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Supplier Integration in Category Management –
A case study of the situational impact on relationship performance and
interdependence

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2015

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ABSTRACT

Supplier integration in category management means that a supplier takes part in the activities that are traditionally performed by retailers. These activities are the selection of which products to sell, decisions on how to price and market the products, and making sure that the products are delivered to the stores in a timely manner. Depending on the situation, an integration of suppliers in these activities can be more or less suitable.

As more research is needed to understand when supplier integration in category management is suitable, the purpose of this thesis is to describe and analyze how situational factors affect the relationship consequences of supplier integration in category management. Specifically, the relationship consequences are expressed in terms of relationship performance and interdependence between the firms.

The study builds on empirical data about British and Swedish builders' merchants and their suppliers, with a particular focus on timber suppliers. Data has mainly been collected through participative observations and interviews.

Five situational factors that improve the relationship performance of supplier integration in category management are identified: large retailer firms, supplier product knowledge, homogeneity of market demands for the supplier's products, mutual trust and a shared view on customer value between the supplier and retailer. Three situational factors are identified that affect the interdependence between the retailer and the supplier when supplier integration in category management is implemented: supplier product knowledge, whether the supplier or the retailer initiates the integration and whether coercive or non-coercive power has to be used in the implementation.

This thesis contributes to retail literature by highlighting the need to include situational factors in the analysis of supplier integration, clarifying which activities are comprised by category management and suggesting a theoretical foundation based on the resource-based view and the transaction cost framework to analyse relationship performance in retailer-supplier dyads. When making decisions on integration, managers of retailers and their suppliers are advised to consider the fit with their overall strategy, the fit with the surrounding situation and the effects both in terms of interdependence and relationship performance.

LEVERANTÖRSSAMARBETE I HANDELN

Handelns uppgift är att ge allmänheten tillgång till rätt produkter, för rätt pris, på rätt plats och dessutom att informera sina kunder om värdet av dessa produkter. De handelsföretag som lyckas bättre med detta än sina konkurrenter är de som långsiktigt kommer överleva. För att utföra denna uppgift kan handeln ta hjälp av sina leverantörer. Detta kallas för leverantörsintegration. Eftersom leverantörerna ofta har mer kunskap om sina egna produkter och den nytta deras produkter bidrar med, kan leverantörerna spela en viktig roll i handelns arbete med sina produktkategorier.

Att ta hjälp av leverantörer innebär dock inte alltid en förbättring för varken leverantören, handeln eller kunden. I denna avhandling identifierar jag de situationer där leverantörens och handlarens gemensamma prestation gagnas av ökad leverantörsintegration. Detta sker (1) när leverantören har stor produktkunskap, (2) när det finns små regionala skillnader i efterfrågan på marknaden, (3) när det finns ett ömsesidigt förtroende mellan leverantören och handlaren, (4) när handlaren är ett företag som kontrollerar ett större antal butiker och (5) när det finns en samsyn mellan leverantören och handlaren kring vad kunderna värderar.

När handlare tar mer hjälp av sina leverantörer får detta dessutom konsekvenser för maktbalansen och beroendet mellan leverantören och handlaren. Om ett företag blir för beroende av ett annat företag riskerar de att inte få del av de vinster som genereras. Det är därför viktigt för både handeln och deras leverantörer att reflektera kring hur en ökad leverantörsintegration påverkar maktbalansen mellan företagen. För det första ökar handlarens beroende av leverantören när denna har relevant produktkunskap att bidra med till handlarens arbete med sina produktkategorier. Dessutom påverkas företagets ömsesidiga beroende av om initiativtagaren till leverantörsintegrationen tvingar in morparten i samarbetet, eller om denne ingår frivilligt. Om handlaren tvingar in leverantören i ett utökat samarbete kommer leverantörens beroende av handlaren minska, medan beroendet kommer öka om leverantören ser en nytta med att stödja handlaren i sitt arbete med sina produktkategorier. För beslutsfattare är det viktigt att ta hänsyn till hur situationen påverkar både maktbalansen mellan företagen, och den gemensamma prestationen som ökad leverantörsintegration innebär.

För leverantörer innebär denna typ av integration en förskjutning från produktionsfokus till kundfokus. Detta kan skapa ett unikt erbjudande och därmed möjliggöra en högre lönsamhet, men ställer samtidigt nya krav på kundförståelse som ofta saknas hos produktionsorienterade leverantörer.

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This thesis is the most tangible result of the five years I have spent as a PhD student. It is my contribution to research. However, the contribution is reciprocal: these five years of research have also contributed to me and who I am today. In addition to the insights I have gained about business management, I have become humbler regarding the difficulties of knowledge creation and interpretation.

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To all of you, may your winding roads be lined with the most beautiful flowers!

Linköping, August 2015

Daniel Ellström

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APPENDIX I: APPENDED PAPERS

Paper I

The Dynamic Effects of Power in Buyer-Seller Relations – The Process of Gaining and Using Power to Increase Share of Profitability

Daniel Ellström and Jakob Rehme

Previous version presented at the 3rd Nordic Retail and Wholesale Conference, 2012, Lund, Sweden

Paper II

Supplier Assortment Strategy for Balancing Power

Jakob Rehme, Daniel Nordigården, Daniel Ellström and Daniel Chicksand

Accepted for publication in Industrial Marketing Management

Paper III

Supplier Integration in the Assortment Management of Builders' Merchants

Daniel Ellström

Published in International Journal of Retail and Distribution Management

Paper IV

Resource Alignment in the Category Management of Builders' Merchants

Daniel Ellström and Jakob Rehme

Submitted to International Review of Retail, Distribution & Consumer Research

Paper V

Open Book Accounting with Fixed Returns in an Outsourcing Implementation

Daniel Ellström and Martin Hochi Larsson

Submitted to Qualitative Research in Accounting & Management

APPENDIX II: CASE REPORT ON BUILDERS' MERCHANTS AND TIMBER TRADE

1 INTRODUCTION

Imagine walking into a retail store that offers a wide range of gadgets and technical products, asking for something you can only vaguely describe, as you don't even know if such a thing exists. The store clerk then starts to browse a catalogue of products. After a while, she walks into the store-room, and when she comes back she holds a small box in her hand. You tell the clerk, "You seem to know everything," but she gently replies that "No, I get a lot of support from our suppliers. What I don't know myself I can find in their catalogues. And everything you need, they will make sure I have back in the store-room." You realize that the clerk working there, even though she knows a lot about the products they sell, is aided by the fact that their suppliers are well integrated in their business. You start to think that the reason you always come back to this particular store is not only because of the helpful and knowledgeable clerk, but also because the retail store is supported by its suppliers. Since you have an interest in business management, new questions begin to occupy your mind. Should suppliers always integrate with retailers in this way? Should the supplier provide support with more things than just the products to keep in the store? And as the supplier's support can explain why you like this particular store, are the suppliers able to charge higher prices for their products when they are integrated? Hopefully, the book you hold in your hands can provide some answers to your questions.

1.1 Category management

To understand when or why suppliers integrate in category management, there is a need to describe what category management is. In my view, category management can be seen both as an abstract view on retail business conduct and as a practical set of tasks that are handled by retailers. Therefore, I will describe the category management philosophy as well as the specific activities that are included in category management.

1.1.1 Category management as a management philosophy

Category management is associated with a number of ideas on how to manage retailing. It mainly refers to a strong customer focus (Harris and McPartland, 1993; Dussart, 1998; Gruen and Shah, 2000) and looking at the retailer's offering through the eyes of the customer, as products are grouped together according to the customers' views of product categories (Basuroy et al., 2001). Supplier integration is also mentioned as an important aspect of category management that is needed to improve customer focus (Harris and McPartland, 1993; Dupre and Gruen, 2004; Aastrup et al., 2007). In category management, value is created by suppliers and retailers as they integrate information sources, coordinate tactical efforts and align the aims of the category (Aastrup et al., 2007). In this way, category management aims to better satisfy customer needs through coordination between the supplier and retailer, and thereby improve the retailer-supplier relationship performance (Dupre and Gruen, 2004).

