and their company. Grand tour questions ask the respondents to give a verbal tour of something they know well and they are suggested for opening an interview (Spradley, 1979). Then the following question was asked: “Could you describe to me the typical relationship of your firm with a multiple retailer?” In addition, the question “How do you feel about them?” was used. The purpose was to encourage the respondent to think about and also to share her/his feelings about the supplier-multiple retailer relationships. Hence, possible insights regarding multiple retailers’ opportunism could be obtained in a non directive way (Warren & Karner, 2005). An open-ended question asking the interviewee to describe the supplier-multiple retailer contractual agreements of her/his firm followed. Again, a question of her/his feelings about the agreements was asked. Additional prompt questions were asked in case the respondent wasn’t enabled to talk about the subject. This question could give us valuable information regarding supplier-multiple retailer formal relationships, their level of formality and their frequency. The inclusion of this question had to do with the fact that multiple retailers’ opportunistic behavior is frequently related with the terms of the contractual agreements (e.g., retailers’ deviation from contractual terms) (Vander-Stichele & Young, 2009; UK competition Commission, 2008; Duffy et al., 2003).

In addition, another open-ended question was asking the interviewees to describe the negotiation process between the supplier and the multiple retailer. The inclusion of this question had to do with the fact that according to the literature multiple retailers’ opportunistic behavior emerges during the negotiation process (Vander-Stichele & Young, 2009; UK competition Commission, 2008; Duffy et al.,
Again, a question of her/his feelings about the negotiations was asked. In case the respondent wasn’t enabled to talk about the subject additional prompt questions were asked. In this way, information regarding the negotiations’ frequency, the most common negotiation subjects and the negotiation process itself could be obtained.

The above open-ended questions could give us an overview of the supplier-multiple retailer relationships regarding both the formal and informal parts of their agreements. Questions about feelings could also reveal whether the respondents perceived aspects of the retailers’ behavior as opportunistic.

The next section of the semi-structured questionnaire included a list of 32 questionable (or potentially opportunistic) supply chain practices that multiple retailers could possibly use and which were identified in literature and were presented earlier (Table 2.1). The respondents were asked to think about one typical relationship of their firm. They were specifically instructed not to think their best or worst relationship but a typical relationship with a multiple retailer to avoid biased answers (Moberg & Speh, 2003). Then, they were asked to indicate how often each practice occurred in the typical relationship (Likert-type scale: 1 indicates “never” and 7 indicates “in a high degree”). In case the respondent was unfamiliar with a specific practice, the researcher gave him a short description of it. This question aimed to give insights regarding the most usually practiced questionable behaviors of multiple retailers. The respondents were also asked to indicate the level of impact of each practice to the supplier’s performance (Likert-type scale: low indicates “low impact”, medium indicates “medium impact” and high indicates “high impact”) (Moberg & Speh, 2003). In this way valuable information regarding the most significant questionable behaviors of the multiple retailers was obtained. In addition, the interviewees were also asked to make comments about the accuracy and relevancy of the list of practices (Moberg & Speh, 2003). We wanted to clarify whether each practice identified in literature was describing the actual multiple retailer’s behavior in a realistic way. Also, it is possible that the practices identified in literature were variations of the practices met in the Greek market. Hence, practitioners’ comments could give valuable insights in this issue. Respondents were
also asked to indicate the way they felt for each practice (Warren & Karner, 2005). Their comments could give insights for the potential opportunistic character of each practice (e.g., whether the practice truly encompassed the notion of guile or not). Finally, the respondents were prompted to suggest other retailers’ questionable practices which according to their opinion were significant and widely practiced. In summary, this part of the semi-structured questionnaire could help us identify the most significant multiple retailers’ practices, their frequency and whether they had the characteristics of opportunism. These pieces of information combined could give us insights regarding the level of opportunism in the supplier-multiple retailer relationships and regarding the exact form of the most significant opportunistic practices met in the Greek food sector.

The last part of the semi-structured questionnaire included questions concerning the factors that create multiple retailers’ opportunism. The first question asked the respondents to indicate the determinants of the retailers’ questionable practices in an open-ended way. After obtaining the answers, focused directed questions for each determinant previously identified in literature were used (Manuj & Sahin, 2002; Rapley, 2001). Hence, the respondents were asked to indicate whether suppliers’ dependency on their big customers increases multiple retailers’ questionable practicing. Similar questions were asked for goal incompatibility (and especially financial goal incompatibility), informational asymmetry, business related environmental uncertainty and behavioral uncertainty. In case the respondent had difficulties in comprehending a specific determinant, the researcher gave him a short definition of it or a situational example describing it. These questions aimed to confirm the role of the five elements as described in the literature. Moreover, the respondents were asked to indicate whether context specific factors could increase the level of multiple retailers’ questionable practicing. Again open-ended questions were used first. Then, specific questions regarding the role of the two contextual variables that were identified in literature (i.e., suppliers’ size and facing competition from own brand products) were asked. The answers obtained in this part of the semi-structured questionnaire combined with the identification of the most significant opportunistic practices could allow us to preliminary confirm or reject the
hypothesized role of dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty and that of the two contextual variables as well. Finally, any last comments were asked.

The interviews were followed up with informal discussion that provided additional information to our study. The results from the qualitative part of the study will be presented in the next chapter.

5.2.2 In-depth interviews sample

A sample of fifteen well qualified practitioners was selected for the in-depth interviews in order to give us their perceptions in the examined phenomenon. Participants were deemed qualified due to their years of experience in the area of supplier-multiple retailer relationships. Most of them were specialized in the food sector. Eleven interviewees were or had been trade managers in food companies that were supplying multiple retailers. Four out of eleven were managers in international companies that had presence in the Greek market as well. The rest were managers in national companies except of one interviewee which had experience working in local suppliers. All the supplying firm managers confirmed that they were the most appropriate person of their firm for speaking about these issues or had very good knowledge of the relationships of their firms with the multiple retailers including the negotiation issues. Two of the respondents were journalists in a top sector magazine. The other two respondents were store-managers of multiple retailers. In addition, five experienced academics in the area of supplier-multiple retailer relationships were also interviewed in order to share their point of view in the investigated subject. Further background information concerning the respondents wasn’t included in the study since anonymity was a strict condition of their involvement in our research.
5.2.3 In-depth interview process

The participants were firstly contacted via telephone or e-mail and the purpose of the research was presented to them. In addition, confidentiality was assured as well. In some cases, more detailed information about the nature of research was requested and therefore, an e-mail with more information was sent to the respondents. The respondents’ recruitment and interviewing process lasted approximately one and a half month (April-May 2012). Respondents were mostly willing to participate; however, it was difficult to arrange an appointment due to their heavy schedule. Interviews typically lasted 60 to 120 minutes with an average of approximately 90 minutes. All the interviews were conducted face-to-face by the researcher. We should note that the word opportunism wasn’t presented until the conclusion of interview when participants were debriefed as to the purpose and the scope of the study. We didn’t refer to the specific word for avoiding biased answers. All interviews were tape-recorded, given the consent of the interviewee, and latter on were transcribed on paper by the researcher. In the few cases when the interviewee was not willing to be recorded, the researcher kept extensive notes while doing the interview.
5.3 QUANTITATIVE RESEARCH

In relation to the research objectives described in section 3.1 and the relevant hypotheses developed in section 3.2 the quantitative part of the study will help us obtain valuable information from the Greek market concerning the following issues:

• Concerning the research objective of the examination of the determinants of potential opportunism in the supply chain in the food sector and the five research hypotheses (Hypotheses 1-5), the quantitative study will help us:
  o Confirm or reject the hypotheses developed in the third chapter concerning the five determinants of multiple retailers’ opportunism

• Concerning the research objective of the identification and the examination of multiple retailers’ supply chain opportunistic practices in the food sector, the qualitative study will help us:
  o Identify the most usually applied multiple retailers’ supply chain opportunistic practices in the Greek food sector.
  o Measure the level of use of opportunistic practices from the part of the multiple retailers in the supply chain in the Greek food sector.
  o Detect underlying dimensions in the examined multiple retailers’ supply chain opportunistic practices in the Greek food sector.

• Concerning the research objective of the examination of the effect of supplier’s size and competition from own brand products on the level of multiple retailers’ opportunism in the supply chain in the food and the two research hypotheses (Hypotheses 6-7), the quantitative part of the study will help us:
  o Confirm or reject the hypotheses developed in the third chapter concerning the role of the two contextual factors that affect the magnitude of the phenomenon.

For obtaining the above information, we designed and conducted a survey in a sample of practitioners from the Greek food sector. A survey is a common method used in quantitative studies and requires the employment of a structured
questionnaire. In particular, a survey includes the questionnaire design, the sampling, the data collection and the data analysis (Golicic et al., 2005). Surveys have been used extensively in past studies for the examination of the concept of opportunism in business relationships (e.g., Handley & Benton, 2011; Mysen et al., 2011; Tangpong et al., 2010; Liu et al., 2009; Luo, 2007; Morgan et al., 2007; Carson et al., 2006; Kwon & Suh, 2005; Ting et al., 2007; Skarmeas et al., 2002). In this part of the study we will describe the sampling methods that we used in our survey, the questionnaire design and the detailed procedures of data collection.

5.3.1 Study population and sampling frame

5.3.1.1 Study population

The central concept examined in the study is multiple retailers’ opportunism in the supply chain in the food sector. We are focusing on multiple retailers because as described earlier in the literature review (section 2.4) this is the case which raises concerns regarding the competitiveness of the supply chain in the food sector (European Commission, 2009). For examining multiple retailers’ opportunism in the Greek sector we had two choices: i) to examine multiple retailers’ perceptions concerning their self-opportunism or ii) to examine the perceptions of suppliers concerning the phenomenon. We chose the second approach in order to avoid potential social desirability bias. Retailers might be unwilling to truthfully reveal the extent to which they engage in guileful behaviors (Cronso & Dahlstrom, 2008). In their meta-analysis of opportunism in exchange relationships, Crosno and Dahlstrom (2008) suggested that future studies should implement self-reported measures of opportunism with caution due to social desirability bias. In addition, due to high retail concentration in the Greek market the vast majority of interactions in the examined dyad take place between few multiple retailers and a wide range of suppliers of various characteristics and sizes. It would be difficult to obtain the appropriate amount of information from the retailers’ side. In particular, it would be very competitive to obtain from the few retailers a realistic view of the various
aspects of their relationships with a large number of their suppliers. Supplier-multiple retailer relationships include diversified relations. As mentioned before, multiple retailers may behave differently to different suppliers (see section 2.4.2). It would be unavoidable but to obtain summarized information from retailers concerning these relationships and hence, we would lose valuable information.

We examined suppliers’ perceptions concerning multiple retailers’ opportunism. Typically, suppliers’ perceptions can’t verify whether guile exists or not in their partners’ behavior (Wang, 2012; Jap, 2003). In addition, the examined relationships are in many cases imbalanced in favor of multiple retailers and suppliers could exaggerate in their answers concerning retailers’ adoption of opportunistic practices. Therefore, the results of the suppliers’ perceptions should be treated in caution concerning their generalizability. Nevertheless, we strongly believe that the second approach will give us more accurate and rich information concerning our objectives and hypotheses than the first method. The approach of obtaining perceptions concerning partner’s opportunism has been widely used in many studies examining opportunism in the past (e.g., Wang et al., 2012; Handley & Benton, 2011; Mysen et al., 2011; Luo, 2007; Morgan et al., 2007; Kwon & Suh, 2005; Rokkan et al., 2003; Schilling & Steensma, 2002; Skarmeas et al., 2002; Wang, 2002; Sako & Helper, 1998).

As described in chapter 4, retailers in the Greek food sector are highly concentrated. In particular, the top five retailers account for 69.03% of the market (Self-service magazine, 2011). These are: Carrefour/ Marinopoulos, AB Vasilopoulos, Sklavenitis, Veropoulos and Masoutis. Each of the other retailers accounts for less than 5% of the market. The Greek multiple retailers’ aim is to offer a wide range of product variety in order to satisfy Greek consumers and hence, they include thousand of different codes/products in their stores (ICAP, 2007). This fact indicates that the five retailers are being supplied by a large number of food companies. This number would allow us to obtain answers from a sufficiently large enough sample in order to achieve statistically valid results.
Our study examines specific retailers’ practices including promotional activities such as buy one get one for free. These activities don’t apply to bulk products offered by retailers. For this reason, we focused on suppliers of packaged products. One of our hypotheses was the examination of the impact of own brand products in multiple retailers’ opportunism. In addition, the agreements between retailers and suppliers of branded products show differences compared to the agreements between retailers and suppliers of own brand products (ICAP, 2009; ICAP, 2007). Even though the market share of own brands is continuously growing, they are still accounting for a small proportion of the total retail sales compared to the sales of packaged foods (Self-service magazine, 2011). For consistency reasons we focused only on suppliers of branded products. Nevertheless, we feel confident that they account for the vast majority of Greek multiple retailers’ suppliers.

Another important issue that should be stressed is the case of the retail chain Lidl. Lidl is a significant player of the Greek market. However, we didn’t include its suppliers in our study population because it is mainly focused on own brand products and we are targeting suppliers of packaged foods. Therefore, our study’s population is the suppliers (both food manufacturers and agents) of branded packaged foods of the following Greek multiple retailers: Carrefour/ Marinopoulos, AB Vasilopoulos, Sklavenitis, Veropoulos and Masoutis.

5.3.1.2 Sampling frame

In Greece there isn’t available any data base of the retailers’ suppliers. In addition, multiple retailers were unwilling to give us the full lists of their suppliers for information sensitivity reasons. The most relevant database for our study population was the list of firms of the food manufacturing industry and their agents. ICAP is the biggest organization that gathers business-related financial and market data in Greece. Its database included a list of the biggest Greek food manufacturers and their agents. The list included only identity information and contact details concerning the firms. In addition, relevant free online databases were identified and contributed to the total sampling frame. In total, 3498 firms were identified which was an adequate sampling frame for the purposes of the specific study.
5.3.2 Questionnaire design

The method of data collection was decided after taking into consideration issues such as the subject’s complexity, the amount of data required, data reliability, the number of firms from which data could be obtained, the time and speed of data collection and the relevant cost. It was decided that survey research was the most appropriate method in our case. In particular, a telephone survey was conducted and a structured questionnaire was implemented for its purpose. The questionnaire was developed based on past empirical studies examining opportunism and its determinants. In addition, past empirical studies examining the concepts of the five determinants (i.e., dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty) in the general context of exchange relationships were also reviewed for this purpose.

The first draft of the questionnaire (Appendix III a) was pre-tested from academics (four senior academics) and practitioners (five supply chain practitioners) which had significant knowledge in the area of supplier-multiple retailer relationships in the supply chain in the food sector. A second draft of the questionnaire (Appendix III a) was created according to their comments concerning the questionnaire’s length, its structure and the questions’ wording.

The second draft (Appendix III a) was pilot tested in a sample of 20 firms which was randomly chosen from the sampling frame. These 20 firms were excluded from the final sample and their responses were excluded from our analysis. The first two drafts are presented combined in the same questionnaire in the Appendix (III a). This combination was made in a way that highlights the most significant differences between the first two drafts and the final questionnaire (Appendix III b) and it was made for text consistency reasons. The most significant changes concerned the inclusion of reverse coded questions for the improvement of the data collection process and the inclusion of demographic questions for the respondents. In addition, the inclusion of a question which helped the respondent giving more accurate
responses was deemed necessary. Finally, the wording of the questionnaire was improved and the questions became more specific in some cases. Based on the results and the feedback obtained from the pre-test and the pilot test, the final questionnaire was developed (Appendix III b). We will now present the final form of the questionnaire which had the following four parts.

5.3.2.1 First part of the questionnaire

The first part included three screening questions which aimed to secure: i) that the respondent was the most appropriate person in her/his firm for taking part in our survey, ii) that packaged products accounted for a significant proportion of the firm’s turnover and iii) that the firm was supplying at least one of the five examined multiple retailers of the Greek market. In addition, a question concerning the most significant (in terms of turnover) product that the firm was managing was included.

5.3.2.2 Second part of the questionnaire: Multiple retailers’ opportunistic supply chain practices

The second part of the questionnaire included questions concerning multiple retailers’ opportunistic practices. In total 24 multiple retailers’ opportunistic supply chain practices were included in the questionnaire. These are practices which were identified in the relevant literature and were also confirmed in our qualitative study. In addition, some practices which emerged from the qualitative study and weren’t previously identified in the literature were included in the 24 item list as well. It should be highlighted that these 24 practices are not typical in supplier-multiple retailer relationships and could be used by retailers sometimes and against some of the suppliers.

The detailed results of the qualitative study will be presented in the next chapter. The 24 item scale asked the respondents to indicate their perceptions concerning the degree in which each practice occurred during their relationship with multiple retailers. The scale was rated from “1: Never” to “7: In a high degree”. Table 5.1 presents the 24 items.
<table>
<thead>
<tr>
<th>Practice</th>
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</thead>
<tbody>
<tr>
<td>1. Favoring own brands against branded products</td>
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<tr>
<td>2. Unreasonably high payments as condition for stocking goods</td>
<td></td>
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<tr>
<td>3. Unreasonably high payments for the product’s better in-store positioning</td>
<td></td>
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<tr>
<td>4. Unreasonably high payments for new store openings</td>
<td></td>
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<tr>
<td>5. The payments for entering in the retailer’s brochure offer are reasonable (R)</td>
<td></td>
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<tr>
<td>6. Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or better in-store positioning or entering in the retailer’s brochure offers</td>
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<tr>
<td>7. Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)</td>
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<tr>
<td>8. Financial support for matching competing retailer’s lower price</td>
<td></td>
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<tr>
<td>9. Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers</td>
<td></td>
</tr>
<tr>
<td>10. Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier</td>
<td></td>
</tr>
<tr>
<td>11. Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier</td>
<td></td>
</tr>
<tr>
<td>12. Ad-hoc unilateral change to agreement concerning the number of products/codes that will enter the stores without compensating the supplier</td>
<td></td>
</tr>
<tr>
<td>13. Obscure terms of agreement</td>
<td></td>
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<tr>
<td>14. Payment delay without good cause</td>
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<td>15. Outside agreement financial support for achieving annual economic objectives</td>
<td></td>
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<tr>
<td>16. Discrimination between suppliers concerning credit periods</td>
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<tr>
<td>17. Limited time for new products to achieve high turnovers</td>
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<td>18. Termination of the relationship or parts of it without prior notice or further explanation</td>
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<td>19. Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases</td>
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<tr>
<td>20. Falsely suggesting that competitive supplier is offering better trade terms</td>
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<tr>
<td>21. Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin</td>
<td></td>
</tr>
<tr>
<td>22. Delisting threat in order to improve trade terms and decrease supplier’s prices</td>
<td></td>
</tr>
<tr>
<td>23. Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions</td>
<td></td>
</tr>
<tr>
<td>24. Optimistic sales forecasts for gaining concessions from suppliers</td>
<td></td>
</tr>
</tbody>
</table>

(R): Reverse coded item
5.3.2.3 Third part of the questionnaire: Determinants of opportunism

The third part of the questionnaire included questions concerning the five examined determinants of opportunism: dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty. All the scales were taken or adapted from previous studies from the literature of opportunism and the literature of exchange relationships in general.

**Dependence**

Dependence assesses the respondents’ perceptions concerning the level of supplier’s dependence on multiple retailers. The scale measuring dependence included 5 Likert-type items, rated from “1: Completely disagree” to “7: Completely agree”. Table 5.2 presents the five items used for measuring dependence and the studies from which they were adapted. The items included in the questionnaire were widely used in past studies. All the five items generally described the concept of dependence. However, their operationalizations had significant differences. In particular, the first item referred to how easily suppliers could replace their big customers. The second item referred to the cost that would be derived in case the supplier-retailer relationship was terminated. The third item directly asked the respondent to indicate the level of her/his firm’s dependence on multiple retailers. The fourth item referred to the impact on the suppliers’ total sales in case the relationship with a big customer was terminated. The last dependence item asked the respondent to indicate whether her/his firm could afford a termination of the relationship with one of its big customers.
Table 5.2: Questionnaire scales: Dependence

<table>
<thead>
<tr>
<th>Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It would be easy to replace these customers. (R)</td>
<td>Mysen et al., 2011; Caniëls &amp; Gelderman, 2010; Brown et al., 2009; Morgan et al., 2007; Yilmaz et al., 2005; Heide &amp; John, 1988</td>
</tr>
<tr>
<td>2. It would be costly to lose these customers.</td>
<td>Mysen et al., 2011; Caniëls &amp; Gelderman, 2010; Morgan et al., 2007; Yilmaz et al., 2005; Joshi &amp; Stump, 1999</td>
</tr>
<tr>
<td>3. We are dependent on these customers.</td>
<td>Caniëls &amp; Gelderman, 2010; Morgan et al., 2007; Joshi &amp; Stump, 1999</td>
</tr>
<tr>
<td>4. If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>Yilmaz et al., 2005; Heide &amp; John, 1988; Kumar et al., 1998; Noorderhaven et al., 1998</td>
</tr>
<tr>
<td>5. We cannot afford to lose this customer.</td>
<td>Noorderhaven et al., 1998</td>
</tr>
</tbody>
</table>

(R): Reverse coded item

Goal incompatibility

Goal incompatibility evaluates suppliers’ perceptions of the level of goal incompatibility between their firm and multiple retailers concerning financial goals. The scale used four Likert-type items rated from “1: Completely disagree” to “7: Completely agree”. Table 5.3 presents the four items used for measuring goal incompatibility and the studies from which they were adapted. The items were adapted from relevant goal incompatibility measures in such a way that explicitly examined financial goal incompatibility. The items were adapted from scales that were widely used in past studies. All the four items generally assessed the level of goal incompatibility between the respondent supplier and her/his big customers concerning financial objectives. However, the items’ operationalizations had significant differences between them. In particular, the first item directly asked the respondent to indicate in what degree her/his company and multiple retailers had different financial goals. The second item referred to common financial goals between the exchange partners. The third item indicated the level of support that multiple retailers offer to the supplier for achieving his financial objectives. The fourth item encompassed the notion of conflict in the financial goals of the exchange partners.
Table 5.3: Questionnaire scales: Goal incompatibility

<table>
<thead>
<tr>
<th>Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Our company and multiple retailers have different financial goals.</td>
<td>Yang et al., 2012; Yi et al., 2010; Wang et al., 2010; Mallin et al., 2009; Jap &amp; Anderson, 2003; Jap, 2001; Song et al., 2000</td>
</tr>
<tr>
<td>2. We share common financial goals with multiple retailers. (R)</td>
<td>Yang et al., 2012; Liberatore &amp; Luo, 2010; Mallin et al., 2009; Vásquez et al., 2005; Wong et al., 2005; Shankarmahesh et al., 2004; Batt, 2003; Jap &amp; Anderson, 2003; Jap, 2001; Ross et al., 1997; Bucklin &amp; Sengupta, 1993; Jaworski &amp; Young, 1992</td>
</tr>
<tr>
<td>3. Multiple retailers don’t support our financial goals.</td>
<td>Wang et al., 2010; Mallin et al., 2009; Lee et al., 2008; Vásquez et al., 2005; Jap &amp; Anderson, 2003; Jap, 2001; Ross et al., 1997</td>
</tr>
<tr>
<td>4. Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals.</td>
<td>Shankarmahesh et al., 2004</td>
</tr>
</tbody>
</table>

(R): Reverse coded item

Informational asymmetry

Informational asymmetry refers to situations when one of the partners (multiple retailers in particular) possesses more information than the other party for key aspects of their relationship. Measuring informational asymmetry is a very competitive task and there is a lack of relevant measures in literature. Studies measuring informational asymmetry implement scales that reflect informational asymmetry and don’t measure it directly. For example, Ting et al. (2007) used a scale that reflected informational asymmetry by measuring the difficulty faced by a manager in attaining sufficient information to make a correct decision. In addition, Sako & Helper (1998) operationalized the difference in the information shared by the two exchange partners in order to measure informational asymmetry. In section 2.3.3 the relationship between informational asymmetry and information sharing was described. In particular, lack of information sharing increases informational asymmetry (Wu, 2008; Kwon & Suh, 2005; Dyer, 1997). Therefore, in our study we used lack of information sharing between the two partners in order to conceptualize informational asymmetry.

The scale used five Likert-type items rated from “1: Completely disagree” to “7: Completely agree”. Table 5.4 presents the five items used for measuring informational asymmetry and the studies from which they were adapted.
were adapted from scales measuring information sharing in order to reflect lack of informational sharing and hence, informational asymmetry. Information, such as category performance or other suppliers’ performance is not easily being shared by the part of multiple retailers. In addition, in some cases it used by retailers to achieve better agreements with suppliers (Vander-Stichele & Young, 2009; Hingley, 2005). This piece of information is not available from any other source than the retailer himself. Therefore, in our case lack of information sharing is an accurate reflection of informational asymmetry. The items were adapted from scales that were widely used in past studies.

All the five items generally evaluated the level of informational asymmetry between the respondent supplier and multiple retailers. However, the items’ operationalizations had significant differences between them. In particular, the first item asked the respondent to indicate the degree in which big customers avoid sharing important information concerning product category, competitors, etc. with her/his company. The second item asked the respondent to indicate the degree in which big customers avoid sharing useful information and business knowledge with the respondents’ firm. The third item asked the respondent to indicate the degree in which big customers avoid sharing information with the respondent’s firm unless the firm asked them to give information or there was an information exchange agreement. The fourth item referred to lack of information sharing concerning events and changes that could affect the company. Finally, the fifth item referred to lack of voluntary informational sharing from the part of multiple retailers.

<table>
<thead>
<tr>
<th>Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general.</td>
<td>Gundlach et al., 1995; Sako &amp; Helper, 1998</td>
</tr>
<tr>
<td>2. Multiple retailers usually don’t share with us useful information and business knowledge.</td>
<td>Wu, 2008; Li &amp; Lin, 2006; Wu &amp; Choi, 2004</td>
</tr>
<tr>
<td>3. Multiple retailers usually don’t share with us information or they do only if we ask them to or in case of information exchange agreement.</td>
<td>Griffith &amp; Myers, 2005; Joshi &amp; Arnold, 1997; Lusch &amp; Brown, 1996; Heide &amp; John, 1992</td>
</tr>
<tr>
<td>4. Multiple retailers usually don’t share with us information about events or changes that may affect our company.</td>
<td>Griffith &amp; Myers, 2005; Joshi &amp; Arnold, 1997; Lusch &amp; Brown, 1996; Mohr &amp; Spekman, 1994; Heide &amp; John, 1992.</td>
</tr>
<tr>
<td>5. Multiple retailers won’t volunteer helpful information to us unless we ask them to.</td>
<td>Mohr &amp; Spekman, 1994</td>
</tr>
</tbody>
</table>
Business related environmental uncertainty

Business related environmental uncertainty refers to the business environment in which the examined supplier-multiple retailer relationships take place. It was measured using the operationalization by Skarmeas et al. (2002) who empirically examined the business related environmental uncertainty-opportunism relationship as well. The caution in the operationalization of the specific concept as expressed in literature (e.g., Yi et al., 2010) drove us to choose a specific well-developed scale from literature. The specific scale was successfully used in another study examining exchange relationships (Skarmeas et al., 2008). The four-item scale was rated from “1: Completely disagree” to “7: Completely agree”. Table 5.5 presents the four items used for measuring business related environmental uncertainty. The items captured the changeability in market shares, the accuracy of sales forecasts, the difficulty in monitoring trends and the stability in industry’s sales volumes. All the four items reflected the uncertainty of business environment but captured four distinct aspects of it.

<table>
<thead>
<tr>
<th>Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The market shares in our sector are volatile.</td>
<td></td>
</tr>
<tr>
<td>2. It is difficult to make accurate sales forecasts in our sector.</td>
<td>Skarmeas et al., 2002; Skarmeas et al., 2008</td>
</tr>
<tr>
<td>3. It is difficult to follow the sector’s trends.</td>
<td></td>
</tr>
<tr>
<td>4. The sector’s sales volumes are volatile.</td>
<td></td>
</tr>
</tbody>
</table>

Behavioral uncertainty

Behavioral uncertainty assesses respondents’ perceptions concerning the suppliers’ difficulty in monitoring multiple retailers’ performance according to the agreements’ obligations. The scale used four Likert-type items rated from “1: Completely disagree” to “7: Completely agree”. Table 5.6 presents the four items used for measuring behavioral uncertainty and the studies from which they were adapted. The items were adapted from scales that were widely used in past studies.
All the four items generally assessed the level of behavioral uncertainty between the respondent supplier and his big customers. However, the items’ operationalizations had significant differences between them.

In particular, the first item directly referred to the costs associated with monitoring in detail retailers’ performance. The second item linked the complexity of agreements between the supplier and the retailer as a factor that increases the difficulty in monitoring the other party. The third item referred to the suppliers’ perceived confidence of the accuracy of monitoring information concerning retailers’ performance. Finally, the fourth item directly asked the respondent to indicate the degree of difficulty in monitoring whether multiple retailers’ were performing according to the agreement.

Table 5.6: Questionnaire scales: Behavioral uncertainty

<table>
<thead>
<tr>
<th>Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There would be significant costs associated with monitoring in detail whether the multiple retailers are performing all of their contractual obligations under our agreement.</td>
<td>Chao, 2011; Bergen et al., 1998</td>
</tr>
<tr>
<td>2. Our commercial agreements with multiple retailers refer to so many stores, promotional activities, products and commercial activities in general that it is difficult to verify if they are performing all their contractual obligations under these agreement.</td>
<td>Ishida &amp; Brown, 2011; Stump &amp; Heide, 1996</td>
</tr>
<tr>
<td>3. Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>Zhou &amp; Poppo, 2010; Lee, 1998</td>
</tr>
<tr>
<td>4. It is easy to monitor whether multiple retailers are performing all of their contractual obligations under our agreement. (R)</td>
<td>Zhou &amp; Poppo, 2010; Shervani et al., 2007; Ghosh &amp; John, 2005; Stump &amp; Heide, 1996</td>
</tr>
</tbody>
</table>

(R): Reverse coded item

5.3.2.4 Fourth part of the questionnaire: Demographics

The fourth part of the questionnaire included demographic questions. The demographics referred to the respondent’s firm and to the respondent as well. In particular, the questionnaire asked the respondent to indicate the number of the firm’s employees, its turnover and the average length of the firm’s relationship with multiple retailers. These questions captured the size of the firm and its experience in working with multiple retailers.
Moreover, the questionnaire included questions concerning the age and the sex of the respondent, her/his position in the company, the number of years she/he is working in the food sector and the number of years she/he is working in the particular company. The particular demographic questions captured the appropriateness of the respondent in giving accurate information for the examined subject.

5.3.3 Survey procedure

The firms of the study’s population were first contacted via telephone or e-mail and the purpose of the research was presented to them. Then we asked for an appointment with the person which was responsible for the firm’s relationships with multiple retailers. In particular, this person should be responsible for issues such as negotiations and conduction of annual agreements with multiple retailers. In addition, confidentiality was assured. In some cases, more detailed information about the nature of research was requested and therefore, an e-mail with more information was sent to the firms. Arranging appointments with the appropriate person was a difficult procedure due to the heavy schedule of the potential respondents. In many occasions, the respondent wasn’t available at the time of the contact. Therefore, appointments at another point in time (next few days or later in the same day) were arranged.

When the appropriate person was accessed, she/he was informed for the survey’s objectives and the questionnaire’s length and she/he was reassured for the respondent’s anonymity and the confidentiality of information. Then, the screening question concerning the proportion of the firm’s packaged products in the firm’s total turnover was asked. In case packaged firms accounted for a small proportion of the firm’s total turnover then, the interview was ended since the supplying firm didn’t have the appropriate characteristics to be included in our sample. Then, the screening question concerning the firm’s partners was asked. In particular, the respondent was asked to indicate which of the five multiple retailers (Carrefour/
Marinopoulos, AB Vasilopoulos, Sklavenitis, Veropoulos, Masoutis) was the firm’s customer(s). If none of the above retailers was the firm’s customer then, the interview was ended as well. If at least one of the five retailers was a firm’s customer then, the telephone interview proceeded. The respondent was then, asked to indicate the firm’s most significant packaged product in terms of turnover. The questionnaire included questions concerning issues such as promotional activities and therefore, we wanted from the supplier to bear in mind a specific part of their relationship with multiple retailers. The choice of the most significant product was made in order to assure that it accounted for a significant amount of the two partners’ agreement. This was a question included after the pretest and the pilot test. Then, it was summarized that the interview would focus on the firm’s relationships with multiple retailers and explicitly on the agreements concerning the firm’s specific packaged product.

Before the questions concerning multiple retailers’ practices, the respondent was specifically instructed that during the interview she/he should bear in mind a typical relationship of her/his firm with multiple retailers and neither the best or the worst relationship. In this way, we could avoid biased responses due to specificity (Moberg & Speh, 2003). The questions concerning retailers’ practices and the determinants were rotated and were presented in a different order for each different respondent. In this way we could avoid biased responses due to the questions’ order. It should be noted that the words opportunism, questionable practices or determinants weren’t mentioned during the telephone interview again for avoiding biased answers.

The survey started in June 2012 and was completed in October 2012. Each telephone interview typically lasted 15-20 minutes. After the exclusion of the firms that took part in the questionnaire pilot test, the final study’s population was 3478 firms. However, not all these firms could be included in our final sample due to the restrictions earlier presented (i.e., packaged foods should account for a large amount of the supplier’s turnover and the firm should be a supplier of at least one of the five largest multiple retailers of the Greek market). Therefore, 870 firms were contacted but they didn’t have the appropriate characteristics for being included in our sample.
Therefore, only 2608 firms from those included in the study’s population were potential respondents of our survey. In total, 420 telephone surveys were conducted. However, 22 questionnaires were unusable and were excluded from the analysis. Therefore, our final sample included 398 food suppliers. The study’s response rate was 398/2608 = 15.26%. This response rate level is satisfactory given the high sensitivity of the information requested from the respondents. Past studies have also stressed this issue concerning research in the field of opportunism (e.g., Gassenheimer et al., 1996; John, 1984). In addition, past studies examining opportunism have presented similar response rates (e.g., Morgan et al., 2007: 19.5%; Gassenheimer et al., 1996: 9.9%).

To investigate the possibility of non-response bias in the data, data obtained from the early telephone surveys and those obtained form later telephone surveys were tested separately. The last surveys conducted were considered representative of non-respondents (Lambert & Harrington, 1990). The sample was split in half and one-way ANOVA was used. The F-statistic was not significant at the 5% significant level, implying that there was no bias in our data due to the time of data collection.

Even though we have put some restrictions in the kind of firms that should be included in our final sample and the response rate of our study was moderate (though, satisfactory), we believe that we obtained a representative sample of multiple retailers’ suppliers from the Greek market.

In this chapter, the methodology of the qualitative and the quantitative part of the study was presented. According to the methodologies applied we obtained the results that will be presented in the next two chapters. First the results of the qualitative study will be presented.
CHAPTER 6: RESULTS: QUALITATIVE RESEARCH

The current chapter presents the results of the qualitative part of the research. The first section presents respondents’ perceptions concerning general aspects of their relationships with multiple retailers. In addition, respondents’ perceptions concerning agreements and negotiations with multiple retailers are also presented. The above will give us insights concerning the level of adoption of opportunistic behaviors from the part of multiple retailers in the Greek market. In addition, sensitive and context specific information and also a realistic view of the phenomenon are obtained.

Next, results concerning specific multiple retailers’ opportunistic supply chain practices are presented. These results will help us confirm or reject whether multiple retailers’ supply chain opportunistic practices as identified from the relevant literature are occurring in the Greek market; the significance of each one of them is described as well. Moreover, other multiple retailers’ supply chain opportunistic practices which weren’t previously identified in literature are derived. These practices will be included in the quantitative study and will reflect multiple retailers’ opportunism. Therefore, they will be included in the model described in chapter 3 that will test our hypotheses.

Finally, the practitioners’ point of view regarding the determinants and other contextual factors which affect opportunism is analyzed. Their perceptions will help us confirm or reject the determinants of opportunism and the relevant contextual variables in an explanatory way. The presentation of the results will follow a common approach applied in literature (e.g., Rossetti et al., 2011; Alvarez et al., 2010; Ballantine et al., 2010; Moore et al., 2010; Scholten et al., 2010; Fearne et al., 2005). The general pattern of the responses will be described first and then specific quotes of the respondents’ comments supporting the pattern will be noted. Any contradictions found will be highlighted and be reconciled (Oke & Gopalakrishnan, 2009).
6.1 EVIDENCE OF OPPORTUNISM IN SUPPLIER-MULTIPLE RETAILER RELATIONSHIPS

As expected all the respondents highlighted the fact that successful relationships with multiple retailers are essential for every food supplier because they are the main way to the final consumer. In many cases, suppliers’ viability depends on successful relationships with multiple retailers. The interviewees confirmed the fact that multiple retailers have the upper hand in the relationships with most of the suppliers. They also noted that retailers are aiming to build strong relationships with suppliers in order to gain mutual benefits. However, the respondents argued that in the market we could find examples of good and bad practicing both in the case of retailers but also in the case of suppliers. They revealed that in some cases multiple retailers aimed to gain benefits at the expense of the suppliers. In fact, one respondent commented that “In my everyday routine I may face bad practicing from the part of multiple retailers”. Another one argued: “I don’t fully trust some of my big customers. They will try to take advantage of me whenever they can”.

According to the respondents, the contractual agreements between suppliers and multiple retailers were the most significant part of their relationships. Agreements are quite formal and their frequency varies according to the specific characteristics of every relationship. They highlighted the fact that the struggle for better financial results drove many retailers to become creative in developing various terms of their agreements with suppliers. Nevertheless, they reported that in some case this creativeness resulted in unreasonable demands that clearly harmed suppliers’ interests. In addition, the interviewees reported that there are some cases when multiple retailers are behaving against the terms of the agreement. An interviewee stated that: “The terms of the contractual agreements are usually in favor of multiple retailers. We have to be careful and resist to unreasonable demands”. Similarly, another stated: “It is possible that a multiple retailer could breach parts of a contractual agreement with a supplier”.

According to the interviewees, negotiation is also a significant part of supplier-multiple retailer relationships and it is a key aspect in a healthy business
relationship. Nevertheless, the majority of the respondents agreed to the fact that in many relationships both parts will try to gain profits at the expense of the other party. Towards this notion, one respondent argued: “During negotiations both parties try to achieve the best agreement for their firm. There are many cases when both parties try to take advantage of their partner”. For multiple retailers in particular, the respondents reported that during negotiations there are cases that the pressures put on suppliers could be unreasonably high in order to achieve further concessions from them. A respondent commented on this issue: “If one of my big customers fails to achieve his financial objectives it is possible that he will demand from my firm further concessions. In that case, my firm has to find ways to manoeuvre in order to minimize the consequences. A denial of the multiple retailer’s requirement could damage our relationship”. Another one stated: “During negotiations, multiple retailers have the upper hand. In some cases, they might threaten suppliers that they will stop their partnership unless the suppliers satisfy their demands”.

The answers obtained from the initial part of the semi-structured questionnaire gave valuable insights concerning the general picture of the supplier-multiple retailer relationships in the Greek market. The first notion is that opportunism doesn’t dominate the examined relationships. However, the phenomenon isn’t absent. In addition, we should also keep in mind that every business relationship is unique and has its own characteristics. According to the respondents the same multiple retailer could act in a questionable manner against one supplier and be a trustful partner to another.

This part of the qualitative study gave valuable information concerning the research objective of the identification and examination of opportunistic practices from the part of multiple retailers in the supply chain in the food sector.
6.2 IDENTIFICATION OF SPECIFIC MULTIPLE RETAILERS’ SUPPLY CHAIN OPPORTUNISTIC PRACTICES

6.2.1 General comments

The previous part of the qualitative research findings gave some preliminary proof that opportunism is neither ubiquitous nor very unusual in the supplier-multiple retailer relationships in the supply chain in the Greek food sector. In this part of the study we will report the qualitative study’s results regarding the most significant manifestations of multiple retailers’ opportunistic behavior. This will be done through the identification of the most frequently occurred retailers’ questionable supply chain practices in the Greek market and the confirmation of their opportunistic characteristics and their significant impact on the supplier as well. The above resulted from the respondents’ answers and comments to the questions of the second part of the qualitative semi-structured questionnaire. Again we should highlight the fact that we don’t aim to identify all the manifestations of the multiple retailers’ opportunism. Similarly one respondent argued: “It is very difficult to identify all the possible questionable behaviors in the supplier-multiple retailer relationships. You will never identify the 100% of them because new forms emerge all the time”. Another interviewee also comments: “There isn’t a specific set of practices (i.e., questionable practices) applied in every case. Every business relationship is different from the other... Nothing is certain”. Therefore, we will focus on the most significant ones based on their frequency and their impact on the supplier.

6.2.2 Identification and analysis of multiple retailers’ opportunistic supply chain practices

During the qualitative interviews, respondents were asked to comment on 32 questionable multiple retailers’ supply chain practices (potential forms of opportunism) identified in the literature (Table 2.1). In the initial list of 32 questionable practices 8 more were added according to the respondents’ suggestions. A total list of 40 questionable practices was gathered. However, not all
40 practices will be included in our model. According to respondents’ perceptions some of them occurred very rarely in the Greek market or were not used at all, others were insignificant and had a minor impact on the supplier and others did not encompass the notion of guile that distinguishes the self interest seeking behavior from the opportunistic one. On the other hand, some practices had a general form as identified in the literature and the respondents’ comments helped us specify them in their exact forms as occurred in the Greek market.

Respondents’ comments resulted in a final list of 24 significant multiple retailers’ opportunistic practices that could be detected in the market. The qualitative part of the study confirmed: i) their occurrence in the Greek supply chain in the food sector, ii) the notion of guile that characterizes them, iii) their significant impact on the supplier and iv) indicated their level of occurrence in supplier-multiple retailer relationships. In addition, the respondents’ comments contributed to clarifying the practices and acquire their exact form in which they occurred in the Greek market. We will present the 24 practices accompanied with the most significant respondents’ comments. Any differences with the corresponding practices in the literature will be noted.

1) Favoring own brands against branded products

Respondents agreed that sometimes multiple retailers favored own brand products against branded ones. They also argued that this practice had significant impact on the supplier and it also had the notion of guile because it was an unfair behavior against him. One respondent commented on this practice: “Own brand products have the better in-store positioning...Multiple retailers are favoring them against the branded products". Another respondent argued: “It is a usual and annoying practice for the suppliers... The suppliers have to put their products on a shelf that is far from the own brand one in order to achieve higher sales”.

2) Unreasonably high payments as condition for stocking goods

Respondents agreed that payment as condition for stocking goods was a reasonable demand from the part of the multiple retailer. It was usually a part of the initial agreement. According to the interviewees, in some cases multiple retailers in the Greek market required considerably high payments. They
perceived this behavior as opportunistic and that it could have high impact on the supplier. One respondent said that: “The entry fees required are prohibitive in some cases. It is possible that a supplier couldn’t make it to the retailer’s shelf due to high entry fees”. Another respondent gave his own point of view: “The reason behind these payments is the fact that the retailer has invest a lot of money and effort to achieve high consumer traffic inside his store and he wants to share the risk of this investment with the supplier. On the other hand, when these payments are unreasonably high, then the issue is under ethical consideration”.

3) Unreasonably high payments for the products’ better in-store positioning

Respondents’ perceptions concerning this practice had similarities with their perceptions regarding the payments for stocking goods. According to them, these payments were a fair requirement from the part of the retailer. However, when the payments required were unreasonably high then the practice could be characterized as a form of opportunism. In this situation the impact on the supplier could have been high. Respondents argued that in some cases this practice was present in the Greek food chain.

4) Unreasonably high payments for new store openings

Again the respondents’ perceptions regarding this practice and the other requirements for payments shared similarities. They argued that a new store had most of the times high consumer traffic. Hence, the retailer requirement for payments for new store openings was reasonable because it could bring high sales to the supplier. However, the notion of opportunism was manifested when the payments required were unreasonably high. In this situation the impact on the supplier could have been high. The respondents believed that this case was also practiced in some cases in the Greek market. However, they didn’t confirm the cases when the retailer requires high payments for store refurbishment and anniversaries as was described in the literature (Table 2.1). Therefore, we focus only in the case of payments for new store openings.

5) Unreasonably high payments for entering in the retailer’s brochure offer

This practice was derived from the qualitative part of the study. It referred to the case when suppliers had to pay fees in order to enter in the multiple retailers’ brochure offer. The demand was reasonable according to the respondents.
Retailers had to share the brochures’ costs and also the brochures would possibly result in higher sales volumes for suppliers. Therefore, fees were demanded. Also in the case of payments for entering in the multiple retailer’s brochure similar results were obtained. According to practitioners’ perceptions, opportunism manifested when the payments demanded were unreasonably high. The impact on the supplier could also have been high. Respondents believed that this practice was also occurring in some degree in the Greek market.

6) **Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or better in-store positioning or entering in the retailer’s brochure offers**

Again this was the case of a practice derived from the qualitative part of the study. According to the respondents’ point of view the payments for stocking goods or for new store openings or better in-store positioning or entering in the retailer’s brochure offers were justifiable. However, they believed that it was unfair for the supplier to pay this amount of money upfront and not as a percentage of the product’s turnover. In this way, multiple retailers disregarded their partners and were unwilling to share the risk with them even though there was no certainty that a competitive supplier would achieve higher sales. This indicates that according to the interviewees the specific practice encompassed the notion of guile. In addition, this practice could have significant financial impact on the supplier. This practice is very common in the Greek market.

7) **Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)**

Respondents agreed that this practice occurred frequently in supplier-multiple retailer relationships. It was customary for the supplier to pay all the promotional activities’ costs. Promotional activities increased the supplier’s sales. However, the retailer’s sales increased as well. Nevertheless, multiple retailers were contributing to promotional activities very rarely. According to the respondents this was unfair for the supplier because it was a form of free riding. In addition, the costs of these activities could significantly impact the supplier. One respondent stated: “It is us (i.e., the suppliers) who always undertake the promotional costs...During the last years all multiple retailers put pressures on
suppliers for more promotional activities. However, this could damage our (i.e., the suppliers’) profitability”. In addition, many of the respondents highlighted the fact that promotions like buy one get one free could have consequences for both the supplier (e.g., damage in brand image) and the retailer (e.g., consumers may stock promotional products).

8) Financial support for matching competing retailer’s lower price

The majority of the respondents agreed that if a retailer discovered that a supplier offered better trade terms in another retailer then the first retailer would react and demand also better trade terms from the supplier. However, the practice had an opportunistic notion when the lower price was posed after the retailer’s initiative. In some cases other retailers would put pressures on the supplier for better trade terms even though they knew that the supplier had nothing to do with the lower price. In this way, they took advantage of the supplier with detrimental effects for him. According to one of the respondents: “That was a significant problem that our company faced in the past...We faced significant losses due to the low prices posed in our products by a retailer. Then the other customers threatened to delist us unless we gave them further concessions”.

9) Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers

According to the respondents, ad-hoc unilateral changes to agreements were not very common in the Greek food chain. Nevertheless, when occurred it could take several forms. This practice was previously identified in the literature but in a more general form (ad-hoc unilateral change to agreement) and without being specified in the case of order quantity and quality (practice 17 in Table 2.1). Nevertheless, the respondents’ comments drove us to specify it in this form. Respondents agreed that this practice was not very common and applied mainly to small suppliers. This was a clear example of breaching an agreement and it could be labeled as opportunistic. Towards this notion, a respondent stated: “This is a common practice for us. However, as a supplier we’ll try to satisfy the requirements of the multiple retailer”. Its impact on the supplier was evaluated as low.
10) **Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier**

This practice was also a more specific form of the practice “Ad-hoc unilateral change to agreement” that was identified in the literature (practice 17 in Table 2.1). As before, the respondents’ comments drove us to specify it in this form. It refers to the case when multiple retailers failed to include a supplier’s product in the number of stores as was initially agreed. Again it is a case of retailers breaching an agreement and it could be labeled as opportunistic. The comments obtained indicated that the impact in the suppliers’ revenues could be significant.

11) **Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier**

The qualitative part of the study gave us information concerning another specific form of ad-hoc change to agreement from the part of multiple retailers. This was the case when multiple retailers failed to implement the agreed number of in-store promotional activities. Again, the respondents confirmed the notion of guile in this kind of behavior and highlighted the possible impact on suppliers.

12) **Ad-hoc unilateral change to agreement concerning the number of products/codes that will enter the stores without compensating the supplier**

Another form of ad-hoc unilateral changes to agreement that came up from the qualitative interviews was the case when multiple retailers failed to put on their shelves the range and depth of the suppliers’ products as it was initially agreed. Again, the respondents confirmed the notion of guile in this kind of behavior and highlighted the possible impact on the suppliers’ revenues.

13) **Obscure terms of agreement**

Respondents agreed that suppliers should be very careful when signing contractual agreements with multiple retailers because in some cases retailers could try to take advantage of them. Some of the respondents posited that the terms of the contractual agreements were in most cases very specific and therefore, the practice never occurred. However, most of them argued that there were cases when multiple retailers left holes in the agreements in order to shirk obligations during their implementation. They based their argument to the fact that in most cases the agreements were initially formed by the retailers and then
negotiation between the retailer and the supplier concerning their terms followed. Hence, a respondent commented: “The multiple retailer could try not to be specific in various agreement terms. For example he could argue that the number of inside promotional activities of my (i.e., the supplier’s) products will be discussed later during the year and not be specified a priori. However, during the year he could argue that he is unable to implement this informal agreement and the number of promotional activities could be considerably less than expected. I have to be careful and demand precision in our agreement”. Apart from confirming the guileful character of this practice, the respondents also indicated that it could have significantly impact on the supplier.

14) Payment delay without good cause
According to the respondents this practice was probably the most significant problem in supply chain relationships in the food sector. It was a clear form of agreement violation from the part of the retailer, it had detrimental effects on the supplier and in many cases financial problems were used as a false excuse for it. Towards this notion one respondent argued: “Payment delay is the most significant problem in supplier-multiple retailer relationships”. Similarly, another one posited: “Suppliers can’t do anything about it (i.e., payment delay). They won’t react because they don’t want to lose a big customer” while another argued: “He (i.e., the multiple retailer) could say to me that he can’t pay me. As a supplier I can’t do anything. I’ll just take my post-dated cheque”.

15) Outside agreement financial support for achieving annual economic objectives
This was another practice that came up from the qualitative part of the study and wasn’t previously identified in literature. According to the respondents this was not a very frequent practice. Nevertheless, it could be detected in some supplier-multiple retailer relationships and it could impact the supplier in a high degree. It encompassed the notion of opportunism because it was an out of agreement requirement. Failing to satisfy this requirement could damage the supplier-retailer relationship and thus, it was not an obvious option. Towards this notion an interviewee stated: “This practice could be required within the frame of a good relationship however, the notion of requirement is rhetorical. In the next
negotiation that our firm will have with the specific retailer, he may be negotiating in bad faith”.

16) Discrimination between suppliers concerning credit periods

The majority of the respondents argued that this was a common practice that could be detected in some supplier-multiple retailer relationships. They highlighted the fact that in most cases the smaller supplier would be the last to be paid by the multiple retailer. They perceived this practice as unfair for some of the suppliers because they could face significant problems in their liquidity. In addition, they confirmed that competitiveness problems arose as well. Toward this notion, a respondent posited: “This is a common practice. In most cases the time the supplier will be paid depends on his share on the multiple retailer’s turnover. It is difficult for a supplier to put pressures on multiple retailers for this issue”. Another one stated that: “The supplier which is a category leader for the retailer will be probably paid first of all the other suppliers of the same category”.

17) Limited time for new products to achieve high turnovers

Again this practice emerged from the respondents’ comments. They reported that there were some cases when multiple retailers were unwilling to give to a product the appropriate time to achieve high turnovers. This was unfair since a new product needs sufficient time to become known to the consumers. This practice could have high impact on the supplier considering that a supplier in most cases pays a significant amount of money as an entry fee for every product. If the retailer refuses to give the product the appropriate amount of time to achieve satisfactory turnovers then the notion of sharing risk as an excuse for the entry fee is dismissed and the motives are opportunistically.

18) Termination of the relationship or parts of it without prior notice or further explanation

Interviewees reported that there were cases when multiple retailers took one or some of the suppliers’ products out of their selves without prior notice or explanation. Terminating the whole relationship with the supplier was uncommon and according to the respondents it applied only to small suppliers. The respondents argued that this was an annoying practice for the supplier because he was caught unprepared. However, the majority of the respondents reported
that the supplier usually knows whether his product will be taken out of the shelves or not. Nevertheless, this was a behavior that disregarded the partner even though the impact on him was known. Towards this notion a respondent commented: “Multiple retailers won’t bother to inform you... Of course I would like to receive a warning from them first”.

19) **Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases**

Most of the respondents shared similar opinions for this practice and confirmed that it was a common practice with high impact for the supplier. They reported that in many cases suppliers increased their prices due to low profitability and naturally, retailers were not willing to accept these price increases. Nevertheless, there were cases when the prices were increasing or were justifiably high due to cost increases (e.g., in raw material or oil) but the retailers refused to accept them. In these cases multiple retailers disregarded their trading partner and they failed to adjust to the new environmental condition. These acts had detrimental effects on suppliers and their financial performance. One interviewee commented: “They (i.e., multiple retailers) will react. They won’t accept price increasing easily”. Similarly another one posited: “Usually, they (i.e., multiple retailers) will accept it after three months. During this time the supplier will face high losses”. Another one argued: “Multiple retailers always try to force suppliers’ prices down. They could do so even though they know that the supplier may not be able to cover his costs. It depends on the supplier whether he will accept or not such a behavior. There are cases when suppliers accept this demand in order to maintain the good relationship with multiple retailers”.

20) **Falsely suggesting that competitive supplier is offering better trade terms**

The majority of the respondents agreed that this was a common negotiation tactic. However, according to the respondents this was also a tactic used from the part of the supplier. This practice was characterized as lying, bluffing and negotiating in bad faith from the interviewees and therefore it could be labeled as a form of opportunism. In particular, one of the respondents said that: “It is a customary tactic in negotiations”. Similarly, another one argued: “It is applied in every negotiation. And it is natural according to my opinion. As a supplier I could
also suggest that another retailer offers me better terms”. However, a different opinion came from another respondent who said: “This is a common practice but the Greek market is a small one and usually the offered terms by the suppliers are known”. According to the last comment this practice was of minor significance since the argument of better trade terms from competitive suppliers was not quite strong during negotiations. However, this is a clear manifestation of opportunistic behavior that could damage the trustfulness between trade partners in the long term. Therefore, we will include it in our list of significant opportunistic practices.

21) Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin
According to the respondents, this was another common practice which could have significant impact on the supplier and it wasn’t identified in the literature. It was an unfair behavior against a supplier who could increase retailers’ sales. According to the respondents this was a negotiation tactic of multiple retailers’ for taking advantage of the suppliers and gaining further concessions. For the specific practice one respondent argued: “It is a frequent practice and it could hold your (i.e., the supplier’s) products out of the multiple retailer stores”.

22) Delisting threat in order to improve trade terms and decrease supplier’s prices
Respondents reported that this was a quite common multiple retailers’ practice and especially against smaller suppliers. The impact of this practice could have detrimental consequences on the supplier since losing a big customer could severely damage the supplier’s turnover. The respondents’ comments on this practice indicated that they perceived it as a form of opportunism due to the notion of threat that it encompassed.

23) Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions
Again the majority of the respondents believed that this was a quite common practice from the part of multiple retailers and especially during negotiations. Issues such as low category sales or the financial crisis were usual retailers’ excuses for demanding better terms. According to the respondents in many occasions these excuses were false and retailers misrepresented the real
numbers. One interviewee stated that: “This is a common practice. For example a multiple retailer could argue that due to the financial crisis consumers have lost their buying power and so he will demand better trade terms. This is true but as a supplier I’ve heard this excuse many times in the years before the financial crisis”. Hence, this case encompass the notion of opportunism and the impact on the supplier could vary according to the level of concessions.

24) Optimistic sales forecasts for gaining concessions from suppliers

According to the respondents, there were some cases when multiple retailers used this tactic during negotiations for achieving better trade terms. This practice was characterized as lying, bluffing and negotiating in bad faith from the interviewees and therefore it could be labeled as a form of opportunism. If the supplier believes such arguments and give further concessions to the retailer then he might face significant financial issues. Respondents argued that this practice, when occurred, mostly applied to new market players. Similarly, one respondent argued: “It is common for multiple retailers to make optimistic sales forecasts. For example they could argue that the next year our sales would increase 50%. However, you don’t have to agree with this statement. But they could try to use this argument for achieving better terms”.

When asked to comment on the list of questionable practices, the respondents argued: “Most of them have been practiced in supplier-multiple retailer relationships”; “I can’t deny that most of them (i.e., the questionable practices) occur...However, their frequency and impact on the supplier is a matter that needs further investigation”; “Most of them (i.e., the questionable practices) have been applied some of the times in supplier-multiple retailer relationships”. The comment that according to our opinion describes best the level of adoption of questionable practices in supplier-multiple retailer relationships is the following: “The practices in the list do occur but they are not customary in supplier-multiple retailer relationships”. In addition, many questionable practices are described in literature as requirements (e.g., requirement for retrospective discounts) (UK Competition Commission, 2008). Respondents indicated that the nature of these requirements is not very optional or voluntary from the part of the supplier because it could damage
their relationship with multiple retailers. Therefore, these requirements in some cases have the notion of demands which suppliers could not deny. Toward this notion, a respondent commented that: “...the notion of requirement is rhetorical”.

The 24 practices that were confirmed from the qualitative part of the study as multiple retailers’ opportunistic supply chain practices are presented in Table 6.1. Table 6.1 also presents in summary the reasons for which these practices were included in the following part of our study (whether they were commonly practiced, whether they had significant impact on suppliers and whether they had the notion of opportunism). The quantitative part of the study that will attempt to empirically confirm the conceptual model will be based on this list of 24 practices.

**Table 6.1: Confirmed multiple retailers’ opportunistic supply chain practices**

<table>
<thead>
<tr>
<th>Practice</th>
<th>Reasons for inclusion in study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Common practice</td>
</tr>
<tr>
<td>1. Favoring own brands against branded products</td>
<td>✓</td>
</tr>
<tr>
<td>2. Unreasonably high payments as condition for stocking goods</td>
<td>✓</td>
</tr>
<tr>
<td>3. Unreasonably high payments for the product’s better in-store positioning</td>
<td>✓</td>
</tr>
<tr>
<td>4. Unreasonably high payments for new store openings*</td>
<td>✓</td>
</tr>
<tr>
<td>5. Unreasonably high payments for entering in the retailer’s brochure offer*</td>
<td>✓</td>
</tr>
<tr>
<td>6. Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or better in-store positioning or entering in the retailer’s brochure offers*</td>
<td>✓</td>
</tr>
<tr>
<td>7. Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)</td>
<td>✓</td>
</tr>
<tr>
<td>8. Financial support for matching competing retailer’s lower price</td>
<td>✓</td>
</tr>
<tr>
<td>9. Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers*</td>
<td>✓</td>
</tr>
<tr>
<td>10. Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier*</td>
<td>✓</td>
</tr>
<tr>
<td>11. Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier*</td>
<td>✓</td>
</tr>
<tr>
<td>Practice</td>
<td>Greece</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>12. Ad-hoc unilateral change to agreement concerning the number of products/codes that will enter the stores without compensating the supplier*</td>
<td>✔</td>
</tr>
<tr>
<td>13. Obscure terms of agreement</td>
<td>✔</td>
</tr>
<tr>
<td>14. Payment delay without good cause</td>
<td>✔</td>
</tr>
<tr>
<td>15. Outside agreement financial support for achieving annual economic objectives*</td>
<td>✔</td>
</tr>
<tr>
<td>16. Discrimination between suppliers concerning credit periods</td>
<td>✔</td>
</tr>
<tr>
<td>17. Limited time for new products to achieve high turnovers*</td>
<td>✔</td>
</tr>
<tr>
<td>18. Termination of the relationship or parts of it without prior notice or further explanation</td>
<td>✔</td>
</tr>
<tr>
<td>19. Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases</td>
<td>✔</td>
</tr>
<tr>
<td>20. Falsely suggesting that competitive supplier is offering better trade terms</td>
<td>✔</td>
</tr>
<tr>
<td>21. Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin*</td>
<td>✔</td>
</tr>
<tr>
<td>22. Delisting threat in order to improve trade terms and decrease supplier’s prices</td>
<td>✔</td>
</tr>
<tr>
<td>23. Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions</td>
<td>✔</td>
</tr>
<tr>
<td>24. Optimistic sales forecasts for gaining concessions from suppliers</td>
<td>✔</td>
</tr>
</tbody>
</table>

* The practice is variation of the identified practice in literature
# The practice emerged from the qualitative interviews

As previously described, some of the identified practices were excluded from the rest of the study because of their low levels of occurrence and significance in the Greek market, or their non-opportunistic character. These are presented in Table 6.2 accompanied with the reasons that were excluded. Table 6.2 shows that in most cases the unconfirmed practices didn’t occur in the Greek market. Nevertheless, in some cases, practitioners were aware of their occurrence in foreign markets and argued that it was possible that they will be applied also to the Greek market in the following years. Towards this notion one respondent commented: "Multiple retailer X argued that every six months he is going to evaluate the turnover of each product and if they don’t achieve the expected sales volumes then compensation will be demanded". This comment clearly refers to the non-confirmed practice of
“Compensation for not meeting target profits” that was identified in the relevant literature (Table 2.5, section 2.4).

Concerning the non-opportunistic character of the non-confirmed practices, respondents argued that these practices didn’t occur in the Greek market in the form that was detected in literature. Hence, “Charges for consumer complaints/returns”, “Fines for unproven specification shortfalls” and “Buy back unsold products outside the agreement” were in most cases issues that were agreed in detail between the two partners in the beginning of their relationship. On the other hand, “Requirement of retrospective discounts” was in most cases a suggestion from the part of multiple retailers towards suppliers in order to help their products achieving higher turnovers.

Table 6.2: Unconfirmed multiple retailers’ opportunistic supply chain practices

<table>
<thead>
<tr>
<th>Practice</th>
<th>Reason of exclusion from the study</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Uncommon practice</td>
</tr>
<tr>
<td>1. Payments for entering and remaining in the retailer’s list of suppliers</td>
<td>✓</td>
</tr>
<tr>
<td>2. Compensation for not meeting target profits</td>
<td>✓</td>
</tr>
<tr>
<td>3. Upfront lump sum payment for in-store promotions</td>
<td>✓</td>
</tr>
<tr>
<td>4. Charges for consumer complaints/returns</td>
<td>✓</td>
</tr>
<tr>
<td>5. Fines for unproven specification shortfalls</td>
<td>✓</td>
</tr>
<tr>
<td>6. Requirement for suppliers’ contribution to retrospective supply chain costs and services</td>
<td>✓</td>
</tr>
<tr>
<td>7. Requirement for suppliers’ contribution to various multiple retailers’ costs</td>
<td>✓</td>
</tr>
<tr>
<td>8. Requirement for retrospective discounts</td>
<td>✓</td>
</tr>
<tr>
<td>9. Requirement for suppliers’ contribution to multiple retailers’ losses</td>
<td>✓</td>
</tr>
<tr>
<td>10. Fail to compensate suppliers for costs and profit losses caused by the retailer’s actions</td>
<td>✓</td>
</tr>
<tr>
<td>11. Buy back unsold products outside of the agreement</td>
<td>✓</td>
</tr>
<tr>
<td>12. Low promotion pass-through</td>
<td>✓</td>
</tr>
<tr>
<td>13. Forward buying</td>
<td>✓</td>
</tr>
<tr>
<td>Requirement</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Requirement for designating the discount price as the normal price</td>
<td>✔</td>
</tr>
<tr>
<td>Requirement for purchasing goods or services from designated companies</td>
<td>✔</td>
</tr>
<tr>
<td>Requirement for exclusive supply of a product</td>
<td>✔</td>
</tr>
</tbody>
</table>

This part of the qualitative study gave valuable insights concerning the research objective of the identification and examination of multiple retailers’ supply chain opportunistic practices in the supply chain in the Greek food sector.
6.3 EXAMINATION OF THE DETERMINANTS OF OPPORTUNISM AND RELEVANT CONTEXTUAL VARIABLES

This part of the qualitative research aimed to confirm in an explanatory manner the role of the five determinants in the creation of opportunism and the role of contextual factors which may possibly affect it.

6.3.1 Dependence

All the respondents agreed that the supplier’s dependence on multiple retailers is a factor that could result in multiple retailers’ questionable practices which as we previously described may encompass the notion of opportunism. The respondents firstly admitted that in most cases suppliers are dependent on multiple retailers. Towards this notion, one respondent stated: “Loosing a multiple retailer as a customer would have high impact on my company... We won’t be able to achieve this level of sales with other big customers”. Additionally, another respondent comment: “…There is high dependency from our part as suppliers. ...If they (i.e., multiple retailers) close the door to you, then where are you going to sell our products?... If we lose the customers X and Y we won’t be able to replace them with other customers”. On the other hand, one responded said that: “If I was a category leader in the stores of a multiple retailer, then he would be dependent on me”. Regarding the role of dependence as a determinant of opportunism one of the respondents reported: “A supplier should try to have a balanced number of customers. Otherwise, multiple retailers could exploit this dependency and put high pressures on the supplier”. Similarly, another interviewee argued: “There are many suppliers and few multiple retailers in the market. The higher the number of suppliers the higher the pressures put on them by multiple retailers”.

6.3.2 Goal incompatibility

The respondents’ beliefs regarding compatible goals between the supplier and the multiple retailer gave very interesting results. All the respondents agreed that
suppliers and multiple retailers should have shared goals. They have the same target which is the final consumer and they should collaborate in order to increase consumption and hence, to increase suppliers’ selling units. Towards this notion, one respondent said: “Both parts aim to increase their profits which derive from the final consumer. Therefore, collaboration between them is more than necessary.” Similarly, another interviewee posited: “In theory we (i.e., suppliers and multiple retailers) have a common objective; to collaborate and increase the market volume”.

Nevertheless, the majority of the respondents indicated that when the time to sign the agreement comes then both parties focus on achieving their financial objectives. Then goal incompatibility emerges between the two parties. One of the respondents commented on this subject: “Multiple retailers set specific financial goals. For example they aim to achieve 2 million € turnover in a specific product category. On the other hand, my objective as a supplier is to sell the higher amount of products in the lowest cost. As we can see, these goals are conflicting with each other”. In addition, another interviewee argued: “Both sides want to see their numbers growing. At the end of the day everyone cares for his own interest”. According to the respondents this emerging goal incompatibility may result to multiple retailers questionable practicing and therefore, to opportunism.

On the other hand, some respondents highlighted the fact that there are many suppliers without specific strategy or marketing plan; multiple retailers are unwilling to collaborate with them in a strategic level. The respondents claimed that in this situation, it is very likely that multiple retailers will focus only on the financial part of the partnership and will put high pressures on suppliers in order to achieve the highest short-term objectives. According to the practitioners’ perceptions, opportunistic behavior could rise in this case as well.

6.3.3 Informational asymmetry

The interviewees indicated that there is significant informational asymmetry between the supplier and the multiple retailer. In the vast majority of supplier-
multiple retailer relationships, the retailer has more knowledge of the product category of the supplier. In addition, they have knowledge of the cross-category performance; this is information that the supplier seldom possesses. One of the respondents commented on this issue: “In most cases the multiple retailer possesses more information for your product category than you do. However, a good key account manager from the part of the supplier could solve this issue”. All the respondents agreed that informational asymmetry helps the retailer to achieve better agreements. In addition, they indicated that suppliers’ lack of information in key issues such as the competitors’ performance or the category performance could make them vulnerable to retailers’ opportunistic tensions.

6.3.4 Business related environmental uncertainty

Business related environmental uncertainty was another determinant of opportunism that was highlighted in the literature. Many of the respondents indicated that business related environmental uncertainty could lead multiple retailers’ to put higher pressures on their suppliers. In particular, one respondent stated that: “Business related environmental uncertainty plays a significant part in supplier-multiple retailer relationships. As the uncertainty grows retailers are putting higher pressures on suppliers”. Similarly, another respondent argued: “Even multiple retailers face significant problems due to business related environmental uncertainty. They don’t achieve their financial targets. In order to balance their losses, they put higher pressures on suppliers”. The respondents’ comments indicated that these pressures could lead to retailers’ opportunism.

On the other hand, some of the respondents highlighted the fact that high business related environmental uncertainty could improve supplier-multiple retailer relationships. Due to the financial crisis there are cases when multiple retailers and suppliers decided to improve their level of partnership in order to find common ways to improve their financial numbers. Towards this notion, one of the respondents reported: “There are cases of multiple retailers who avoid asking unreasonable
demands from suppliers in case of high business related environmental uncertainty. Instead, they try to collaborate with them in a higher degree”. Another interviewee stated: “High levels of business related environmental uncertainty brought suppliers and multiple retailers closer and this resulted in higher levels of collaboration”. Therefore, some of the respondents believed that business related environmental uncertainty could have the opposite effect on multiple retailers’ opportunism than expected.

A different point of view argued that business related environmental uncertainty isn’t related in a high degree with multiple retailers’ questionable practices. Environmental uncertainty could be an excuse for putting higher pressures on the suppliers but not a significant determinant that creates opportunism. Towards this notion one interviewee posited: “For example a multiple retailer could argue that due to economic crisis consumers have lost their buying power and so he will demand better trade terms. This is true but as a supplier I’ve heard this excuse many times in the years before the economic recession”. Similarly, one respondent argued: “Due to financial crisis multiple retailers could put higher pressures on the suppliers...There were always cases of unreasonable demands from the part of multiple retailers; there are now and there will always be”.

We could argue that respondents partially confirmed that business related environmental uncertainty could increase multiple retailers’ opportunism. Nevertheless, there was a minority of respondents which argued for the opposite. In general, the issue of business related environmental uncertainty brought some confusion to the respondents and we should take this fact under consideration. The contradicting perceptions of one respondent on this issue are representative of the issue. He firstly stated that: “Financial crisis could result in higher pressures towards suppliers” and later on that: “They (i.e., multiple retailers) recognize the difficulties suppliers are facing...and they try to help them”.

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6.3.5 Behavioral uncertainty

The majority of the participants argued that behavioral uncertainty could affect multiple retailers’ opportunism. According to their answers, many suppliers don’t have the ability or the means to thoroughly evaluate multiple retailers’ performance. In most cases, suppliers are the ones with this ability. On the other hand, it is difficult to estimate the amount of supplying firms that have such capabilities and those that can’t evaluate their partner’s performance according to the contractual agreement. One of the respondents commented: “Yes, this is true. I (i.e., as a supplier) can’t monitor him (i.e., the multiple retailer) 100%”. Another one argued: “There are mechanisms you can use to control him (i.e., the multiple retailer)... Monitoring will be difficult... I have personal experience on the issue”. According to the majority of the respondents, behavioral uncertainty could result to multiple retailers’ questionable practicing and therefore, to retailers’ opportunism.

6.3.6 Competition from own brand products

The comments obtained from the practitioners revealed that the presence of own brands significantly impacts supplier-multiple retailer relationships. Retailers’ bargaining power has significantly increased due to own brands. In short, own brands were described from the respondents as a powerful tool that helps retailers to gain the upper hand in their relationships with suppliers; even with the bigger ones. The respondents indicated that the existence of own brands could sometimes increase the pressures put on suppliers. According to their opinion, the level of adoption of questionable practices (and hence, opportunism) would be lower if own brands were not part of the game. This is due to the fact that own brands could substitute in a low or high degree many of the suppliers’ products. Therefore, the competition that comes from own brands should be considered a significant factor that affect the level of multiple retailers’ opportunistic behavior.
6.3.7 Size of the supplier

The respondents revealed that the relevant size between the supplier and the multiple retailer plays a significant role in their relationship. All the respondents agreed that smaller suppliers are more likely to face higher levels of questionable practicing from the part of multiple retailers. Smaller suppliers aren’t able to react to possible unreasonable demands from the retailer because in most cases they are easily replaced from other small suppliers. The respondents agreed that the majority of the practices examined are more likely to be applied to smaller suppliers. The comment: “Smaller suppliers are more vulnerable to questionable practices” was made from the majority of the participants. One respondent stated that: “The way the market works is unfair for the smaller businesses”. Therefore, the size of the supplier should be also considered as a significant factor that affects multiple retailers’ level of opportunistic behavior.

This part of the qualitative study gave valuable insights concerning the research objective of the examination of the determinants of potential opportunism in the supply chain in the food sector and the five research hypotheses (Hypotheses 1-5). Significant information was obtained regarding the creation of opportunism in supplier-multiple retailer relationship. In addition, this part of the qualitative study confirmed in an explanatory way that the supplier’s size and the fact that he is competing own brand products increase the levels of opportunism he will face from multiple retailers (Hypotheses 6-7).

Based on the results obtained from the qualitative study and the methodological considerations described in the previous chapter, a quantitative study was conducted. Its results will be presented in the next chapter.
CHAPTER 7: RESULTS: QUANTITATIVE RESEARCH

The current chapter presents the results of the quantitative part of the research. There are five main sections: i) one regarding the descriptive statistics of all the measured items of our questionnaire which will answer to the research objective of the identification and examination of multiple retailers’ supply chain opportunistic practices and will give a general picture of the five examined aspects (i.e., dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty) of the supplier-multiple retailer relationship; ii) one regarding the Exploratory Factor Analysis (EFA) that is applied as a preliminary examination of the factorial structure of the opportunistic behaviors and their determinants; iii) one regarding the Confirmatory Factor Analysis (CFA) for the confirmation of the results of the EFA; iv) one regarding the Structural Equation Model (SEM) that examines the relationships between the opportunistic behaviors and their determinants and will confirm or reject the developed hypotheses 1-5 (chapter 3) and v) one regarding the examination of possible mean differences in the levels of opportunistic behaviors that are faced by sub-groups of our sample based on the characteristics of the firm size and whether the firm competes own brand products. This section will confirm or reject the developed hypotheses 6-7 (chapter 3).
7.1 DESCRIPTIVE STATISTICS

This section will present the demographic profile of the food suppliers that participated in the research. Information regarding both the sample firms and the respondents are given. In addition, simple descriptive statistics (i.e., frequencies, means, standard deviations, skewness and kurtosis) are used to describe the other variables of our questionnaire: retailers’ supply chain opportunistic practices and their determinants.

7.1.1 Profile of the sample firms

The profile of the sample firms (398 food suppliers in total) will give us information regarding their size (annual turnover, number of employees, categorization of the sample firms into micro, small, medium and large enterprises), the kind of products they manage, their most important customers-multiple retailers, how many multiple retailers they are supplying and the length of relationship with them.

The size of the sampling firms was measured in terms of the firm’s turnover and the number of its employees. The survey’s respondents gave the exact number of their firm’s turnover and the number of the employees. For a better interpretation of the results we grouped the answers according to the European Commission’s definition and categorization of firms in micro, small, medium and large enterprises (European Commission, 2005) as seen in Table 7.1. A micro firm is the one that has less than 10 employees and presents annual turnover equal to or less than 2 million € or has total balance sheet equal to or less than 2 million €. A small firm is the one that has less than 50 employees and turnover equal to or less than 10 million € or total balance sheet equal to or less than 10 million €. A medium sized enterprise has less than 250 employees and its turnover shouldn’t exceed 50 million € or its total balance sheet shouldn’t exceed 43 million €. European Commission defines micro, small and medium enterprises but not large ones. However, the inversion of this definition gives a definition for large enterprises.
Hence, a large enterprise has 250 or more employees and its turnover exceeds 50 million € or has a total balanced sheet of more than 43 million €.

Table 7.1: European Commission’s definition of enterprises according to their size

<table>
<thead>
<tr>
<th>Firm category</th>
<th>Employees</th>
<th>Annual Turnover or Balance sheet total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>&lt; 10</td>
<td>≤ 2.000.000 €</td>
</tr>
<tr>
<td>Small</td>
<td>&lt; 50</td>
<td>≤ 10.000.000 €</td>
</tr>
<tr>
<td>Medium</td>
<td>&lt; 250</td>
<td>≤ 50.000.000 €</td>
</tr>
<tr>
<td>Large</td>
<td>≥ 250</td>
<td>&gt; 50.000.000 €</td>
</tr>
</tbody>
</table>

The questionnaire included only questions regarding the number of employees and the annual turnover and not regarding the total balance sheet.