Previous retail research has often described category management as a specific management method or process that some retailers have adopted and some have not (e.g. Dussart, 1998; Basuroy et al., 2001; Cachon and Kök, 2007; Bandyopadhyay et al., 2009). Category management is then considered as an alternative to brand-centered management, where

brands are the strategic business units (Basuroy et al., 2001). Adopting this view, many authors advocate a switch from brand-centered management to category management (ACNielsen, 1992; Harris and McPartland, 1993; Basuroy et al., 2001; Larson, 2005). However, whether a retailer uses brands or categories as strategic business units is not always apparent. Since I view category management as a philosophy rather than a method that is clearly distinguished from brand-centered management, I also argue that category management can be implemented to a greater or lesser extent. This view of category management as a philosophy that all retailers apply to some extent is also reflected by other authors (Dhar et al., 2001; Gooner et al., 2011). Thus, the main issue in this thesis is not the decision of whether to manage supplier brands or product categories, but rather how to incorporate suppliers in category management in order to increase customer focus and relationship performance.

1.1.2 Category management as a set of activities

Category management is carried out in a set of activities. Breaking category management down into specific activities makes it easier to capture my view of what it is and what it includes. The literature on category management is helpful in determining what these activities can be. Here, four activities of category management are distinguished: assortment management, pricing management, marketing management and logistics management.

The activity of *assortment management* is mentioned by several authors describing category management (e.g. Gruen and Shah, 2000; Campo and Gijsbrechts, 2005; Cachon and Kök, 2007; Kurtuluş and Toktay, 2011; Hübner and Kuhn, 2012; Kurtuluş et al., 2014) and includes the selection of which brands and products to offer within the categories. Assortment management also includes product development and the introduction of new products to the assortment (Kaufman et al., 2006). *Pricing management* is a second activity that is often mentioned as part of category management (e.g. Gruen and Shah, 2000; Basuroy et al., 2001; Cachon and Kök, 2007; Kurtuluş and Toktay, 2011). The relative pricing of products within a category is often brought forward as an important activity in category management. Third, *marketing management* or promotion is mentioned as part of category management (e.g. Gruen and Shah, 2000; Basuroy et al., 2001; Dhar et al., 2001; Kurtuluş and Toktay, 2011; Hübner and Kuhn, 2012; Kurtuluş et al., 2014). Marketing can be carried out in many different ways, such as presentation of the products in the store, shelf space allocation or advertising. Lastly, *logistics management* activities such as order planning, restocking and forecasting have also been mentioned as a part of category management (e.g. Dhar et al., 2001; Campo and Gijsbrechts, 2005; Hübner and Kuhn, 2012). The motivation for breaking category management down into these four activities is further elaborated in Paper IV.

The activities that are described as constituting category management include selecting which products to sell, making sure the products are efficiently distributed through the stores to customers, deciding how to price the products and marketing the products to increase their sales. These activities are carried out by all retailers, and constitute the main task of retailers. However, the activities can be carried out more or less in line with the category management philosophy; that is, with more or less customer focus. This thesis looks at how these activities

can be carried out collaboratively by a retailer and a supplier, with an aim to increase customer value and consequently increase the relationship performance.

1.2 Supplier integration in category management

The general view among retail practitioners and scholars is that supplier integration is important for retailers (Harris and McPartland, 1993; Dupre and Gruen, 2004; Aastrup et al., 2007), and there are plenty of accounts in the literature of how suppliers support or take responsibility for the category management of retailers (e.g. Dupre and Gruen, 2004; Bandyopadhyay et al., 2009; Subramanian et al., 2010; Gooner et al., 2011; Kurtuluş et al., 2014 to name a few). As this thesis is concerned with the integration of suppliers in category management, it is important to understand the supplier's role in category management. In this thesis, supplier integration in category management means that a supplier engages in and supports the retailer's category management, but that both the supplier and the retailer can *initiate* the supplier's engagement.

1.2.1 Consequences of supplier integration in category management

Regarding category management, previous literature often argues that suppliers and retailers benefit from supplier integration in category management. Aastrup et al. (2007) suggested that closer relations between suppliers and retailers can lead to increased value creation through, for example, the application of complementary information resources. According to Gruen and Shah (2000, p. 485), suppliers have developed an expertise to “determine the efficient assortment, pricing, promotions and placement” of the products in a retailer's category. Harris and McPartland (1993) recognized that category expertise is a shared resource between retailers and their suppliers. However, these are theoretical arguments that are not empirically tested, and a high intensity of supplier integration may not be suitable for all retailer-supplier relationships.

The empirical descriptions of supplier integration in category management often take a retailer perspective. There are several examples of retailers that successfully integrate suppliers to help manage their categories (cf. Subramanian et al., 2010; Kurtuluş et al., 2014). Gooner et al. (2011) showed how supplier influence in category management in US supermarkets correlates with the performance of both supplier and retailer, without increasing opportunism. On the other hand, other authors have expressed concerns over supplier integration in category management (Desrochers et al., 2003; Bandyopadhyay et al., 2009), and indications of negative consequences of integration exist, at least from a retailer perspective. Dussart (1998) views category management as a change in focus from supplier products to retail categories and consequently a shift in power and responsibility towards the retailer. Kurtulus and Toktay (2005) advise managers to avoid competitive exclusion among suppliers, and to only give suppliers responsibility over categories where variety is of low importance (and thus not in strategically important categories). Aastrup et al. (2007) claimed that even though value creation increases when suppliers take more responsibility over category management, negotiation power decreases for the retailer. Similarly, Bandyopadhyay et al. (2009) claimed that retail efficiency is ensured, but that there is a risk of power misuse from the supplier that can harm the retailer.

All articles described above have a retail focus in their findings and describe the consequences for the retailer of supplier integration. Contrastingly, Lindblom et al. (2009) took a supplier perspective on supplier integration in category management and found that suppliers who can influence category management perceive the effects of category management more positively than suppliers with low influence over category management, which indicates that supplier integration in category management benefits suppliers. Dupre and Gruen (2004) took a relationship perspective and used interviews to show that supplier involvement in category management can create a strategic competitive advantage for the dyad.

To conclude, previous literature about supplier integration in category management (a) has a strong retailer focus and (b) reports both positive and negative consequences of supplier integration. Little help is given to explain when or why supplier integration is beneficial, and for whom. To answer these questions, general supplier integration literature can prove helpful.

1.2.2 The consequences of supplier integration depend on the situation

Many studies have shown a correlation between supply chain or supplier integration and various performance metrics (Frohlich and Westbrook, 2001; Narasimhan and Kim, 2002; Vachon and Klassen, 2008; Zhao et al., 2008; Lawson et al., 2009; Villena et al., 2009; Cao and Zhang, 2011). However, the findings on supplier integration outcomes are inconsistent, and integration has even been associated with decreased performance (Song et al., 1998). In survey-based research, supply chain integration has been measured with items that differ considerably, and with different levels of aggregation. Van der Vaart and van Donk (2008) have categorized items used to measure supply chain integration as attitudes, patterns or practices, and stated that most articles focus on the attitudes towards integration. However, obtaining any effects of integration on performance likely requires the attitudes towards integration to be transformed into actions and practices. Therefore, it is reasonable to have doubts regarding what has actually been measured in previous research on supplier integration. This has led many researchers to question the positive relation between supplier integration and performance (Barratt, 2004; Power, 2005; Das et al., 2006; Fabbe-Costes and Jahre, 2008; van der Vaart and van Donk, 2008; Flynn et al., 2010; Danese, 2013). For example, Power (2005) concludes that there is a contradiction between promised benefits and limited evidence of actual implementation of integration. Therefore, it can be argued that more supplier integration is not always beneficial.