Figure 7.1 groups our sample firms according to their annual turnover in four categories as proposed by the European Commission and shows that the sample included companies of various sizes; 29% of the sampled firms had an annual turnover that didn’t exceed 2 million €, 38% of the firms had turnover between 2 million € and 10 million €, 23% of the firms had turnover between 10 million € and 50 million € while 10% of the firm had annual turnover of more than 50 million €.

The above results showed that most of the sampled firms presented low turnovers (67% of the firms had turnover of less or equal to 10 million €). This is an indication that our sample mainly included relatively small firms.

In Figure 7.2 the firms’ size is shown in terms of the number of employees. Most of the sampled firms (50% of the sample) had 10 or more but less than 50 employees, 27% of the firms had 50 or more but less than 250 employees, 13% of the firms had less than 10 employees and 10% of the sample had more than 250 employees.
This result showed that our sample included firms which employed a relatively small number of persons (63% of the sampled firms employed less than 50 people). This is another indication that our sample included relatively small firms.

Figure 7.3 presents the sampled firms grouped in micro, small, medium and large enterprises according to the European Commission’s definition. In this case both the criteria of the annual turnover and the number of employees were used. The majority of the firms were small enterprises (48% of the sample), 28% of the sample was medium sized companies while the micro and the large enterprises were each represented by 12% of the sampled firms.

Again, the results showed that our sample included firms of relatively small size (60% of the sampled firms are micro and small firms while only 12% of the sample are large firms).
The sampled firms managed a variety of packaged food products. In Table 7.2 we can see how many of the sampled firms considered each kind of the packaged foods seen in Table 7.2 as the most important one in terms of their turnover.

Table 7.2: Basic product (in terms of turnover) of the sample firms

<table>
<thead>
<tr>
<th>Kind of packaged food product</th>
<th>Number of firms</th>
<th>Kind of packaged food product</th>
<th>Number of firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol drinks</td>
<td>9</td>
<td>Olive oil</td>
<td>13</td>
</tr>
<tr>
<td>Beer</td>
<td>1</td>
<td>Olives</td>
<td>9</td>
</tr>
<tr>
<td>Beverages</td>
<td>8</td>
<td>Other confectionary products</td>
<td>35</td>
</tr>
<tr>
<td>Canned fish</td>
<td>13</td>
<td>Other flour &amp; cereal products</td>
<td>3</td>
</tr>
<tr>
<td>Canned meat</td>
<td>2</td>
<td>Other sweets</td>
<td>13</td>
</tr>
<tr>
<td>Cheese</td>
<td>19</td>
<td>Packaged bread</td>
<td>9</td>
</tr>
<tr>
<td>Chocolates</td>
<td>4</td>
<td>Packaged frozen fish</td>
<td>6</td>
</tr>
<tr>
<td>Chocolate milk</td>
<td>1</td>
<td>Packaged sausages</td>
<td>4</td>
</tr>
<tr>
<td>Coffee &amp; cacao</td>
<td>8</td>
<td>Pasta</td>
<td>6</td>
</tr>
<tr>
<td>Dried fruits &amp; nuts</td>
<td>14</td>
<td>Potato crisps</td>
<td>2</td>
</tr>
<tr>
<td>Drops &amp; gums</td>
<td>6</td>
<td>Pulses</td>
<td>7</td>
</tr>
<tr>
<td>Eggs</td>
<td>8</td>
<td>Ready to eat salads</td>
<td>10</td>
</tr>
<tr>
<td>Feta cheese</td>
<td>32</td>
<td>Ready to eat soups &amp; sauces</td>
<td>1</td>
</tr>
<tr>
<td>Flour</td>
<td>4</td>
<td>Rice</td>
<td>9</td>
</tr>
<tr>
<td>Frozen &amp; ready to eat meals</td>
<td>4</td>
<td>Salt</td>
<td>2</td>
</tr>
<tr>
<td>Frozen vegetables</td>
<td>16</td>
<td>Seed oil</td>
<td>6</td>
</tr>
<tr>
<td>Fruit juices</td>
<td>12</td>
<td>Spices</td>
<td>3</td>
</tr>
<tr>
<td>Honey</td>
<td>4</td>
<td>Sugar</td>
<td>7</td>
</tr>
<tr>
<td>Ice creams</td>
<td>6</td>
<td>Tea</td>
<td>1</td>
</tr>
<tr>
<td>Marmalades</td>
<td>7</td>
<td>Toasted bread</td>
<td>4</td>
</tr>
<tr>
<td>Meat products</td>
<td>24</td>
<td>Tomato products</td>
<td>6</td>
</tr>
<tr>
<td>Milk</td>
<td>11</td>
<td>Vinegar</td>
<td>7</td>
</tr>
<tr>
<td>Milk concentrated</td>
<td>2</td>
<td>Wine</td>
<td>31</td>
</tr>
<tr>
<td>Mineral water</td>
<td>9</td>
<td>Yoghurt</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 7.2 shows that our sample included firms representing a wide variety of packaged food products. This is very significant regarding the quality of data obtained in our study. Thus, our results didn’t come from firms managing only specific products nor any product category was neglected from our research. Firms managing feta cheese, meat products, confectionary products and wines appeared the most in our sample. Some of the firms gave more than one answer in this question and for this reason the sum of the firms in Table 7.2 exceeds the number of the total sample (n=398).

The study focused on food suppliers of the five largest multiple retailers of the Greek market. These are Carrefour Marinopoulos, AB Vassilopoulos, Sklavenitis,
Veropoulos and Masoutis. Figure 7.4 shows how many of the sampled firms were supplying each of the five multiple retailers.

**Figure 7.4: Number of the sampled firms supplying each of the five multiple retailers**

The retailer with the most suppliers was AB Vassilopoulos (67% of the sampled firms supplied the specific retailer). Each of the other four retailers was supplied by, approximately, 50% of the sampled firms. The results in Figure 7.4 show that all the five major multiple retailers were adequately represented in our sample.

Figure 7.5 presents the number of retailers that the sampled firms were supplying.

**Figure 7.5: Number of retailers supplied by the sampled firms**

Figure 7.5 shows that 37% of the sample firms was supplying only one multiple retailer while the rest 63% was supplying two or more retailers. It should be noted
that approximately one out of five food suppliers of our sample was supplying all the five multiple retailers. This is very important regarding the quality of data obtained in our study. Therefore, we obtained information from suppliers who had experience in working with more than one multiple retailers.

Length of relationship is another factor that was taken into consideration in the study. The results concerning this issue are presented in Figure 7.6.

![Figure 7.6: Length of relationships](image)

Figure 7.6 shows that 13% of the sampled firms were supplying multiple retailers with packaged food products for less than 5 years, 25% were supplying multiple retailers for 6 to 10 years, 39% for 11 to 20 years and 23% for more than 20 years. The above results clearly show that in general our data came from suppliers who had been partnering with multiple retailers for a significant amount of time.

**7.1.2 Profile of the respondents**

The questionnaire also included questions regarding the profile of the respondents: sex, age, their position in the firm, the number of years they are working in the firm and the number of years they are working in the sector (Table 7.3).
Most of the respondents were male and between 30 and 50 years of age. The majority of the respondents had the position of Sales Manager (43.2%) or Trade Manager (19.1%) while 10% of our sample was General Managers or Owners of the sample firms. This means that we obtained data from persons who were directly involved in the relationships and the agreements of the supplying firms with multiple retailers. The respondents were working in the sampled firms for 13.1 years in average and in the sector for 15.7 years in average. Again, this is very significant for the quality of our data since the respondents had long experience in the examined field.

### 7.1.3 Opportunistic supply chain practices’ descriptive statistics

The following Table (Table 7.4) presents the perceptions of the sampled food suppliers regarding the 24 examined retailers’ opportunistic supply chain practices in their relationships (Likert-type scale: 1 indicates “never” and 7 indicates “in a high degree”). These 24 practices were identified by the qualitative part of the study as the most significant ones in the Greek market. Since these practices are studied for the first time it is very important to highlight the cases when suppliers mentioned
that these practices never occurred during their relationships with the multiple retailers. Thus, for each practice Table 6.4 presents the mean, standard deviation, skewness, kurtosis and the % frequency of the food suppliers that answered that the practice never occurred. The practices are presented in a descending order based on their mean.

<table>
<thead>
<tr>
<th>Retailers’ practice</th>
<th>Mean (N=398)</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>The practice never occurred (%frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. FAVORING OWN BRANDS AGAINST BRANDED PRODUCTS*</td>
<td>5.15</td>
<td>1.563</td>
<td>-0.712</td>
<td>-0.028</td>
<td>3.2%</td>
</tr>
<tr>
<td>2. FORCING SUPPLIER’S PRICES DOWN OR REFUSING SUPPLIER’S JUSTIFIED PRICE INCREASES DUE TO COST INCREASES</td>
<td>5.06</td>
<td>1.535</td>
<td>-0.772</td>
<td>0.160</td>
<td>3.3%</td>
</tr>
<tr>
<td>3. PAYMENT DELAY WITHOUT GOOD CAUSE.</td>
<td>4.92</td>
<td>1.825</td>
<td>-0.736</td>
<td>-0.519</td>
<td>6.3%</td>
</tr>
<tr>
<td>4. FALSELY SUGGESTING THAT COMPETITIVE SUPPLIER IS OFFERING BETTER TRADE TERMS.</td>
<td>4.89</td>
<td>1.676</td>
<td>-0.720</td>
<td>-0.169</td>
<td>6.0%</td>
</tr>
<tr>
<td>5. REFUSE TO ACCEPT A LOWER PROFIT MARGIN FROM A SUPPLIER WITH HIGH AMOUNT OF SALES WITH THE EXCUSE OF THE STANDARD CATEGORY AVERAGE PROFIT MARGIN.</td>
<td>4.84</td>
<td>1.661</td>
<td>-0.643</td>
<td>-0.307</td>
<td>5.0%</td>
</tr>
<tr>
<td>6. OUTSIDE AGREEMENT FINANCIAL SUPPORT FOR ACHIEVING ANNUAL ECONOMIC OBJECTIVES.</td>
<td>4.77</td>
<td>1.825</td>
<td>-0.590</td>
<td>-0.696</td>
<td>7.0%</td>
</tr>
<tr>
<td>7. MULTIPLE RETAILERS DON’T CONTRIBUTE FINANCIALLY TO PROMOTIONAL ACTIVITIES (E.G., BUY ONE GET ONE FREE PROMOTION)</td>
<td>4.73</td>
<td>1.971</td>
<td>-0.572</td>
<td>-0.839</td>
<td>11.1%</td>
</tr>
<tr>
<td>8. DELISTING THREAT IN ORDER TO IMPROVE TRADE TERMS AND DECREASE SUPPLIER’S PRICES.</td>
<td>4.53</td>
<td>1.809</td>
<td>-0.415</td>
<td>-0.857</td>
<td>7.5%</td>
</tr>
<tr>
<td>9. UPFRONT LUMP SUM PAYMENTS INSTEAD OF PERCENTAGE OF THE PRODUCT’S TURNOVER AS CONDITION FOR STOCKING GOODS OR FOR NEW STORE OPENINGS OR STORE REFURBISHMENTS OR BETTER IN-STORE POSITIONING OR ENTERING IN THE RETAILER’S BROCHURE OFFERS.</td>
<td>4.53</td>
<td>1.844</td>
<td>-0.505</td>
<td>-0.781</td>
<td>9.5%</td>
</tr>
<tr>
<td>10. EXAGGERATION OF THE SERIOUSNESS OF PROBLEMS (E.G., LOW DEMAND) FOR GAINING CONCESSIONS.</td>
<td>4.52</td>
<td>1.719</td>
<td>-0.404</td>
<td>-0.743</td>
<td>6.3%</td>
</tr>
<tr>
<td>11. UNREASONABLY HIGH PAYMENTS AS CONDITION FOR STOCKING GOODS.</td>
<td>4.49</td>
<td>1.843</td>
<td>-0.416</td>
<td>-0.887</td>
<td>8.8%</td>
</tr>
<tr>
<td>12. FINANCIAL SUPPORT FOR MATCHING COMPETING RETAILER’S LOWER PRICE.</td>
<td>4.45</td>
<td>1.923</td>
<td>-0.373</td>
<td>-1.024</td>
<td>10.3%</td>
</tr>
<tr>
<td>13. UNREASONABLY HIGH PAYMENTS FOR THE PRODUCTS’ BETTER IN-STORE</td>
<td>4.33</td>
<td>1.819</td>
<td>-0.299</td>
<td>-0.884</td>
<td>9.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Diff.</td>
<td>Diff. Std.</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------</td>
<td>-----------</td>
<td>-------</td>
<td>-----------</td>
</tr>
<tr>
<td>14.</td>
<td>Discrimination between suppliers concerning credit periods.</td>
<td>4.22</td>
<td>1.757</td>
<td>-0.098</td>
<td>-0.806</td>
</tr>
<tr>
<td>15.</td>
<td>Unreasonably high payments for new store openings.</td>
<td>4.18</td>
<td>1.823</td>
<td>-0.213</td>
<td>-1.050</td>
</tr>
<tr>
<td>16.</td>
<td>Optimistic sales forecasts for gaining concessions from suppliers.</td>
<td>4.18</td>
<td>1.818</td>
<td>-0.181</td>
<td>-1.077</td>
</tr>
<tr>
<td>17.</td>
<td>Limited time for new products to achieve high turnovers.</td>
<td>3.95</td>
<td>2.060</td>
<td>-0.117</td>
<td>-1.343</td>
</tr>
<tr>
<td>18.</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>3.91</td>
<td>1.878</td>
<td>-0.068</td>
<td>-1.194</td>
</tr>
<tr>
<td>19.</td>
<td>Obscure terms of agreement.</td>
<td>3.85</td>
<td>1.841</td>
<td>0.122</td>
<td>0.244</td>
</tr>
<tr>
<td>20.</td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>3.82</td>
<td>1.885</td>
<td>-0.041</td>
<td>-1.255</td>
</tr>
<tr>
<td>21.</td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/codes that will enter the stores without compensating the supplier.</td>
<td>3.73</td>
<td>1.843</td>
<td>0.060</td>
<td>-1.115</td>
</tr>
<tr>
<td>22.</td>
<td>The payments for entering in the retailer's brochure offer are reasonable. (R)</td>
<td>3.69</td>
<td>1.615</td>
<td>0.251</td>
<td>-0.734</td>
</tr>
<tr>
<td>23.</td>
<td>Termination of the relationship or parts of it without prior notice or further explanation.</td>
<td>3.68</td>
<td>1.992</td>
<td>0.074</td>
<td>-1.325</td>
</tr>
<tr>
<td>24.</td>
<td>Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers.</td>
<td>3.54</td>
<td>1.961</td>
<td>0.227</td>
<td>-1.222</td>
</tr>
<tr>
<td></td>
<td>Overall Mean</td>
<td>4.42</td>
<td>1.118</td>
<td>-0.241</td>
<td>-0.476</td>
</tr>
</tbody>
</table>

*: The specific question referred only to firms that were competing own brand products. The number of such firms was 311. Hence, only for the specific question N=311.

(R): The specific practice is reversed in relation to the other retailers’ practices and its mean has been reversed to match with the means of the other retailers’ practices

Food suppliers’ perceptions as presented in Table 7.4 showed that multiple retailers were behaving opportunistically in a significant degree in their relationships with their food suppliers. It should be highlighted that 16 out of 24 practices had mean over the scale’s median (i.e., 4) and the means of the rest 8 practices were near it. The overall mean was 4.42 and it was over the scale’s median as well. In addition, the % frequency of the suppliers answering that the practice never
occurred was under 10% in 15 out of the 24 examined practices, while the highest frequency in this case reached only 19.6% (practices number 23 and 24 in Table 7.4). No firm in the sample indicated that none of the examined practices ever occurred during their relationship with multiple retailers.

The most frequent practices were: i) Favoring own brands against branded products (mean: 5.15). This result showed that suppliers believed that in many cases multiple retailers didn’t support their products as much as they should but instead favored own brand products more (for example by putting them in larger and or better shelves). Only the 3.2% of the sample answered that this practice never occurred. This means that this practice not only occurred frequently in supply chain relationships but also that it occurred in many supply chain relationships. ii) Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases (mean: 5.06). Suppliers perceived that multiple retailers in the Greek market put high pressures on them in terms of their prices even though these were justified due to their costs. Again, the frequency of the “never occurred” answer was very low (3.3%) which means that it was a practice that occurred in the majority of the relationships. iii) Payment delay without good cause (mean: 4.92). Suppliers believed that in many occasions and in most of the examined relationships (frequency of the “never occurred” answer: 6.3%) multiple retailers didn’t pay them on time even though they had the opportunity to do so. iv) Falsely suggesting that competitive supplier is offering better trade terms (mean: 4.89). This result showed that multiple retailers’ in the Greek market used in a high degree false arguments and particularly made-up agreements with other suppliers to put pressures during negotiations. Also this practice was occurring on some level for most of the examined relationships (frequency of the “never occurred” answer: 6.0%). v) Refusing to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin (mean: 4.84). According to this result, multiple retailers in the Greek market set a standard category average profit margin and in many occasions they used it as an excuse to achieve better agreements even with suppliers that could increase their profitability due to their high amount of sales. Therefore, they were taking advantage of them.
Again, this practice was experienced at least once from the majority of our sample (frequency of the “never occurred” answer: 5.0%).

The less frequent practices were: i) Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers (mean: 3.54). Suppliers believed that ad-hoc unilateral change to agreements wasn’t occurring in a high degree. Also it was one of the practices that had the highest frequency in the “never occurred” answer (19.6%). ii) Termination of the relationship or parts of it without prior notice or further explanation (mean: 3.68). This result showed that multiple retailers avoid terminating a relationship with a supplier or parts of it very often without considering the supplier first. This was also a practice with a relatively high frequency in the “never occurred” answer (19.6%). iii) The payments for entering in the retailer’s brochure offer are reasonable (R) (reversed mean: 3.69). Suppliers perceived that unreasonable payments for entering in the brochure offer weren’t required very often. However, the majority of the respondents had faced it at least once (frequency of the “never occurred” answer: 7.5%). iv) Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier (mean: 3.79). This was a practice with a relatively high frequency in the “never occurred” answer (15.3%). In summary,

Low levels of skewness and kurtosis indicated data normality. All items showed skewness and kurtosis close to |1| or less. Since severe non-normality associates with kurtosis higher than |7| and skewness higher than |2| (Boomsma and Hoogland, 2001), all data were deemed suitable for all subsequent analyses.

In the following parts of the text and for text consistency reasons we will use the same numbering of the examined practices as seen in Table 7.4.

7.1.4 Determinants’ of opportunism descriptive statistics

In the following Tables (Tables: 7.5, 7.6, 7.7, 7.8 & 7.9) the five determinants of opportunism (i.e., dependence, goal incompatibility, informational asymmetry,
business related environmental uncertainty and behavioral uncertainty) and their variables that describe them are presented. Mean, standard deviation, skewness and kurtosis are presented for every variable. The suppliers were asked to indicate the degree in which they agree or disagree with 22 items describing the five determinants and referring to their relationships with multiple retailers (Likert-type scale: “1: Totally disagree” and “7: Totally agree”).

Table 7.5 shows food suppliers’ perceptions concerning their dependency of multiple retailers.

<table>
<thead>
<tr>
<th>Dependence</th>
<th>Mean (N=398)</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It would be easy to replace these customers. (R)</td>
<td>4.75</td>
<td>1.786</td>
<td>-0.552</td>
<td>-0.868</td>
</tr>
<tr>
<td>2. It would be costly to lose these customers.</td>
<td>5.14</td>
<td>1.677</td>
<td>-0.882</td>
<td>-0.072</td>
</tr>
<tr>
<td>3. We are dependent on these customers.</td>
<td>4.67</td>
<td>1.824</td>
<td>-0.488</td>
<td>-0.852</td>
</tr>
<tr>
<td>4. If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>4.97</td>
<td>1.732</td>
<td>-0.762</td>
<td>-0.418</td>
</tr>
<tr>
<td>5. We cannot afford to lose this customer.</td>
<td>5.24</td>
<td>1.734</td>
<td>-0.917</td>
<td>-0.107</td>
</tr>
<tr>
<td>Overall mean</td>
<td>4.95</td>
<td>1.396</td>
<td>-0.792</td>
<td>0.051</td>
</tr>
</tbody>
</table>

(R): The specific question is reversed in relation to the other dependence questions and its mean has been reversed to match with the means of the other dependence questions

Suppliers believed that they were highly dependent on multiple retailers (overall mean=4.95). Dependence variables had a high mean between 4.67 and 5.24 in the seven point scale. In particular, the variables that indicated that food suppliers had much to lose if they ended their relationship with multiple retailers had the highest mean scores. On the contrary, the item that asked the suppliers to straightforwardly indicate if they were dependent to multiple retailers had the lower mean score. Low levels of skewness and kurtosis of the five variables indicated data normality.

Goal incompatibility is related to the lack of congruence between the suppliers’ financial objectives and the ones of multiple retailers. Table 7.6 presents the results of the respondents’ answers in this issue.
Table 7.6: Descriptive statistics of the determinant goal incompatibility

<table>
<thead>
<tr>
<th>Goal incompatibility</th>
<th>Mean (N=398)</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Our company and multiple retailers have different financial goals.</td>
<td>4.57</td>
<td>1.509</td>
<td>-0.425</td>
<td>-0.281</td>
</tr>
<tr>
<td>2. We share common financial goals with multiple retailers. (R)</td>
<td>4.03</td>
<td>1.730</td>
<td>0.014</td>
<td>-0.916</td>
</tr>
<tr>
<td>3. Multiple retailers don’t support our financial goals.</td>
<td>4.30</td>
<td>1.717</td>
<td>-0.091</td>
<td>-0.990</td>
</tr>
<tr>
<td>4. Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals.</td>
<td>4.33</td>
<td>1.690</td>
<td>-0.165</td>
<td>-0.887</td>
</tr>
<tr>
<td>Overall mean</td>
<td>4.31</td>
<td>1.275</td>
<td>-0.093</td>
<td>-0.073</td>
</tr>
</tbody>
</table>

(R): The specific question is reversed in relation to the other goal incompatibility questions and its mean has been reversed to match with the means of the other goal incompatibility questions.

Food suppliers believed that their financial objectives were incompatible with the retailers’ ones in a high degree (overall mean=4.31). The examined goal incompatibility variables had high means between 4.03 and 4.57. The variable with the highest score was the one measuring in what degree the partners’ goals were different. The lowest score was related to the reversed coded item that measured the degree in which the partners’ goals were common. Again, skewness and kurtosis were low.

Table 7.7 shows the results concerning the questions that described informational asymmetry between suppliers and their multiple retailing partners.

Table 7.7: Descriptive statistics of the determinant informational asymmetry

<table>
<thead>
<tr>
<th>Informational asymmetry</th>
<th>Mean (N=398)</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general.</td>
<td>4.90</td>
<td>1.570</td>
<td>-0.558</td>
<td>-0.481</td>
</tr>
<tr>
<td>2. Multiple retailers usually don’t share with us useful information and business knowledge.</td>
<td>4.81</td>
<td>1.544</td>
<td>-0.430</td>
<td>-0.637</td>
</tr>
<tr>
<td>3. Multiple retailers usually don’t share with us information or they do only if we ask them to or in case of information exchange agreement.</td>
<td>5.06</td>
<td>1.492</td>
<td>-0.594</td>
<td>-0.413</td>
</tr>
<tr>
<td>4. Multiple retailers usually don’t share with us information about events or changes that may affect our company.</td>
<td>4.72</td>
<td>1.617</td>
<td>-0.363</td>
<td>-0.811</td>
</tr>
<tr>
<td>5. Multiple retailers won’t volunteer helpful information to us unless we ask them to.</td>
<td>5.02</td>
<td>1.577</td>
<td>-0.712</td>
<td>-0.259</td>
</tr>
<tr>
<td>Overall mean</td>
<td>4.90</td>
<td>1.209</td>
<td>-0.461</td>
<td>-0.017</td>
</tr>
</tbody>
</table>
Food suppliers were not satisfied with the amount of information they were obtaining from multiple retailers (overall mean=4.90). The means in these five variables were between 4.72 and 5.06 in the seven point scale and they indicated that there was significant informational asymmetry between the two parties. Suppliers weren’t satisfied with their big customers especially regarding their partners’ unwillingness to voluntarily give them helpful information. The item with the lowest mean score was the one indicating that retailers don’t share with their suppliers information about events or changes that could affect the suppliers (mean=4.72). Low levels of skewness and kurtosis indicated data normality.

In Table 7.8 we can see food suppliers’ opinions regarding business related environmental uncertainty in their sector.

<table>
<thead>
<tr>
<th>Business related environmental uncertainty</th>
<th>Mean (N=398)</th>
<th>Standard Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The market shares in our sector are volatile.</td>
<td>4.56</td>
<td>1.631</td>
<td>-0.341</td>
<td>-0.709</td>
</tr>
<tr>
<td>2. It is difficult to make accurate sales forecasts in our sector.</td>
<td>4.64</td>
<td>1.689</td>
<td>-0.407</td>
<td>-0.782</td>
</tr>
<tr>
<td>3. It is difficult to follow the sector’s trends.</td>
<td>3.90</td>
<td>1.606</td>
<td>0.039</td>
<td>-0.698</td>
</tr>
<tr>
<td>4. The sector’s sales volumes are volatile.</td>
<td>4.63</td>
<td>1.561</td>
<td>-0.447</td>
<td>-0.424</td>
</tr>
<tr>
<td>Overall mean</td>
<td>4.43</td>
<td>1.119</td>
<td>-0.200</td>
<td>-0.081</td>
</tr>
</tbody>
</table>

The overall mean was 4.43 and showed that uncertainty was perceived as quite high by suppliers. The respondents argued that it was difficult to make accurate sales forecasts and that there was high volatility in market shares and the sector’s sales volumes. The item with the lowest score was the one regarding the suppliers’ ability to follow the sector’s trends (mean=3.90). Also, in the case of business related environmental uncertainty data normality was achieved.

Suppliers’ perceptions regarding their ability to monitor multiple retailers’ performance according to their agreement obligations is presented in Table 7.9.
The variables mean ranged between 3.32 and 4.12 in the seven point scale. Food suppliers believed that their commercial agreements with multiple retailers were so complex that it was difficult to monitor retailers’ performance (mean=4.12). On the contrary they believed that they had quite accurate information regarding retailers’ performance (mean=3.32). We should note that the two reversed coded items (items 3 & 4 in Table 6.9) had lower scores from the other two behavioral uncertainty questions. Again, skewness and kurtosis were low.

The above results of the quantitative study gave valuable information concerning the research objective of the identification and examination of multiple retailers’ supply chain opportunistic practices in the supply chain in the Greek food sector. In particular, insights regarding their level of occurrence were obtained and the most usually applied practices were identified. In addition, information about the profile of the sampled firms, the respondents and general characteristics of the relationship/potential determinants of opportunism was obtained.
7.2 EXPLORATORY FACTOR ANALYSIS

Exploratory Factor Analysis (EFA) is a multivariate technique for analyzing the structure of interrelationships among a large number of variables by defining sets of variables that are highly interrelated (Hair et al., 2009). These groups of variables are known as factors and are assumed to represent dimensions within the data. In this way EFA is able to determine whether the information derived from the dataset could be summarized in a smaller set of components (factors). EFA has an exploratory character because the researcher has little control over the specification of the structure (Hair et al., 2009). EFA is primarily used when the relationships between the observed and the latent variables (factors) are unknown or uncertain (Gounaris et al., 2004). In this section of our study, EFA will be used twofold. First, EFA will be employed in order to reveal a parsimonious set of opportunistic behaviors from a large set of retailers’ opportunistic supply chain practices in their relationships with food suppliers; our aim is to derive a preliminary factorial structure of retailers’ opportunism. Secondly, as we previously saw in the Methodology (chapter 5), the determinants’ scales of questions were adapted from previous studies. EFA will be applied in order to refine the five latent constructs of the determinants examined and guarantee convergent and discriminant validity. The EFA results will be confirmed through Confirmatory Factor Analysis (CFA) in the next section of the study and then the derived factors will be included in the structural model for the examination of the relationships between the determinants and opportunism.

7.2.1 EFA opportunistic supply chain practices

In the absence of any relevant empirical measure available regarding retailers’ specific opportunistic supply chain practices, we applied EFA in order to make a preliminary examination of the factorial structure of retailers’ opportunism. EFA was used in an explanatory manner for revealing the underlying factors of opportunism that will explain the interrelationships among the observed opportunistic practices.
In our study we examined 24 retailers’ supply chain practices which cover a wide variety of aspects in supplier-retailer relationships. These practices emerged from the literature review and they were refined through the qualitative part of our study. We expect that these variables are highly intercorrelated and represent dimensions within the data. In this way, we will identify general dimensions of retailers’ opportunism.

The observed variables included in Table 7.4 were used as the basis for the EFA. Table 7.4 presents a list of 24 opportunistic supply chain practices including the practice regarding favoring own brand products against branded ones. The results showed that this practice had the higher mean score between all the practices. However, it was answered only by the firms that faced competition from own brand products which were 311 while the whole sample included 398 firms. For this reason our first EFA didn’t include the specific practice and it was based on 23 practices. On the other side, this practice was very significant and therefore, we will conduct another EFA with 24 practices including the own brand products favoring practice in the subsample of 311 firms. We could then compare the two EFAs results.

EFA was based on Principal Components factor extraction and Varimax Rotation with Kaiser Normalization in order to clarify the factors. Items with low loadings (<0.5) were excluded from the subsequent data analysis in order to achieve convergent and discriminant validity of the emerged factors and in order to create well defined constructs (Hair et al., 2009) and achieve clear solution (Diep et al., 2008). In addition, items with significant cross loadings or low communalities were also excluded according to commonly used decision rules (Roy, 2010; Richey et al., 2009; Hair et al., 2009). The dropped items are presented in Table 7.10.
Table 7.10: Opportunistic supply chain practices: Dropped items (exploratory factor analysis)

<table>
<thead>
<tr>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment delay without good cause.</td>
</tr>
<tr>
<td>Outside agreement financial support for achieving annual economic objectives.</td>
</tr>
<tr>
<td>Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)</td>
</tr>
<tr>
<td>Delisting threat in order to improve trade terms and decrease supplier’s prices.</td>
</tr>
<tr>
<td>Financial support for matching competing retailer’s lower price.</td>
</tr>
<tr>
<td>Discrimination between suppliers concerning credit periods.</td>
</tr>
<tr>
<td>Optimistic sales forecasts for gaining concessions from suppliers.</td>
</tr>
<tr>
<td>Limited time for new products to achieve high turnovers.</td>
</tr>
<tr>
<td>The payments for entering in the retailer’s brochure offer are reasonable. (R)</td>
</tr>
<tr>
<td>Termination of the relationship or parts of it without prior notice or further explanation.</td>
</tr>
<tr>
<td>Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers.</td>
</tr>
</tbody>
</table>

(R): The specific practice is reversed in relation to the other retailers’ practices and its mean has been reversed to match with the means of the other retailers’ practices

Between the dropped items are some of the most frequently occurred practices (Table 7.4). These are: payment delay without good cause; Outside agreement financial support for achieving annual economic objectives; Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion); Delisting threat in order to improve trade terms and decrease supplier’s prices.

Table 7.11 presents the EFA results. From the initial list of 23 items the optimum factor solution included 12 opportunistic items that were loaded in three factors. Barlett’s test of sphericity was significant ($x^2 = 2152.4$, significant 0.000) and Kaiser-Meyer-Olkin = 0.915. These results showed that the variables had significant intercorrelations and therefore, EFA could be applied in the data (Hair et al., 2009). The solution of three factors with eigenvalues equal to 1 explained 66.65% of the Total Variance ensuring practical significance of for the derived factors (Hair et al., 2009). All the item factor loadings were significant. Moreover, all factor loadings were over the threshold of 0.7 (Hair et al., 2009) except of two items which were over 0.6 which can also be an acceptable value (Hair et al., 2009). All items had high loadings on a single factor and there were no significant factor cross-loadings. In
addition, no single item factors emerged. All items had communalities over 0.5 (communalities range: 0.548-0.759) and hence, they had sufficient explanation from the factor solution (Hair et al., 2009). The internal consistency of all the three factors was sufficiently high (Cronbach’s a coefficient >0.7) (Hair et al., 2009; Flynn et al., 1995). Overall, the EFA results gave a very satisfactory solution.

Table 7.11: Opportunistic supply chain practices: Exploratory factor analysis

<table>
<thead>
<tr>
<th>Factors (varimax method)</th>
<th>Items loading in each factor</th>
<th>Loadings</th>
<th>Cronbach’s a coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments (47.44% of Total Variance)</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>0.816</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>0.758</td>
<td>0.837</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for new store openings.</td>
<td>0.734</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for the products’ better in-store positioning.</td>
<td>0.715</td>
<td></td>
</tr>
<tr>
<td>Agreement violations (10.10% of Total Variance)</td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>0.815</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>0.763</td>
<td>0.819</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>0.761</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Obscure terms of agreement.</td>
<td>0.653</td>
<td></td>
</tr>
<tr>
<td>Negotiation pressures (9.11% of Total Variance)</td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>0.815</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>0.738</td>
<td>0.832</td>
</tr>
<tr>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>0.727</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>0.691</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Total Variance explained: 66.65%; Communalities range: 0.548-0.759; Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.915; Bartlett’s Test of Sphericity: $\chi^2 = 2152.4$, significant 0.000

From the results of Table 7.11 we will try to label the emerged factors based on which variables are loaded on them and we will do it in an appropriate way for representing its underlying dimensions. Four items had high loadings (between 0.715 and 0.816) in the first factor. All these variables have to do with excessive payments that suppliers have to pay to their big customers in order to make business with
them. In addition, one of the items describes the fact that suppliers have to pay upfront for these issues and not as a percentage of the product’s turnover. Consequently, this factor could be named as “excessive payments”. The second factor included four items (loadings between 0.653 and 0.815). If we examine these four variables conceptually, we could see that they all concern agreement issues between the food supplier and the multiple retailer. Actually, all the four variables have to do with some short of agreement violation which may be formal (such as ad-hoc unilateral change to agreement) or informal (breach of informal agreements based on obscure contract terms). Thus, we could name this factor as “agreement violations”. Four variables had high loadings (between 0.691 and 0.815) on the third factor. Again these four items have something in common. They are all related to negotiation tactics and pressures that retailers use in order to gain better terms of agreement from their food suppliers. Hence, our third factor could be named as “negotiation pressures”.

The above results showed that the examined practices had three underline dimensions. This means that when multiple retailers try to exploit their suppliers opportunistically they follow three main ways to do so: i) They may require direct excessive payments from their partners as condition for stocking their goods, for new store openings and for better in-store positioning. In addition, multiple retailers may require these payments to be paid upfront and not as a percentage of the product’s turnover. ii) They may breach some parts of their agreements with the suppliers. These parts of the agreements refer to the number of products/codes that will enter the stores, the number of stores in which a product will enter and the number of in-store promotional activities that will take place. Moreover, obscure terms of agreement may be used as a vehicle for this kind of practicing. iii) They may put high pressures on the suppliers during negotiations. These pressures may take the form of forcing prices down or refusing justified price increases, falsely suggesting better made-up agreements with other suppliers, exaggeration of problems they face or refusing to discriminate suppliers concerning the profit margin regardless of the turnover of their products. Even though these dimensions are
distinct they all have to do with ways that increase multiple retailers’ gains at the expense of their suppliers.

It is also interesting the fact that even though the items presented in Table 7.10 were dropped from the rest of the analysis, they conceptually match with the three revealed underlying dimensions. In particular, the practices: payment delay without good cause, outside agreement financial support for achieving annual economic objectives, discrimination between suppliers concerning credit periods, limited time for new products to achieve high turnovers, termination of the relationship or parts of it without prior notice or further explanation and ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers are all referring to violations of formal or informal agreements Therefore, they conceptually match with the factor of agreement violations. On the other hand, the practices: multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion), financial support for matching competing retailer’s lower price and unreasonable payments for entering in the retailer’s brochure offer are all referring to payments suppliers have to make due to multiple retailers’ behavior. For this reason they conceptually match with the factor excessive payments. Finally, the practices: delisting threat in order to improve trade terms and decrease supplier’s prices and optimistic sales forecasts for gaining concessions from suppliers are referring to negotiations between suppliers and multiple retailers. Hence, they conceptually match with the factor of negotiation pressures. The above give an additional support for the derived three factor solution.

7.2.2 EFA opportunistic supply chain practices subsample (firms facing own brand products’ competition)

As described earlier we will conduct an EFA in the subsample of 311 firms in order to examine the underline constructs of opportunistic supply chain practices in the firms facing own brand products’ competition. In this case, the item regarding favoring own brands against branded products is added to the list of retailers’
opportunistic practices. The results of the subsample 24 items EFA gave us results very similar to the 23 items full sample EFA. The adding of the practice regarding favoring own brand products against the branded ones didn’t change the results significantly. The specific item was loaded on the factor of excessive payments but with a low factor loading (factor loading: 0.484<0.5) and had also a very low communality (0.277<0.5) which means that the factor solution couldn’t explain well the specific variable. Therefore, the variable was excluded from the analysis. The analysis after the deletion of this item resulted in a three factor solution almost identical with the EFA solution of the full sample.

7.2.3 EFA determinants of opportunism

In the case of EFA on the determinants variables, the technique is applied in order to refine the determinants scales (Bansal & Voyer, 2000). Hence, we examine the determinants in order to find possible modifications needed in the constructs (e.g., due to item crossloadings) (Patil et al., 2008). Again, EFA was based on Principal Components factor extraction and Varimax Rotation with Kaiser Normalization in order to clarify the factors.

Poorly performing items (items with loadings<0.5) were excluded from the subsequent data analysis in order to achieve convergent and discriminant validity of the emerged factors (Lai et al., 2009). In addition, items with low communalities (<0.5) were also deleted because they weren’t sufficiently explained by the factor solution (Roy, 2010; Richey et al., 2009; Hair et al., 2009). Due to lack of internal consistency (Cronbach’s a coefficient<0.7) the whole construct of business related environmental uncertainty was excluded from the rest of the analysis (Hair et al., 2009). The items deleted and excluded from the rest of the analysis are seen in Table 7.12. Apart from the whole scale of business related environmental uncertainty all the other dropped items were reverse coded items. We should also note that the reverse coded variable of opportunism (i.e., the payments for entering in the
retailer’s brochure offer are reasonable) also didn’t have a significant loading in any particular factor.

| Table 7.12: Determinants of opportunism: Dropped items (Exploratory factor analysis) |
|-----------------------------------------------|-------------------------------------------------|
| **Factor**                                   | **Item dropped**                                |
| Dependence                                   | It would be easy to replace these customers. (R)|
| Goal incompatibility                         | We share common financial goals with multiple retailers. (R)|
| Business related environmental uncertainty*  | The market shares in our sector are volatile.   |
|                                               | It is difficult to make accurate sales forecasts in our sector. |
|                                               | It is difficult to follow the sector’s trends.   |
|                                               | The sector’s sales volumes are volatile.         |
| Behavioral uncertainty                       | It is easy to monitor whether the multiple retailers are performing all of their contractual obligations under our agreement. (R)|

(R): The specific questions are reversed in relation to the other determinants’ questions and their means have been reversed to match with the means of the other determinants’ questions

* The whole factor was excluded from the analysis due to lack of internal consistency

Table 7.13 presents the EFA results for the determinants incorporating 15 variables. The optimum factor solution included four factors of determinants of opportunism: dependence (4-item factor), goal incompatibility (3-item factor), informational asymmetry (5-item factor) and behavioral uncertainty (3-item factor). Barlett’s test of sphericity was significant ($x^2 = 2291.5$, significant 0.000) and Kaiser-Meyer-Olkin = 0.820. These results showed that the variables had significant intercorrelations and therefore, EFA could be applied in the data (Hair et al., 2009). The solution of four factors with eigenvalues equal to 1 explained 67.46% of the Total Variance ensuring practical significance of for the derived factors (Hair et al., 2009). All the item factor loadings were significant and over the threshold of 0.7 (Hair et al., 2009). All items had high loadings on a single factor and there were no significant factor cross-loadings. All items had communalities over 0.5 (Communalities range: 0.557-0.789) and hence, they had sufficient explanation from the factor solution (Hair et al., 2009). The internal consistency of all the three factors was sufficiently high (Cronbach’s a coefficient >0.7) (Hair et al., 2009; Flynn et al., 1995). Overall, the results of the final EFA gave a very satisfactory solution and gave a well-specified determinants’ factor structure.
<table>
<thead>
<tr>
<th>Factors (varimax method)</th>
<th>Items loading in each factor</th>
<th>Loadings</th>
<th>Cronbach’s a coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informational asymmetry</td>
<td>Multiple retailers usually don’t share with us useful information and business knowledge.</td>
<td>0.794</td>
<td></td>
</tr>
<tr>
<td>(25.66% of Total variance)</td>
<td>Multiple retailers usually don’t share with us information about events or changes that may affect our company.</td>
<td>0.768</td>
<td>0.833</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general.</td>
<td>0.763</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multiple retailers won’t volunteer helpful information to us unless we ask them to.</td>
<td>0.755</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Multiple retailers usually don’t share with us information or they do only if we ask them to or in case of information exchange agreement.</td>
<td>0.720</td>
<td></td>
</tr>
<tr>
<td>Dependence</td>
<td>It would be costly to lose these customers.</td>
<td>0.887</td>
<td>0.876</td>
</tr>
<tr>
<td>(20.44% of Total variance)</td>
<td>If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>0.871</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We cannot afford to lose this customer.</td>
<td>0.824</td>
<td></td>
</tr>
<tr>
<td></td>
<td>We are dependent on these customers.</td>
<td>0.824</td>
<td></td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>Multiple retailers don’t support our financial goals.</td>
<td>0.814</td>
<td>0.777</td>
</tr>
<tr>
<td>(11.49% of Total variance)</td>
<td>Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals.</td>
<td>0.810</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Our company and multiple retailers have different financial goals.</td>
<td>0.802</td>
<td></td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>Our commercial agreements with multiple retailers refer to so many stores, promotional activities, products and commercial activities in general that is difficult to verify if they are performing all their contractual obligations under these agreement.</td>
<td>0.818</td>
<td>0.759</td>
</tr>
<tr>
<td>(9.87% of Total variance)</td>
<td>Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>0.800</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There would be significant costs associated with monitoring in detail whether the multiple retailers are performing all of their contractual obligations under our agreement.</td>
<td>0.796</td>
<td></td>
</tr>
</tbody>
</table>

Notes: Total Variance explained: 67.46%; Communalities range: 0.557-0.789; Kaiser-Meyer-Olkin Measure of Sampling Adequacy: 0.820; Bartlett’s Test of Sphericity: $x^2 = 2291.5$, significant 0.000

The results presented in Table 7.13 showed that the refined scales of the four determinants of opportunism (dependence, goal incompatibility, informational asymmetry and behavioral uncertainty) are functioning well and they summarize well the information obtained from the variables included.

After the conduction of the EFA for the opportunistic supply chain practices (revealing the underline dimensions of opportunism) and the EFA for the five
determinants (leading to a well specified factor structure) we will proceed to the validation of the two factor structures by implementing CFA in each of them (Bansal & Voyer, 2000).

The above results of the quantitative study gave valuable information concerning the research objective of the identification and examination of multiple retailers’ supply chain opportunistic practices in the supply chain in the Greek food sector. In particular, insights regarding their underlying dimensions were obtained. In addition, information about the validity of the scales used for measuring the determinants of opportunism was revealed.
7.3 CONFIRMATORY FACTOR ANALYSIS

CFA is a multivariate data analysis technique that examines and confirms how well the observed variables estimate or reflect fewer factors (latent constructs) that can’t be estimated directly (Hair et al., 2009). Contrary to EFA, CFA is a technique with a confirmatory character and addresses the situation when a researcher specifies a model a priori, and tests the conjecture that a relationship between the observed and the latent variables does in fact exist. In the case of CFA, the researcher has a good knowledge about the number of factors that explains the inter-correlations between observed variables. CFA examines the validity of the measurement model which is the operationalization of latent constructs by sets of measured variables. Assessing measurement model validity includes the following steps which are commonly used in literature (e.g., Hair et al., 2009; Liu et al., 2009; Rokkan et al., 2003; Gilliland & Manning, 2002; Brown et al., 2000).

- Examination of the measurement model’s overall fit (whether our data fit the hypothesized model well).
- Examination of the measurement model’s construct validity. Construct validity is assessed through:
  - Convergent validity. According to convergent validity, the measured variables of a latent construct should share a high proportion of variance and is estimated through:
    - Factor loadings
    - Variance extracted
    - Construct reliability
  - Discriminant validity. It helps us examine whether latent constructs which according to the theory shouldn’t be correlated, are indeed uncorrelated according to our data. Thus, with discriminant validity we examine the degree of differentiation between latent constructs.

In this section of the study we will employ CFA in two cases. Firstly, we will validate the results of the two EFAs from the previous section. The CFA of the opportunistic supply chain practices will also test alternative models with the same
number of items but with different factorial structure in order to better validate our model. Secondly we will validate our whole measurement model including both the determinants and the factors of opportunism. The second case is necessary in order to test the validity of our measurement model as a whole. Once validity is achieved we could proceed to SEM and the examination of the impact of the determinants on opportunism.

7.3.1 CFA opportunistic supply chain practices

Our first CFA model encompasses the three factors derived from the EFA: excessive payments, agreement violations and negotiation pressures (section 7.2.1). For a descent model presentation every opportunistic practice has been renamed with the abbreviation opp_ (for opportunism) accompanied with the number of the specific practice from Table 7.14. Table 7.14 presents the items included in the CFA model of the opportunistic practices.

Table 7.14: Items included in the CFA opportunistic supply chain practices model

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>1. Unreasonably high payments as condition for stocking goods.</td>
<td>opp_1</td>
</tr>
<tr>
<td></td>
<td>2. Upfront lump sum payments instead of percentage of the product’s</td>
<td>opp_2</td>
</tr>
<tr>
<td></td>
<td>turnover as condition for stocking goods or for new store</td>
<td></td>
</tr>
<tr>
<td></td>
<td>openings or store refurbishments or better in-store positioning or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>entering in the retailer’s brochure offers.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Unreasonably high payments for new store openings.</td>
<td>opp_3</td>
</tr>
<tr>
<td></td>
<td>4. Unreasonably high payments for the products’ better in-store</td>
<td>opp_4</td>
</tr>
<tr>
<td></td>
<td>positioning.</td>
<td></td>
</tr>
<tr>
<td>Agreement violations</td>
<td>5. Ad-hoc unilateral change to agreement concerning the number of</td>
<td>opp_5</td>
</tr>
<tr>
<td></td>
<td>products/ codes that will enter the stores without compensating the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>supplier.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Ad-hoc unilateral change to agreement concerning the number of</td>
<td>opp_6</td>
</tr>
<tr>
<td></td>
<td>stores in which a product will enter without compensating the</td>
<td></td>
</tr>
<tr>
<td></td>
<td>supplier.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Ad-hoc unilateral change to agreement concerning the number of</td>
<td>opp_7</td>
</tr>
<tr>
<td></td>
<td>in-store promotional activities that will take place without</td>
<td></td>
</tr>
<tr>
<td></td>
<td>compensating the supplier.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Obscure terms of agreement.</td>
<td>opp_8</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>9. Forcing supplier’s prices down or refusing supplier’s justified</td>
<td>opp_9</td>
</tr>
<tr>
<td></td>
<td>price increases due to cost increases.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Falsely suggesting that competitive supplier is offering better</td>
<td>opp_10</td>
</tr>
<tr>
<td></td>
<td>trade terms.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11. Exaggeration of the seriousness of problems (e.g., low demand)</td>
<td>opp_11</td>
</tr>
<tr>
<td></td>
<td>for gaining concessions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>12. Refuse to accept a lower profit margin from a supplier with high</td>
<td>opp_12</td>
</tr>
<tr>
<td></td>
<td>amount of sales with the excuse of the standard category</td>
<td></td>
</tr>
<tr>
<td></td>
<td>average profit margin.</td>
<td></td>
</tr>
</tbody>
</table>
In Figure 7.7 we can see the CFA model of the three factors of opportunism. The model includes three latent variables (i.e., the three factors of opportunism) and twelve observed variables (i.e., the twelve opportunistic practices).

**Figure 7.7: CFA opportunistic supply chain practices model**

Overall model fit of the CFA opportunistic supply chain practices model

CFA was conducted using AMOS 20.0 (Byrne, 2001). The model fit indices are shown in Table 7.15.

| Table 7.15: Fit Indices of the CFA opportunistic supply chain practices model |
|---------------------------------------------|---------|
| Chi-square ($\chi^2$)                      | 76.934  |
| Degrees of freedom (df)                    | 51      |
| Chi-square/ degrees of freedom ($\chi^2$/df) | 1.509   |
| Probability level (p)                      | 0.011   |
| Root Mean Square of Approximation (RMSEA)  | 0.036   |
|                                            | (0.018-0.051) |
| Goodness of Fit Index (GFI)                | 0.970   |
| Adjusted Goodness of Fit Index (AGFI)      | 0.954   |
| Comparative Fit Index (CFI)                | 0.988   |
| Normed Fit Index (NFI)                     | 0.965   |
| Parsimony Normed Fit Index (PNFI)          | 0.745   |

The results of the CFA model showed that our data fit the hypothesized model very well according to commonly used thresholds (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988). The chi-square goodness of fit statistic was statistically significant which indicated that our model was significantly different from our data ($\chi^2=76.934$, $p<0.05$). However, it is commonly accepted that the chi-
square statistic will reject valid models in large samples (Rokkan et al., 2003; Brown et al., 2000; Schilling & Steensma, 2002; Byrne, 2001; Bagozzi & Yi, 1988). Therefore, we relied more heavily to the following goodness of fit indices. We should highlight the fact that RMSEA=0.036 while the acceptable RMSEA values are <0.05. In addition, CFI=0.988 while the acceptable values are >0.95 for samples over 250 (in our case N=398) and 12 variables. PNFI value (0.745) was also acceptable.

In summary, our initial CFA model had acceptable fit indices. Modification indices showed no significant cross-loadings and error covariances. We now have to examine construct validity in order to totally confirm the model.

**Construct validity of the CFA opportunistic supply chain practices model**

**Convergent validity**

**Factor loadings**

Factor loadings are an important aspect of convergent validity and high factor loadings show that variables converge to a common characteristic. Hence, the factor loadings should be statistically significant (Anderson & Gerbing, 1988) and the values of the standardized factor loadings should be >0.5 or better >0.7 (Hair et al., 2009). In Table 7.16 we can see the factor loadings of every variable in their corresponding latent construct.

According to Table 7.16 all standardized factor loadings were >0.7 apart from three items with loadings >0.6.
### Table 7.16: Factor loadings of the CFA opportunistic supply chain practices model

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Variable</th>
<th>Standardized factor loading</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>0.824</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>0.758</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for new store openings.</td>
<td>0.731</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for the products’ better in-store positioning.</td>
<td>0.693</td>
<td>***</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>0.802</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>0.793</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>0.736</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Obscure terms of agreement.</td>
<td>0.656</td>
<td>***</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>0.769</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>0.761</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>0.704</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>0.677</td>
<td>***</td>
</tr>
</tbody>
</table>

*** factor loading is non equal to zero (level of significance: $p<0.001$)

**Variance extracted**

The Average Variance Extracted (AVE) of a group of variables describing a latent construct shows the level of convergence between these variables. AVE is estimated by the sum of the squared standardized factor loadings of a construct’s variables divided by the number of variables (Fornell & Larcker, 1981). That is:

$$\text{AVE} = \frac{\sum \lambda_i^2}{n}$$

where $i=$ the observed variables from 1 to $n$ and $\lambda =$ standardized factor loadings. An acceptable AVE value is $>0.5$ (Hair et al., 2009; Bagozzi & Yi, 1988). An AVE $<0.5$ means that the largest share of the variables’ variance is unexplained by the model.
and hence, convergent validity is not achieved. In Table 7.17 we can see the estimated AVE of every latent construct of our model. The three AVEs extracted for the three factors of opportunism were over the threshold of 0.5.

**Construct reliability**

Construct reliability is another important aspect of convergent validity and measures the overall reliability of the items describing a construct. It is estimated as following (Fornell & Larcker, 1981):

\[
CR = \frac{(\sum \lambda_i)^2}{(\sum \lambda_i)^2 + \sum \delta_i^2}
\]

where \(i\) = the observed variables, \(\lambda\) = standardized factor loadings and \(\delta_i\) = error variances of each variable. An acceptable construct reliability value is >0.7 (Hair et al., 2009). In Table 7.17 we can see the estimated construct reliability of every latent construct of our model. Also in the case of construct reliability the results satisfied the minimum acceptable value of 0.7. The results from Table 7.17 showed that convergent validity was achieved in our model. We now have to examine its discriminant validity.

**Discriminant validity**

One efficient way of examining discriminant validity is to compare the AVE of a latent construct with the square of the highest correlation coefficient (\(\text{Corr}^2\)) of the specific latent construct with the other latent constructs. AVE should be larger than the \(\text{Corr}^2\) (Fornell & Larcker, 1981). In this case, the latent factor explains his variables better than any other latent factor. In Table 6.18 we can see whether the discriminant validity requirements were satisfied or not.

**Table 7.17: Construct validity of the CFA opportunistic supply chain practices model**

<table>
<thead>
<tr>
<th>Latent Construct</th>
<th>High &amp; significant factor loadings</th>
<th>Construct reliability</th>
<th>Average variance extracted</th>
<th>Convergent validity</th>
<th>Corr²</th>
<th>Discriminant validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>YES</td>
<td>0.839</td>
<td>0.567</td>
<td>YES</td>
<td>0.490</td>
<td>YES</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>YES</td>
<td>0.819</td>
<td>0.561</td>
<td>YES</td>
<td>0.490</td>
<td>YES</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>YES</td>
<td>0.836</td>
<td>0.531</td>
<td>YES</td>
<td>0.456</td>
<td>YES</td>
</tr>
</tbody>
</table>

224
The results in Table 7.17 showed that our model satisfied the discriminant validity requirements and all the AVEs extracted were larger than the square of the highest correlation coefficient (Fornell & Larcker, 1981).

The above results showed that both convergent and discriminant validity were achieved in the CFA opportunistic supply chain practices model which means that it is a valid measurement model that could be used further in our analysis. Therefore, CFA confirmed that multiple retailers’ opportunism has three underlying dimensions: excessive payments, agreement violations and negotiation pressures. CFA showed that the items measuring these dimensions reflect them very well.

**CFA opportunistic supply chain practices model comparison**

The CFA model incorporating three factors of opportunistic supply chain practices fits the data very well. Nevertheless, we should examine the case that other models with different construct structures fit the data better than the 3-factor model (Panigyrakis & Theodoridis, 2007). According to Bollen & Long (1992) testing and comparing alternative models is recommended especially in the case when relevant measures aren’t identified in literature. CFA can be applied in testing which of the alternative models has the best fit in the data (Swafford et al., 2008). For this reason, we will estimate two more models that will be compared with the 3-factor model. In our case there is no past study providing a scale for measuring retailers’ opportunistic practicing. Therefore, we will compare the factorial structure that emerged from the previous section with other possible factorial structures that we will propose. The comparison will include: a 1-factor structure that will encompass all the 12 opportunistic practices (i.e., one-dimensional model in which all the items load on one factor illustrating opportunism) (Model 1); a 2-factor structure in which one factor will include the opportunistic practices which are related with payments (4 items) and the other factor will encompass the opportunistic practices which are not directly related with payments (8 items) (i.e., covariation among items is
presented by two factors: payment related practices and non-payment related practices) (Model 2); the 3-factor structure (i.e., covariation among items is explained by three factors which are allowed to correlate) as described earlier (Model 3). In this way, we will try to show that the 3-factor structure has the better fit in the data proving its validity. Table 7.18 presents the items of every factor in each of the three models.

Table 7.18: CFA opportunistic supply chain practices model comparison

<table>
<thead>
<tr>
<th>Model</th>
<th>Factor</th>
<th>Variable</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>opp_1</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Unreasonably high payments for new store openings.</td>
<td>opp_3</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Unreasonably high payments for the products' better in-store positioning.</td>
<td>opp_4</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>opp_5</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>opp_6</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>opp_7</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Obscure terms of agreement.</td>
<td>opp_8</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>opp_9</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>opp_10</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>opp_11</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>opp_12</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>opp_2</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>opp_2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>opp_1</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Unreasonably high payments for new store openings.</td>
<td>opp_3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Unreasonably high payments for the products' better in-store positioning.</td>
<td>opp_4</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>opp_12</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>opp_5</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>opp_6</td>
</tr>
<tr>
<td>Model</td>
<td>Factor</td>
<td>Variable</td>
<td>Item</td>
</tr>
<tr>
<td>-------</td>
<td>--------</td>
<td>----------</td>
<td>------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>compensating the supplier.</td>
<td>opp_7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>opp_7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Obscure terms of agreement.</td>
<td>opp_8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>opp_9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>opp_10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>opp_11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>opp_12</td>
</tr>
<tr>
<td>Factor 1</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>opp_1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>opp_2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for new store openings.</td>
<td>opp_3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for the products’ better in-store positioning.</td>
<td>opp_4</td>
<td></td>
</tr>
<tr>
<td>Model 3</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>opp_5</td>
<td></td>
</tr>
<tr>
<td>Factor 2</td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>opp_6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>opp_7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Obscure terms of agreement.</td>
<td>opp_8</td>
<td></td>
</tr>
<tr>
<td>Factor 3</td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>opp_9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>opp_10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>opp_11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>opp_12</td>
<td></td>
</tr>
</tbody>
</table>

The three models are seen in Figure 7.8. The three competing models are nested models since they have the same number of indicators and they show differences only in the structure of the proposed constructs (Hair et al., 2009). Therefore the comparison can be made in terms of differences in chi-square ($\Delta \chi^2$) (Hair et al., 2009; Bollen, 1989). The examination of $\Delta \chi^2$ is presented in Table 7.19.

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Table 7.19: Statistics for the competitive models

<table>
<thead>
<tr>
<th>Models (N=398)</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of latent variables</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Chi-square ($\chi^2$)</td>
<td>424.973</td>
<td>263.066</td>
<td>76.934</td>
</tr>
<tr>
<td>Degrees of freedom (df)</td>
<td>54</td>
<td>53</td>
<td>51</td>
</tr>
<tr>
<td>Comparison by $\Delta \chi^2$</td>
<td>Model 1 and 3</td>
<td>Model 2 and 3</td>
<td></td>
</tr>
<tr>
<td>$\Delta \chi^2$</td>
<td>348.039</td>
<td>186.132</td>
<td></td>
</tr>
<tr>
<td>$\Delta$df</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Statistical significance</td>
<td>YES</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>(Values of $\chi^2$ for df 3 and 2)</td>
<td>(16.27, p=0.001)</td>
<td>(13.82, p=0.001)</td>
<td></td>
</tr>
<tr>
<td>Root Mean Square of Approximation (RMSEA)</td>
<td>0.132</td>
<td>0.100</td>
<td>0.036</td>
</tr>
<tr>
<td>(0.120-0.143)</td>
<td>(0.088-0.112)</td>
<td>(0.018-0.051)</td>
<td></td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.815</td>
<td>0.874</td>
<td>0.970</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.733</td>
<td>0.815</td>
<td>0.954</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.824</td>
<td>0.901</td>
<td>0.988</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.805</td>
<td>0.879</td>
<td>0.965</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
<td>0.659</td>
<td>0.706</td>
<td>0.745</td>
</tr>
</tbody>
</table>
Table 7.19 showed that there were significant differences between the models. In particular, comparing the 1-factor model with the 3-factor one gave a $\Delta \chi^2$ of 348.039. This value revealed statistical significant difference ($p<0.001$) between the two models since the 1-factor model had only three more degrees of freedom available. The comparison between the 2-factor model and the 3-factor one gave similar results. $\Delta \chi^2$ was 186.132 and $\Delta df$ was equal to 2. These results also revealed statistical significant difference ($p<0.001$) between the two models. In addition, all fit indices were much better in the case of the 3-factor model. Therefore, we can conclude that Model 3 fit the specific dataset better than the other two models.

These results indicated that trying to force items measuring retailers’ opportunism onto fewer factors leads to a significant deterioration of the model fit relative to the 3-factor model identified from the previous results of the EFA and CFA. Consequently, the examined supply chain practices which multiple retailers may use in their relationships with suppliers could be better grouped in three underlying dimensions which are related with excessive payments, agreement violations and negotiation pressures.

### 7.3.2 CFA determinants of opportunism

The CFA of the determinants of opportunism encompasses four factors of determinants: dependence, goal incompatibility, informational asymmetry and behavioral uncertainty. We should note that the construct of business related environmental uncertainty was excluded from the analysis due to lack of reliability and also that some determinants’ variables were dropped during the EFA refinement process. For a descent model presentation the variables of the five determinants will be renamed. Hence, dependence items will be renamed as dep_ accompanied with the item’s corresponding number from Table 7.20, goal Incompatibility items will be renamed as gi_ accompanied with the item’s corresponding number from Table 7.20, informational asymmetry items will be renamed as ia_ accompanied with the
item’s corresponding number from Table 7.20 and behavioral uncertainty items will be renamed as bu_ accompanied with the item’s corresponding number from Table 7.20. Through a measurement purification process, one item from the informational asymmetry scale (ia_5: Multiple retailers usually don’t share with us information or they do only if we ask them to or in case of information exchange agreement) was deleted because it didn’t share a high proportion of variance with the other items and therefore, model fit and convergent validity issues for the model were raised.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Item</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence</td>
<td>1. It would be costly to lose these customers.</td>
<td>dep_1</td>
</tr>
<tr>
<td></td>
<td>2. We are dependent on these customers.</td>
<td>dep_2</td>
</tr>
<tr>
<td></td>
<td>3. If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>dep_3</td>
</tr>
<tr>
<td></td>
<td>4. We cannot afford to lose this customer.</td>
<td>dep_4</td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>1. Our company and multiple retailers have different financial goals.</td>
<td>gi_1</td>
</tr>
<tr>
<td></td>
<td>2. Multiple retailers don’t support our financial goals.</td>
<td>gi_2</td>
</tr>
<tr>
<td></td>
<td>3. Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals.</td>
<td>gi_3</td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>1. Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general.</td>
<td>ia_1</td>
</tr>
<tr>
<td></td>
<td>2. Multiple retailers usually don’t share with us useful information and business knowledge.</td>
<td>ia_2</td>
</tr>
<tr>
<td></td>
<td>3. Multiple retailers won’t volunteer helpful information to us unless we ask them to.</td>
<td>ia_3</td>
</tr>
<tr>
<td></td>
<td>4. Multiple retailers usually don’t share with us information about events or changes that may affect our company.</td>
<td>ia_4</td>
</tr>
<tr>
<td></td>
<td>5. Multiple retailers usually don’t share with us information or they do only if we ask them to or in case of information exchange agreement.*</td>
<td>ia_5</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>1. There would be significant costs associated with monitoring in detail whether the multiple retailers are performing all of their contractual obligations under our agreement.</td>
<td>bu_1</td>
</tr>
<tr>
<td></td>
<td>2. Our commercial agreements with multiple retailers refer to so many stores, promotional activities, products and commercial activities in general that is difficult to verify if they are performing all their contractual obligations under these agreement.</td>
<td>bu_2</td>
</tr>
<tr>
<td></td>
<td>3. Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>bu_3</td>
</tr>
</tbody>
</table>

* Item was excluded from the analysis

In Figure 7.9 we can see the CFA model of the four factors of determinants. The model includes 4 latent variables (dependence, goal incompatibility, informational asymmetry and behavioral uncertainty) and 14 observed variables.
Overall model fit of the CFA determinants of opportunism model

CFA was conducted using AMOS 20.0 (Byrne, 2001). The model fit indices are shown in Table 7.21.

Table 7.21: Fit Indices of the CFA opportunistic supply chain practices model

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square (χ²)</td>
<td>80.793</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>71</td>
</tr>
<tr>
<td>Chi-square/ degrees of freedom (χ²/df)</td>
<td>1.138</td>
</tr>
<tr>
<td>Probability level</td>
<td>0.200</td>
</tr>
<tr>
<td>Root Mean Square of Approximation (RMSEA)</td>
<td>0.019</td>
</tr>
<tr>
<td></td>
<td>(0.000-0.036)</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.972</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.958</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.995</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.962</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
<td>0.751</td>
</tr>
</tbody>
</table>

The results of the CFA model showed that our data fit the hypothesized model very well according to commonly used thresholds (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988). The chi-square goodness of fit statistic was statistically insignificant which indicated that our model wasn’t significantly different from our data (χ²=80.793, p=0.200). Moreover, RMSEA=0.019 while the acceptable RMSEA values are <0.05 and CFI=0.995 while the acceptable values are >0.92 for samples over 250 (in our case N=398) and 14 variables. PNFI value (0.751) was also acceptable. In summary, our initial CFA model had an excellent fit. Modification
indices showed no significant cross-loadings and error covariances. We now have to examine construct validity in order to totally confirm the model.

**Construct validity of the CFA supply chain opportunistic practices model**

*Convergent validity*

**Factor loadings**

High factor loadings show that variables converge to a common characteristic. Hence, the factor loadings should be statistically significant (Anderson & Gerbing, 1988) and the values of the standardized factor loadings should be >0.5 or better >0.7 (Hair et al., 2009). In Table 7.22 we can see the factor loadings of every variable on their corresponding latent construct.

**Table 7.22: Factor loadings of the CFA determinants of opportunism model**

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Variable</th>
<th>Standardized factor loading</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence</td>
<td>It would be costly to lose these customers.</td>
<td>0.860</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>We are dependent on these customers.</td>
<td>0.757</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>0.829</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>We cannot afford to lose this customer.</td>
<td>0.755</td>
<td>***</td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>Our company and multiple retailers have different financial goals.</td>
<td>0.731</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers don’t support our financial goals.</td>
<td>0.774</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals.</td>
<td>0.698</td>
<td>***</td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general.</td>
<td>0.762</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers usually don’t share with us useful information and business knowledge.</td>
<td>0.752</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers won’t volunteer helpful information to us unless we ask them to.</td>
<td>0.691</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers usually don’t share with us information about events or changes that may affect our company.</td>
<td>0.724</td>
<td>***</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>There would be significant costs associated with monitoring in detail whether the multiple retailers are performing all of their contractual obligations under our agreement.</td>
<td>0.720</td>
<td>***</td>
</tr>
</tbody>
</table>
### Table 7.22

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Variable</th>
<th>Standardized factor loading</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Our commercial agreements with multiple retailers refer to so many stores, promotional activities, products and commercial activities in general that is difficult to verify if they are performing all their contractual obligations under these agreement.</td>
<td>0.773</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>0.659</td>
<td>***</td>
</tr>
</tbody>
</table>

*** factor loading is non equal to zero (level of significance: p<0.001)

(R): The specific questions are reversed in relation to the other determinants’ questions and their means have been reversed to match with the means of the other determinants’ questions.

According to Table 7.22 all standardized factor loadings were >0.7 apart from three items with loadings >0.6.

**Variance extracted**

We estimate the AVE for every latent construct in our model (Table 7.23). The AVE extracted for the four determinants were over the threshold of 0.5 (Hair et al., 2009; Bagozzi & Yi, 1988).

**Construct reliability**

In Table 7.23 we can see the estimated construct reliability of every latent construct of our model. Also in the case of construct reliability the results satisfied the minimum acceptable value of 0.7 (Hair et al., 2009).

The results from Table 7.23 showed that convergent validity was achieved in our model. We now have to examine its discriminant validity.

**Discriminant validity**

In Table 7.23 we can see whether the discriminant validity requirements were satisfied or not.
Table 7.23: Construct validity of the CFA determinants of opportunism model

<table>
<thead>
<tr>
<th>Latent Construct</th>
<th>High &amp; significant factor loadings</th>
<th>Construct reliability</th>
<th>Average variance extracted</th>
<th>Convergent validity</th>
<th>Corr²</th>
<th>Discriminant validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence</td>
<td>YES</td>
<td>0.878</td>
<td>0.642</td>
<td>YES</td>
<td>0.025</td>
<td>YES</td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>YES</td>
<td>0.779</td>
<td>0.540</td>
<td>YES</td>
<td>0.194</td>
<td>YES</td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>YES</td>
<td>0.822</td>
<td>0.537</td>
<td>YES</td>
<td>0.194</td>
<td>YES</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>YES</td>
<td>0.762</td>
<td>0.517</td>
<td>YES</td>
<td>0.108</td>
<td>YES</td>
</tr>
</tbody>
</table>

The results in Table 7.23 showed that our model satisfied the discriminant validity requirements and all AVEs were larger than the square of the highest correlation coefficient (Fornell & Larcker, 1981). Therefore, the constructs were distinct from each other.

The above results showed that both convergent and discriminant validity were achieved in the CFA determinants of opportunism model which means that it is a valid measurement model that could be used further in our analysis. Therefore, CFA confirmed that the items used for measuring the four determinants of opportunism (i.e., dependence, goal incompatibility, informational asymmetry and behavioral uncertainty) reflect them very well.

7.3.3 CFA final model

Even though the two CFA models (the one of the opportunistic practices and the one of the determinants) showed excellent model fit and construct validity, prior to estimating the structural model, another measurement analysis should be conducted (Choi et al., 2004); a CFA incorporating both the three factors of opportunism and the four determinants factors. The final CFA model includes seven latent variables (3 factors of opportunism and 4 factors of determinants) and 28 observed variables (12 opportunistic practices and 14 determinants variables).

For a descent model presentation we will use the variable names from Table 7.14 for the variables of the three factors of opportunism and the variable names from Table 7.20 for the variables of the four determinants factors. In Figure 7.10 we can see the final CFA model.
CFA was conducted using AMOS 20.0 (Byrne, 2001). The model fit indices are shown in Table 7.24. The results of the CFA model showed that our data fit the hypothesized model very well according to commonly used thresholds (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988). The chi-square goodness of fit statistic was statistically significant which indicated that our model was significantly different from our data ($\chi^2=383.340$, $p<0.01$). However, it is commonly accepted that the chi-square statistic will reject valid models in large samples (Rokkan et al., 2003; Brown et al., 2000; Schilling & Steensma, 2002; Byrne, 2001; Bagozzi & Yi, 1988). Therefore, we relied more heavily to the following goodness of fit indices. We should highlight the fact that RMSEA=0.031 while the acceptable RMSEA values are <0.05. In addition, CFI=0.976 while the acceptable values are >0.92 for samples over 250 (in our case N=398) and 26 variables. PNFI
value (0.745) was also acceptable. In summary, our initial CFA model had very good fit indices. Modification indices showed no significant cross-loadings and error covariances.

We now have to examine construct validity in order to totally confirm the model.

Table 7.24: Fit Indices of the CFA final model

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square ($\chi^2$)</td>
<td>383.340</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>278</td>
</tr>
<tr>
<td>Chi-square/ degrees of freedom ($\chi^2$/df)</td>
<td>1.379</td>
</tr>
<tr>
<td>Probability level</td>
<td>0.000</td>
</tr>
<tr>
<td>Root Mean Square of Approximation (RMSEA)</td>
<td>0.031 (0.023-0.038)</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.931</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.913</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.976</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.918</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
<td>0.785</td>
</tr>
</tbody>
</table>

Construct validity of the CFA final model

**Convergent validity**

Factor loadings

High factor loadings show that variables converge to a common characteristic. Hence, the factor loadings should be statistically significant (Anderson & Gerbing, 1988) and the values of the standardized factor loadings should be >0.5 or better >0.7 (Hair et al., 2009). In Table 7.25 we can see the factor loadings of every variable in their corresponding latent construct. According to Table 7.25 all standardized factor loadings were >0.7 apart from five items with loadings >0.6.
<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Variable</th>
<th>Standardized factor loading</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>0.824</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>0.757</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for new store openings.</td>
<td>0.731</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for the products’ better in-store positioning.</td>
<td>0.696</td>
<td>***</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>0.804</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning regarding the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>0.790</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning regarding the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>0.734</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Obscure terms of agreement.</td>
<td>0.657</td>
<td>***</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>0.766</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>0.758</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>0.708</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>0.680</td>
<td>***</td>
</tr>
<tr>
<td>Dependence</td>
<td>It would be costly to lose these customers.</td>
<td>0.857</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>We are dependent on these customers.</td>
<td>0.759</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>0.833</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>We cannot afford to lose this customer.</td>
<td>0.752</td>
<td>***</td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>Our company and multiple retailers have different financial goals.</td>
<td>0.732</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers don’t support our financial goals.</td>
<td>0.755</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals.</td>
<td>0.717</td>
<td>***</td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general.</td>
<td>0.765</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers usually don’t share with us useful information and business knowledge.</td>
<td>0.750</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers won’t volunteer helpful information to us unless we ask them to.</td>
<td>0.692</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Multiple retailers usually don’t share with us information</td>
<td>0.721</td>
<td>***</td>
</tr>
<tr>
<td>Latent construct</td>
<td>Variable</td>
<td>Standardized factor loading</td>
<td>Sig.</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>There would be significant costs associated with monitoring in detail whether the multiple retailers are performing all of their contractual obligations under our agreement.</td>
<td>0.705</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Our commercial agreements with multiple retailers refer to so many stores, promotional activities, products and commercial activities in general that is difficult to verify if they are performing all their contractual obligations under these agreement.</td>
<td>0.789</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td>Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>0.656</td>
<td>***</td>
</tr>
</tbody>
</table>

*** factor loading is non equal to zero (level of significance: p<0.001)
(R): The specific questions are reversed in relation to the other determinants’ questions and their means have been reversed to match with the means of the other determinants’ questions

Variance extracted

We estimated the AVE for every latent construct in our model (Table 7.26). The AVE extracted for the four determinants were over the threshold of 0.5 (Hair et al., 2009; Bagozzi & Yi, 1988).

Construct reliability

In Table 7.26 we can see the estimated construct reliability of every latent construct of our model. Also in the case of construct reliability the results satisfied the minimum acceptable value of 0.7 (Hair et al., 2009).

The results from Table 7.26 showed that convergent validity was achieved in our model. We now have to examine its discriminant validity.

Discriminant validity

In Table 7.26 we can see whether the discriminant validity requirements were satisfied or not.
The results in Table 7.26 showed that our model satisfied the discriminant validity requirements and all AVEs were larger than the square of the highest correlation coefficient (Fornell & Larcker, 1981). Therefore, the constructs were distinct from each other.

The above results showed that both convergent and discriminant validity were achieved in the final CFA model which means that it is a valid measurement model that could be used further in our analysis. Therefore, we can proceed to the structural model for examining the structural relationships between opportunism and its determinants.

The overall results of the CFA gave valuable information concerning the research objective of the identification and examination of multiple retailers’ supply chain opportunistic practices in the supply chain in the Greek food sector. In particular, insights regarding their underlying dimensions were obtained. In addition, information about the validity of the scales used for measuring the determinants of opportunism was revealed.
7.4 STRUCTURAL EQUATION MODELLING

7.4.1 2nd order structural model of opportunism and its determinants

The Structural Equation Modeling (SEM) methodology provides a reliable way of testing the theory (Hair et al., 2009; Byrne, 2001). The researcher may express theory in the form of relationships (structural model) between measured variables and non observable latent constructs and then SEM can assess whether the observed data confirm the theoretical assumptions. In this section we will apply SEM for examining the relationships between the determinants and opportunism. Since the three factors of opportunistic supply chain practices are all related to retailers’ opportunistic behavior we can assume that a higher order factor of opportunism accounts for covariance between the three factors (Jarvis et al., 2003). Therefore in our structural model, we will examine the impact of the four determinants on the 2nd order factor of opportunism which encompasses the three factors of opportunistic practices (i.e., excessive payments, agreement violations and negotiation pressures).