The insight that integration is not always beneficial has led Das et al. (2006) to try to find an optimal configuration of supplier integration that companies should strive to achieve. In this thesis, I will argue that there is no optimal fit-for-all solution for how to share responsibilities or integrate suppliers in category management, and that relationship performance and interdependence during supplier integration will vary for different situations. This could explain why Fabbe-Costes and Jahre (2008) claimed that there has been limited managerial advice for how and what to integrate. From his literature review, Kim (2013) concluded that previous studies lack an in-depth analysis of the role supplier integration has for performance improvements. Thus, a new paradigm is emerging in research on supply chain integration, where “combinatory effects” between supply chain integration practices and other practices

are taken into account (Danese, 2013). According to Kim (2013), a contingency perspective is needed, in which situational factors are taken into consideration when interpreting the potential of supplier integration. Even though he acknowledges that some research in this direction has already been conducted (i.e. Koufteros et al., 2007; Song and Thieme, 2009), he explicitly states that “future research should address whether other contextual factors may produce different effects of supplier integration on performance” (Kim, 2013, p. 78). Van der Vaart and van Donk (2008) also called for studies of individual buyer-supplier relationships in order to better understand supply chain integration in specific situations. Therefore, an ongoing challenge is to provide descriptions of specific situations where supplier integration takes place to varying extents, and use the ideas of supplier integration to analyze retailer-supplier cooperation in different situations. In this thesis, the literature on supplier integration is applied to analyze how situational factors affect the consequences of supplier integration in category management.

1.2.3 Situational factors that affect supplier integration

As it is stated that the potential for supplier integration is heavily dependent on situational factors, there is a need to explain what is meant by situational factors. In a seminal work, Lawrence and Lorsch (1967) described that the organization of firms is contingent on the environment in which they operate – mainly, various economic and market conditions. This book led to the emergence of the contingency theory, where it is suggested that firms should adapt their processes and strategies to the environment in which they operate (e.g. Donaldson, 2001). With this reasoning, it can be claimed that the intensity of supplier integration should fit with the situation where supplier integration takes place. Fabbe-Costes and Jahre (2008, p. 145) proposed that contingency theory “must not be forgotten” in our efforts to contribute to theory-building in logistics.

In contingency theory, factors that affect a firm’s strategy, structure and performance are often separated into internal and external characteristics (e.g. Anderson and Lanen, 1999; Chenhall, 2003). Similarly, Lin et al. (2009) included firm-level and environmental contingent factors to understand firm alliances. In a network setting, Kajuter and Kulmala (2005) added network characteristics as a third kind of factor that affects firms. Since supplier integration takes place within a relationship, it makes sense to include relationship characteristics – rather than network characteristics – as a group of affecting factors. Cao et al. (2015) therefore described antecedents to supply chain integration as environmental, interorganizational and firm-level characteristics. Finally, the internal characteristics can concern both the supplier and the buyer in supplier integration, since supplier integration in this thesis is described as an activity where both the supplier and the buyer have important roles.

To conclude, the factors that can affect supplier integration can be separated into external characteristics, buyer characteristics, supplier characteristics and relationship characteristics. Drawing on contingency theory, this separation is not made to exclude certain situational factors, but rather to structure all possible characteristics that may affect supplier integration in category management.

1.3 Purpose

The purpose of this thesis is to *describe and analyze how situational factors affect the relationship consequences of supplier integration in category management*. The introduction has highlighted the need to analyze how situational factors affect supplier integration in category management. Depending on situational factors, the consequences of supplier integration in category management will differ. Even though most retail literature advocates supplier integration in category management, there are counter-examples that advise against integration, and there is little advice as to when and to what extent integration should occur. As for supplier integration in general, situational factors are likely to affect the consequences of supplier integration in category management. Suppliers can also be more or less involved in category management decisions, and situational factors will affect the extent to which supplier integration should be implemented.

For academia, this will contribute to literature on supplier integration in category management in two ways. First, it will introduce situational factors as a tool for analyzing supplier integration in category management. Second, it uses a relationship perspective and considers the consequences for the individual parties as well as for the dyad. Together, this extends our comprehension of the potential benefits provided by supplier integration in category management. For practitioners, this thesis will provide retailers and their suppliers with more specific advice on when and where to integrate suppliers in category management.

1.4 Consequences of supplier integration in category management

There are several avenues of research that can be taken when the relationship consequences of supplier integration in category management are analyzed. The existing literature on supplier integration in category management has focused on consequences in terms of various performance metrics (Dupre and Gruen, 2004; Aastrup et al., 2007; Bandyopadhyay et al., 2009; Subramanian et al., 2010; Gooner et al., 2011) and a discussion of changes in interdependence as a result of integration (Dussart, 1998; Aastrup et al., 2007; Bandyopadhyay et al., 2009; Gooner et al., 2011). The consequences for performance are mainly described from a retailer perspective, even though a broader relationship perspective is provided by Dupre and Gruen (2004). In this thesis, the relationship consequences of supplier integration are separated into relationship performance and interdependence. These are also perceived to be the two main areas of interest in previous research on supplier integration in category management.

The exploration of relationship performance regards the retailer and the supplier as one entity, and investigates the performance of this entity. The necessity to investigate the output of a buyer-supplier exchange in terms of relationship performance is argued for by O'Toole and Donaldson (2002), as well as by Palmatier et al. (2007), and is further described in the literature review. This is covered in RQ1 and RQ2. With the first research question, I identify situational factors that may affect the relationship performance of supplier integration in category management. In the second research question, I describe how the identified situational factors may affect the relationship performance of supplier integration in the specific activities that constitute category management.

The exploration of interdependence instead focuses on the competition between the supplier and the retailer. This issue is covered in RQ3. Here, I aim to identify situational factors that affect the interdependence between the retailer and the supplier during supplier integration in category management. From a managerial view, these two issues are important because they can help managers predict how increased supplier integration will affect effectiveness and efficiency in the distribution channel, and how the negotiation power in the relationship will be affected.

RQ1: What situational factors affect the relationship performance of supplier integration in category management?

Different situational factors create different consequences for supplier integration. Depending on what supplier integration intends to achieve, different situational factors will be relevant to study. In research question one, the effects on relationship performance are targeted; therefore, the effect of situational factors on relationship performance is explored. Most of the current research on situational factors and supplier integration has investigated effects on the performance of individual firms rather than the performance of the dyad. As the majority of supplier integration research is based on quantitative surveys, this can partly be explained by methodological limitations. Nevertheless, I believe that if integration should be a viable strategy in the long run, the overall performance of the dyad has to increase as a consequence of integration.

RQ2: For what specific category management activities do the situational factors identified in RQ1 affect the relationship performance of supplier integration?

The second research question builds on and extends the first research question by distinguishing between different activities in category management. Category management is a hot topic in retail literature, but the specifications of the activities that are included in category management can be described as vague, at best. Based on a theoretical reasoning presented in the introduction, category management is assumed to encompass four activities: assortment, pricing, marketing and logistics management. The situational factors identified in the first research question's answer are here analyzed with regard to the four activities that constitute category management. Specifically, it is determined for what activities the situational factors affect relationship performance.

RQ 3: What situational factors affect the changes in interdependence between the retailer and supplier when supplier integration is initiated?

If an individual supplier or retailer should benefit from supplier integration, an increased relationship performance is not sufficient. If a firm becomes more dependent on its partner as a consequence of supplier integration, it can be more difficult to take advantage of the benefits generated in the relationship, even though the relationship performance increases. As increased integration is associated with higher switching costs (Swink et al., 2007), it is likely that supplier integration results in increased interdependence (cf. Gadde, 2004) and changed power structures. Supplier integration can be initiated by either the supplier or the retailer, and this will likely affect how interdependence changes when supplier integration is implemented.