The process that should be followed for assessing the structural model validity includes the following tests which are commonly used in the literature (e.g., Hair et al., 2009; Cavusgil et al., 2004; Rokkan et al., 2003; Skarmeas et al., 2002; Gilliland & Manning, 2002; Woodside et al., 1989).

- Examination of the structural model’s overall fit (whether our data fit the hypothesized model well).
- Examine if the structural parameters estimates are statistical significant and in the hypothesized direction.
- Examination of the theoretical validity of our structural model by testing whether the parameter estimates are nontrivial.
- Examination of possible relations between the latent constructs through standardized residuals and modification indices. The results from this analysis will give us information regarding existing relations that are not included in the model.
• Cross-validation of the results through regression and multiple regression analysis.

We first examine the higher order factor of opportunism which encompasses the three factors of multiple retailers’ opportunistic practices as included in the structural model (Fig. 7.11). Items included are shown in Table 7.30.

**Figure 7.11: Second order factor of opportunism**

![Diagram of second order factor of opportunism](image)

Table 7.27 and Table 7.28 present the parameter estimates and the standardized regression weights of the second order factor model respectively. We should note that SEM treats the 2nd order factor as an ordinary construct and hence, the three factors of opportunism are treated as variables.

**Table 7.27: Second order factor model parameter estimates**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Construct/ Variable</th>
<th>Regression weight estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd order factor of opportunism</td>
<td>Excessive payments</td>
<td>1.271</td>
<td>0.119</td>
<td>10.641</td>
<td>***</td>
</tr>
<tr>
<td>2nd order factor of opportunism</td>
<td>Agreement violations</td>
<td>1.191</td>
<td>0.115</td>
<td>10.354</td>
<td>***</td>
</tr>
<tr>
<td>2nd order factor of opportunism</td>
<td>Negotiation pressures</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** Level of significance: p<0.001
Table 7.28: Standardized regression weights of the second order factor model

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Latent construct</th>
<th>Standardized regression weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd order factor of opportunism</td>
<td>---&gt; Excessive payments</td>
<td>0.848**</td>
</tr>
<tr>
<td>2nd order factor of opportunism</td>
<td>---&gt; Agreement violations</td>
<td>0.824**</td>
</tr>
<tr>
<td>2nd order factor of opportunism</td>
<td>---&gt; Negotiation pressures</td>
<td>0.803**</td>
</tr>
</tbody>
</table>

** level of significance: p<0.01

The above results show that the second order factor of opportunism causes the three factors of multiple retailers' opportunistic practices. More specifically, multiple retailers' opportunism is represented very well by the three first order factors (i.e., excessive payments, agreement violations and negotiation pressures). Hence, the parameter estimates were significant and the regression weights were significantly different from zero in a significance level of p<0.001. This is also clear from the high critical ratio (C.R.) values which were all over the 1.96 threshold (Hair et al., 2009).

SEM is capable of explaining both direct and indirect effects between latent variables (Jöreskog & Sörbom, 2001). Therefore, we will also examine possible indirect effects of the four determinants to specific opportunistic factors as well. Table 7.29 displays the correlations between the study's constructs to provide a general picture of their inter-correlations.

Table 7.29: Correlation matrix

<table>
<thead>
<tr>
<th>Construct</th>
<th>2nd order factor of opportunism</th>
<th>Dependence</th>
<th>Goal incompatibility</th>
<th>Informational asymmetry</th>
<th>Behavioral uncertainty</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd order factor of opportunism</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dependence</td>
<td>0.209**</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>0.478**</td>
<td>0.021</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>0.335**</td>
<td>-0.083</td>
<td>0.440**</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>0.330**</td>
<td>0.161*</td>
<td>0.328**</td>
<td>0.311**</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* level of significance: p<0.05  
** level of significance: p<0.01

In Figure 7.12 we can see the examined structural model of opportunism and its determinants while Table 7.30 presents all the items included in our structural
model. It should be noted that the twelve items of opportunism (opp_1-opp_12) are included in the structural model and they are indicators of the three first order factors of opportunistic practices. Nevertheless, for presentation reasons the twelve items and the three first order factors are not included in Figure 7.12.

**Figure 7.12: Examined structural model**

![Examined structural model diagram]

**Table 7.30: Items included in the structural model**

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Variable</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>opp_1</td>
</tr>
<tr>
<td></td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>opp_2</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for new store openings.</td>
<td>opp_3</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for the products’ better in-store positioning.</td>
<td>opp_4</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>opp_5</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>opp_6</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>opp_7</td>
</tr>
<tr>
<td></td>
<td>Obscure terms of agreement.</td>
<td>opp_8</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>opp_9</td>
</tr>
<tr>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>opp_10</td>
</tr>
<tr>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>opp_11</td>
</tr>
</tbody>
</table>
### Latent Construct: Variable

<table>
<thead>
<tr>
<th>Latent Construct</th>
<th>Variable</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>opp_12</td>
<td></td>
</tr>
<tr>
<td>It would be costly to lose these customers.</td>
<td>dep_1</td>
<td></td>
</tr>
<tr>
<td>We are dependent on these customers.</td>
<td>dep_2</td>
<td></td>
</tr>
<tr>
<td>If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>dep_3</td>
<td></td>
</tr>
<tr>
<td>We cannot afford to lose this customer.</td>
<td>dep_4</td>
<td></td>
</tr>
<tr>
<td>Our company and multiple retailers have different financial goals.</td>
<td>gi_1</td>
<td></td>
</tr>
<tr>
<td>Multiple retailers don’t support our financial goals.</td>
<td>gi_2</td>
<td></td>
</tr>
<tr>
<td>Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals.</td>
<td>gi_3</td>
<td></td>
</tr>
<tr>
<td>Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general.</td>
<td>ia_1</td>
<td></td>
</tr>
<tr>
<td>Multiple retailers usually don’t share with us useful information and business knowledge.</td>
<td>ia_2</td>
<td></td>
</tr>
<tr>
<td>Multiple retailers won’t volunteer helpful information to us unless we ask them to.</td>
<td>ia_3</td>
<td></td>
</tr>
<tr>
<td>Multiple retailers usually don’t share with us information about events or changes that may affect our company.</td>
<td>ia_4</td>
<td></td>
</tr>
<tr>
<td>There would be significant costs associated with monitoring in detail whether the multiple retailers are performing all of their contractual obligations under our agreement.</td>
<td>bu_1</td>
<td></td>
</tr>
<tr>
<td>Our commercial agreements with multiple retailers refer to so many stores, promotional activities, products and commercial activities in general that is difficult to verify if they are performing all their contractual obligations under these agreement.</td>
<td>bu_2</td>
<td></td>
</tr>
<tr>
<td>Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>bu_3</td>
<td></td>
</tr>
</tbody>
</table>

(R): The specific questions are reversed in relation to the other determinants’ questions and their means have been reversed to match with the means of the other determinants’ questions

### 7.4.1.1 Overall model fit of the structural model

The model fit indices of the structural model are shown in Table 7.31. SEM was conducted using AMOS 20.0 (Byrne, 2001). The model fit indices showed that our data fit the hypothesized structural model very well according to commonly used thresholds (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988). The chi-square goodness of fit statistic was statistically significant which indicated that our model was significantly different from our data ($\chi^2=395.697$, $p<0.01$).
However, it is commonly accepted that the chi-square statistic will reject valid models in large samples (Rokkan et al., 2003; Brown et al., 2000; Schilling & Steensma, 2002; Byrne, 2001; Bagozzi & Yi, 1988). Therefore, we relied more heavily to the following goodness of fit indices. We should highlight the fact that RMSEA=0.031 while the acceptable RMSEA values are <0.05. In addition, CFI=0.975 while the acceptable values are >0.92 for samples over 250 (in our case N=398) and 26 variables. PNFI value (0.805) was also acceptable.

<table>
<thead>
<tr>
<th>Table 7.31: Fit Indices of the structural model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square (χ²)</td>
</tr>
<tr>
<td>Degrees of freedom</td>
</tr>
<tr>
<td>Chi-square/ degrees of freedom (χ²/df)</td>
</tr>
<tr>
<td>Probability level</td>
</tr>
<tr>
<td>Root Mean Square of Approximation (RMSEA)</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
</tr>
</tbody>
</table>

**7.4.1.2 Examination of statistical significance and predicted direction of parameter estimates**

Table 7.32 presents the parameter estimates (or regression weights) of our structural model. Results in Table 7.32 showed that the parameter estimates of our structural model were significant and they were also towards the hypothesized direction.

The results showed that most of the regression weights were significantly different from zero in a significance level of p<0.001 while two regression weights were significantly different from zero in a significance level of p<0.05. This is also clear from the high critical ratio (C.R.) values which were all over the 1.96 threshold (Hair et al., 2009).
Table 7.32: Structural model parameter estimates

<table>
<thead>
<tr>
<th>Construct</th>
<th>Construct/ Variable</th>
<th>Regression weight estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence</td>
<td>--&gt; 2nd order factor of opportunism</td>
<td>0.149</td>
<td>0.044</td>
<td>3.380</td>
<td>***</td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>--&gt; 2nd order factor of opportunism</td>
<td>0.305</td>
<td>0.063</td>
<td>4.867</td>
<td>***</td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>--&gt; 2nd order factor of opportunism</td>
<td>0.138</td>
<td>0.063</td>
<td>2.198</td>
<td>0.028</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>--&gt; 2nd order factor of opportunism</td>
<td>0.125</td>
<td>0.062</td>
<td>2.023</td>
<td>0.043</td>
</tr>
<tr>
<td>Excessive payments</td>
<td>--&gt; opp_1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excessive payments</td>
<td>--&gt; opp_2</td>
<td>0.921</td>
<td>0.058</td>
<td>15.779</td>
<td>***</td>
</tr>
<tr>
<td>Excessive payments</td>
<td>--&gt; opp_3</td>
<td>0.881</td>
<td>0.058</td>
<td>15.190</td>
<td>***</td>
</tr>
<tr>
<td>Excessive payments</td>
<td>--&gt; opp_4</td>
<td>0.834</td>
<td>0.058</td>
<td>14.281</td>
<td>***</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>--&gt; opp_5</td>
<td>1.034</td>
<td>0.064</td>
<td>16.183</td>
<td>***</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>--&gt; opp_6</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreement violations</td>
<td>--&gt; opp_7</td>
<td>0.943</td>
<td>0.064</td>
<td>14.645</td>
<td>***</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>--&gt; opp_8</td>
<td>0.825</td>
<td>0.064</td>
<td>12.938</td>
<td>***</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>--&gt; opp_9</td>
<td>1.019</td>
<td>0.071</td>
<td>14.285</td>
<td>***</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>--&gt; opp_10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>--&gt; opp_11</td>
<td>0.963</td>
<td>0.073</td>
<td>13.227</td>
<td>***</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>--&gt; opp_12</td>
<td>0.829</td>
<td>0.065</td>
<td>12.755</td>
<td>***</td>
</tr>
<tr>
<td>Dependence</td>
<td>--&gt; dep_1</td>
<td>1.099</td>
<td>0.066</td>
<td>16.762</td>
<td>***</td>
</tr>
<tr>
<td>Dependence</td>
<td>--&gt; dep_2</td>
<td>1.057</td>
<td>0.071</td>
<td>14.864</td>
<td>***</td>
</tr>
<tr>
<td>Dependence</td>
<td>--&gt; dep_3</td>
<td>1.104</td>
<td>0.067</td>
<td>16.369</td>
<td>***</td>
</tr>
<tr>
<td>Dependence</td>
<td>--&gt; dep_4</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>--&gt; gi_1</td>
<td>0.911</td>
<td>0.077</td>
<td>11.771</td>
<td>***</td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>--&gt; gi_2</td>
<td>1.075</td>
<td>0.090</td>
<td>11.949</td>
<td>***</td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>--&gt; gi_3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>--&gt; ia_1</td>
<td>1.100</td>
<td>0.087</td>
<td>12.696</td>
<td>***</td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>--&gt; ia_2</td>
<td>1.061</td>
<td>0.085</td>
<td>12.530</td>
<td>***</td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>--&gt; ia_3</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>--&gt; ia_4</td>
<td>1.068</td>
<td>0.088</td>
<td>12.161</td>
<td>***</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>--&gt; bu_1</td>
<td>1.213</td>
<td>0.115</td>
<td>10.525</td>
<td>***</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>--&gt; bu_2</td>
<td>1.299</td>
<td>0.122</td>
<td>10.650</td>
<td>***</td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>--&gt; bu_3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** level of significance: p<0.001

7.4.1.3 Examination of the structural model’s theoretical validity

In order to examine the theoretical validity of the hypothesized relationships between the four determinants (i.e., dependence, goal incompatibility, informational
asymmetry and behavioral uncertainty) and opportunism we have to examine the standardized loading estimates of our model (Hair et al., 2009). The theory will be confirmed if the standardized loadings are significant and positive (since they are determinants of opportunism).

Table 7.33 presents the standardized loading estimates of our model and their level of significance. In addition, Table 7.33 shows the indirect effects of the four determinants on the three distinct factors of opportunism.

**Table 7.33: Standardized regression weights of the 2nd order structural model**

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Latent construct</th>
<th>Standardized regression weight</th>
<th>Standardized indirect effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence</td>
<td>2nd order factor of opportunism</td>
<td>0.193**</td>
<td></td>
</tr>
<tr>
<td>Goal Incompatibility</td>
<td>2nd order factor of opportunism</td>
<td>0.365**</td>
<td></td>
</tr>
<tr>
<td>Informational Asymmetry</td>
<td>2nd order factor of opportunism</td>
<td>0.149*</td>
<td></td>
</tr>
<tr>
<td>Behavioral Uncertainty</td>
<td>2nd order factor of opportunism</td>
<td>0.133*</td>
<td></td>
</tr>
<tr>
<td>Dependence</td>
<td>Excessive payments</td>
<td>0.163</td>
<td></td>
</tr>
<tr>
<td>Dependence</td>
<td>Agreement violations</td>
<td>0.159</td>
<td></td>
</tr>
<tr>
<td>Dependence</td>
<td>Negotiation pressures</td>
<td>0.155</td>
<td></td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>Excessive payments</td>
<td>0.309</td>
<td></td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>Agreement violations</td>
<td>0.301</td>
<td></td>
</tr>
<tr>
<td>Goal incompatibility</td>
<td>Negotiation pressures</td>
<td>0.293</td>
<td></td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>Excessive payments</td>
<td>0.127</td>
<td></td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>Agreement violations</td>
<td>0.123</td>
<td></td>
</tr>
<tr>
<td>Informational asymmetry</td>
<td>Negotiation pressures</td>
<td>0.120</td>
<td></td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>Excessive payments</td>
<td>0.113</td>
<td></td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>Agreement violations</td>
<td>0.110</td>
<td></td>
</tr>
<tr>
<td>Behavioral uncertainty</td>
<td>Negotiation pressures</td>
<td>0.107</td>
<td></td>
</tr>
</tbody>
</table>

* level of significance: p<0.05  
** level of significance: p<0.01

From the results of Table 7.33 we can conclude that the examined parameter estimates are nontrivial. Goal incompatibility had the highest effect (standardized regression weight=0.365) on opportunism and dependence had the second highest effect (standardized regression weight=0.193). Informational asymmetry and behavioral uncertainty had also a significant but lower effect on opportunism.
Effects of different statistical significance from different determinants in the same model are commonly reported in literature (e.g., Wang, 2012; Handley & Benton, 2011; Liu et al., 2009; Wong et al., 2005; Skarmeas et al., 2002). The results regarding the indirect effects showed that every determinant had approximately the same effect on each of the three factors.

Figure 7.13 presents the resulted structural model. The proportion of variance of opportunism that is explained by the four predictors is 30.9%. This means that the variance of opportunism is explained by dependence, goal incompatibility, informational asymmetry and behavioral uncertainty in a satisfactory level.

The above results come in accordance with the theoretical hypotheses that we developed concerning the creation of multiple retailers’ opportunism in the supply chain in the Greek food sector. The proposed theoretical relationships between the examined constructs fit and described our data very well. The results showed that multiple retailers’ opportunism manifested in the form of specific supply chain practices and represented by three underlying dimensions (i.e., excessive payments, agreement violations and negotiation pressures) are determined by four factors: dependence, goal incompatibility, informational asymmetry and behavioral uncertainty.
In particular, the application of SEM methodology on our data showed that suppliers’ dependence on multiple retailers as reflected by the costs of the termination of their relationships, the general level of suppliers’ dependence, the impact on the suppliers’ total sales of the termination of their relationships and whether suppliers’ could afford losing a big customer significantly increases multiple retailer’s opportunism in terms of requiring from their suppliers excessive payments for various reasons, breaching parts of their agreements and putting high pressures on them during negotiations (Hypothesis 1).

Moreover, the analysis showed that goal incompatibility between suppliers and multiple retailers in financial objectives as reflected by the general level of difference between the financial goals of the two parties, the level of support that multiple retailers offer to suppliers for achieving their financial objectives and the level of conflict between the financial goals of the two partners positively impacts in a high degree the three factors representing multiple retailers’ opportunism (Hypothesis 2).

In addition, the data analysis revealed that informational asymmetry in favor of multiple retailers as reflected by retailers’ avoidance of sharing and volunteering information to suppliers concerning product category, competitors, the market in general, business knowledge and events or changes that could affect the supplier increases multiple retailers’ opportunism as reflected by excessive payments, agreement violations and negotiation pressures (Hypothesis 3).

Finally, SEM methodology applied on the data obtained from a sample of 398 suppliers of the Greek market showed that multiple retailers’ behavioral uncertainty as reflected by the costs associated with monitoring in detail retailers’ performance, the complexity of the agreements between the two parties and the suppliers’ accuracy of information concerning the retailers’ performance determines multiple retailers’ opportunism as reflected by excessive payments, agreement violations and negotiation pressures (Hypothesis 5).
7.4.1.4 Examination of the structural model’s standardized residuals and modification indices

Standardized residuals with values of 2.5 (or 4) or greater (in absolute values) indicate significant relationships between latent constructs (Hair et al., 2009). The results showed that all standardized residuals were <2.5 apart from 2 cases that were <4. Modification indices showed no significant cross-loadings and error covariances. These results indicate that there are no significant relationships that aren’t included in our model.

7.4.1.5 Cross-validation of the results through regression and multiple regression analyses

Regression and multiple regression analyses were applied for testing the various hypotheses in order to further strengthen the results of SEM (Woodside et al., 1989). It must be confirmed that each of the four determinants (i.e., dependence, goal incompatibility, informational asymmetry and behavioral uncertainty) has a significant separate impact on opportunism without the presence of the other determinants. Four regression analyses were applied and the results are shown in Table 7.34. The items of every scale (i.e., 4 dependence items, 3 goal incompatibility items, 4 informational asymmetry items, 3 behavioral uncertainty items and 12 opportunism items) were summated for the regression analysis purposes.

Table 7.34: Separate regression analyses of the four determinants and opportunism

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>Standardized regression coefficient</th>
<th>Adjusted R square</th>
<th>F criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunism*</td>
<td>Dependence*</td>
<td>0.162</td>
<td>0.024**</td>
<td>10.648**</td>
</tr>
<tr>
<td>Opportunism*</td>
<td>Goal Incompatibility*</td>
<td>0.386</td>
<td>0.147**</td>
<td>69.266**</td>
</tr>
<tr>
<td>Opportunism*</td>
<td>Informational Asymmetry*</td>
<td>0.278</td>
<td>0.075**</td>
<td>33.109**</td>
</tr>
<tr>
<td>Opportunism*</td>
<td>Behavioral Uncertainty*</td>
<td>0.243</td>
<td>0.057**</td>
<td>24.836**</td>
</tr>
</tbody>
</table>

* Summated scale scores  
** level of significance: p<0.01
The four regression analyses confirmed the direct impact of each of the four determinants on opportunism. The coefficients in each case were significant and the F criterion was significantly high. The adjusted R square was low but this was expected since the variance explained in the structural model that included all the four determinants was quite low (i.e., 30.9%).

In addition, we applied a multiple regression analysis (stepwise regression) incorporating the summated scores of the four determinants and of the one of opportunism. The results are shown in Table 7.35.

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variables</th>
<th>Standardized regression coefficient</th>
<th>Adjusted R square</th>
<th>F criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunism#</td>
<td>Goal Incompatibility*</td>
<td>0.302**</td>
<td>0.202</td>
<td>26.128**</td>
</tr>
<tr>
<td></td>
<td>Dependence*</td>
<td>0.153**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informational Asymmetry*</td>
<td>0.153**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behavioral Uncertainty*</td>
<td>0.108*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Summated scale scores
** level of significance: p<0.01
* level of significance: p<0.05

The results of the multiple regression analysis provided support of the results of the structural model and reconfirmed the various relationships. Thus, multiple regression analysis confirmed the direct impact of dependence, goal incompatibility, informational asymmetry and behavioral uncertainty on opportunism. The coefficients were significant and the F criterion was significantly high. The adjusted R square was low but this was expected since the variance explained in the structural model that included all the four determinants was quite low (i.e., 30.9%). Standardized coefficients in multiple regression analysis followed the general pattern of the structural model standardized coefficients thus, denoting that the strongest impact on opportunism is the one of goal incompatibility and the lowest the one of behavioral uncertainty.
In summary, the results showed that our structural model is valid. The model fit the data well and the hypothesized relationships between the determinants and opportunism were significant. The above results of the quantitative study gave valuable information concerning the research objective of the examination of the determinants of potential multiple retailers’ opportunism, manifested in the form of supply chain practices, in the supply chain in the food sector and the relevant developed hypotheses. In particular, four out of five hypotheses concerning the determinants of dependence, goal incompatibility, informational asymmetry and behavioral uncertainty were empirically confirmed.
7.5 MULTIPLE GROUP ANALYSIS/ INVARIANT LATENT MEAN STRUCTURES

SEM allows the researcher to test differences between similar models estimated for different groups of respondents. A specific procedure for comparing measurement models across different samples of respondents has emerged in literature (Hair et al., 2009). This procedure encompasses measurement invariance. Measurement invariance examines whether measurement models conducted in different sample groups yield equivalent representations of the same construct (Hair et al., 2009; Byrne, 2001). As we previously saw CFA is used to ensure construct validity through the measurement model. Measurement invariance uses CFA’s various aspects in order to compare measurement models between different groups. The comparison process includes a series of model comparisons with increasingly restrictive constraints. The difference is measured by chi-square difference ($\Delta \chi^2$) which allows comparison between model specifications. In this way, when a set of constraints is applied and the model fit doesn’t increase significantly then the constraints can be accepted and invariance between groups can be assumed. First we estimate the fit of the most unconstrained model and then between groups constraints are added to reflect specific measurement model comparisons (Hair et al., 2009). In our study we are interested in comparing the construct means of the three factors of opportunism across different groups. Significant differences between groups will indicate that firm characteristics are responsible for the level of retailers’ opportunism they face. In this section of our study model comparison will be made based a) on whether the sample firms are facing competition from own brand products or not and b) on the size of the sampled suppliers (small versus large firms). Invariant latent mean structures are examined through the following steps (Hair et al., 2009; Carpenter & Moore, 2009; Byrne, 2001).

- Examination of configural invariance between the measurement models of the groups. The CFA model of each group should have the same number of constructs and items associated with each construct while it must meet the appropriate levels of model fit and construct validity.
• Examination of metric invariance between the measurement models of the groups. Metric invariance refers to the equivalence of the factor loadings between the groups and determines cross-group validity beyond the basic factor structure.

• Examination of the scalar invariance between the measurement models of the groups. Scalar invariance tests for the equality of the measured variables intercepts on the construct. Scalar invariance is the test that allows comparisons in the means of latent construct between groups.

• Comparison of the latent means scores between groups.

7.5.1 Invariant latent mean structures of opportunism (own brand food products competing/ non competing firms)

According to our theory we hypothesized that food suppliers that face the competition of own brand products will face higher levels of retailer’s opportunism than food suppliers that don’t face such competition (Hypothesis 6, chapter 3). Hence, we will conduct invariant latent mean structures analysis between these groups of our sample. The size of sample for the suppliers facing own brand competition was \( N_1 = 311 \) while the size of the second group was \( N_2 = 87 \).

There is no theoretical suggestion regarding differences in the means of determinants between the two groups. Thus, our model in testing mean differences will include only the three opportunistic factors (i.e., excessive payments, agreement violations and negotiations pressures). We can see the examined model in Figure 7.14. The CFA model of Figure 7.14 is the resulted 3-factor model of opportunism as emerged from the previous EFA and CFA stages of our analysis.
Figure 7.14: Invariant latent mean structures model (own brand food products competing/ non competing firms)

The items included in the invariant latent mean structures model are presented in Table 7.36.

Table 7.36: Items included in the invariant latent mean structures model (own brand food products competing/ non competing firms)

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Variable</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>opp_1</td>
</tr>
<tr>
<td></td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>opp_2</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for new store openings.</td>
<td>opp_3</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for the products’ better in-store positioning.</td>
<td>opp_4</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>opp_5</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>opp_6</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>opp_7</td>
</tr>
<tr>
<td></td>
<td>Obscure terms of agreement.</td>
<td>opp_8</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>opp_9</td>
</tr>
<tr>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>opp_10</td>
</tr>
<tr>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>opp_11</td>
</tr>
<tr>
<td></td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>opp_12</td>
</tr>
</tbody>
</table>
Before testing measurement invariance, we should examine whether the CFA model of each group has significant model fit and construct validity. These are the prerequisites of every CFA model as seen before. CFA was conducted using AMOS 20.0 (Byrne, 2001). Table 7.37 shows the model fit indices of the 3-factor CFA model for the two groups. As we can see both groups had acceptable model fits according to their sample size (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988). This means that the theoretical hypothesis of the factorial structure of multiple retailers’ opportunism fit the data of the two subsamples. Now, we have to examine whether the CFA models of the two groups show construct validity as well.

Table 7.37: Model fit indices of the CFA model of opportunism (own brand food products competing/ non competing firms)

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Own brand food products competing firms</th>
<th>Own brand food products non competing firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square (χ²)</td>
<td>N₁=311</td>
<td>N₂=87</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>72.225</td>
<td>69.418</td>
</tr>
<tr>
<td>Chi-square/ degrees of freedom (χ²/df)</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Probability level</td>
<td>1.416</td>
<td>1.361</td>
</tr>
<tr>
<td>Root Mean Square of Approximation (RMSEA) (0.013-0.055)</td>
<td>0.027</td>
<td>0.044</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.964</td>
<td>0.889</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.945</td>
<td>0.831</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.987</td>
<td>0.964</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.956</td>
<td>0.879</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
<td>0.739</td>
<td>0.679</td>
</tr>
</tbody>
</table>

The measurement models of the two examined groups were valid according to the results of Table 7.38. Own brand food products competing firms had high and statistical significant values (all standardized factor loadings were > 0.7 apart from three items with loadings >0.6.) (Hair et al., 2009). The AVEs extracted for the three factors of opportunism were over the threshold of 0.5 (Hair et al., 2009). Also in the case of construct reliability the results satisfied the minimum acceptable value of 0.7 (Hair et al., 2009). Discriminant validity was also satisfied in all the three factors (Fornell & Larcker, 1981). On the other hand, own brand food products non competing firms had also high and statistical significant values (all standardized factor loadings were >0.7 apart from three items with loadings >0.6.) (Hair et al.,
The AVEs extracted for the three factors of opportunism were over the threshold of 0.5 (Hair et al., 2009). Also in the case of construct reliability the results satisfied the minimum acceptable value of 0.7 (Hair et al., 2009). Discriminant validity was satisfied only in the two out of three factors. However, the fact that the whole sample CFA model was valid (see previous sections) allow us to assume that this result was due to the fact that the specific sample group was rather small (N2=87). In addition, constructs which are sub-dimensions of another construct and are measuring a higher order latent factor (i.e., opportunism) could show lack of discriminant validity (Lai et al., 2002). Therefore and due to the fact that the rest of the construct validity tests gave satisfying results allows us to accept these levels of discriminant validity.

Table 7.38: Construct validity of the CFA model of opportunism (own brand food products competing/ non competing firms)

<table>
<thead>
<tr>
<th>Group: Own brand food products competing firms (N1=311)</th>
<th>Latent Construct</th>
<th>High &amp; significant factor loadings</th>
<th>Construct reliability</th>
<th>Average variance extracted</th>
<th>Convergent validity</th>
<th>Corr²</th>
<th>Discriminant validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>YES</td>
<td>0.829</td>
<td>0.548</td>
<td>YES</td>
<td>0.475</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Agreement violations</td>
<td>YES</td>
<td>0.835</td>
<td>0.560</td>
<td>YES</td>
<td>0.482</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>YES</td>
<td>0.808</td>
<td>0.514</td>
<td>YES</td>
<td>0.482</td>
<td>YES</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group: Own brand food products non competing firms (N2=87)</th>
<th>Latent Construct</th>
<th>High &amp; significant factor loadings</th>
<th>Construct reliability</th>
<th>Average variance extracted</th>
<th>Convergent validity</th>
<th>Corr²</th>
<th>Discriminant validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>YES</td>
<td>0.859</td>
<td>0.608</td>
<td>YES</td>
<td>0.566</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td>Agreement violations</td>
<td>YES</td>
<td>0.824</td>
<td>0.540</td>
<td>YES</td>
<td>0.566</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>YES</td>
<td>0.850</td>
<td>0.587</td>
<td>YES</td>
<td>0.416</td>
<td>YES</td>
<td></td>
</tr>
</tbody>
</table>

Construct validity of the CFA model in both groups is achieved. Therefore, we can proceed to the examination of measurement invariance in the CFA 3-factor model of opportunism between firms competing own brand food products and firms that don’t face this kind of competition. Model invariance tests were conducted using AMOS 20.0 (Byrne, 2001). The first model (Configural invariance model) in Table 7.39 tests the invariance of the number of factors included in the CFA models.
of the two samples. The overall model fit demonstrated goodness of fit (CFI=0.981; RMSEA=0.031). Since the specific model is the baseline for the subsequent models, change in the chi-squares and degrees of freedom wasn’t evaluated.

Model 2 (Metric invariance model) in Table 7.39 examines whether the loadings between the indicators and the latent constructs are the same among the CFA models two groups. Change in the chi-square wasn’t significant ($\Delta \chi^2=11.115$, 9df, $p=0.268$) and changes in fit indices were also minimal. This means that the items measuring the three dimensions of opportunism loaded well in the relevant construct for both groups. Hence, metric invariance was achieved and the analysis can proceed with the next layer of constraint which is scalar invariance.

The results of Table 7.39 showed that scalar invariance was also achieved (Model 3). Change in the chi-square was not significant ($\Delta \chi^2=18.269$, 12df, $p=0.108$) and fit indices achieved the acceptable thresholds (CFI=0.981; RMSEA=0.029). This means that the measured variable intercepts on the construct are equal between the two groups.

Table 7.39: Measurement invariance tests for own brand food products competing/ non competing firms

<table>
<thead>
<tr>
<th>Model tested</th>
<th>Model fit measures</th>
<th>Model differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
<td>df</td>
</tr>
<tr>
<td>Model 1: Configural invariance</td>
<td>141.966</td>
<td>102</td>
</tr>
<tr>
<td>Model 2: Metric invariance</td>
<td>153.081</td>
<td>111</td>
</tr>
<tr>
<td>Model 3: Scalar invariance</td>
<td>171.350</td>
<td>123</td>
</tr>
</tbody>
</table>

Tests of Model 1, 2 and 3 indicated equivalence of the across the two constraints. For examining latent mean structure invariants one more additional constraint was added. Within the multiple group model, one of the examined groups was used as a reference group (the means are set to zero) while the means of the other group were free to be estimated to reflect differences between the two groups. In this part of the analysis, we will focus only on the estimated differences between the means of the two groups while changes in the chi-square statistics are irrelevant (Hair et al., 2009, Lai et al., 2002). Once more, overall model fit will be a
prerequisite. Table 7.40 presents the fit indices of the model examining latent construct mean differences. Fit indices showed an acceptable fit of the data in our latent means model (CFI=0.981, RMSEA=0.029) (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988).

Table 7.40: Model fit indices of the CFA invariant latent mean structures model (own brand food products competing/ non competing firms)

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square (χ²)</td>
<td>159.378</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>120</td>
</tr>
<tr>
<td>Chi-square/ degrees of freedom (χ²/df)</td>
<td>1.328</td>
</tr>
<tr>
<td>Probability level</td>
<td>0.009</td>
</tr>
<tr>
<td>Root Mean Square of Approximation (RMSEA)</td>
<td>0.029 (0.015-0.040)</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.981</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.928</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
<td>0.844</td>
</tr>
</tbody>
</table>

Table 7.41 presents the significant differences in the means of the latent constructs between own brand food products competing and non competing firms. The reference group was the one of the own brand food products competing firms (latent means set to zero) while the means of the own brand food products non competing firms were freely estimated. The results showed that own brand food products non competing firms faced significantly less opportunism in the cases of excessive payments (estimate=-0.632, critical ratio=-3.265>|1.96|, p=0.001) and agreement violations (estimate=-0.411, critical ratio=-2.704>|1.96|, p=0.007). On the other hand, the two examined groups showed no significant differences in the amount of opportunism that they face regarding negotiation pressures.

Table 7.41: Latent mean structures differences (own brand food products competing/ non competing firms)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>-0.632</td>
<td>0.193</td>
<td>-3.265</td>
<td>0.001</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>-0.411</td>
<td>0.152</td>
<td>-2.704</td>
<td>0.007</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>-0.163</td>
<td>0.144</td>
<td>-1.127</td>
<td>0.260</td>
</tr>
</tbody>
</table>
The invariant latent mean structures analysis that was applied between the own brand food products competing and non competing firms showed that the two groups have significant differences in the amount of opportunism they face from the part of the multiple retailers (Hypothesis 6). However, these differences were not related with negotiation pressures but only with excessive payments and agreement violations.

In particular, the invariant latent mean structures analysis showed that when a multiple retailer decides to behave opportunistically against some of his suppliers, then the suppliers who compete with own brand products will face significantly higher levels of this opportunism than the suppliers who don’t face such competition. Multiple retailers will require more frequently unreasonable lump-sum payments for stocking goods, for new store openings and better in-store positioning from suppliers who compete own brand products than from suppliers who don’t.

Similarly, multiple retailers with opportunistic tensions will breach more frequently the agreements with suppliers who compete own brand products concerning the number of stores in which a product will enter, the number of product/ codes that will enter the stores and the number of in-store promotional activities than the agreements with suppliers who doesn’t face competition from own brand products. In addition, obscure contract terms will be used more often in the agreements with suppliers who face competition from own brand products.

On the other hand our data didn’t reveal any differences between the two examined groups concerning the pressures they will face from multiple retailers during negotiations. Hence, in case a multiple retailer decides to opportunistically exploit his suppliers by falsely suggesting that competitive suppliers are offering better trade terms or by refusing to accept a lower profit margin with the excuse of the standard category average profit margin or by overstating about his problems or by putting high pressures for low prices he won’t behave differently against the suppliers who compete own brand products and suppliers who don’t.
7.5.2 Invariant latent mean structures of opportunism (small/ large firms)

According to our theory we hypothesize that the smaller the food supplier the more the retailer’s opportunism that he will face (Hypothesis 7, chapter 3). Hence, we will conduct invariant latent mean structures analysis in sampled groups that will be designated according to their size. In our sample, 12% of the firms were micro enterprises, 48% were small, 28% were medium and 12% were large while N=398. Therefore, due to the small sample size of the above groups it wasn’t feasible to apply SEM and examine invariant latent mean structures of opportunism between these four groups. However, some characteristics of the Greek firms allow us to make another comparison. Greek firms are smaller than the typical EU firm (Small Business Act, 2012; Wymenga et al., 2012). In addition, an annual turnover of approximately 2.000.000 € is not typical for a Greek micro firm (Voulgaris et al., 2005). Hence, we could assume that the micro firms of our sample could be grouped together with the small firms while the medium firms could be grouped with the large firms. In this way our sample was divided in two groups based on the firm size (Table 7.42). The small firms group included 228 firms while the large firms group included 155. The sum of the two groups is not equal to the total sample (N=398) because some of the sampled firms refused to give us any information regarding their size.

The invariant latent mean structures analysis between the small and the large firms didn’t show significant and strong results concerning the differences in the levels of opportunism faced by suppliers of different size. However, the previous invariant latent mean structures analysis showed that the own brand food products non competing firms face lower retailers’ opportunism. In our sample, 70% of the firms that don’t face competition from own brands are smaller suppliers (61 out of 87 firms that don’t face competition from own brand products). Our hypothesis argues that smaller suppliers may face higher levels of opportunism. Therefore, the fact that many smaller suppliers don’t face competition from own brands could affect the results of invariant latent mean structures analysis between the small and the large firms. For this reason, we will exclude the own brand food products non competing firms from this analysis in order to have clearer results of the impact of

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the supplier’s size on the levels of opportunism he faces. In addition, invariant latent mean structures analysis was conducted between firms that don’t face competition from own brands and didn’t show significant results. This further enhances our choice to exclude these firms from the invariant latent mean structures analysis between firms of different size.

The sample of the invariant latent mean structures included 167 small firms \( (N_1=167) \) and 130 large firms \( (N_2=130) \). There is no theoretical suggestion regarding differences in the means of determinants between the two groups. Thus, our model in testing mean differences will include only the three opportunistic factors (i.e., excessive payments, agreement violations and negotiations pressures). We can see the examined model in Figure 7.15. The CFA model of Figure 7.15 is the resulted 3-factor model of opportunism as emerged from the previous EFA and CFA stages of our analysis.

Table 7.42: Size of the sample firms (small/ large firms)

<table>
<thead>
<tr>
<th>Group</th>
<th>Small firms (N)</th>
<th>Large firms (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sample</td>
<td>228</td>
<td>155</td>
</tr>
<tr>
<td>Own brand food products non competing firms</td>
<td>61</td>
<td>25</td>
</tr>
<tr>
<td>Sample of invariant latent mean structures analysis</td>
<td>167</td>
<td>130</td>
</tr>
</tbody>
</table>

Figure 7.15: Invariant latent mean structures model (small/ large firms)
The items included in the invariant latent mean structures model are presented in Table 7.43.