It is important for the individual firms involved in supplier integration to consider the changes in interdependence caused by supplier integration, as this will have effects on their value appropriation capacity (Ailawadi et al., 1995; Cox, 1999). Mizik and Jacobson (2003) also illustrated that an increased emphasis on value appropriation relative to value creation can have positive effects for the firm. According to Gadde (2004), power issues are just as important in collaborative firm relationships as in the traditional arm's length relationships. Even though the firms share goals and cooperate, there is still a potential conflict in how to divide risks and rewards in the business. Although the dyad benefits from increased supplier integration, the decision to increase supplier integration in category management has to be accepted by both the supplier and the retailer. This thesis assumes that the changes in interdependence caused by increased supplier integration depend on situational factors. While researchers tend to associate supplier integration in category management with increased supplier power (Dussart, 1998; Aastrup et al., 2007), this may not always be the case. According to Yeung et al. (2009), the interrelatedness between power and supplier integration is largely unknown, and in contrast to conventional wisdom about coercive power (see Brown et al., 1996), they found a correlation between the usage of coercive power and supplier integration. The literature that explicitly deals with supplier integration seldom takes a dependence perspective, and an incorporation of power is requested in research on supply chain integration (van der Vaart and van Donk, 2008). Yeung et al. (2009) also called for further research on the relationship between dependence and supplier integration; specifically, further research is sought regarding how this relationship can be explained in different contexts.

1.5 Disposition

This thesis follows a traditional disposition, where the introduction is followed by a literature review and a description of the research approach. In chapter four, the contributions of the appended papers to the thesis are discussed. In chapter five, the answers to the research questions are discussed individually, followed by a synthesis of how the thesis fulfills the purpose. Chapter six targets the theoretical contributions to different fields of research, the implications for managers, and the generalizability of the conclusions. This chapter and the thesis end with a discussion of possible future avenues for further research. In the appendix, five papers and a description of the empirical setting for this thesis are included.

2 LITERATURE REVIEW

Based on the research questions, three areas that require further investigation are identified: supplier integration, relationship performance and interdependence.

2.1 Supplier integration

As the purpose of this thesis is to describe and analyze how situational factors affect the relationship consequences of supplier integration in category management, there is a need to explain why supplier integration takes place, as well as to provide a definition of supplier integration, review how supplier integration relates to other interorganisational relationships and identify what kind of situational factors might affect supplier integration.

2.1.1 Why firms integrate

Several authors have argued for increased integration in supply chains (Droge et al., 2004; Yeung et al., 2009; Danese, 2013), or regard supply chain integration and collaboration as important strategies to improve performance in a supply chain (Frohlich and Westbrook, 2001; Horvath, 2001; Koufteros et al., 2005; van der Vaart and van Donk, 2008; Flynn et al., 2010; Cao et al., 2015). It has also been stated that supply chain integration is increasingly important to remain competitive in today's global competition (Flynn et al., 2010; Danese, 2013). Through integration, the core competencies of the firms in a supply chain can be leveraged, and thus a competitive advantage against competing supply chains can be obtained (Flynn et al., 2010; Kim, 2013). Firm integration has been studied with several theoretical lenses, and is often supported by arguments based on transaction cost analysis (e.g. in Narasimhan and Kim, 2002; Squire et al., 2009; Yeung et al., 2009; Danese, 2013) and the resource-based view (e.g. in Das et al., 2006; Swink et al., 2007; Squire et al., 2009; Narasimhan et al., 2010). Other perspectives or frameworks such as resource dependence (Yeung et al., 2009; Zhang and Huo, 2013), contingency theory (Cao et al., 2015) or the social network perspective (Koufteros et al., 2007) have also been used to understand when and why firms integrate.

Firm integration can be understood from two perspectives: the dyad's perspective and the individual firm's perspective. For firm integration to take place, the individual firms must see their own benefit from integrating. However, integration can also be understood from a relationship perspective, as the rationale for integration must be that integration increases relationship performance. In this thesis, the question of relationship performance is accounted for in RQ1 and RQ2, whereas the individual firm's perspective is accounted for in RQ3. Both of these perspectives can be used to describe why firms integrate.

The relationship perspective

From a relationship perspective, integration has been understood based on transaction cost analysis and the resource-based view. With transaction cost reasoning, integration could be described as a hybrid governance form (Danese, 2013). Compared to market governance and arms-length relationships, integrated firms are less flexible, but the transaction costs for searching, negotiating and monitoring are reduced (Zhao et al., 2008). It has been argued that when the resource-based view is applied to firm integration, synergies between the firms'

different practices can be achieved (Das et al., 2006), and that external capabilities from integrated firms can be used to improve performance (Squire et al., 2009).

The individual firm perspective

Resource dependence theory has been used to understand the consequences of integration for the individual firm. As firms that are connected often have an asymmetrical distribution of resources, they become dependent on each other (Crook and Combs, 2007; Zhang and Huo, 2013). This interdependence between firms is connected to the integration between them (van Donk and van der Vaart, 2005; Yeung et al., 2009); for example, a powerful firm can dictate how integration should be carried out, and integration can lead to changes in interdependence between the involved firms. Therefore, integration can be beneficial for the dyad, but harmful for an individual firm. Because of this, there is a need to complement the relationship perspective with an understanding of integration from the individual firm's perspective. Ideally, integration should be beneficial both for the dyad and for the two integrating firms.

2.1.2 Supplier integration defined

There are slight variations in the way supplier integration is defined in previous literature . It has been described as a “process of acquiring and sharing operational, technical, and financial information and related knowledge,” (Swink et al., 2007, p. 151; Narasimhan et al., 2010, p. 357) a “state of synergy accomplished through a variety of integration practices among the supplier, purchasing and manufacturing constituents of an organization,” (Das et al., 2006, p. 563) and as “the degree to which a firm exchanges information and develops partnerships with its suppliers” (Danese, 2013, p. 1029). From the literature it can be concluded that the integration taking place can concern the exchange of materials, information and knowledge in different ways.

A distinction that is not made explicit in previous supplier integration research is whether supplier integration only takes place in activities normally carried out by the customer, or if it can also concern activities traditionally carried out by the supplier. Danese (2013) stated that the objective of supplier integration is smoothing and optimizing the procurement and production processes of the customer firm, thus implicating that supplier integration takes place in activities normally carried out by the customer. On the other hand, Yeung et al. (2009) stated that supplier integration structures the endeavors of a dyad, thus implicating that all activities in the dyad can be subject to supplier integration. The operationalization of supplier integration also differs between articles. Some articles include the supplier's support, feedback or involvement in the customer's activities (e.g. Koufteros et al., 2007; Swink et al., 2007; Yeung et al., 2009), while other articles include the customer's support, feedback or involvement in the supplier's activities (e.g. Das et al., 2006; Danese, 2013). In this thesis, the involvement from suppliers in retailers' category management is studied. I have chosen to label this involvement supplier integration, as the supplier integrates in activities normally carried out by the customer.

Regarding the aim of supplier integration, current research largely agrees that the ultimate purpose of supplier integration is to align the actions of a supplier with those of a buyer, and

thereby be able to provide more customer value and reduce costs. Fawcett and Magnan (2001) explicitly mentioned the desire to reduce costs and meet the requirements of customers as driving forces for supply chain integration. As mentioned previously, Danese (2013) stated that the objective of supplier integration is smoothing and optimizing the procurement and production processes of the customer firm, while Yeung et al. (2009) affirmed that supplier integration structures the endeavors of a dyad with the purpose of fulfilling customer requirements. Monczka and Morgan (1996) emphasized a harmonization of goals and a localization of tasks at the appropriate point in the correct firm as important constituents of supplier integration. Flynn et al. (2010) claimed that supplier integration can achieve effective and efficient flows, and thereby “provide maximum value to the customer” (Flynn et al., 2010, p. 58). In line with these views, this thesis considers the aim of supplier integration to be an alignment of the suppliers’ and buyers’ actions in order to reduce costs and increase the customer value provided.

Even though none of the definitions of supplier integration identified in literature specify what firm initiates supplier integration, it is often implicitly understood that the buyer is the active firm that integrates its suppliers (e.g. Fliess and Becker, 2006; Danese, 2013). When a supplier initiates integration in its customers’ operations, this is often referred to as customer integration. However, my view on supplier integration is broader, and can also include initiatives taken by the supplier to integrate into the operations of the buyer. Regardless of who initiates the integration, the actions and decisions that constitute supplier integration can still remain the same.

To summarize, the term supplier integration is used in this thesis to describe buyer-supplier relationships characterized by the following:

- Exchange of materials, information and knowledge;
- The supplier engages in and supports the operations and activities normally carried out by the buyer;
- An aim to align the actions of the supplier and buyer in order to reduce costs and increase the customer value provided;
- Both the supplier and the buyer can *initiate* the supplier’s engagement and support in the operations and activities normally carried out by the buyer.

In addition to the characteristics of a supplier integration relationship, there is a need to define the extent and scope of supplier integration. Supplier integration is not a binary phenomenon in the sense that it either does or does not exist.. Instead, there can be different levels of supplier integration, and suppliers can be more or less integrated in the business of a retailer. This is also acknowledged in quantitative research, where supplier integration is often measured by Likert-type scales, and the intensity of integration is determined based on the extent to which respondents agree to a number of statements (e.g. Narasimhan and Kim, 2002; Koufteros et al., 2007; Yeung et al., 2009; Danese, 2013). The appropriate level of supplier integration will then depend on situational factors.

Supplier integration is a concept mainly used to describe the efforts of *manufacturing* firms to integrate suppliers in their operations. Pamela Danese described the objective of supplier integration as “smoothing and optimizing procurement and production processes” (Danese, 2013, p. 1029), thus implicitly stating that a company that integrates a supplier is occupied with production processes. In the same vein, the definition by Das et al. (2006) quoted above implies that a manufacturing firm is integrating a supplier. A definition of supplier integration that does not presuppose that the integration takes place in a manufacturing firm is provided by Yeung et al. (2009). In this thesis, supplier integration in the category management of a retailer is targeted. Therefore, in my definition of supplier integration, I do not limit the concept to manufacturing firms.

To summarize, the extent and scope of supplier integration can be described as follows:

- Supplier integration can be carried out to different extents, and there are different degrees of supplier integration intensity;
- Supplier integration can take place between any types of companies; that is, not only manufacturers and their suppliers

Given this description of supplier integration, other terms have previously been used to describe similar kinds of relationships. In this thesis, articles using terms such as buyer-supplier collaboration (Hoegl and Wagner, 2005) and supply chain alignment (Fawcett and Magnan, 2001) are also used to contribute to the understanding of the phenomena that is labeled supplier integration in this thesis.

2.1.3 Supplier integration and other interorganizational relationships

The literature on interorganisational relationship is vast, but unfortunately also highly fragmented (Oliver, 1990). In strategic management literature, interorganisational relationships are often described as alliances (e.g. Stuart, 2000; Das and Teng, 2003; Grant and Baden-Fuller, 2004; Lin et al., 2009), and more formal ties between firms, such as joint ventures, board interlocks or franchises are often focused in this type of research (e.g. Oliver, 1990; Ring and Van de Ven, 1994; Barringer and Harrison, 2000). In supply chain literature, the term integration is frequently used for relationships within supply chains (e.g. Fabbe-Costes and Jahre, 2008; Kamal and Irani, 2014; Cao et al., 2015). In marketing literature, partnering is a popular term to use for interorganisational relationships (e.g. Mentzer, 1999; Weber, 2001). Researchers within these different fields often try to differentiate from each other rather than search for common grounds and transfer knowledge between the fields of research – ironic, it may seem, as we often encourage firms to transfer knowledge between one another and cooperate in order to become stronger together.

Because of the fragmented literature, it is difficult to provide a clear overview of how supplier integration, in my definition, can be distinguished from other concepts that describe interorganisational relationships. For example, there are similarities between outsourcing and my view of supplier integration. Cotroll (1997) also claimed that supply chain integration will lead to more outsourcing activities. However, an important distinction between outsourcing and my view of supplier integration is that supplier integration focuses on collaboration,

whereas outsourcing means that full responsibility for certain activities is given to the supplier (cf. Holcomb and Hitt, 2007; McIvor, 2008).

Other terms such as collaboration, cooperation, partnering and alliances are, to some extent, used interchangeably in literature, even though slight differences appear in how close the relationships are or how important it is to share common goals between the firms. Supply chain integration has even been described as a process of improved partnerships, alliances and cooperation (Power, 2005). Akkerman et al. (1999) have also described cooperation, collaboration and partnerships as ingredients at the basis of supply chain integration. For this reason, I refrain from an effort to describe and distinguish these various concepts from supplier integration.

I will, however, make an effort to explain supplier integration in relation to the broader concepts of supply chain integration and supply chain management, as the term supplier integration originates from the supply chain school of thought; this effort will hopefully help the reader to better understand this thesis and its contributions.

Several authors consider supplier integration to be one of three types of supply chain integration – the other two being internal integration and customer integration (Narasimhan and Kim, 2002; Droge et al., 2004; Koufteros et al., 2005; Yeung et al., 2009; Flynn et al., 2010; Danese, 2013). Using this reasoning, supplier integration is an integrated part of the larger supply chain integration body of literature. Therefore, much of the research on supplier integration is contrasted with previous findings in supply chain integration literature. In this regard, this thesis is no exception. It is important to clarify that many authors distinguish between supplier and customer integration based on the company with which the integration takes place. As described in 2.1.2 Supplier integration defined, I instead make the distinction based on whether the integration occurs for activities traditionally carried out by the customer (supplier integration) or for activities traditionally carried out by the supplier (I would call that customer integration, even though it is outside the scope of this thesis). Thus, it is relevant to include the broader supply chain integration literature in my review of supplier integration literature.

Supply chain integration takes its starting point in the general field of supply chain management (Frohlich and Westbrook, 2001; Fawcett and Magnan, 2002; Fabbe-Costes and Jahre, 2008). Integration is one of the main themes of supply chain management (van der Vaart and van Donk, 2008), and the Global Supply Chain Forum has even defined supply chain management as integration of key business processes (Lambert et al., 1998). According to Fabbe-Costes and Jahre (2008), most definitions of supply chain management are related to integration. The objective of supply chain integration has been described as “reduced inventory, shorter lead times and better service to the customer” (Parnell, 1998, p. 60). This objective draws on general supply chain management literature and aligns well with the objectives of supply chain management.

2.1.4 Factors that affect supplier integration

As this thesis aims to explain supplier integration based on the situation where the integration takes place, it is relevant to describe how previous literature has associated supplier integration with situational factors.

In Table 1, a compilation is made of situational factors that have been directly related to supplier or customer integration in previous literature. As my definition of supplier integration differs slightly from others', I have also included situational factors that are related to customer integration. In these articles, the view on customer integration resembles my view on the supplier's role in supplier integration. The list of situational factors is not intended to cover all situational factors mentioned in previous research; instead, I have made a qualitative selection of influential or important articles, from which the situational factors are identified. The articles included in this table were identified by searches for 'supplier integration', 'customer integration', and 'supply chain integration' in Google Scholar. For the most-cited articles published in business journals, I read the abstracts and made a selection of articles to include based on whether they specifically dealt with supplier or customer integration. Some recent articles with fewer citations were also included. This sample was complemented by references in the articles primarily found. The literature reviews by Fabbe-Costes and Jahre (2008) and van der Vaart and van Donk (2008) were especially helpful in identifying articles that investigate the relationship between supplier or customer integration and situational factors. In the selected samples of articles, I looked for situational factors that were mentioned or investigated as potentially affecting supplier or customer integration. These factors were then categorized as relating to the customer, the supplier, the relationship or the dyad. Some of the identified articles did not mention any situational factors that affect supplier or customer integration, and were consequently excluded from the table.