Table 7.43: Items included in the invariant latent mean structures model (small/ large firms)

<table>
<thead>
<tr>
<th>Latent construct</th>
<th>Variable</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>Unreasonably high payments as condition for stocking goods.</td>
<td>opp_1</td>
</tr>
<tr>
<td></td>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers.</td>
<td>opp_2</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for new store openings.</td>
<td>opp_3</td>
</tr>
<tr>
<td></td>
<td>Unreasonably high payments for the products’ better in-store positioning.</td>
<td>opp_4</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier.</td>
<td>opp_5</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier.</td>
<td>opp_6</td>
</tr>
<tr>
<td></td>
<td>Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier.</td>
<td>opp_7</td>
</tr>
<tr>
<td></td>
<td>Obscure terms of agreement.</td>
<td>opp_8</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>Falsely suggesting that competitive supplier is offering better trade terms.</td>
<td>opp_9</td>
</tr>
<tr>
<td></td>
<td>Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin.</td>
<td>opp_10</td>
</tr>
<tr>
<td></td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions.</td>
<td>opp_11</td>
</tr>
<tr>
<td></td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases.</td>
<td>opp_12</td>
</tr>
</tbody>
</table>

Before testing measurement invariance, we should examine whether the CFA model of each group has significant model fit and construct validity. These are the prerequisites of every CFA model as seen before. CFA was conducted using AMOS 20.0 (Byrne, 2001). Table 7.44 shows the model fit indices of the 3-factor CFA model for the two groups. As we can see both groups had acceptable model fits (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988). This means that the theoretical hypothesis of the factorial structure of multiple retailers’ opportunism fit the data of the two subsamples.
Now, we have to examine whether the CFA models of the two groups also show construct validity.

Table 7.44: Model fit indices of the CFA model of opportunism (small/ large firms)

<table>
<thead>
<tr>
<th>Fit index</th>
<th>Small firms N₁=167</th>
<th>Large firms N₂=130</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square (χ²)</td>
<td>71.743</td>
<td>73.293</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Chi-square/ degrees of freedom (χ²/df)</td>
<td>1.407</td>
<td>1.437</td>
</tr>
<tr>
<td>Probability level</td>
<td>0.029</td>
<td>0.022</td>
</tr>
<tr>
<td>Root Mean Square of Approximation (RMSEA)</td>
<td>0.049</td>
<td>0.058</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.936</td>
<td>0.919</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.901</td>
<td>0.876</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.975</td>
<td>0.969</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.921</td>
<td>0.906</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
<td>0.711</td>
<td>0.700</td>
</tr>
</tbody>
</table>

The measurement models of the two examined groups were valid according to the results of Table 7.45. Small firms had high and statistical significant values (all standardized factor loadings were >0.7 apart from three items with loadings >0.6.) (Hair et al., 2009). The AVEs extracted for the three factors of opportunism were over the threshold of 0.5 (Hair et al., 2009). Also in the case of construct reliability the results satisfied the minimum acceptable value of 0.7 (Hair et al., 2009). Discriminant validity wasn’t satisfied only in the case of negotiation pressures factor.

On the other hand, large firms had also high and statistical significant values (all standardized factor loadings were >0.7 apart from three items with loadings >0.6.) (Hair et al., 2009). The AVEs extracted for the three factors of opportunism were over the threshold of 0.5 (Hair et al., 2009). Also in the case of construct reliability the results satisfied the minimum acceptable value of 0.7 (Hair et al., 2009). Discriminant validity was not satisfied in the case of excessive payments and agreement violations (Fornell & Larcker, 1981). However, the fact that the whole sample CFA model was valid (see previous sections) allow us to assume that this result is due to the fact that the groups had rather small size (N₁=167 and N₂=130). In addition, we should note that none of the three factors showed lack of discriminant
validity in both groups. Moreover, constructs which are sub-dimensions of another construct and are measuring a higher order latent factor (i.e., opportunism) could show lack of discriminant validity (Lai et al., 2002). Therefore and due to the fact that the rest of the construct validity tests gave satisfying results allows us to accept these levels of discriminant validity.

Table 7.45: Construct validity of the CFA model of opportunism (small/ large firms)

| Group: Small firms (N₁=167) |  |  |  |  |  |  |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Latent Construct              | High & significant factor loadings | Construct reliability | Average variance extracted | Convergent validity | Corr² | Discriminant validity |
| Excessive payments            | YES             | 0.815           | 0.525           | YES              | 0.487 | YES                  |
| Agreement violations          | YES             | 0.846           | 0.580           | YES              | 0.517 | YES                  |
| Negotiation pressures         | YES             | 0.806           | 0.510           | YES              | 0.517 | NO                   |

| Group: Large firms (N₂=130) |  |  |  |  |  |  |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Latent Construct              | High & significant factor loadings | Construct reliability | Average variance extracted | Convergent validity | Corr² | Discriminant validity |
| Excessive payments            | YES             | 0.862           | 0.610           | YES              | 0.645 | NO                   |
| Agreement violations          | YES             | 0.820           | 0.534           | YES              | 0.645 | NO                   |
| Negotiation pressures         | YES             | 0.805           | 0.509           | YES              | 0.487 | YES                  |

Construct validity of the CFA model in both groups was achieved. We can, now, proceed to the examination of the measurement invariance in the CFA 3-factor model of opportunism between the small and the large sampled firms. Model invariance tests were conducted using AMOS 20.0 (Byrne, 2001).

The first model (Configural invariance model) in Table 7.46 tests the invariance of the number of factors present in the CFA models of the two samples. The overall model fit demonstrated goodness of fit (CFI=0.972; RMSEA=0.038). Since the specific model is the baseline for the subsequent models, change in the chi-squares and degrees of freedom isn’t evaluated.

Model 2 (Metric invariance model) in Table 7.46 examines whether the loadings between the indicators and the latent constructs are the same among the CFA models of the two groups. Change in the chi-square wasn’t significant
(Δχ²=5.077, 9df, p=0.828) and changes in fit indices were also minimal. This means that the items measuring the three dimensions of opportunism loaded well in the relevant construct for both groups. Hence, metric invariance was achieved and the analysis can proceed with the next layer of constraint which is scalar invariance.

In Table 7.46 we can see that the results of the scalar invariance test (Model 3) showed that the change in the chi-square was significant (Δχ²=22.697, 12df, p=0.030). This means that constraining intercepts resulted in a significantly worse fit. However, constraining all the intercepts on the constructs is a rather conservative standard (Hair et al., 2009). Hence, we will test our model for partial scalar invariance (Model 4) which is achieved when at least two intercepts per construct are found to be invariant (Hair et al., 2009; Steenkamp & Baumgartner, 1998). In order to decide which item intercepts would be left free for estimation we have to examine modification indices of the fully constrained scalar invariance model (Model 3). Modification indices suggest the difference in chi-square in case we estimate a relationship. Equality constraints with the largest modification indices will be freed first (Hair et al., 2009; Steenkamp & Baumgartner, 1998). The results from the full scalar invariance model showed that the items opp_2, opp_4 and opp_8 (Table 7.43) had the highest modification indices for both the examined groups. Therefore, we will free them in order to test partial scalar invariance. In that case, Δχ²=10.624, Δdf=9 and p=0.302.

According to Model 4 partial scalar invariance is achieved. It should be noted that partial scalar invariance was achieved with the minimum freed constraints. We constrained three intercepts in total while the threshold allowed us to constrain up to six (at least two intercepts per construct should be invariant) in the 3-factor model. Thus, we can assume that our 3-factor model showed significant scalar invariance between the two examined groups.
Table 7.46 Measurement invariance tests for small/ large firms

<table>
<thead>
<tr>
<th>Model tested</th>
<th>Model fit measures</th>
<th>Model differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>χ²</td>
<td>df</td>
</tr>
<tr>
<td>Model 1: Configural invariance</td>
<td>145.052</td>
<td>102</td>
</tr>
<tr>
<td>Model 2: Metric invariance</td>
<td>150.129</td>
<td>111</td>
</tr>
<tr>
<td>Model 3: Scalar invariance (Full)</td>
<td>172.826</td>
<td>123</td>
</tr>
<tr>
<td>Model 4: Scalar invariance (Partial)</td>
<td>160.753</td>
<td>120</td>
</tr>
</tbody>
</table>

Models 1, 2, 3 and 4 indicated measurement equivalence across the two constraints (i.e., metric and scalar invariance). For examining latent mean structure invariants one more additional constraint was added. Within the multiple group model, one of the examined groups was used as a reference group (i.e., the means are set to zero) while the means of the other group were free to be estimated to reflect differences between the two groups. In this part of the analysis, we will focus only on the estimated differences between the means of the two groups while changes in the chi-square statistics are irrelevant (Hair et al., 2009, Lai et al., 2002).

Once more, overall model fit is a prerequisite. Table 7.47 presents the fit indices of the model examining latent construct mean differences. Fit indices showed an acceptable fit of the data in our latent means model (CFI=0.971, RMSEA=0.035) (Hair et al., 2009; Rokkan et al., 2003; Wisner, 2003; Bagozzi & Yi, 1988).

Table 7.47: Model fit indices of the CFA invariant latent mean structures model (small/ large firms)

<table>
<thead>
<tr>
<th>Fit index</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square (χ²)</td>
<td>164.491</td>
</tr>
<tr>
<td>Degrees of freedom</td>
<td>120</td>
</tr>
<tr>
<td>Chi-square/ degrees of freedom (χ²/df)</td>
<td>1.371</td>
</tr>
<tr>
<td>Probability level</td>
<td>0.004</td>
</tr>
<tr>
<td>Root Mean Square of Approximation</td>
<td></td>
</tr>
<tr>
<td>(RMSEA)</td>
<td>0.035</td>
</tr>
<tr>
<td></td>
<td>(0.020-0.048)</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.971</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.902</td>
</tr>
<tr>
<td>Parsimony Normed Fit Index (PNFI)</td>
<td>0.820</td>
</tr>
</tbody>
</table>

Table 7.48 presents the significant differences in the means of the latent constructs between small and large firms. The reference group was the one of the
large firms (latent means set to zero) while the means of the small firms were freely estimated. The results showed that large firms faced significantly less opportunism in all the three factors of opportunism: excessive payments (estimate= 0.345, critical ratio= 2.047>|1.96|, p=0.041) agreement violations (estimate= 0.382, critical ratio= 2.361>|1.96|, p=0.018) and negotiation pressures (estimate= 0.339, critical ratio=-2.665>|1.96|, p=0.008).

Table 7.48: Latent mean structures differences (small/ large firms)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excessive payments</td>
<td>0.345</td>
<td>0.169</td>
<td>2.047</td>
<td>0.041</td>
</tr>
<tr>
<td>Agreement violations</td>
<td>0.382</td>
<td>0.162</td>
<td>2.361</td>
<td>0.018</td>
</tr>
<tr>
<td>Negotiation pressures</td>
<td>0.339</td>
<td>0.127</td>
<td>2.665</td>
<td>0.008</td>
</tr>
</tbody>
</table>

The invariant latent mean structures analysis that was examined between small and large firms showed that the two groups had significant differences in the amount of opportunism they faced from the part of the multiple retailers (Hypothesis 7). These differences were related with all the three dimensions (i.e., excessive payments, agreement violations and negotiation pressures) of multiple retailers’ potential opportunistic behavior.

In particular, the invariant latent mean structures analysis showed that smaller suppliers in the Greek market will be required to make unreasonable lump-sum payments for stocking goods, for new store openings and better in-store positioning to some of their big customers in a higher degree than their larger competitors.

Similarly, the invariant latent mean structures analysis showed that multiple retailers will violate more frequently agreements made with smaller food suppliers concerning the number of stores in which a product will enter, the number of product/ codes that will enter the stores and the number of in-store promotional activities than with relevant agreements made with larger food suppliers.

In addition, smaller suppliers will face in a higher than the larger suppliers degree negotiation pressures concerning false suggestions that competitive suppliers
are offering better trade terms or non acceptance of lower profit margin with the excuse of the standard category average profit margin or exaggerations about retailers’ problems or high pressures for low prices.

The above results of the quantitative study gave valuable information concerning the research objective of the examination of the effect of supplier’s size and competition from own brand products on the level of multiple retailers’ opportunism in the supply chain in the food sector and the two relevant hypotheses. In particular, the invariant latent mean structures analysis confirmed that the contextual factors of competition from own brand products and the size of the supplier affect the level of opportunism faced by the supplier.

In this chapter the results of the quantitative part of the study were presented. In the next chapter we will discuss the results according to the study’s objectives. In addition, the hypotheses tested will be analyzed. Final conclusions of the study’s findings will be drawn.
CHAPTER 8: DISCUSSION-CONCLUSIONS

The current chapter discusses the results presented in the two previous chapters. We examine whether the study’s objectives as described in chapter 3 were fulfilled through the findings of both the qualitative and the quantitative part of the study. All the results are compared to other relevant studies in the literature.

First, the results obtained from the qualitative part of the study are discussed. Insights concerning the creation of multiple retailers’ opportunism in the supply chain in the Greek food sector are obtained. In addition, invaluable insights concerning the practices that multiple retailers in the Greek market might opportunistically use are given. Moreover, the preliminary confirmation or rejection of the seven hypotheses of the study is presented. Then, the findings of the quantitative part of the study are presented. The results concerning the characteristics of the sample are discussed. Then, the confirmation or rejection of the five hypotheses concerning the determinants of opportunism is presented. In addition, the empirical results concerning the occurrence of specific opportunistic practices which retailers may use in the supply chain in the Greek food sector are demonstrated. The findings about the examination of the contextual factors are presented as well. Moreover, a summary of the tested hypotheses is demonstrated.

Finally, general conclusions, theoretical, managerial and policy implications and also limitations and future research suggestions are presented.
8.1 DISCUSSION: FINDINGS FROM THE QUALITATIVE PART OF THE STUDY

The qualitative part of the study gave valuable context specific information concerning multiple retailers’ opportunism in the supply chain in the Greek food sector. In this section, we will discuss the findings from the qualitative part of the study according to the specific research objective that they partially address and according to the hypotheses they preliminarily confirm or reject.

8.1.1 Creation of opportunism in the supply chain in the Greek food sector

Our first objective was the examination of the determinants of potential opportunism in the supply chain in the food sector and five hypotheses were developed (Hypotheses 1-5) in order to examine their effect. The in-depth interviews with practitioners from the Greek market preliminary confirmed that opportunism may emerge in the supply chain relationships in the Greek food sector. The qualitative research didn’t indicate rampant opportunism among multiple retailers to food suppliers. Opportunism is not a typical multiple retailers’ behavior. However, in some cases retailers may try to exploit some of their suppliers. In addition, the study revealed that the multiple retailers’ behavior may differ according to the supplier and this applies to opportunistic behavior as well.

The findings from the qualitative study showed that in most cases suppliers are highly dependent on multiple retailers. The fact that suppliers can’t replace them easily was stressed. In addition, it was emphasized that in most cases, the supplier would lose a significant part of his total sales in case of termination of the relationship with a multiple retailer. The qualitative part of the study indicated that supplier’s dependence on multiple retailers could result in multiple retailers’ opportunism. Thus, it confirmed the first hypothesis of our study (H1) in a preliminary way.

According to the literature of supply chain management, aligned goals between the chain members will increase supply chain’s performance and higher
gains will be achieved from its members (Christopher, 2005). Nevertheless, Dobson (2005) argued that multiple retailers have a triple role in their relationships with suppliers (i.e., customers, competitors, suppliers). This could result in a lack of compatibility between the goals of the retailer and the goals of the supplier. The qualitative part of our study gave valuable insights in this issue and confirmed that even though the two exchange members aim to increase suppliers’ sale volumes, their financial goals could be in conflict. The findings from the qualitative research indicated that financial goal incompatibility could result in multiple retailers’ opportunism. Therefore, the second hypothesis (H2) of our study was preliminarily confirmed. However, it was specified that goal incompatibility in financial issues and not in general is the factor determining opportunism.

The qualitative part of the study showed that in most cases, multiple retailers possess significantly more information than many of their suppliers in issues such as consumer’s behavior, product movement, product category performance and cross-category performance. This information could be very valuable for the supplier. Nevertheless, multiple retailers don’t share it easily. Moreover, in-depth interviews revealed that this information asymmetry could be used in an opportunistic way from multiple retailers in order to increase their benefits from the relationship at the expense of the suppliers. Hence, the qualitative part of the study confirmed the third hypothesis of the research (H3) in a preliminary way.

Significant findings concerning the way that business related environmental uncertainty affects supplier-multiple retailer relationships in the supply chain in the Greek food sector were also obtained from the qualitative part of the study. It was revealed that business related environmental uncertainty characterized most supplier-multiple retailer relationships. The notion that uncertainty could result in opportunism was partially confirmed. However, it was also stressed that in some occasions, uncertainty could improve supplier-multiple retailer relationships because the two parties believed that under these conditions higher levels of collaboration and trust could improve their financial numbers. Our study offers some indications which are contradicting to the customary finding of the positive relationship between uncertainty and opportunism (e.g., Mysen et al., 2011; Luo, 2007; Ting et
al., 2007; Carson et al., 2006; Schilling & Steensma, 2002; Skarmeas et al., 2002). Therefore, the specific theoretical argument may not apply in the context of supply chains in the food sector. In summary, the qualitative study gave some insights concerning the positive relationship between business related environmental uncertainty and multiple retailers’ opportunism (H4) but the findings should be treated with caution.

The qualitative part of the study gave some very interesting findings concerning multiple retailers’ behavioral uncertainty. It was stressed that in many cases, suppliers and especially the smaller ones don’t have the capabilities for thoroughly assessing whether multiple retailers perform according to their agreements. The in-depth interviews preliminarily confirmed that this situation could result in opportunistic behavior from the part of multiple retailers and hence, they preliminarily confirmed the fifth hypothesis of our study (H5).

According to the aforementioned, the qualitative research contributed significantly to addressing the objective of the examination of the determinants of potential opportunism in the supply chain in the food sector and in confirming in a preliminary way the five hypotheses concerning the determinants of opportunism.

### 8.1.2 Multiple retailers’ supply chain opportunistic practices

The second objective of the study was the identification and the examination of multiple retailers’ supply chain opportunistic practices in the food sector. The in-depth interviews with practitioners gave valuable insights concerning this issue in the Greek market. In particular, the qualitative part of the study examined multiple retailers’ questionable practices identified in the literature. These practices were sometimes occurred in supplier-multiple retailer relationships. The qualitative research identified which of them encompassed the notion of opportunism. The occurrence of some of the opportunistic supply chain practices which were identified in the literature wasn’t confirmed in the Greek case. In addition, others which weren’t identified in the literature came up from the discussions with the Greek
practitioners. The qualitative part of the study also contributed in acquiring accurate information in the examined issue and revealed the exact form of these practices, and their significance. In summary, 24 opportunistic practices (Table 6.1, chapter 6) which multiple retailers might use against their suppliers were identified and were included in the study’s model.

Information concerning the level of occurrence of these practices was also obtained. In-depth interviews showed that the examined practices were not customary in the supplier-multiple retailer relationships in the supply chain in the Greek food sector. Nor were they applied in every case. Nevertheless, they were not absent from the Greek market but they did occur in it. In addition, practitioners weren’t surprised when hearing about them. Therefore, the qualitative study confirmed the theoretical notion that opportunism is neither ubiquitous nor very unusual (Wathne & Heide, 2000). It also indicated that these practices are an important issue in supplier-multiple retailer relationships in the supply chain in the Greek food sector.

In particular, the qualitative part of the study showed that some of these practices were very significant and caused problems to supplier-multiple retailer relationships. The interviews indicated that the most significant practice was the one of payment delay without good cause and had a high negative impact on the supplier. Financial crisis severely damaged the Greek firms’ liquidity. Nevertheless, suppliers believed that in some cases this was an excuse from multiple retailers and that the same excuse was also used in the years prior to the Greek economy’s recession. The significance of this practice is widely reported in the literature (Vander-Stichele & Young, 2009; UK Competition Commission) and explicitly highlighted for the Greek market (ICAP, 2007).

Another case of a highly significant opportunistic practice which was revealed from the qualitative part of the study was the case when multiple retailers forced suppliers’ prices down or refused suppliers’ justified price increases due to cost increases. In this case, the supplier has to operate with losses. This finding comes in accordance with the findings of Fearne et al. (2005) which researched problematic
issues and bad practices between suppliers and UK supermarkets. These pressures were also reported in the study of Fassin (2005).

In-depth interviews with practitioners from the Greek food sector revealed that a very common and significant multiple retailers’ opportunistic practice is favoring own brand products against the branded ones. This finding is in accordance with the report from Vander-Stichele & Young (2009) that highlighted the importance of this practice.

The findings of the qualitative study revealed that opportunistic practices referring to negotiation tactics are very common in supplier-multiple retailer relationships. Therefore, falsely suggesting that competitive supplier is offering better trade terms, threat of delisting and exaggeration of the seriousness of problems were very common negotiation pressures put by multiple retailers. All of them aim to improve trade terms in favor of the retailer. Again this finding comes in accordance with past studies (Hill et al., 2009; Carter, 2000). The findings also indicated that similar opportunistic practices which have to do with negotiations are frequently used by suppliers as well. However, our study is focused on the retailers’ behavior.

According to the aforementioned, the qualitative research contributed significantly to addressing the objective of the identification and the examination of multiple retailers’ supply chain opportunistic practices in the food sector.

8.1.3 Contextual factors affecting the level of multiple retailers’ opportunism

The study’s third objective was the examination of the effect of supplier’s size and competition from own brand products on the level of multiple retailers’ opportunism in the supply chain in the food sector and two hypotheses (Hypotheses 6-7) were developed in order to examine this effect. The in-depth interviews with practitioners gave valuable insights concerning this issue in the Greek market. Concerning, the competition from own brand products, the qualitative research
findings showed that it may increase the pressures put on suppliers by multiple retailers. Therefore, the sixth hypothesis of the study (H6) was preliminarily confirmed.

The qualitative study revealed that the supplier’s size significantly affect supplier-multiple retailer relationships in the supply chain in the food sector. The fact that smaller suppliers may face higher levels of multiple retailers’ opportunism was stressed. This fact was also highlighted in many cases of specific opportunistic practices. Practitioners indicated that many practices (e.g., delisting threats, termination of the relationship without prior notice, ad-hoc unilateral change to agreements, discrimination between suppliers concerning credit periods) were mostly applied and in a higher degree in the case of smaller suppliers. Hence, the seventh hypothesis (H7) was confirmed in a preliminary way.

According to the aforementioned, the qualitative research contributed significantly to addressing the objective of the examination of the effect of the supplier’s size and the competition from own brand products on the level of multiple retailers’ opportunism in the supply chain in the food sector and in confirming in a preliminary way the two hypotheses concerning these two contextual factors which affect the level of opportunism.
8.2 DISCUSSION: FINDINGS FROM THE QUANTITATIVE PART OF THE STUDY

The quantitative part of the study gave us invaluable insights concerning the explanation of multiple retailers’ opportunism in the supply chain in the Greek food sector. In this section, we will discuss the findings from the survey according to the specific research objective that they address and according to the hypotheses they confirm or reject. The results concerning the profile of the sampled firms and the respondents are discussed as well.

8.2.1 Profile of the sampled firms and the respondents

The results of the study concerning the profile of the respondents showed that the vast majority of the sampled firms are SMEs (approximately 90% of the sample). This was a realistic result since most firms in Greece are SMEs. In fact only 0.1% of the Greek firms are large (Small Business Act, 2012). In addition, and concerning the food sector in particular, 90% of the production and processing firms are also SMEs (Lambrinopoulou & Tregear, 2011). Hence, the sample is representative of the Greek economy and of the Greek food sector in particular. Half of the sampled firms are small firms. This result is not in accordance with the proportion of small firms in the Greek food sector in general. The vast majority of firms in the food sector are micro firms (Thomaidou & Vlachou, 2012). Nevertheless, multiple retailers are mainly collaborating with suppliers who can supply them in a regular basis and with the appropriate amount of products in order to fill the shelves of their stores (ICAP, 2007). Naturally, micro firms have limited producing capacity and could satisfy specific retailers’ needs probably at a local level or for a small number of their stores. Therefore, in most cases multiple retailers are collaborating with larger firms. Hence, our sample may be less representative for the food manufacturing sector but it is more representative for the population of the multiple retailers’ suppliers.

In our sample 311 out of 398 firms (% frequency=78.14) reported that they were competing own brand products on the shelves of multiple retailers. This fact reflects that the presence of own products in the retailing stores is significant. This
finding is in accordance with market reports highlighting the growth of own brands in the Greek market according to the relevant European and global trend (ICAP, 2009).

The sample included suppliers of all the five multiple retailers and most of them were supplying more than one of the retailers. This reduced the bias due to specificity reasons. In particular, most of the sampled firms when asked to comment on their typical relationship with multiple retailers were referring in more than one relationship.

In addition, the sampled firms were doing business with the five multiple retailers mostly for a long time while they were managing a large variety of food products. The variety of suppliers in terms of products and customers increases the generalizability of the results. The above characteristics of our sample show that the study acquired information from firms with a lot of experience in working with multiple retailers. This improved the accuracy of the information obtained. Collaborating with specific firms for a long time could result in perceptions of low partner’s opportunism. Nevertheless, the dimension of time wasn’t clearly identified as affecting opportunism in past studies. In particular, Chung & Yin (2011) showed that long lasting relationships could decrease partners’ opportunism. Handley & Benton (2011) and Johnson et al., (1996) didn’t find significance in this relationship. On the other hand, Liu et al. (2010), Liu et al. (2009) and Deeds & Hill (1999) found that the relationship between the length of partnership and opportunism is not direct but complicated. Therefore, the fact that our sample mostly included firms supplying multiple retailers for a long time doesn’t lead to biased answers. Multiple retailers are seeking for long and well-established relationships with their suppliers (ICAP, 2007). In addition, long-term relationship is a factor of successful supply chain relationships as well (Chen & Paulraj, 2004). The aforementioned indicate that our sample was representative of the population and it was also the appropriate for examining the phenomenon of opportunism in supplier-multiple retailer relationships in the supply chain in the Greek food sector.
Similarly, the profile of the respondents confirmed that the responses were acquired mostly from individuals who were responsible for and had the appropriate information concerning the agreements between food supplying firms and multiple retailers-customers. Moreover, they had a lot of experience in working in their firm and the sector. All the above indicate that the data of the study came from accurate sources which was a matter of great importance in researching such a sensitive issue as opportunism in supplier-retailer relationships.

8.2.2 Creation of opportunism in the supply chain in the Greek food sector

The quantitative research provided very interesting results concerning the first objective of our study (i.e., the examination of the determinants of potential opportunism in the supply chain in the food sector) and the five relevant hypotheses developed (Hypotheses 1-5). The perceptions of food suppliers as reflected by the high means scores in the majority of the examined opportunistic practices (general mean score of opportunism: 4.42) indicated that multiple retailers may behave opportunistically during their relationships with food suppliers in order to gain extra benefits at the expense of their partners. These findings come in accordance with past studies that indicated that multiple retailers which have the upper hand in the relationship with their suppliers may behave in a questionable manner (Vander Stichele & Young, 2009; UK Competition Commission, 2008; Hingley, 2005; Fearne et al., 2004; Patterson & Richards, 2000) and in particular that these behaviors are not uncommon (Moberg & Speh, 2003).

Nevertheless, the fact that these results come from the perceptions of suppliers with long lasting relationships with multiple retailers confirms the argument of Hingley (2005); suppliers have learned to live with multiple retailers and despite the severe pressures that sometimes may face, retailers are their most beneficial way of creating revenues. This finding gives valuable insights to the question posited by Hawkins et al. (2008) concerning whether opportunism sometimes is expected and accepted. The results of the study indicate that multiple
retailers’ opportunism is not unknown in supply chain relationships in the food sector. Nevertheless, the cost-benefit tradeoff of terminating a relationship with a customer is not positive in many occasions. Therefore, suppliers prefer not to lose their customers and hence, they tolerate their partners’ opportunism.

Our study examined dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty as determinants of multiple retailers’ opportunism (manifested in the form of supply chain practices). The EFA and CFA methods were applied to the variables describing dependence, goal incompatibility, informational asymmetry, business related environmental uncertainty and behavioral uncertainty in order to refine their scales. The results suggested that the construct business related environmental uncertainty should be excluded from the analysis due to lack of reliability. Relevant problems with the construct of business-related environmental uncertainty were reported from Yi et al. (2010) as well.

For the determinants’ examination, we applied SEM in the data obtained from the survey. The sample’s size (i.e., 398 firms) was adequate (Hair et al., 2009) for investigating the relationships between the examined determinants and multiple retailers’ potential opportunism. The findings of the quantitative study concerning the effect of the five determinants on opportunism will be discussed next.

8.2.2.1 Dependence as determinant of multiple retailers’ opportunism in the supply chain in the Greek food sector

Suppliers’ perceptions concerning their relationships with multiple retailers clearly showed that they were feeling highly dependent on their big customers. This finding agrees with the arguments of past studies regarding the dependency of suppliers to multiple retailers. In particular, Hingley (2005) argued that the suppliers’ dependency to their big customers comes from the fact that multiple retailers have the role of the main gateway to consumers and also that of the gate-keeper between the producer and the consumer. Vander-Stichele & Young (2009) also highlighted the suppliers’ necessity of selling their products to multiple retailers. Similarly, the UK
Competition Commission (2008) reported that multiple retailers have asymmetric relationships with at least some of their suppliers which are dependent on them.

The survey confirmed the first hypothesis of the study that suppliers’ dependence on multiple retailers increase multiple retailers’ opportunism (H1 is supported). Therefore, it was confirmed that dependence is a significant determinant of opportunism. This finding agrees with various studies that supported the positive relationship between dependence and opportunism (Wang et al., 2012; Handley & Benton, 2011; Mysen et al., 2011). In addition, our findings confirmed the relevant indications of studies examining supplier-multiple retailer relationships (Fassin, 2005; Towill, 2005).

8.2.2.2 Goal incompatibility as determinant of multiple retailers’ opportunism in the supply chain in the Greek food sector

The quantitative part of the study showed that suppliers and multiple retailers in the supply chain in the Greek food sector don’t share common financial goals. This comes in accordance with the argument of Dobson (2005) regarding the triple role of multiple retailers in their relationships with suppliers (i.e., customers, competitors, suppliers). Suppliers’ perceptions empirically confirmed that due to this attribute of the retailers the financial goals between the two exchange parties may not be compatible. Therefore, our study empirically confirmed the relevant arguments from the literature (Morgan et al., 2007; Hingley et al., 2006; Dobson, 2005).

Our findings strongly supported the positive relationship between goal incompatibility (concerning financial objectives) and multiple retailers’ opportunism (H2 is supported). The specific determinant was by far the most significant and the one with the highest magnitude in the creation of opportunism. The specific result is in accordance with the work of Wong et al. (2005) and similar to the findings of Yi et al. (2010) and Anderson (1988) as well. In addition, this finding empirically confirmed past studies’ indications concerning the positive effect of financial goal incongruence on various high pressures put on suppliers by retailers (Dobson, 2005; Towill, 2005).
8.2.2.3 Informational asymmetry as determinant of multiple retailers’ opportunism in the supply chain in the Greek food sector

Past studies (UK Competition Commission, 2008; Duffy et al., 2003) indicated that multiple retailers possess important information such as consumers’ behavior, category performance and product movement that could be valuable for the supplier. This was also confirmed from our survey since suppliers perceived that there is informational asymmetry in relevant issues in the Greek market. This finding comes in accordance with the findings of Vieira & Ferreira (2006) which also reported lack of knowledge transfer from multiple retailers to their suppliers.

The third hypothesis (H3) was also supported from the quantitative research. Our study empirically confirmed that informational asymmetry between the two examined parties enhances multiple retailers’ opportunistic behavior. This finding matches with the results of other studies which examined the specific or similar relationships between the two concepts (Ting et al., 2007; Kwon & Suh, 2005; Heiman & Nickerson, 2004; Sako & Helper, 1998; Joshi & Arnold, 1997; Ramaswami et al., 1997). The supported hypothesis gives empirical proof in the arguments of past studies concerning the issue of informational asymmetry between food suppliers and multiple retailers and its potential of creating retailers’ opportunism (Vander-Stichele & Young, 2009; Hingley et al., 2006).

8.2.2.4 Business related environmental uncertainty as determinant of multiple retailers’ opportunism in the supply chain in the Greek food sector

Our findings revealed the suppliers’ perceptions concerning business-related environmental uncertainty. In particular, respondents evaluated environmental conditions as quite uncertain. Of course this finding is in accordance with the general financial crisis and the deep recession of the Greek economy which severely affected the operations of the supply chain members in the Greek food sector (Self-service magazine, 2011). The hypothesis that business related environmental uncertainty enhances multiple retailers’ opportunism (H4) wasn’t supported. It wasn’t supported because of reliability issues of the scale measuring it. However, it should be noted
that the qualitative part of the study gave some contradicting evidence for the examined relationship.

8.2.2.5 Behavioral uncertainty as determinant of multiple retailers’ opportunism in the supply chain in the Greek food sector

The results of our study showed that food suppliers evaluated retailers’ behavioral uncertainty as moderate. In particular, they argued that they have the ability to monitor their partners’ performance and they have accurate information about them but this was a quite costly and complex process. This finding empirically confirmed the argument of Reardon & Hopkins (2006) that suppliers may face difficulties in monitoring multiple retailers’ performance which is characterized by ambiguity.

The study’s findings supported the theoretical suggestion that behavioral uncertainty enhances opportunism. Therefore, the fifth hypothesis (H5) was supported. This comes in accordance with the results of the few empirical studies that examined the relationship of the two concepts (Wang, 2012; Stump & Heide, 1996; Anderson, 1988). Our study empirically confirmed that the supplier’s difficulty in monitoring whether multiple retailers’ perform according to the contractual agreements increases retailers’ opportunism.

According to the aforementioned, the quantitative part of the study contributed significantly to addressing the objective of the examination of the determinants of potential opportunism in the supply chain in the food sector and in confirming the four out of five hypotheses concerning the determinants of opportunism (H4 wasn’t supported).

8.2.3 Multiple retailers’ supply chain opportunistic practices

One of the study’s objectives was the identification and the examination of multiple retailers’ supply chain opportunistic practices in the food sector. The survey gave valuable insights concerning the suppliers’ perceptions in this issue. The most
usually applied practices were identified and their level of occurrence was measured as well. Due to lack of studies that empirically investigate retailers’ opportunism in the food sector it is not easy to compare our results with the findings of past studies regarding the amount of retailers’ opportunism faced by food suppliers. In general, past studies that examined partner’s opportunism showed opportunism scores over or near the scale median (i.e., Wang et al., 2012; Liu et al., 2009; Cavusgil et al., 2004; Wang, 2002; Skarmeas et al., 2002; Schilling & Steensma, 2002). Some studies found very low levels of opportunism and are not in accordance with the results of this study. However, they measured self reported opportunism (Handley & Benton, 2011; Lee, 1998; Provan & Skinner, 1989). It is likely that their results could be biased due to social desirability reasons (Crosno & Dahlstrom, 2008).

The study of Wong et al. (2005) which measures customer’s opportunism also reported high levels of occurrence of partner’s opportunism (mean=2.62, in a 5 point Likert-type scale from “1: Strongly disagree” to “5: Strongly agree”). In the specific study the sampled firms were suppliers who were in a weak position against their customers such as in our case (i.e., imbalanced relationships between food suppliers and multiple retailers in favor of the later). The similarity in the results strengthens the validity of our findings. The findings from the study of Moberg & Speh (2003) are also comparable with ours since the authors measured questionable practices in supplier-customer relationships even though they didn’t examine whether these practices were opportunistic or not. Their findings showed moderate to low levels of occurrence of customers’ opportunism (mean=2.81, in a 7 point Likert-type scale rated from “1: Never” to “7: Always”). However, they also examined whether some of the practices never occurred in the examined relationships. As in our study, they also found that fewer were the cases reporting that these practices never occurred than those reporting that they did occurred in a certain degree.

In the context of supply chains in the food sector, Morgan et al. (2007) examined focal suppliers’ opportunism and obtained data from retailers’ perceptions. Their study reported moderate levels of opportunism (mean=2.98, in a 7 point Likert-type scale rated from “1: Strongly disagree” to “7: Strongly agree”). Focal suppliers take significant part or completely undertake retailers’ category
management in order to enhance its performance (Morgan et al., 2007). Designating a specific supplier as a focal one could entail that retailer perceived him as trustful enough for this position. Therefore, the moderate level of opportunism could be explained in this way.

The study of Rokkan et al. (2003) had significantly different results from our study. Even though they measured suppliers’ opportunism, the amount of opportunism faced by buyers was very low (mean=1.8, in a 7 point Likert-type scale rated from “1: completely inaccurate” to “7: completely accurate”). However, the sampled firms showed high expectations for the extent of the relationship and willingness to strive for joint benefits. Thus, it could be assumed that they perceived that their partner won’t behave opportunistically in a great degree. Similarly, Parkhe (1993) reported very low levels of partner’s opportunism (mean=0.38, in a 5 point Likert-type scale from “1: Strongly disagree” to “5: Strongly agree”). The characteristics of the sample (i.e., members of inter-firm strategic alliances) could be the reason of the incongruent findings between our study and the study of Parkhe (1993).

The survey’s findings demonstrated a strong proof of the phenomenon. It is clear that in some cases multiple retailers may try to opportunistically exploit their partners. The phenomenon is real in the Greek food sector and suppliers perceived that it is an issue in their relationships with customers in general. It should be highlighted that these practices are not typical in the supplier-multiple retailer relationships but they manifest only some of the times and not in every relationship.

The survey revealed differences in the level of occurrence of the 24 examined practices. These practices were questionable practices that multiple retailers’ might use in their relationships with suppliers and were identified in the literature or revealed by the qualitative study. Their opportunistic character was confirmed in the qualitative part of the study. Suppliers’ perceptions recognized favoring own brands against branded products as the top opportunistic practice of multiple retailers. This finding is in accordance with the report from Vander-Stichele & Young (2009) that
highlights the importance of this practice. In addition, it provides empirical evidence of the relevant concern as expressed by Dobson et al. (2000).

Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases was another practice that occurred in a high degree according to the suppliers’ perceptions. This finding empirically confirms the findings from Fearne et al. (2005) and Fassin (2005). The third most highly occurring practice in our results was payment delay without good cause. This finding agrees with the indications in the literature concerning the occurrence and the significance of this practice in supplier-multiple retailer relationships (Vander-Stichele & Young, 2009; UK Competition Commission). The occurrence of this practice in the Greek market was reported in years before the deep economic recession (ICAP, 2007). Nowadays, financial recession could be used as a false excuse for payment delay. It should be highlighted that we didn’t examine payment delay due to liquidity problems. We focused on the case when the supplier perceived that multiple retailers intentionally paid him later even though he could make it on-time.

Our study confirmed the occurrence of a widely used practice in exchange relationships. This is the one that falsely suggests that competitive firms are offering better trade terms. It has been recognized as an unethical act in the literature (Hill et al., 2009; Carter, 2000). It is an expected action in the negotiation process. Nevertheless, perceived unethical behavior could damage relationships in the long term (Carter, 2000). Hence, unethical actions such as this one, if occurred repeatedly, may negatively affect the relationship in the long run even though it may not impact it in the short-term.

On the other hand, suppliers perceived that the practices which occurred less in the relationship mostly had to do with ad-hoc unilateral changes of agreement (i.e., concerning i) the number of in-store promotional activities that will take place, ii) the number of stores in which a product will enter, iii) the number of products/codes that will enter the stores and iv) order quantity or quality). This finding agrees with the findings from the study of Weaver & Dickson (1998) that showed that opportunistic behavior regarding non compliance in contract agreements doesn’t
occur very often (mean=1.74, in a 5 point Likert-type scale rated from “1: Never” to “5: Always”) between exchange partners. On the contrary, in the work of Cavusgil et al. (2004), the item of opportunism measuring explicit contractual agreement violations had the highest mean score compared with the other items of opportunism that measured violations in relational contracts. However, the focus of the study of Cavusgil et al. (2004) was the cross-border governance arrangements. In these situations, it is possible that differences in the regulatory environment between countries could result in increased opportunistic behavior between partners of different countries and thus, violation of contractual agreements could be more likely (Cavusgil et al., 2004).

We should highlight the case of the opportunistic practices which weren’t identified in the literature but came up from the qualitative study. Three of them (i.e., refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin, outside agreement financial support for achieving annual economic objectives and upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or store refurbishments or better in-store positioning or entering in the retailer’s brochure offers) were among the most frequently occurring in the Greek food sector according to the suppliers’ perceptions. Therefore, the quantitative study confirmed the significance of the practices revealed in the qualitative study.

The implementation of EFA and CFA methods gave significant results concerning the underline dimensions of the detected opportunistic practices. The corresponding fit indices in combination with the various techniques used that tested their validity showed that the factors derived were sound and valid. Therefore, we are confident that multiple retailers in some cases may behave opportunistically in three main ways: i) by requesting excessive payments from their suppliers, ii) by violating part of the agreements and iii) by putting high pressures on their suppliers during negotiations. The first case refers to situations when multiple retailers request unreasonably high payments for issues such as for stocking goods, for new store openings and for better in-store positioning. This finding comes in
accordance with Towill (2005) who argued that multiple retailers sometimes put severe financial pressures on their suppliers through direct payments received from suppliers. Even though these payments are justified for sharing risk and costs between the retailer and the supplier sometimes some of the multiple retailers are exaggerating in their requests. Evidence of this kind of behavior was reported in the past in general (e.g., Vander-Stichele & Young, 2009; UK Competition Commission, 2008; Dobson, 2005; Moberg & Speh, 2003) and in particular for the Greek food sector (ICAP, 2007). Our study empirically confirmed the occurrence of this kind of behavior.

The second dimension of opportunistic behavior referred to the cases when multiple retailers broke specific parts of their agreement with their suppliers. This finding empirically confirms reported concerns in the relevant literature (European Commission, 2009; UK Competition Commission, 2008; Towill, 2005; Duffy et al., 2003). Finally, the third dimension referred to the opportunistic behavior during the negotiations of the two examined partners. In some cases suppliers may face multiple retailers’ lies or even threats for offering them better trade terms. However, this opportunistic dimension is more general and applies in other exchange relationships as well (Hill et al., 2009; Carter, 2000).

During the process of the extraction of the underlying dimensions several items were dropped from our analysis because they weren’t thoroughly explained by the emerged factors. However, some of them were perceived as very significant from the suppliers. These are the following five: i) favoring own brands against branded products (item 1 in Table 7.4), ii) payment delay without good cause (item 3 in Table 7.4), iii) outside agreement financial support for achieving annual economic objectives (item 6 in Table 7.4), iv) multiple retailers don’t contribute financially to promotional activities (item 7 in Table 7.4) and v) delisting threat in order to improve trade terms and decrease supplier’s prices (item 8 in Table 7.4)). These practices were occurring in a high degree in the Greek market but they weren’t included in the model due to statistical reasons. With a closer look, the practices payment delay without good cause and outside agreement financial support for achieving annual economic objectives are related to contractual issues. Conceptually they capture the
notion of the agreement violations’ dimension. We strongly believe that due to their significance they should be included in relevant scales measuring agreement violation. In addition, the practices concerning favoring own brand and multiple retailers’ unwillingness to contribute financially to promotional activities could be related to the factor of excessive payments because they are indirect ways of enhancing retailers’ “bottom line”. We strongly believe that also in this case the two practices should be included in relevant scales measuring excessive payments. The practice of delisting threat in order to improve trade terms and decrease supplier’s prices is related to the pressures put during negotiations and therefore it captures the notion of the relevant extracted factor. Again, the practice’s significance should be taken into consideration in studies that attempt to measure the relevant multiple retailers’ behavior.

From the total 24 practices that were examined in the survey, only 12 of them were included in the final model. This was due to the fact that we chose the clearest solutions from the EFA and the CFA methods in order to obtain valid factors that could be used to the structural model of our study. Therefore, practices which didn’t load highly to the emerging factors were excluded.

The above findings from the quantitative part of the study contributed significantly to addressing the objective of the identification and the examination of multiple retailers’ supply chain opportunistic practices in the food sector. The most significant ones were recognized, their level of occurrence was measured and their underlying dimensions were revealed.

8.2.4 Contextual factors affecting the level of multiple retailers’ opportunism

The findings from the survey gave very interesting insights concerning the third objective (i.e., the examination of the effect of supplier’s size and competition from own brand products on the level of multiple retailers’ opportunism in the supply chain in the food sector) and the two relevant developed hypotheses (Hypothesis 6-7). The study strongly confirmed that the suppliers who face competition from own
brand products are subjects to higher levels of multiple retailers’ opportunism and particularly for the cases of excessive payments and agreements violations. The levels of negotiation pressures didn’t showed any differences. In summary, we could argue that our sixth hypothesis was supported (H6 supported). To our knowledge this is the first study that empirically examines the magnitude of own brand products’ impact on multiple retailers’ opportunism. This finding confirmed some concern in the literature about the role of own brands in supplier-multiple retailer relationships (European Commission, 2009; Vander-Stichele & Young, 2009). The fact that negotiation pressures weren’t significantly less for the firms that didn’t face competition from own brands comes in accordance with the finding of the qualitative part of the study who revealed that negotiation pressures are very common in supplier-multiple retailer relationships. In addition, past studies identified them as common in exchange relationships in general and not only in the context that we examine (Hill et al., 2009; Carter, 2000).

The study’s results showed that smaller suppliers face higher levels of retailers’ opportunism than the larger ones (H7 supported). In order to come up with this finding we had to exclude from the analysis the firms that don’t face competition from own brand products. This finding agrees with the results of Vázquez et al. (2007) and is differentiated from the studies of Rokkan et al. (2003) and Brown et al. (2000) who didn’t find significance in this relationship. However, Brown et al. (2000) examined the relationship of firm size and opportunism in the context of franchising partners and this could have affected the result. This finding empirically confirms the arguments and indications of past studies concerning the role of suppliers’ size in his relationships with multiple retailers.

According to the aforementioned, the quantitative part of the study contributed significantly to addressing the objective of the examination of the effect of supplier’s size and competition from own brand products on the level of multiple retailers’ opportunism in the supply chain in the food sector and in confirming the two relevant hypotheses (H6 and H7 were supported).
8.2.5 Hypotheses tested summary

Table 8.1 summarizes the statistical examination of our research hypotheses. It should be highlighted that the study’s findings designated goal incompatibility between the two exchange parties and suppliers’ dependence on multiple retailers as the two most significant determinants that explain multiple retailers’ opportunism in the supply chain in the Greek food sector. Informational asymmetry and behavioral uncertainty were also significant determinants but had a lower effect on it.

Table 8.1: Hypotheses testing summary

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Dependence → (+) Multiple retailers’ opportunism</td>
<td>Supported</td>
</tr>
<tr>
<td>H2: Goal incompatibility → (+) Multiple retailers’ opportunism</td>
<td>Supported</td>
</tr>
<tr>
<td>H3: Informational asymmetry → (+) Multiple retailers’ opportunism</td>
<td>Supported</td>
</tr>
<tr>
<td>H4: Business related environmental uncertainty → (+) Multiple retailers’ opportunism</td>
<td>Not supported</td>
</tr>
<tr>
<td>H5: Behavioral uncertainty → (+) Multiple retailers’ opportunism</td>
<td>Supported</td>
</tr>
<tr>
<td>H6: Suppliers facing competition from own brand products will face higher levels of multiple retailers’ opportunism</td>
<td>Supported</td>
</tr>
<tr>
<td>H7: Smaller suppliers will face higher levels of multiple retailers’ opportunism</td>
<td>Supported</td>
</tr>
</tbody>
</table>

The examination of the structural model gave an interesting finding. No indirect effects of the four reliable determinants (business related environmental uncertainty was excluded from this analysis) on the three emerged dimensions of opportunism were detected. This means that the findings didn’t imply any difference in the relationship pattern of the determinants with the dimensions of opportunism. Therefore, the four determinants generally increase opportunistic behavior but not particular parts of it.

According to our findings multiple retailers’ opportunism is mainly attributed to financial goal incompatibility between the two exchange parties and to high suppliers’ dependence on the big customers. On the other hand informational asymmetry and behavioral uncertainty also contribute to multiple retailers’
opportunism. In addition, we found that smaller suppliers and those who compete own brand products inside the retail store will face higher levels of opportunism.
8.4 CONCLUSIONS

8.4.1 General conclusions

Opportunism is a complex phenomenon and even though it has been widely researched in the past further empirical research is needed (Mysen et al., 2011). It is a context specific concept as well (Rindfleisch et al., 2010) but it hasn't been thoroughly examined in the context of supply chains (Hawkins et al., 2008) and in the food sector in particular (Dobson, 2005). This study examined multiple retailers’ potential opportunism in the supply chain in the Greek food sector. For this reason we investigated the perceptions of Greek food suppliers in the issue. It is evident that some multiple retailers sometimes may try to opportunistically take advantage of their suppliers.

Retailing consolidation in the food sector led to the creation of big organizations which dominate supply chains (Burt, 2010). These business entities boost supply chain’s performance and increase its competitiveness according to consumers’ preferences. However, during the last years a concern about some questionable behaviors of the powerful multiple retailers has risen (European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008; ICAP, 2007; Dobson, 2005, Fearne et al., 2005; Towill, 2005; Duffy et al., 2003). This concern mainly refers to multiple retailers’ behavior in their relationships with food suppliers. Even though reports of this concern are being presented since the early 00’s no empirical study has focused on this issue.

The aim of this study is not to criticize the role of multiple retailers in the supply chain in the food sector. Their initiatives and their contribution to improving supply chain’s capabilities in issues such as product quality, traceability, sustainability, operational optimization, supply chain coordination and consumers’ satisfaction are beyond doubt and they are frequently reported in literature (e.g., Dawson, 2013; Burt, 2010; Hingley et al., 2006; Bourlakis & Bourlakis, 2001).

Our aim is to empirically confirm or reject the raising concern about some issues in multiple retailers’ behavior against their suppliers. If the imbalanced
relationships in the supply chain in the food sector include retailer’s opportunistic practices then, problems in the supply chain may occur in the long run. These problems refer not only to the impact on the supplier which may be high but also to potential consequences on the whole supply chain’s competitiveness. Supply chain competitiveness is directly linked to consumers’ welfare. Issues such as increased prices, low diversification of products and low product quality may emerge due to these practices (European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008). Therefore, the issue of opportunism in the supply chain in the food sector could evolve to a major problem not only for supply chain relationships but also for society in the long run. As a result it is of highly importance to investigate such issues before they evolve in the form of typical behavior inside the supply chain. For the above reasons we focused on this aspect of the supplier-multiple retailer relationships in the food sector.

In order to study the specific phenomenon, we developed a conceptual model of the creation of opportunism and we applied a combination of qualitative and quantitative research methodologies in the supply chain in the Greek food sector. Opportunism was examined as specific supply chain practices. These practices were identified in the literature and the notion of opportunism was detected and confirmed in them. The examined practices are not typical in supplier-multiple retailer relationships but they might be used in some cases. The characteristics of the Greek food sector (i.e., presence of big multinational companies, similarity in structural characteristics of the supply chain in Greece with the global and European trends and similarity in the concerns about retailers’ behavior) rend it appropriate for the examination of the specific phenomenon.

The combined findings from the qualitative and the quantitative part of the study confirmed our model and showed that opportunism is a real issue in some of the supplier-multiple retailer relationships. Goal incompatibility, dependence, informational asymmetry and behavioral uncertainty are the factors that determine it. Goal incompatibility (concerning financial objectives) and dependence had the most significant effect. In addition, the presence of own brands and big size difference between the two parties enhances the magnitude of the phenomenon.
This is the first empirical study that examines multiple retailers’ opportunism in the supply chain in the food sector. The findings of our study are highly significant because they give valuable insights for a phenomenon which might have considerable negative impact not only on the supplier-retailer dyad but also on the supply chain in the food sector as a whole and ultimately on the final consumers’ welfare. Greek suppliers perceive that multiple retailers’ opportunism occurs in a considerable degree in the relationships between the two parties. This contributes in some extent to the confirmation of the concerns raised for the specific phenomenon. However, our study adds invaluable insights to the understanding of multiple retailers’ opportunism in the supply chain in the food sector as well. The comprehension of the phenomenon is the first step towards the investigation of its impact and to its mitigation in case considerable proof of its negative consequences emerges. The study’s findings according to the research objectives, the hypotheses and the conceptual model contributed to the identification of the determinants of multiple retailers’ opportunism, the identification of contextual variables that affect the magnitude of the phenomenon, the identification of the most significant supply chain opportunistic practices, the level of their occurrence and their underlying dimensions as well. All the above enrich our understanding of multiple retailers’ opportunism in the supply chain in the food sector.

8.4.2 Theoretical implications

The present study significantly contributes to literature by empirically examining opportunism in the supply chain in the food sector. The findings confirmed the theoretical argument that opportunism is neither ubiquitous nor very unusual. Therefore, we found that some multiple retailers behave opportunistically in some occasions in their relationships with suppliers. In addition, the confirmation of our first hypothesis supported the arguments of TCA and Resource dependence theories that a firm’s dependence in its partner increases partner’s opportunism. Our study also confirmed the positive effect of goal incompatibility on partner’s opportunism. However, we specifically focused on the financial objectives of the
exchange partners. Insights from the qualitative part of the study were valuable in this decision. Hence, the operationalization of the concept should be treated with caution since goals may encompass a wide variety of different objectives that should be taken into consideration in every distinct case. In addition, our study was one of the few empirical studies which empirically confirm the positive relationships of informational asymmetry and opportunism and that of behavioral uncertainty and opportunism.

On the other hand the qualitative part of the study gave some interesting insights concerning the determinant of business related environmental uncertainty and its relationship with opportunism. The contextual characteristics of the examined relationships may develop a positive link between uncertainty and opportunism. To our knowledge this study is the first one that implements specific supply chain behaviors as forms of opportunism. In addition, our study revealed practices which weren’t detected previously in literature while it rejected the occurrence of others in the Greek market. The above confirmed the contextual nature of the concept of opportunism.

In addition, the findings of our study concerning the general level of adoption of opportunism showed that practices related to specific contractual terms (e.g., the number of agreed promotional activities) are less likely to occur than practices related to informal agreements (e.g., favoring own brands against branded products). In the second case the partners don’t make any explicit agreements for the particular issue. However, the supplier assumes that the retailer won’t take such an action. Moreover, our study confirmed that the firm’s size may impact partner’s opportunism while it also gave first empirical proofs concerning the relationship between own brands and retailers’ opportunism. Finally, we faced issues in the implementation of variables which were reverse coded. This is not an unusual finding in empirical studies (Salzberger & Sinkovics, 2006).
8.4.3 Managerial implications

The findings of this study have also significant managerial implications. The results identified the most significant opportunistic supply chain practices which may be used by multiple retailers. Once suppliers are acknowledged of this potential behavior they could be aware of possible requirements of such a relationship and be more prepared while making agreements with retailers (these agreements could be conducted at the beginning of the relationship or regularly during the relationship). The impact of multiple retailers’ opportunism on the supply chain as a whole is not clear yet. However, the impact of multiple retailers’ opportunism on the supplier will be high and will negatively affect him in a considerable way. The findings of this study help suppliers to take the appropriate preemptive actions. They can also better manage their financial budgets by avoiding unexpected costs from multiple retailers’ opportunistic activity. In addition, the knowledge of possible specific practices helps suppliers to plan maneuvering strategies (e.g., a more aggressive promotional strategy that could favor both the supplier and the retailer) that could counter possible retailers’ opportunism.

As we previously saw, multiple retailers could be very creative in developing opportunistic behaviors. However, our study detected three basic areas of multiple retailers’ opportunism. In particular, suppliers could be prepared and expect potential guileful behavior in the form of excessive payments, of violations in particular aspects of the agreement and of high pressures during negotiations. Even though the exact manifestation of opportunistic supply chain practices may change in the long term, it is likely that the general dimensions could remain the same.

The identification of the most significant determinants of multiple retailers’ opportunism helps suppliers to identify its source. Hence, suppliers could more easily mitigate retailers’ opportunism and this could be done in two ways. The first one is by trying to limit the magnitude of the examined determinants per se. For instance they could increase their customer base in order to decrease their dependence on few multiple retailers. Similarly, they could develop better strategic and marketing plans which involve the retailer. In this way their relationship will aim
for larger mutual benefits and will move beyond the simple financial exchange. The supplier must also find a way to facilitate information sharing between him and the retailer. Finally, better monitoring or perhaps various incentives could be used for a limited multiple retailers’ behavioral uncertainty. The second way that the supplier could mitigate retailers’ opportunism is to target each link of our conceptual model with the rightful strategy in order to weaken it.

The findings suggest that the occurrence of multiple retailers’ opportunism is possible in the supply chain in the food sector. However, the current status of the supply chain relationships in the food sector is in favor of retailers. This status can’t be easily changed. Suppliers should be aware of this situation. They should learn to live with this and be adaptive and flexible in their relationships with multiple retailers in order to gain from them because multiple retailers are currently offering the widest access to the final consumer. Towards this notion comes the finding that most of the sampled firms were supplying multiple retailers for a long time. Even though they perceived some of the retailers’ actions as opportunistic they didn’t terminate their relationships with them.

In addition, the study has valuable managerial implications for multiple retailers as well. Our findings are based on suppliers’ perceptions and therefore, this can give retailers significant feedback concerning the way suppliers perceive various aspects of their relationships. The study found that suppliers perceived that opportunism is not absent from their big customers’ behavior. Of course suppliers can’t prove the guile in retailers’ actions. Nevertheless, this kind of perception could be translated to low levels of suppliers’ relationship satisfaction. This could severely impact the relationship in the long term and negatively affect suppliers’ performance, commitment and may even increase suppliers’ opportunism in the form of counter action. Therefore, retailers should find ways to improve their practicing in key aspects of their relationship when it is perceived as inappropriate by suppliers.
8.4.4 Policy implications

The findings of the study offer significant information to policy-makers. Our study revealed that in the supply chain in the Greek food sector cases of multiple retailers’ opportunism do occur. According to the findings from the qualitative and the quantitative part of the study, some of the opportunistic practices (e.g., payment delay without good cause) are significant issues in supplier-multiple retailer relationships. This is the first study that empirically confirmed the concern of many bodies such as the European Parliament and UK Competition Commission. This concern referred to potential opportunistic practicing form the part of multiple retailers and it was widely reported in past studies (e.g., European Commission, 2009; Vander-Stichele & Young, 2009; UK Competition Commission, 2008). Our study refers only to the case of Greece. However, in the previous sections we thoroughly explained why Greece is a representative case for examining the phenomenon. Policy-makers should secure the well-functioning of the supply chain in the food sector by protecting it from this kind of opportunistic practices. The aim of the European policy makers is to protect the consumers’ welfare through low prices, quality products and diversity of products (European Commission, 2009).

Firstly, it must be assured that when multiple retailers put high pressures on suppliers these pressures result in cheaper foods for the final consumer. Therefore, practices such as forcing suppliers’ prices down should result in better product prices. In addition, it must be assured that multiple retailers’ practicing doesn’t have detrimental effects on the profitability of the supplier. This is crucial because in some cases reduced profitability could deter suppliers to invest in new products. In the long term this could result in fewer choices for the consumer or even lower levels of product quality (European Commission, 2009).

Towards this notion, it must be reassured that access to the retailers’ shelves is open to many suppliers and not only to major brands. The findings of our study showed that excessive payments to multiple retailers are an underlying dimension of retailers’ practicing. It must be assured that these payments don’t prohibit the access to multiple retailers’ shelves for many suppliers. Otherwise, product diversity
could be questioned as well. In addition, these payments shouldn’t result in higher suppliers’ prices and they must be passed to consumers in the form of cheaper prices.

Moreover, policy-makers should focus their interest also in the case of the role of own brands in the supplier-multiple retailer relationships. Our study showed that own brands increase the levels of multiple retailers’ opportunism and also that in some cases retailers are favoring them against branded products. It must be assured that the extensive use of own brand products doesn’t have negative effects on the supplier; effects that could affect consumers’ welfare in the long term.

Another important policy implication concerns the agreements between parties of significant difference in their size. There are many cases when multiple retailers are collaborating with suppliers of very small turnovers. Our study found that in these situations the smaller supplier might face higher levels of retailers’ opportunism. Therefore, it must be assured that commercial dealings between parties of different sizes remain fair and desirable from a social point of view.

Our study showed that all the above are significant issues which policy-makers have to solve. Regulations on the basis of social interests and supply chain competitiveness should be made. According to Vander-Stichele & Young (2009) there is a lack of adequate relevant regulation. Regulatory control of multiple retailers’ opportunism could increase consumers’ welfare in the long run. Unfair commercial practices’ laws could improve supplier-multiple retailer relationships.

On the other hand, other countries such as the UK proposed codes of good practices (UK Competition Commission, 2008) in order to avoid the governmental regulation. Similar codes could be developed in other countries such as Greece and regulate the supplier-multiple retailer relationships. In addition, policies and programs assisting suppliers and especially the smaller ones could be applied. They will aim to increase suppliers’ competitiveness. SMEs policy in the E.U. is such a case (European Commission, 2009).
8.4.5 Limitations

Generalization of the above results should be made with caution. The findings’ enhanced reliability and validity were guaranteed with the application of the appropriate research design and data analysis methodology. Nevertheless, this study has also limitations.

The most important limitation is the fact that multiple retailers’ potential opportunism is examined by suppliers’ perceptions. This fact combined with the imbalanced supplier-multiple retailer relationships could be a factor that affected suppliers’ responses. However, this approach has been widely used in literature (e.g., Wang et al., 2012; Handley & Benton, 2011; Mysen et al., 2011; Luo, 2007; Morgan et al., 2007; Kwon & Suh, 2005; Rokkan et al., 2003; Schilling & Steensma, 2002; Skarmeas et al., 2002; Wang, 2002; Sako & Helper, 1998). In addition, it is preferable from the approach of asking retailers to evaluate their self-opportunism which may encompass social desirability bias.

Another limitation is the fact that our data were obtained from firms of the supply chain of the Greek food sector. Even though the Greek case is representative for examining the phenomenon, possible differences between different markets could be detected. The differences could be detected in two areas. The first is the manifestation of retailers’ opportunism. The final list of practices which were included in our model was based on extensive literature review in the area of supplier-multiple retailer relationships and was confirmed by the qualitative part of the study. However, we couldn’t reject the possibility that other practices manifest in other countries. The second area of differentiation could be the level of adoption of opportunism. Therefore, the significant probability of the occurrence of opportunism in the Greek food sector might be rejected in another country. This could be attributed to other characteristics of the examined relationship which may be encompassed by supply chains in other countries (e.g., increased levels of commitment and collaboration, trust, mutual objectives, etc.).
Another limitation is the fact that due to statistical reasons some significant opportunistic practices were excluded from our model. For example, issues such as payment delay and favoring own brands which are reported as major issues in the supplier-multiple retailer relationships weren’t included in the structural model testing process.

In addition, our study was focused on the case of food and in particular, we examined the perceptions of suppliers who manage packaged branded products. However, our choice was justified by the fact that the raising concern regarding retailers’ opportunism mainly referred to the supply chain in the food sector.

8.4.6 Future research

After taken into consideration the above limitations of the study and the general findings of the research the following suggestions for future research emerged.

The examination of retailers’ opportunism was based on suppliers’ perceptions. Future research should also examine the retailers’ point of view in the phenomenon to confirm our findings. Dyadic data from both the supplier and the retailer could optimize the results. Our data were sourced from the Greek market. Future cross-country studies could further validate and improve our conceptual model. In addition, future research attempts should examine multiple retailers’ opportunism by incorporating more practices in the model such as the one of favoring own brands against branded products or threats of delisting or payment delays without good cause. We strongly believe that these practices should be included in relevant models due to their significance.

Potential for future research also rises in the examination of possible differentiation of multiple retailers’ opportunism in the case of non-food products or in the case of bulk products and in the case of suppliers of own brand products as well. It is possible that the agreements between the two exchange parties would
significantly differ from the examined case. In addition, possible differentiations in the level of opportunism according to its manifestation could be examined.

Another area of future research is the implementation of other exchange theories for improving our model. For example possible inter-relationships between the determinants could be examined. Our study showed no significant results in the differentiation of the magnitude of the effect of each determinant in the distinct dimensions of retailers’ opportunism (i.e., insignificant indirect effects). However, future research could focus in more detail in this issue. Difference in the magnitude of the effects could create potential for differentiation in the strategies used for the mitigation of opportunism in every case. In addition, we examined the retailers’ behavior under the perspective of opportunism. Future research could examine the issue under another theoretical perspective.

Data from longitudinal research in the field of multiple retailers’ opportunism could give valuable insights. The concern for the examined phenomenon was firstly raised in the early 00’s. Even though initiatives have been taken the concerns are still real (UK Competition Commission, 2008). Longitudinal data could give insights concerning the development of the phenomenon. The on-going financial crisis should also be examined as a factor that affects the phenomenon. Our study provided contradicting insights for this factor and future studies could give more valid information.

Perhaps, the most significant orientation for future research is the investigation of the impact of multiple retailers’ opportunism on the operation of the whole supply chain in the food sector. How do suppliers respond in it? It is possible that suppliers reduce their investments in new product development or they lower product quality. In addition, suppliers’ may try to counter retailers’ opportunism by setting higher prices to their products. All these cases should be investigated since they affect consumers’ welfare. On the other hand, suppliers could also try to transfer the pressures they face to their suppliers which are mainly the primary producers. Therefore, the upper tiers of the supply chain could face severe problems
as well. This case must also be investigated because it could also result in quality problems or lack of choices for the final consumer.

On the other hand, it should be examined whether the retailers’ pressures put on their suppliers are translated to better prices to the final consumers. Our study is a small step towards that direction. Future studies should provide further empirical results in the issue.
REFERENCES


Hingley, M. K. (2005). Power imbalanced relationships: cases from UK fresh food supply. *International Journal of Retail & Distribution Management, 33*(8), 551-569.


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Roy, S. (2010). So you already have a survey database? A seven-step methodology for the theory building from survey databases: An illustration from incremental