Table 1: Situational factors related to supplier and customer integration previously identified in literature

CUSTOMER-RELATED FACTORS		
Situational factor	Data collection method	Article
International market diversification	Actual data	Narasimhan and Kim, 2002
Firm size	Actual data	Wagner, 2003; Koufteros et al., 2007
Supply base rationalization	Perceived by customer	Koufteros et al., 2007
Customer manufacturing competitive capability	Perceived by customer	Swink et al., 2007
Supplier selection strategy	Perceived by customer	Koufteros et al., 2007
Customer internal integration	Perceived by customer	Flynn et al., 2010
Customer product process technology integration	Perceived by customer	Narasimhan et al., 2010
Customer fast Supply Network Structure	Perceived by customer	Danese, 2013
Customer organizational culture	Perceived by customer	Cao et al., 2015

SUPPLIER-RELATED FACTORS		
Situational factor	Data collection method	Article
Supplier manufacturing competitive capability	Perceived by supplier	Swink et al., 2007
International market diversification	Actual data	Narasimhan and Kim, 2002
Supplier internal integration	Perceived by supplier	Flynn et al., 2010
Supplier product process technology integration	Perceived by supplier	Narasimhan et al., 2010
Supplier organizational culture	Perceived by supplier	Cao et al., 2015
Supplier capabilities	Not measured	Lockström, 2010
RELATIONSHIP-RELATED FACTORS		
Situational factor	Data collection method	Article
Customer power over supplier	Perceived by supplier	Zhao et al., 2008
Supplier coercive power exercise on customer	Perceived by customer	Yeung et al., 2009
Commitment to customer	Perceived by supplier	Zhao et al., 2008
Customer dependence on supplier	Perceived by customer	Zhang and Huo, 2013
Supplier dependence on customer	Perceived by supplier	Zhang and Huo, 2013
Customer trust with supplier	Perceived by customer	Yeung et al., 2009; Zhang and Huo, 2013
Supplier trust with customer	Perceived by supplier	Zhang and Huo, 2013
EXTERNAL FACTORS		
Situational factor	Data collection method	Article
Technological uncertainty	Perceived by customer and supplier	Ragatz et al., 2002; Boon-itt and Wong, 2011
Environmental uncertainty	Perceived by customer and supplier	Wong and Boon-itt, 2011
Demand uncertainty	Perceived by customer and supplier	Boon-itt and Wong, 2011

The table shows that current literature is fragmented, with few articles building on each other's research to complement the investigation of specific factors. Most articles are concerned with when supplier integration takes place, rather than what the consequences of supplier integration are. However, it is likely that supplier integration is used when it has a positive impact on relationship performance and when the consequences on interdependence are acceptable for both parties. Judging from the situational factors identified, the relationship-related factors mainly deal with consequences on interdependence. Most other factors can be related to consequences on relationship performance. This study is not limited by access to quantifiable data; thus, it tries to empirically identify the situational factors that are most important for the consequences of supplier integration in category management. Therefore, this thesis extends previous studies on how different situational factors affect supplier integration and adapt the findings to a retailer-supplier context.

2.2 Relationship performance and supplier integration

In this thesis, the retailer-supplier dyad is considered to be a unit that together achieves relationship performance, based on how the retailer and supplier share responsibilities and how effective and efficient they work together. Therefore, the relationship performance is not limited to the bottom-line cost savings of one party (O'Toole and Donaldson, 2002). It has been argued that buyer-supplier exchanges should be assessed as relationships rather than from an individual firm's perspective (O'Toole and Donaldson, 2002; Palmatier et al., 2007).

Both Palmatier et al. (2007) and O'Toole and Donaldson (2002) claimed that much of the existing research on relationship performance has used a narrow definition of performance. Liang and Chen (2009) measured relationship performance based on how long the relationship lasts, how stable it is and if it is likely to be broadened. Gonzales-Padron et al. (2008) described relationship performance based on loyalty and satisfaction with the relationship. It is also claimed that research on relationship performance is based on a limited theoretical background (O'Toole and Donaldson, 2002; Palmatier et al., 2007). O'Toole and Donaldson (2002) provided a useful distinction of relationship performance measures as both financial and non-financial. Among the non-financial measures, they included dimensions related to operational effectiveness and long-term benefits such as satisfaction and stability. The financial factors' dimensions relate both to traditional economic measures and to dimensions such as information-sharing and changes in dependence. This broad view on relationship performance is also reflected in this thesis.

Social exchange theory and the resource dependence perspective use dependence to determine the performance of a relationship (Pfeffer and Salancik, 1978; Hibbard et al., 2001), transaction cost analysis focuses on governance costs (Williamson, 1979), the resource-based view investigates the idiosyncrasies of resources (Wernerfelt, 1984), etc. While all these frameworks have proven useful on their own, combining them can still expand the view of relationship performance (O'Toole and Donaldson, 2002). For this reason, relationship performance in this thesis is understood using a combination of the resource-based view and transaction cost analysis. Fabbe-Costes and Jahre (2008, p. 144) proposed that "it is important to return to the theoretical bases 'behind' prevailing research," concerning how to approach the question of performance in supply chain integration. Resource dependence is used to understand the interdependence within the relationship, and is therefore excluded from the relationship performance analysis.

Thus, in this thesis, a performing buyer-supplier relationship is understood as a relationship where transaction costs are low and where the resources available in the relationship are used to create a competitive advantage vis-à-vis other buyer-supplier relationships. This is grounded in transaction cost analysis and the resource-based view, as further described below.

2.2.1 Resources and competitive advantage

In this thesis, as well as in previous literature, the resource-based view is used to explain how integrated firms can increase performance and achieve a competitive advantage (Skjoett-Larsen, 1999; Narasimhan and Kim, 2002; Das et al., 2006; Squire et al., 2009; Danese, 2013). According to resource-based logic, the rationale behind supplier integration is to

combine resources and make use of each other's resources in a buyer-supplier dyad (Yeung et al., 2009). An integrated supplier is a strategic collaborator for the buyer, and allows the buyer to access important resources from the supplier (Droge et al., 2004; Kim, 2013). The acquisition of knowledge and resources is then the basis for profitability (Grant, 1991); it is also recognized that firms often need to access resources beyond their own boundaries in order to increase performance (Das and Teng, 2000). Therefore, the use of supplier integration is often theoretically supported by a resource-based logic.

According to Prahalad and Hamel (1990), the roots of a competitive advantage are the core competencies of the corporation. Day (1994) adopted a slightly broader view and included capabilities and assets along with the core competencies. Prahalad and Hamel (1990) would probably have argued that assets and capabilities stem from the core competencies, but it could also be argued that core competencies are dependent on business attributes, such as the scale or scope of the business (Day, 1994). Barney (1991) instead described resources as the roots of competitive advantage; in his broad description of resources, Barney included capabilities as one type of resource, whereas other researchers argued that resources can be transformed into capabilities (Grant, 1991; Allred et al., 2011). With the right resources, firms can be capable of carrying out certain activities better than their competitors, giving them a competitive advantage (Grant, 1991); thus, capabilities are closely related to activities. In the setting of this thesis, capabilities can be seen as the abilities to carry out the activities associated with category management. To do this with virtue, certain resources are needed. The distinction between resources and capabilities is complex and will not be further developed here, as it will not benefit the thesis. Instead, this thesis draws on Barney (1991) and describes resources as all assets, capabilities, organizational processes, attributes, information or knowledge, etc., that firms can use to achieve competitive advantage over competitors and thereby increase performance.

In a changing market, a firm's resources represent a stable basis on which to describe its identity (Grant, 1991). From the relationship performance perspective reflected in the first and second research questions, the resources that can be used to achieve a competitive advantage are primarily relevant to consider. The emphasis on resources as the source of competitive advantage is a basic tenet in the resource-based view (Wernerfelt, 1984). The resource-based view then suggests that resources need to be valuable, rare, durable, imperfectly imitable and non-substitutable if they should be able to create competitive advantage (Barney, 1991; Lambe et al., 2002). These valuable resources enable a firm to either improve customer satisfaction or lower the costs in the firm (Barney, 1991; Lambe et al., 2002; Allred et al., 2011). The resource-based view has been criticized by Priem and Butler (2001) for being tautological, as it claims that valuable resources are needed to create a competitive advantage. Barney (1991) encouraged researchers to use theoretical tools that take the specific market situation into account when determining the value of resources. The focus on situational factors in this thesis can be seen as one way to address this concern, and provides suggestions concerning how the value of resources depends on market conditions.

2.2.2 Competitiveness of alliances

Originally, the resource-based view has taken internal resources as a starting point for developing a strategy and an offering (Grant, 1991). Superior financial performance is then achieved by using the internal resources to create unique capabilities (Grant, 1991; Hunt and Morgan, 1995). However, with increased collaboration between firms, a broader perspective on resources and competitive advantage has emerged (Gulati, 1999; Arya and Lin, 2007). Instead of solely limiting the analysis to a single firm, the resource-based view can also explain the competitiveness and performance of different kinds of alliances. Das et al. (2006) described supplier integration as a capability that in itself may constitute a sustainable competitive advantage against competing supply chains. Narasimhan and Kim (2002), with a manufacturing-oriented focus, claimed that integration leads to improved manufacturing capabilities, while Swink et al. (2007) argued that increased supplier integration leads to decreased internal capabilities for the buyer, as it takes less responsibility for its own operations. The ambiguous results of whether supplier integration improves performance may be caused by differences in how supplier integration is defined, or by differences in situational factors between the articles.

Resource-based theory suggests two motives for the individual firm to create strategic alliances: to access the resources of others or to develop the internal resources (Das and Teng, 2000; Grant and Baden-Fuller, 2004). Based on this distinction, this thesis focuses on how supplier integration grants the firms involved access to resources held by others. According to Grant (2004), this is also the primary advantage of alliances, and “several studies have viewed alliances as a quest for resources” (cf. Grant, 2004, p. 63). Resources such as financial strength, technical capabilities and managerial capabilities are suggested to be particularly interesting for alliances (Hitt et al., 2000; Lin et al., 2009). These resources are not only beneficial for the individual firms, but also for the dyad where supplier integration takes place. The first research question in this thesis intends to suggest which situational factors affect the suitable intensity of supplier integration. To do so, there is a need to explore the existence of, and possibility to use, supplier resources in category management.

Resource access has previously been described as a reason why supplier integration can improve relationship performance. When integrating suppliers in category management, the actors involved will need to hold different resources, depending on which roles they undertake. The roles can also be used as resources by the actors holding them (Callero, 1994). Danese (2013) stated that the sharing of resources is facilitated by supplier integration, and the suppliers’ resources can complement the capabilities of the customer in supplier integration (Ragatz et al., 2002; Koufteros et al., 2007). When resources are made accessible in a dyad, they can be used to increase relationship performance.

2.2.3 Resource alignment

For supplier integration to be beneficial for the involved firms, the resources made accessible through the integration have to be attractive for the other firm. Without this kind of resources, the costs of integrating would outweigh its benefits. Resource alignment can explain when resources made available through supplier integration are attractive and when they are not.

Das and Teng (2000) described resources made available through an alliance as either performing or nonperforming, and similar or dissimilar (see Table 2). This creates a typology where resources can be characterized as supplementary, complementary, surplus or wasteful. The resource alignment framework is further described in Paper IV. In this thesis, the distinction between supplementary and complementary resources is used to understand how different kinds of resources held by buyers and suppliers affect the integration of the suppliers into the buyers' operations.

Table 2: Resource alignment (Das and Teng, 2000)

	Performing	Nonperforming
Similar	Supplementary resources	Surplus resources
Dissimilar	Complementary resources	Wasteful resources

Das and Teng (2000; 2003) argued that supplementary and complementary resources are resources that have a positive effect on alliance performance. Between supplementary and complementary resources, the complementary resources are considered especially important for alliance performance (Doh, 2000; Hitt et al., 2000; Lin et al., 2009; Wittmann et al., 2009). An examination of the articles citing Das and Teng (2000) also shows that complementary resources have been researched far more than supplementary resources (cf. Doh, 2000; Hitt et al., 2000; Stuart, 2000; Lambe et al., 2002; Lin et al., 2009). Firms in partnerships with experienced firms perform better than firms that lack these relationships, indicating that experienced firms can complement the resources of less experienced firms (Stuart, 2000). Hitt et al. (2000) also illustrated the need for complementary resources, as they show how firms in emerging markets seek partners with financial and technical expertise, while firms in developed markets seek partners with geographical expertise. Similarly, Lambe et al. (2002) and Wittman et al. (2009) provided empirical evidence suggesting that complementary resources lead to alliance performance.

However, there are indications in previous research of the importance of supplementary resources as well (cf. Sarkar et al., 2001; Wittmann et al., 2009). With a resource alignment perspective, supplementary resources can be seen as requirements to a well-functioning relationship. While Wittmann et al. (2009) hypothesized that trust, commitment and open communication promote relationship performance, Sarkar et al. (2001) investigated if project and strategic performance increase when there is cultural and operational compatibility between partners. To build trust or operational compatibility, it is possible that firms need to have some supplementary resources in common.

The limited research available on supplementary resources and their connection to relationship performance creates a need to further explore resource alignment. The relation between complementary and supplementary resources has also gained limited attention. Therefore, this thesis emphasizes both supplementary and complementary resources, as well as how these resources interrelate to create relationship performance. Most studies of resource alignment focus on partnerships and alliances, but it is likely that the reasoning can also be transferred to less formalized buyer-seller relationships.

2.2.4 Transaction costs and supplier integration

The transaction cost framework concerns the governance costs of a transaction (Williamson, 1985). The purpose of the transaction cost framework is to determine what mode of governance to use for a transaction in order to reduce the comparative governance and production costs (Williamson, 1985), and consequently improve relationship performance (Palmatier et al., 2007). In the original form of the transaction cost framework, only two stable modes of governance were foreseen: the hierarchy and the market (Williamson, 1979). With a hierarchy, the transaction takes place within an organization or hierarchy, whereas a market means that buyers and sellers meet and agree on a price in an open market. With higher asset specificity in a transaction, the governance costs of buying the product on the market increases, and the suppliers' production cost advantage decreases. Thus, Williamson argued for the use of markets when asset specificity is low, and for the use hierarchies when asset specificity is high. In the evolution of the framework, hybrids (Williamson, 1991; Rindfleisch and Heide, 1997) and clans (Ouchi, 1980) were added as intermediate modes of governance, meaning joint ventures and other cooperative modes of governance. Supplier integration in category management can be considered as a hybrid mode of governance (Das et al., 2006; Danese, 2013), where the retailer and its supplier govern their transactions through contractual agreements.

According to Das et al. (2006), supplier integration safeguards the assets of the involved firms, and consequently reduces transaction costs. Danese argued that supplier integration has the same advantages as vertical integration, but that risks and costs are lower. As close ties between firms can breed trust (Gulati, 1995), uncertainties and the risk of opportunism are reduced with supplier integration (Das et al., 2006; Danese, 2013). According to Zhao et al. (2008), increased integration reduces all four types of transaction costs – search costs, contracting costs, monitoring costs and enforcement costs. However, I do believe that this is a simplified conclusion and argue that the changes in transaction costs that follow from increased integration depend on situational factors. The search and contracting costs only appear when a new supplier integration contract is agreed on, but it is likely that more resources have to be spent, as the contract is far more important than a regular purchase order. Monitoring and enforcement costs may also increase – at least on the customer's part – as responsibilities are shifted to the supplier. Thus, there is a trade-off between different kinds of transaction costs that change when supplier integration is chosen over a market governance form.

Different situational factors can affect the costs of negotiating a supplier integration contract and the risk of opportunism in a supplier integration relationship. In situations where supplier integration causes increased transaction costs or higher risk for opportunism, the relationship performance of supplier integration in category management will be negatively affected. According to Williamson (1979; 2008), transaction costs are affected by frequency of transactions, uncertainty associated with the transactions and asset specificity; that is, how unique the assets needed for the transaction are. To analyze the effect of situational factors on the relationship performance of supplier integration, the situational factors' effects on

opportunism, frequency of transactions, uncertainty and asset specificity are explored in this thesis.

2.3 Dependence and supplier integration

The resource-based view and resource alignment is used in this thesis to understand how a buyer-supplier dyad can increase relationship performance. However, supplier integration in the category management of retailers cannot be fully understood from a dyadic perspective; there is also a need to consider the effects for the individual firms. This topic is covered by the third research question and theoretically described in this chapter

In the endeavor to understand how the relative power and interdependence of firms engaged in supplier integration are affected by the situation, resource dependence theory and power literature are used. According to many researchers, power and dependence are important constructs for understanding organizational behaviors (Morgan and Hunt, 1994; Cox, 2007). The resources held by a buyer and an integrated supplier affect the firms' interdependence and relative power. In addition, the relative dependence of the firms affects whether supplier integration will take place. To enable an exploration of this relation, this section describes literature regarding resource dependence and power from a supplier integration perspective. A general overview of interorganizational power and interdependence is provided in Paper I. This section applies the reasoning in Paper I to a supplier integration setting.