APPENDIX I: Empirical studies examining opportunism
<table>
<thead>
<tr>
<th>Authors/ Date</th>
<th>Aim</th>
<th>Methodology</th>
<th>Examined relationship of opportunism</th>
<th>Key findings</th>
</tr>
</thead>
</table>
| Moon, 2012   | Examination of the factors influencing manufacturer’s opportunism towards small & medium-sized suppliers. | Sample: 131 small & medium sized suppliers Industry: Not specified Analysis: Structural equation modeling | • Manufacturer’s dependence on the supplier → (+) Manufacturer’s opportunism  
• Manufacturer’s trust in the supplier → (-) Manufacturer’s opportunism | • Not supported  
• Supported |
| Wang, et al., 2012 | Examination of the interplay of drivers and deterrents of opportunism in buyer-supplier relationships. | Sample: 400 manufacturing firms Industry: Various Analysis: Structural equation modeling | • Manufacturer’s dependence on supplier (in the form of TSA) → (+) Supplier’s opportunism  
• Supplier’s behavioral uncertainty → (+) Supplier’s opportunism  
• Social interaction → (-) Supplier’s opportunism  
• Identification-based trust → (-) Supplier’s opportunism  
• Shared values → (-) Supplier’s opportunism  
• Supplier’s opportunism → (-) Supplier’s performance  
• Supplier’s opportunism → (-) Firm’s performance  
• Supplier’s opportunism → (+) Firm’s transaction costs | • Supported  
• Supported  
• Supported  
• Supported  
• Supported  
• Supported |
| Chung & Yin, 2011 | Examination of in-group preference and trust as antecedents of opportunism | Sample: 109 department store buyers Industry: Various Analysis: Structural equation modeling | • Retailers with higher in-group preferences will perceive that their suppliers have lower opportunism than will retailers who have lower in-group preferences.  
• Retailer trust in supplier → (-) Supplier’s opportunism | • Supported  
• Supported |
| Dev et al., 2011 | Examination of the effects of coercive and non-coercive tactics for preventing opportunism | Sample: 367 hotel managers Industry: Lodging industry Analysis: Structural equation modeling | • Non-coercive influence → (+) Partner’s opportunism under the condition of high levels of relational norms  
• Non-coercive influence → (-) Partner’s opportunism under the condition of low levels of relational norms  
• Coercive influence → (-) Partner’s opportunism under the | • Supported  
• Supported  
• Not supported |
<table>
<thead>
<tr>
<th>Source</th>
<th>Study Title</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handley &amp; Benton, 2011</td>
<td>Examination of the influence of exchange hazards and power on opportunism in outsourcing relationships.</td>
<td>Sample: 102 dyadic relationships</td>
<td>Various</td>
<td>Analysis: Hierarchical linear regression</td>
<td>• Coercive influence $\rightarrow$ (++) Partner’s opportunism under the condition of high levels of relational norms</td>
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<td>• Supported</td>
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<tr>
<td>Mysen et al., 2011</td>
<td>Examination of the key role of opportunism in business relationships relative to</td>
<td>Sample: 212 small &amp; medium manufacturers</td>
<td>Various</td>
<td></td>
<td>• Business related environmental uncertainty (in the form of market turbulence) $\rightarrow$ (++) Supplier’s opportunism</td>
</tr>
<tr>
<td>Study</td>
<td>Research Question</td>
<td>Methodology</td>
<td>Findings</td>
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</tbody>
</table>
| Caniëls & Gelderman, 2010 | Examination of the safeguarding effect of administrative control, a dominant power position and relational norms on opportunistic behavior of suppliers. | Sample: 624 information and communication technology managers Industry: Dutch municipalities Analysis: Multiple regression analysis | Supplier’s dependence (in the form of buyer’s power) \( \rightarrow \) (‐) Supplier’s opportunism  
Supplier’s dependence (in the form of buyer’s power) \( \rightarrow \) (‐) Supplier’s opportunism under the condition of low buyer’s opportunism  
Administrative control \( \rightarrow \) (‐) Supplier’s opportunism  
Information sharing \( \rightarrow \) (‐) Supplier’s opportunism  
Flexibility & solidarity \( \rightarrow \) (‐) Supplier’s opportunism | Supported  
Supported  
Supported  
Not supported  
Supported |
| Tangpong et al., 2010 | Examination of the effect of relational norms and agent cooperativeness on opportunism in buyer-supplier relationships | Sample: 103 business professionals Industry: Various Analysis: Multiple regression analysis | Relational norms \( \rightarrow \) (‐) Opportunism  
Agent cooperativeness \( \rightarrow \) (‐) Opportunism  
Interaction of relational norms and agent cooperativeness \( \rightarrow \) (‐) Opportunism | Supported  
Supported  
Supported |
| Liu et al., 2009 | Examination of the roles of transactional and relational mechanisms in hindering opportunism and improving relationship performance in an emerging economy (i.e., China) | Sample: 225 dyadic relationships Industry: Household appliance industry Analysis: Hierarchical multivariate regression analysis & Semi-partial correlation analysis | Dependence (in the form of bilateral TSA) \( \rightarrow \) (‐) Partner’s opportunism  
Contract \( \rightarrow \) (‐) Partner’s opportunism  
Relational norms \( \rightarrow \) (‐) Partner’s opportunism  
Trust \( \rightarrow \) (‐) Partner’s opportunism | Supported  
Supported  
Supported  
Supported |
<table>
<thead>
<tr>
<th>Authors</th>
<th>Study Title</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Findings</th>
</tr>
</thead>
</table>
| Luo, 2007            | Examination of the impact of various aspects of environmental uncertainty (i.e., industry structural instability, information unverifiability, and law unenforceability) on joint venture partners’ opportunism. | 188 joint ventures | Various Analysis Hierarchical regression analysis | ● Business related environmental uncertainty (in the form of industry structural instability) → (+) Partner’s opportunism  
● Business related environmental uncertainty (in the form of information unverifiability) → (+) Partner’s opportunism  
● Business related environmental uncertainty (in the form of law unenforceability) → (+) Partner’s opportunism  
● Partner’s opportunism → (-) Joint venture’s performance | ● Not supported  
● Supported  
● Supported  
● Supported |
| Morgan et al., 2007  | Examination of the antecedents and consequences of category level focal supplier opportunism. | 49 managers (qualitative fieldwork) & 75 supermarket store managers (survey) Industry: Supermarket Analysis Structural equation modeling (PLS) | | ● Retailer’s dependence → (+) Focal supplier’s opportunism  
● Focal supplier’s dependence → (-) Focal supplier’s opportunism  
● Focal supplier influence → (+) Focal supplier’s opportunism  
● Retailer’s monitoring ability → (-) Focal supplier’s opportunism  
● Retailer’s punitive capacity → (-) Focal supplier’s opportunism  
● Focal supplier’s opportunism → (-) Retailer’s category performance  
● Focal supplier’s performance → (+) Militant behavior by non focal suppliers | ● Not supported  
● Not supported  
● Not supported  
● Not supported  
● Supported  
● Supported |
| Ting et al., 2007    | Development and empirical examination of a model linking opportunism and its antecedents and consequences. | 200 retailers Industry: Computer Industry Analysis Hierarchical regression analysis | | ● Business related environmental uncertainty → (+) Self-opportunism  
● Informational asymmetry → (+) Self-opportunism  
● Dependence (in the form of own TSA) → (-) Self-opportunism  
● Relational exchange → (-) Self-opportunism  
● Self-opportunism → (+) Transaction costs  
● Self-opportunism → (-) Trust  
● Self-opportunism → (-) Commitment | ● Supported  
● Supported  
● Supported  
● Supported  
● Supported  
● Supported  
● Supported |
<table>
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<tr>
<th>Study</th>
<th>Methodology Description</th>
<th>Findings</th>
<th>Status</th>
</tr>
</thead>
</table>
| Vázquez et al., 2007         | Examination of the impact of the partner’s TSA and relational norms as mediators in the effect of the firm’s TSA on partner’s opportunism. | • Self-opportunism $\rightarrow$ (-) Performance  
• Self-opportunism $\rightarrow$ (-) Cooperation | Supported |
| Carson et al., 2006          | Examination of the impact of formal and relational contracting on opportunism under conditions of volatility and ambiguity | • Business related environmental uncertainty (in the form of environmental volatility) $\rightarrow$ (+) Supplier’s opportunism under the condition of formal contracting  
• Business related environmental uncertainty (in the form of environmental ambiguity) $\rightarrow$ (+) Supplier’s opportunism under the condition of relational contracting  
• Business related environmental uncertainty (in the form of environmental volatility) doesn’t affect supplier’s opportunism under the condition of relational contracting  
• Business related environmental uncertainty (in the form of ambiguity) doesn’t affect supplier’s opportunism under the condition of relational contracting | Supported |
| Dickson et al., 2006         | Examination of the effect of the resource capacity of the SME and the institutional environment on alliance partner’s opportunism | • Size moderates the relationship between the attributes of institutional environment and partner’s opportunism | Supported |
| Kwon & Suh, 2005             | Examination of the relationship between trust and several relevant constructs from TCA theory and Social exchange theory. | • Information sharing $\rightarrow$ (-) Partner’s opportunism  
• Partner’s opportunism $\rightarrow$ (-) Trust | Supported  
Not supported |
<table>
<thead>
<tr>
<th>Authors, Year</th>
<th>Research Question</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Findings</th>
</tr>
</thead>
</table>
| Lai et al., 2005 | Examination of employment of selection, TSA and relational norms respectively and simultaneously as mechanisms in order to mitigate the supplier’s opportunism. | Sample: 131 manufacturers Industry: Semi conductor industry, information/telecommunication industry and electronics industry. Analysis: Multiple regression analysis | • Supplier’s dependence (in the form of supplier’s TSA) → (-) Supplier’s opportunism
• Selection → (-) Supplier’s opportunism
• Relational norms → (-) Supplier’s opportunism | • Supported
• Supported
• Supported |
| Nunlee, 2005 | Examination of the use of social mechanisms for controlling inter-channel opportunism | Sample: 104 licensed contractors Industry: Real estate Analysis: Least squares regression analysis | • Efficient inter-firm communication → (-) Opportunism | • Supported |
| Wong et al., 2005a | Development and empirical examination of a model linking shared visions with compatible goals (in the form of cooperative goals) and incompatible goals (in the form of competitive goals) and opportunism in organizational partnerships in China. | Sample: 103 dyadic customer-supplier relationships Industry: Various Analysis: Structural equation modeling | • Goal incompatibility (in the form of competitive goals) → (+) Partner’s opportunism
• Goal compatibility (in the form of cooperative goals) → (-) Partner’s opportunism
• Independent goals → (+) Partner’s opportunism | • Supported
• Supported
• Not supported |
| Cavusgil et al., 2004 | | Sample: 142 manufacturing companies Industry: Various Analysis: Structural equation modeling | • Manufacturer’s trust in a foreign distributor → (-) Distributor’s opportunism
• Precision in formal contracts → (-) Distributor’s opportunism
• Interaction of trust and formal contracts → (-) Distributor’s opportunism | • Supported
• Not supported
• Not supported |
<p>| Heiman &amp; Nickerson, | Examination of the tension between knowledge sharing | Sample: 36 surveys Industry: Various | • Informational asymmetry (in the form of knowledge management practices) → (+) Partner’s opportunism | • Supported |</p>
<table>
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<tr>
<th>Year</th>
<th>Study Title</th>
<th>Methodology</th>
<th>Findings</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>and knowledge expropriation in collaborations.</td>
<td>Analysis: Ordinary least squares regression analysis</td>
<td>• The increase in supplier opportunism suspicions before and after the auction is greater in online reverse open-bid auctions than in sealed-bid auctions &lt;br&gt;• In online reverse auctions, the increase in supplier opportunism suspicions before and after the auction is greater for current than for new suppliers</td>
<td>Supported</td>
</tr>
<tr>
<td>2003</td>
<td>Examination of the effect of price competition mechanisms on buyer-supplier relationships</td>
<td>Sample: 68 bidders &amp; 50 suppliers  &lt;br&gt;Industry: Automotive industry  &lt;br&gt;Analysis: Quasi experiment</td>
<td>• Dependence (in the form of own TSA) $\rightarrow$ (-) Partner’s opportunism under the condition of high levels of relationship extendedness &lt;br&gt;• Dependence (in the form of own TSA) $\rightarrow$ (+) Partner’s opportunism under the condition of low levels of relationship extendedness &lt;br&gt;• Dependence (in the form of own TSA) $\rightarrow$ (-) Partner’s opportunism under the condition of high levels of solidarity norms &lt;br&gt;• Dependence (in the form of own TSA) $\rightarrow$ (+) Partner’s opportunism under the condition of low levels of solidarity norms</td>
<td>Supported</td>
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<tr>
<td>2003</td>
<td>Examination of the TSA’s bonding effect and its negative impact on opportunism under the conditions of extendedness and solidarity norms.</td>
<td>Sample: 198 dyadic buyer-supplier relationships  &lt;br&gt;Industry: Building industry  &lt;br&gt;Analysis: Ordinary least squares regression analysis</td>
<td>• Formal control $\rightarrow$ (+) Opportunism &lt;br&gt;• Informal control $\rightarrow$ (-) Opportunism</td>
<td>Supported</td>
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<tr>
<td>2002</td>
<td>Examination of the effect of control and informal control on opportunism and compliance</td>
<td>Sample: 173 restaurants  &lt;br&gt;Industry: Restaurants  &lt;br&gt;Analysis: Structural equation modeling</td>
<td>• Opportunism $\rightarrow$ (+) Terminated relationship</td>
<td>Supported</td>
</tr>
<tr>
<td>2002</td>
<td>Examination of the dynamics of export channel relationships in high-velocity environments</td>
<td>Sample: 179 Western manufacturing exporters  &lt;br&gt;Industry: Various  &lt;br&gt;Analysis: Logistics</td>
<td>• Opportunism $\rightarrow$ (+) Terminated relationship</td>
<td>Supported</td>
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<tr>
<td>Reference</td>
<td>Description</td>
<td>Sample</td>
<td>Industry</td>
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</table>
| Schilling & Steensma, 2002 | Examination of the impact of characteristic of technology (i.e., uniqueness, barriers to imitation, commercial uncertainty, technological dynamism) on opportunism, sustainable advantage and the probability of acquisition vis-à-vis licensing agreement. | 127 top managers | Various | Structural equation modeling | - Dependence (in the form of partner’s uniqueness) → (+) Partner’s opportunism  
- Business related environmental uncertainty (in the form of commercial uncertainty) → (+) Partner’s opportunism  
- Business related environmental uncertainty (in the form of technological dynamism) → (+) Partner’s opportunism  
- Barriers to imitation → (+) Partner’s opportunism  
- Partner’s opportunism increases the likelihood of a technology being sourced through an acquisition as opposed to a licensing agreement | Not supported  
Not supported  
Supported  
Supported  
Supported |
| Skarmearas et al., 2002 | Examination of the drivers of commitment and its impact on performance in cross-cultural buyer-seller relationships. | 216 importers | Various | Structural equation modeling | - Business related environmental uncertainty → (+) Partner’s opportunism  
- Partner’s cultural sensitivity → (-) Partner’s opportunism  
- Partner’s opportunism → (-) Firm’s commitment | Supported  
Supported  
Supported |
| Wang, 2002 | Examination of the impact of transaction attributes (i.e., contractor reputation, TSA and uncertainty) on the consequences of outsourcing practices (i.e., opportunism, outsourcing success) | 163 top managers | Manufacturing, service and financial sector | Exploratory factor analysis & Multiple regression analysis | - Dependence (in the form of TSA) → (-) Partner’s opportunism  
- Dependence (in the form of TSA) → (+) Partner’s opportunism  
- Partner’s reputation → (-) Partner’s opportunism  
- Business related environmental uncertainty → (+) Partner’s opportunism  
- Partner’s opportunism → (-) Outsourcing success | Supported  
Not supported  
Supported  
Supported  
Supported |
<p>| Lee et al., 2001 | Examination of the antecedents and consequences of close business relationships (Guanxi) in China | 306 Hong Kong firms | Various | Structural equation modeling | - Opportunism → (-) Guanxi (close business relationships) | Supported |</p>
<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Findings</th>
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</thead>
<tbody>
<tr>
<td>Brown et al., 2000</td>
<td>Examination of three governance mechanisms (i.e., ownership, TSA and relational norms) and their various combinations against opportunism.</td>
<td>395</td>
<td>Lodging industry</td>
<td>Ordinary least squares regression analysis</td>
<td>• Dependence (in the form of own TSA) $\rightarrow$ (-) Self-opportunism</td>
</tr>
<tr>
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<td>Industry</td>
<td>Analysis</td>
<td>• Ownership $\rightarrow$ (-) Self-opportunism</td>
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<td></td>
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<td></td>
<td>• Relational exchange $\rightarrow$ (-) Self-opportunism</td>
</tr>
<tr>
<td>Gruen &amp; Shah, 2000</td>
<td>Examination of manufacturer-retailer relationships and the factors that affect category management</td>
<td>128</td>
<td>Grocery industry</td>
<td>Structural equation modeling</td>
<td>• Opportunism $\rightarrow$ (-) Category plan objectivity</td>
</tr>
<tr>
<td>Achrol &amp; Gundlach, 1999</td>
<td>Examination of the individual and combined effects of contract and relational norm safeguards against opportunism directly and in the context of asymmetric commitments by exchanging parties</td>
<td>101</td>
<td>Various industry</td>
<td>Multiple regression analysis</td>
<td>• Firm’s comparative commitment $\rightarrow$ (+) Partner’s opportunism</td>
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<td></td>
<td></td>
<td>• Contractual safeguards $\rightarrow$ (-) Partner’s opportunism</td>
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<td>• Firm’s comparative commitment won’t lead to partner’s opportunism under the condition of contractual safeguards</td>
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<td>• Relational norms $\rightarrow$ (-) Partner’s opportunism</td>
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<td>• Firm’s comparative commitment won’t lead to partner’s opportunism under the condition of relational norms</td>
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<td></td>
<td>• Interaction of contractual safeguards and relational norms $\rightarrow$ (-) Partner’s opportunism</td>
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<td></td>
<td>• Firm’s comparative commitment won’t lead to partner’s opportunism under the conditions of contractual safeguards and relational norms</td>
</tr>
<tr>
<td>Dahlstrom &amp; Nygaard, 1999</td>
<td>Examination of opportunism as determinant of transaction costs and examination of the effect of cooperation and</td>
<td>395</td>
<td>Oil industry</td>
<td>Structural equation modeling</td>
<td>• Franchisor’s opportunism $\rightarrow$ (+) Franchisee bargaining costs</td>
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<tr>
<td></td>
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<td></td>
<td>Industry</td>
<td>Analysis</td>
<td>• Franchisor’s opportunism $\rightarrow$ (+) Franchisee monitoring costs</td>
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<td></td>
<td>• Franchisor’s opportunism $\rightarrow$ (+) Franchisee maladaption costs</td>
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<tr>
<td>Study</td>
<td>Description</td>
<td>Sample</td>
<td>Industry</td>
<td>Analysis</td>
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</table>
| Deeds & Hill, 1999 | Comparison of the effectiveness of the ex ante structural deterrents embedded within the alliance in accord with Transaction Cost Analysis theory and the strength of relationship between the partners on mitigating opportunism. | Sample: 109 research alliances | Biotechnology | Ordinary least squares regression analysis | • Interfirm cooperation $\rightarrow$ (−) Franchisor’s opportunism  
• Formalized procedures and role responsibilities $\rightarrow$ (−) Franchisor’s opportunism | • Not supported  
• Supported |
| Joshi & Stump, 1999 | Examination of the impact of TSA, business related environmental uncertainty and relational norms on commitment and opportunism; Examination of dependence and long term orientation as mediators to the above relationships. | Sample: 168 purchasing managers | Various | Structural equation modeling | • Manufacturer’s dependence $\rightarrow$ (−) Manufacturer’s opportunism  
• Business related environmental uncertainty (in the form of Technological unpredictability) $\rightarrow$ (−) Long term orientation $\rightarrow$ (−) Manufacturer’s opportunism | • Supported  
• Supported |
<p>| Joshi &amp; Arnold, 1998 | Examination of the moderating effect of relational norms on the dependence-compliance relationship | Sample: 147 purchasing agents | Various | Path analysis | • Compliance $\rightarrow$ (−) Opportunism | • Supported |</p>
<table>
<thead>
<tr>
<th>Reference</th>
<th>Study/Research</th>
<th>Sample Size/Industry</th>
<th>Methodology</th>
<th>Findings</th>
<th>Supported/Not supported</th>
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</table>
| Lee, 1998          | Examination of opportunism’s determinants (i.e., decision making uncertainty, cultural distance and economic ethnocentrism) and its impact on relational exchange. Examination of the impact of relational exchange, exporting performance and the duration of the business relationship on exporters’ intentions to form international strategic alliances. | 105 top managers     | Structural equation modeling         | • Decision making uncertainty $\rightarrow$ (+) Exporter’s opportunism  
• Cultural distance $\rightarrow$ (+) Exporter’s opportunism  
• Economic ethnocentrism $\rightarrow$ (+) Exporter’s opportunism  
• Exporter’s opportunism $\rightarrow$ (-) Relational exchange | Supported/Supported     |
| Sako & Helper, 1998| Examination and differentiation of the determinants of trust and opportunism.                                                                 | 675 first-tier suppliers in the US & 472 first-tier suppliers in Japan | Multivariate regression analysis     | • Business related environmental uncertainty $\rightarrow$ (+) Buyer’s opportunism  
• Suppliers’ perception of customer opportunism is not significantly affected by the degree to which they are vertically integrated by their customer, other things being equal.  
• Duration of written contracts $\rightarrow$ (-) Buyer’s opportunism  
• Informational asymmetry $\rightarrow$ (+) Buyer’s opportunism  
• Supplier’s dependence (in the form of TSA) $\rightarrow$ (+) Buyer’s Opportunism | Supported/Supported     |
<p>| Weaver &amp; Dickson, 1998 | Examination of the relevant impact of negative departures from both contractual and extracontractual behavioral norms on the quality of alliance outcomes.                                                     | 433 manufacturing SMEs | Hierarchical linear regression       | • Quality of alliance outcomes $\rightarrow$ (-) Opportunism | Supported               |</p>
<table>
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<tr>
<th>Alliance Norms</th>
<th>Study Details</th>
<th>Findings</th>
<th>Notes</th>
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| Joshi & Arnold, 1997 | Examination of the impact of buyer dependence on opportunism against the supplier under the moderating role of relational norms. Sample: 148 industrial purchasing agents Industry: Electronic equipment manufacturing Analysis: Structural equation modeling | • Buyer’s dependence $\rightarrow$ (+) Buyer’s opportunism under the condition of low relational norms  
• Buyer’s dependence $\rightarrow$ (-) Buyer’s Opportunism under the condition of high relational norms | Supported  
Supported |
| Gassenheimer et al., 1996 | Examination of opportunism and participative communication in franchise structures Sample: 162 franchisees Industry: Fast food industry Analysis: Regression analysis | • Opportunism $\rightarrow$ (-) Franchise system performance  
• Opportunism $\rightarrow$ (-) Franchisee satisfaction | Supported  
Supported |
| Johnson et al., 1996 | Examination of the variations in opportunism and shared decision making due to culture in international joint ventures. Sample: 155 international joint venture partners Industry: Various Analysis: Ordinary least squares regression analysis | • Culture affects opportunism in international joint ventures  
• Shared decision making in international joint ventures neutralizes cultural differences in opportunism  
• Duration of international joint venture relationships $\rightarrow$ (-) Opportunism | Supported  
Supported  
Not supported |
| Gundlach et al., 1995 | Examination of the effect of the credibility and proportionality of commitment inputs in an exchange upon the development of relational social norms, opportunism, and long-term commitment intentions. Sample: 130 dyadic manufacturers-distributors relationships Industry: Micro-computer industry Analysis: Multiple regression analysis | • Asymmetric commitment $\rightarrow$ (+) Opportunism of the less committed party  
• Relational social norms $\rightarrow$ (-) Opportunism  
• Long term commitment intentions $\rightarrow$ (-) Opportunism | Partially supported  
Supported  
Not supported |
| Parkhe, 1993 | Development and empirical examination of a general model of alliance structuring by linking game theoretic Sample: 111 inter-firm alliances Industry: Various Analysis: Canonical | • Opportunism $\rightarrow$ Strategic alliance performance  
• History of cooperation $\rightarrow$ (-) Opportunism  
• Opportunism $\rightarrow$ (+) Contractual safeguards | Supported  
Supported  
Supported |
<table>
<thead>
<tr>
<th>Source</th>
<th>Title</th>
<th>Sample</th>
<th>Industry</th>
<th>Analysis</th>
<th>Findings</th>
<th>Notes</th>
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<tr>
<td>Ping, 1993</td>
<td>Examination of the associations between response intentions to relationship problems and their antecedents</td>
<td>222 hardware retailers</td>
<td>Computer</td>
<td>Structural equation modeling</td>
<td>• Satisfaction $\rightarrow$ (-) Opportunism</td>
<td>Supported</td>
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<td>• Investment $\rightarrow$ (-) Opportunism</td>
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<td>• Switching costs $\rightarrow$ (-) Opportunism</td>
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<td>• Alternative attractiveness $\rightarrow$ (+) Opportunism</td>
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<td>Provan &amp; Skinner, 1989</td>
<td>Examination of the impact of interorganizational dependence and control over decisions on opportunism.</td>
<td>226 dealers</td>
<td>Farm and power equipment</td>
<td>Multiple regression analysis</td>
<td>• Buyer’s dependence $\rightarrow$ (-) Buyer’s opportunism</td>
<td>Supported</td>
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<td>Anderson, 1988</td>
<td>Examination of the determinants of opportunism in sales forces</td>
<td>169 sales districts</td>
<td>Electronic components industry</td>
<td>Ordinary least squares regression analysis</td>
<td>• Behavioral uncertainty $\rightarrow$ (+) Opportunism</td>
<td>Supported</td>
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<td></td>
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<td>• Business related environmental uncertainty (in the form of environmental unpredictability) $\rightarrow$ (+) Opportunism</td>
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<td>• Goal compatibility $\rightarrow$ (-) Opportunism</td>
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<td></td>
<td>• Dependence (in the form of TSA) $\rightarrow$ (+) Opportunism</td>
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<td>• Integration $\rightarrow$ (-) Opportunism</td>
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<tr>
<td>John, 1984</td>
<td>Examination of the determinants of opportunism in an interfirm relationship</td>
<td>147 retail dealers</td>
<td>Oil industry</td>
<td>Structural equation modeling</td>
<td>• Bureaucratic structuring $\rightarrow$ (+) Opportunism</td>
<td>Not supported</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Coercive power $\rightarrow$ (+) Opportunism</td>
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<td></td>
<td></td>
<td>• Reward influence $\rightarrow$ (+) Opportunism</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>• Non-contingent power $\rightarrow$ (-) Opportunism</td>
<td></td>
</tr>
</tbody>
</table>

**Commitment of non-recoverable investments $\rightarrow$ Opportunism**

**Supported**

**Not supported**

**Supported**
APPENDIX II a: Qualitative research semi-structured questionnaire (pre-test)
Qualitative research semi-structured questionnaire

✓ Welcome the respondent
✓ Present the researcher and the basic details of the research to the respondent in order to create a climate of trust
  ■ “Good morning, ........., my name is, ......., and I am researcher in the Department of Business Administration of Food and Agricultural Enterprises of the University of Patras. Today we will have a discussion regarding the retailer-supplier relationships in the supply chain in the food sector. The data gathered from our discussion will remain confidential and will be used only for the purpose of the research. Your personal information will also remain confidential and won’t be published for any reason”
  ■ “Are you the most appropriate person to speak with about the relationships of your company with your customers and especially in agreement issues?”

✓ Grand Tour Questions
  ■ “To open our conversation I’d like to ask you some questions about yourself and your career until now. So, I would like to know your position in the company, how many years you are working in it, what is your experience in the food industry, what is your former working experience, etc. Could you give me some information about your company and its products as well?”
A) Relationships with multiple retailers

- “What is your opinion concerning the relationships of your firm with the multiple retailers?”
- “Could you please give me some information regarding the contractual agreements with multiple retailers?”
  - Additional prompt questions:
    - “Could you describe the process in which the contracts with the multiple retailer are signed?”
    - “How often are they signed?”
    - “What is the level of formality?”
    - “Are there any informal agreements?”
- “Could you please give me some information regarding the negotiations with multiple retailers;”
  - Additional prompt questions:
    - “How often do you enter in negotiations with them?”
    - “Which are the most common subjects of the negotiations?”
    - “Could you describe the process of the negotiations with multiple retailers?”

B) Questionable practices

- “The following Table presents a number of questionable practices that multiple retailers may use during their relationships with suppliers. Which of the following practices, if any, have occurred during your relationship with multiple retailers and in what frequency (1 indicates “never” and 7 indicates “in a high degree”)? In addition, please indicate how significant their impact on your company’s business performance was (low indicates “low impact”, medium indicates “medium impact” and high indicates “high impact”).”
- “During the process I’d like you to comment whether each practice describes the retailer’s behavior in a realistic way or it is a variation of the actual practice which occurred during the relationship of your firm with them.”
- “Please indicate if any other questionable practices occurred during your relationships with multiple retailers and were not included in the Table.”
<table>
<thead>
<tr>
<th>Retailer's questionable practices</th>
<th>How often does the specific practice occur?</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1=Never 2=Low 3=Moderate 4=Medium 5=High</td>
<td></td>
</tr>
<tr>
<td><strong>1.</strong> Favoring own brands against branded products</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>2.</strong> Unreasonably high payments as condition for stocking goods</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>3.</strong> Unreasonably high payments for the products' better in-store positioning</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>4.</strong> Unreasonably high payments for new store openings</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>5.</strong> Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>6.</strong> Payments for entering and remaining in the retailer’s list of suppliers</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>7.</strong> Compensation for not meeting target profits</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>8.</strong> Upfront lump sum payment for in-store promotions</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>9.</strong> Charges for consumer complaints/ returns</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>10.</strong> Fines for unproven specification shortfalls</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>11.</strong> Requirement for suppliers’ contribution to retrospective supply chain costs and services</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<tr>
<td><strong>12.</strong> Requirement for suppliers’ contribution to various multiple retailers’ costs</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<td><strong>13.</strong> Requirement for retrospective discounts</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>14.</strong> Requirement for suppliers’ contribution to multiple retailers’ losses</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
</tr>
<tr>
<td><strong>15.</strong> Fail to compensate suppliers for costs and profit losses caused by the retailer’s actions</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<td><strong>16.</strong> Add-hoc unilateral changes to agreements</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<tr>
<td><strong>17.</strong> Buy back unsold products outside of the agreement</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<tr>
<td><strong>18.</strong> Obscure terms of agreement</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<td><strong>19.</strong> Payment delay without good cause</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<td><strong>20.</strong> Discrimination between suppliers concerning credit periods</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<tr>
<td><strong>21.</strong> Termination of the relationship or parts of it without prior notice or further explanation</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<tr>
<td><strong>22.</strong> Low promotion pass-through</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<tr>
<td><strong>23.</strong> Forward buying</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<td><strong>24.</strong> Requirement for designating the discount price as the normal price</td>
<td>1  2  3  4  5  6  7</td>
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<td><strong>25.</strong> Requirement for purchasing goods or services from designated</td>
<td>1  2  3  4  5  6  7</td>
<td>☐ Low ☐ Medium ☐ High</td>
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<td></td>
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<td>27</td>
<td>Requirement for exclusive supply of a product</td>
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<td>28</td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price</td>
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<td></td>
<td>increases due to cost increases</td>
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<td>29</td>
<td>Falsely suggesting that competitive supplier is offering better trade</td>
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<td></td>
<td>terms</td>
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</tr>
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<td>30</td>
<td>Delisting threat in order to improve terms and decrease supplier’s prices</td>
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<tr>
<td>31</td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for</td>
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<tr>
<td></td>
<td>gaining concessions</td>
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<td>32</td>
<td>Optimistic sales forecasts for gaining concessions from suppliers</td>
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</tbody>
</table>
C) Characteristics of the relationship-Possible determinants of opportunism

- “According to your opinion which are the reasons behind these questionable practices?”
- “What do you think about the following elements regarding your relationships with multiple retailers? Do they affect them?”
  - “Your firm’s dependence on multiple retailers”
  - “Goal incompatibility between your firm and multiple retailers”
  - “Informational asymmetry between your firm and multiple retailers”
  - “Business related environmental uncertainty”
  - “Multiple retailers’ behavioral uncertainty”
- “What do you think about the following elements regarding your relationships with multiple retailers? Do they affect them?”
  - “Multiple retailers’ own brand products”
  - “Size of your firm relatively to multiple retailers size”

✓ Summary, any last comments
✓ Thank the respondent
✓ Close the interview
APPENDIX II b: Qualitative research semi-structured questionnaire (final form)
Qualitative research semi-structured questionnaire

- **Welcome the respondent**
- **Present the researcher and the basic details of the research to the respondent in order to create a climate of trust**
  - “Good morning, ........, my name is, ...., and I am researcher in the Department of Business Administration of Food and Agricultural Enterprises of the University of Patras. Today we will have a discussion regarding the retailer-supplier relationships in the supply chain in the food sector. The data gathered from our discussion will remain confidential and will be used only for the purpose of the research. Your personal information will also remain confidential and won’t be published for any reason”
  - “Are you the most appropriate person to speak with about the relationships of your company with your customers and especially in agreement issues?”

- **Grand Tour Questions**
  - “To open our conversation I’d like to ask you some questions about yourself and your career until now. So, I would like to know your position in the company, how many years you are working in it, what is your experience in the food industry, what is your former working experience, etc. Could you give me some information about your company and its products as well?”
A) Relationships with multiple retailers

- “Could you describe to me the typical relationship of your firm with a multiple retailer? How do you feel about it?”
- “Could you please give me some information regarding the contractual agreements with multiple retailers? How do you feel about them?”

**Additional prompt questions:**
- “Could you describe the process in which the contracts with the multiple retailer are signed?”
- “How often are they signed?”
- “What is the level of formality?”
- “Are there any informal agreements?”

- “Could you please give me some information regarding the negotiations with multiple retailers; How do you feel about them?”

**Additional prompt questions:**
- “How often do you enter in negotiations with them?”
- “Which are the most common subjects of the negotiations?”
- “Could you describe the process of the negotiations with multiple retailers?”

B) Questionable practices

- “The following Table presents a number of questionable practices that multiple retailers may use during their relationships with suppliers. Which of the following practices, if any, have occurred during your relationship with multiple retailers and in what frequency (1 indicates “never” and 7 indicates “in a high degree”)? I’d like you to think a typical relationship with a multiple retailer; not the best or the worst relationship but a typical one. In addition, please indicate how significant their impact on your company’s business performance was (low indicates “low impact”, medium indicates “medium impact” and high indicates “high impact”).”

- “During the process I’d like you to comment whether each practice describes the retailer’s behavior in a realistic way or it is a variation of the actual practice which occurred during the relationship of your firm with them. How do you feel about them?”

- “Please indicate if any other questionable practices occurred during your relationships with multiple retailers and were not included in the Table.”
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<tr>
<td>1. Favoring own brands against branded products</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>2. Unreasonably high payments as condition for stocking goods</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>3. Unreasonably high payments for the products’ better in-store positioning</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
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<tr>
<td>4. Unreasonably high payments for new store openings</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>5. Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>6. Payments for entering and remaining in the retailer’s list of suppliers</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>7. Compensation for not meeting target profits</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
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<tr>
<td>8. Upfront lump sum payment for in-store promotions</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
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<tr>
<td>9. Charges for consumer complaints/returns</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
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<tr>
<td>10. Fines for unproven specification shortfalls</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
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</tr>
<tr>
<td>11. Requirement for suppliers’ contribution to retrospective supply chain costs and services</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
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<td>12. Requirement for suppliers’ contribution to various multiple retailers’ costs</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>13. Requirement for retrospective discounts</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>14. Requirement for suppliers’ contribution to multiple retailers’ losses</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>15. Fail to compensate suppliers for costs and profit losses caused by the retailer’s actions</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>16. Add-hoc unilateral changes to agreements</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>17. Buy back unsold products outside of the agreement</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>18. Obscure terms of agreement</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>19. Payment delay without good cause</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>20. Discrimination between suppliers concerning credit periods</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>21. Termination of the relationship or parts of it without prior notice or further explanation</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>22. Low promotion pass-through</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>23. Forward buying</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td>24. Requirement for designating the discount price as the normal price</td>
<td>1=Never 2=Rare 3=Occasional 4=Periodic 5=Common 6=Almost always 7=Always</td>
<td>□ Low  □ Medium  □ High</td>
</tr>
<tr>
<td></td>
<td>Requirement</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>26</td>
<td>Requirement for purchasing goods or services from designated companies</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Requirement for exclusive supply of a product</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Forcing supplier’s prices down or refusing supplier’s justified price</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>increases due to cost increases</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Falsely suggesting that competitive supplier is offering better trade</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>terms</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Delisting threat in order to improve terms and decrease supplier’s</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>prices</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Exaggeration of the seriousness of problems (e.g., low demand) for gaining</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>concessions</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Optimistic sales forecasts for gaining concessions from suppliers</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C) Characteristics of the relationship - Possible determinants of opportunism

- “According to your opinion which are the reasons behind these questionable practices?”
- “What do you think about the following elements regarding your relationships with multiple retailers? Do they affect them? Are they linked to the previous questionable practices?”
  - “Your firm’s dependence on multiple retailers”
  - “Goal incompatibility between your firm and multiple retailers concerning financial objectives”
  - “Informational asymmetry between your firm and multiple retailers”
  - “Business related environmental uncertainty”
  - “Multiple retailers’ behavioral uncertainty”
- “What do you think about the following elements regarding your relationships with multiple retailers? Do they affect them? Are they linked to the previous questionable practices?”
  - “Multiple retailers’ own brand products”
  - “Size of your firm relatively to multiple retailers size”

✓ Summary, any last comments
✓ Thank the respondent
✓ Close the interview
APPENDIX III a: Quantitative research structured questionnaire (pre-test/ pilot test)
Dear sir/ madam

This questionnaire was designed by the Department of Business Administration of Food and Agricultural Enterprises of the University of Patras and aims to collect data for academic research in the field of supplier-multiple retailer relationships in the supply chain in the food sector.

The questionnaire is strictly confidential and the data analysis won’t reveal any information concerning the respondent’s identity or the name of his company. The results will be strictly used for academic objectives.

Thank you very much for your time.

Research leader: Christos Fotopoulos

Professor
### A) Screening questions

1) Are you the most appropriate person in your firm to talk about your firms’ relationships with multiple retailers?  
   - YES  
   - NO*  

*Ask for appointment with the firm’s appropriate person

2) Does your firm’s packaged products account for a significant amount of the firm’s total turnover?  
   - YES  
   - NO*  

*End of interview

3) Please indicate which of the following multiple retailers is a key partner of your firm  
   - Carrefour/Marinopoulos  
   - AB Vasilopoulos  
   - Sklavenitis  
   - Veropoulos  
   - Masoutis  
   - None of the above*  

*End of interview

During the interview you should think about one typical relationship of your firm with a multiple retailer. Do not think about your firm’s best nor worse relationship but for a typical multiple retailer.

### B) Multiple retailers’ practices

Please indicate in what degree the above practices occurred or are still occurring during your firm’s relationship with multiple retailers. Please rate your answer in a scale between “1: Never” to “7: In a high degree”.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Never</th>
<th>In a high degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Favoring own brands against branded products*</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. Unreasonably high payments as condition for stocking goods</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. Unreasonably high payments for the product’s better in-store positioning</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. Unreasonably high payments for new store openings</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5. The payments for entering in the retailer’s brochure offer are reasonable</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6. Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or better in-store positioning or entering in the retailer’s brochure offers</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7. Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8. Financial support for matching competing retailer’s lower price</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>9. Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>10. Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without compensating the supplier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11. Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>12. Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>13. Obscure terms of agreement</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>14. Payment delay without good cause</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>15. Outside agreement financial support for achieving annual economic objectives</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>16. Discrimination between suppliers concerning credit periods</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>17. Limited time for new products to achieve high turnovers</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>18. Termination of the relationship or parts of it without prior notice or further explanation</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>19. Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>20. Falsely suggesting that competitive supplier is offering better trade terms</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>21. Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>22. Delisting threat in order to improve trade terms and decrease supplier’s prices</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>23. Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>24. Optimistic sales forecasts for gaining concessions from suppliers</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

*The question refers only to firms competing own brand products*

**C) Characteristics of the relationship**

Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th></th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It would be difficult to replace these customers.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. It would be costly to lose these customers.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. We are dependent on these customers.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. If we lose this customer, it will be very difficult to maintain our current total level of sales.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5. We cannot afford to lose this customer.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th></th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Our company and multiple retailers have different goals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. We don’t have common goals with multiple retailers</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. Multiple retailers don’t support our goals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. Our company’s goals are in conflict with multiple retailers’ goals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th></th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Multiple retailers avoid sharing with us important information</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. Multiple retailers usually don’t share with us useful information and business knowledge</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. Multiple retailers usually don’t share with us information or they do only if we ask them to or in case of information exchange agreement</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. Multiple retailers usually don’t share with us information about events or changes that may affect our company</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5. Multiple retailers won’t volunteer helpful information to us</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Please indicate in what degree you agree or disagree with the following statements concerning the business related economic environment in which your firm is operating. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th></th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The market shares in our sector are volatile</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. It is difficult to make accurate sales forecasts in our sector</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. It is difficult to follow the sector’s trends</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. The sector’s sales volumes are volatile</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th></th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There would be significant costs associated with monitoring whether multiple retailers’ perform according to our agreement</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. Our commercial agreements with multiple retailers are so complex that is difficult to verify if they are performing all their contractual obligations under these agreements</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. It is easy to monitor whether the multiple retailers are performing all of their contractual obligations under our agreement (R)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

**D) Demographics**

Please indicate:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The number or employees working in your firm</td>
<td>...</td>
</tr>
<tr>
<td>Your firm’s annual turnover</td>
<td>...</td>
</tr>
<tr>
<td>The average number of years that your firm is supplying multiple retailers</td>
<td>...</td>
</tr>
</tbody>
</table>
APPENDIX III b: Quantitative research structured questionnaire (final form)
Dear sir/ madam

This questionnaire was designed by the Department of Business Administration of Food and Agricultural Enterprises of the University of and aims to collect data for academic research in the field of supplier-multiple retailer relationships in the supply chain in the food sector.

The questionnaire is strictly confidential and the data analysis won’t reveal any information concerning the respondent’s identity or the name of his company. The results will be strictly used for academic objectives.

Thank you very much for your time.

Research leader: Christos Fotopoulos

Professor
### A) Screening questions

1) Are you the most appropriate person in your firm to talk about your firms’ relationships with multiple retailers?  
   - YES  
   - NO*  

   *Ask for appointment with the firm’s appropriate person

2) Does your firm’s packaged products account for a significant amount of the firm’s total turnover?  
   - YES  
   - NO*

   *End of interview

3) Please indicate which of the following multiple retailers is a key partner of your firm:  
   - Carrefour/ Marinopoulos  
   - AB Vasilopoulos  
   - Sklavenitis  
   - Veropoulos  
   - Masoutis  
   - None of the above*  

   *End of interview

4) Which is the most significant product of your firm in terms of turnover?  
   - …

The rest of the interview will be focused on your firm’s relationships with multiple retailers and only concerning your firm’s specific packaged product. During the interview you should think about one typical relationship of your firm with a multiple retailer. Do not think about your firm’s best nor worse relationship but for a typical multiple retailer.

### B) Multiple retailers’ practices

Please indicate in what degree the above practices occurred or are still occurring during your firm’s relationship with multiple retailers. Please rate your answer in a scale between “1: Never” to “7: In a high degree”.

<table>
<thead>
<tr>
<th>Practice</th>
<th>Never</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Favoring own brands against branded products*</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Unreasonably high payments as condition for stocking goods</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Unreasonably high payments for the product’s better in-store positioning</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Unreasonably high payments for new store openings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>The payments for entering in the retailer’s brochure offer are reasonable (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Upfront lump sum payments instead of percentage of the product’s turnover as condition for stocking goods or for new store openings or better in-store positioning or entering in the retailer’s brochure offers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Multiple retailers don’t contribute financially to promotional activities (e.g., buy one get one free promotion)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Financial support for matching competing retailer’s lower price</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Ad-hoc unilateral change to agreement concerning order quantity or quality without compensating suppliers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Ad-hoc unilateral change to agreement concerning the number of stores in which a product will enter without</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</tr>
<tr>
<td>compensating the supplier</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Ad-hoc unilateral change to agreement concerning the number of in-store promotional activities that will take place without compensating the supplier</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>12. Ad-hoc unilateral change to agreement concerning the number of products/ codes that will enter the stores without compensating the supplier</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>13. Obscure terms of agreement</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>14. Payment delay without good cause</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>15. Outside agreement financial support for achieving annual economic objectives</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>16. Discrimination between suppliers concerning credit periods</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>17. Limited time for new products to achieve high turnovers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</tr>
<tr>
<td>18. Termination of the relationship or parts of it without prior notice or further explanation</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>19. Forcing supplier’s prices down or refusing supplier’s justified price increases due to cost increases</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</tr>
<tr>
<td>20. Falsely suggesting that competitive supplier is offering better trade terms</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>21. Refuse to accept a lower profit margin from a supplier with high amount of sales with the excuse of the standard category average profit margin</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>22. Delisting threat in order to improve trade terms and decrease supplier’s prices</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
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<tr>
<td>23. Exaggeration of the seriousness of problems (e.g., low demand) for gaining concessions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>24. Optimistic sales forecasts for gaining concessions from suppliers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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</tbody>
</table>

*The question refers only to firms competing own brand products*

**C) Characteristics of the relationship**

Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<p>| | | | | | | | | | | | |</p>
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</tr>
<tr>
<td>1. It would be easy to replace these customers (R)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>2. It would be costly to lose these customers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
<td>7</td>
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<td></td>
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<tr>
<td>3. We are dependent on these customers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
<td>7</td>
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<tr>
<td>4. If we lose this customer, it will be very difficult to maintain our current total level of sales</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>5. We cannot afford to lose this customer</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td>6</td>
<td>7</td>
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</tbody>
</table>
Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Our company and multiple retailers have different financial goals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. We share common financial goals with multiple retailers (R)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. Multiple retailers don’t support our financial goals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. Meeting our company’s financial goals clashes with meeting multiple retailers’ financial goals</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Multiple retailers avoid sharing with us important information regarding our product category, competitors or the market in general</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. Multiple retailers usually don’t share with us useful information and business knowledge</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. Multiple retailers usually don’t share with us information or they do only if we ask them to or in case of information exchange agreement</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. Multiple retailers usually don’t share with us information about events or changes that may affect our company</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>5. Multiple retailers won’t volunteer helpful information to us unless we ask them to</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Please indicate in what degree you agree or disagree with the following statements concerning the business related economic environment in which your firm is operating. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The market shares in our sector are volatile.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. It is difficult to make accurate sales forecasts in our sector</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. It is difficult to follow the sector’s trends</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. The sector’s sales volumes are volatile</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>
Please indicate in what degree you agree or disagree with the following statements concerning your firm’s relationships with multiple retailers. Please rate your answer in a scale between “1: Totally disagree” to “7: Totally agree”.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Totally disagree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. There would be significant costs associated with monitoring in detail whether the multiple retailers are performing all of their contractual obligations under our agreement</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2. Our commercial agreements with multiple retailers refer to so many stores, promotional activities, products and commercial activities in general that is difficult to verify if they are performing all their contractual obligations under these agreements</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3. Our monitoring of multiple retailers’ performance according to our agreement is based on very accurate information (R)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4. It is easy to monitor whether the multiple retailers are performing all of their contractual obligations under our agreement (R)</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

D) Demographics

D1) Firm’s demographics

Please indicate:

The number or employees working in your firm       ...
Your firm’s annual turnover       ...
The average number of years that your firm is supplying multiple retailers       ...

D2) Respondent’s demographics

Please indicate:

Your age       ...
Your sex       Male [ ] Female [ ]
Your current position in the company       ...
The numbers of years you are working in the sector       ...
The number of years you are working in the company       ...

(R): reverse coded question