2.3.1 Power

Despite the ambiguity in the power construct (Emerson, 1962), there has been general agreement about the basic definition of power (Gaski, 1984) as: *"A has power over B to the extent that he can get B to do something that B would not otherwise do"* (Dahl, 1957, p. 202-203). In supplier integration, it is important to consider the power balance and to what extent the buyer and supplier are able to influence each other.

Dahl's (1957) definition of power is also commonly used as a starting point in resource dependence theory, in which Emerson (1962, p. 32) defined power with the following: *"the power of actor A over actor B is the amount of resistance on the part of B which can be potentially overcome by A."* Overcoming resistance is stronger than Dahl's definition of getting someone to do something they would not otherwise do, as it implies that the influenced party is unwilling to change. An actor may be willing to do something, but might be unable to do so without the aid of the power holder. In this case, no resistance is overcome, but the power holder has still induced a change in the other party's behavior. While this would not be an exercise of power according to Emerson (1962), it would be so according to French and Raven (1968) and Dahl (1957). In this thesis, Dahl's (1957) view of power is used, as supplier integration to a large extent means that a supplier and a buyer invoke un-resisted changes in each other's behavior.

In economics, the concept of power is primarily used to understand the share of value gained from a business relationship. Relative profitability is sometimes used as a proxy for relative power. Bowles and Gintis (1993, p. 88) defined power as *"the ability to furthering one's interests by imposing (or credibly threatening to impose) sanctions on another agent when the converse is not also true."* This definition of power is similar to Emerson's (1962) view of

power as overcoming resistance. As this thesis adopts the more liberal definition of power, it is important to acknowledge that a firm's exercise of power does not necessarily mean an increase in relative profitability. Economists imply an unwillingness to change from the influenced firm when they define the exercise of power as the imposition of sanctions.

For a distribution channel, El-Ansary and Stern (1972, p. 47) defined the power of a channel member as its "*ability to control the decision variables in the marketing strategy of another member in a given channel at a different level of distribution.*" This definition of power is also referenced by Hunt and Nevin (1974), Etgar (1976), and Gaski (1984), and this perspective connects the sociological aspects of changing behavior with the economic perspective of value appropriation. In this case, the behavioral change is related to a company's decision variables and the effects these decisions may have on the financial performance of the individual firm and the distribution channel. Based on French and Ravens' (1968) distinction between control and influence, and as supplier integration is more concerned with influence than with control of the other actor's decision variables, this thesis adopts a definition of power based on the ability to influence the other actor.

To conclude, this thesis defines power in supplier integration relationship as *the ability to influence the decision variables of the other actor*. The power balance between the two actors is based on the power bases held by the two actors. Furthermore, power exercise does not necessarily have consequences for the share of value gained from the relationship.

2.3.2 Power bases

To be able to account for the different effects of power, French and Raven (1968) argued for the need to distinguish between different types of power. Their own definition of five types of power is probably the most cited within the marketing field, although it is not only specifically intended for interorganizational relations. French and Raven defined what they perceive to be the five most common and important power bases, or power sources: reward power, coercive power, legitimate power, referent power and expert power (French and Raven, 1968).

In distribution channels research, the power bases are sometimes simplified to coercive and non-coercive power bases (e.g. Hunt and Nevin, 1974; Lusch and Brown, 1982) due to the difficulty of differentiating between the non-coercive power bases. Coercive power is then described as punishments, while non-coercive power is described as assistances (Lusch and Brown, 1982). Emerson's (1962) definition of power – *to overcome resistance* – largely resembles what French and Raven (1968) label coercive power.

In their original definition, the power bases indicate potential power and rely on the perception from one party that another party has power. Having a coercive power base does not mean that coercive power is used; in fact, it does not even imply that coercive power can be used – it only means that one party perceives the other party to be able to use coercive power, should it choose to do so (cf. French and Raven, 1968). However, Wilkinson (1996) described rewards and sanctions – methods similar to assistances and punishments – as ways of *using* power. Frazier and Rody (1991) also talked about influence strategies as coercive and non-coercive, thereby suggesting that the power bases are influence strategies and potential

ways of *exercising* power. In this thesis, the terms coercive and non-coercive power are consequently used to describe different ways of using or exercising power.

In quantitative research on power in buyer-seller relationships, power in terms of punishments and assistances is often measured by perception from the influenced firm, as prescribed by French and Raven (1968). However, the questions used do not directly concern the supplier's ability to influence the buyer. For many of the investigated assistances provided to buyers – for example product warranty (Lusch and Brown, 1982), fast claim handling (Etgar, 1976) or salesmen's training offered to buyers (El-Ansary and Stern, 1972) –, it is uncertain whether they are non-coercive power sources of the supplier or if they are demands from the buyer. Because of the uncertainty associated with the constructs used in previous research, there is a need for further theoretical investigation of power and dependence in order to understand how supplier integration affects the relative dependence between the involved actors.

2.3.3 Coercive and non-coercive power

The differences in the definition of power between resource-dependence theorists and other scholars become clearer when the distinction is made between coercive and non-coercive power sources. As non-coercive power exercises are seldom met with resistance, they are not considered to be power exercises by resource-dependence scholars (e.g. Emerson, 1962). This definition of power exercise is narrower than those given by Dahl (1957), French and Raven (1968) or El-Ansary and Stern (1972). This is important to keep in mind when resource dependence is used for studying power in the broader definition used in this thesis.

Another reason for differentiating between coercive and non-coercive power sources is the effect they have on the relationship. Kumar (1996) distinguished between the power game and the trust game, where the power game relates to the use of punishments and the trust game relates to the use of assistances. The essence of his argumentative article is that playing the trust game generates greater profits and more commitment to the relation. It is also claimed that reward power increases attraction, whereas coercive power decreases the attraction of the power exerciser (French and Raven, 1968). This argument is supported by Hunt and Nevin (1974), who argued that non-coercive power sources increase satisfaction of the influenced party, whereas satisfaction decreases when coercive power is used. As exercising coercive power reduces the influenced party's satisfaction with the relationship, its dependence on the power exerciser is consequently reduced (Bacharach and Lawler, 1986; Frazier and Rody, 1991). Therefore, it can be concluded that coercive and non-coercive power exercises are of different natures. Coercive power exercises, such as threats and sanctions, decrease dependence, while non-coercive power exercises, such as benefits and assistances, increase dependence. Because of the inherent differences between coercive and non-coercive power, a distinction between the two power bases is used in this thesis to understand the effects supplier integration will have on the power balance between a retailer and its suppliers. In different situations, either coercive or non-coercive power has to be used to implement supplier integration. Depending on these situational factors, the consequences of supplier integration on the interdependence between supplier and retailer will vary. Thus, an exploration of the situational factors' consequences in terms of whether coercive or non-coercive power is used to implement supplier integration will contribute to the analysis of

which situational factors affect the changes in interdependence when supplier integration is initiated.

2.3.4 Dependence

In general, firms want to be autonomous and avoid being dependent on others for survival. However, they seldom have all the resources necessary to manage all activities within their own organization (Cook, 1977). Therefore, firms must engage in relationships with other organizations to obtain these resources. When one firm holds resources that are important to another (attractiveness), and when control over these resources is concentrated (availability), dependence is created in the relationship (Pfeffer and Salancik, 1978). Similar descriptions of resource attractiveness and availability as the source of dependence are provided by several scholars (e.g. Emerson, 1962; Bacharach and Lawler, 1986; Ramsay, 1994), and are often used to operationalize dependence in distribution channel contexts (see e.g. El-Ansary and Stern, 1972; Etgar, 1976; Provan and Gassenheimer, 1994). When supplier integration takes place, the supplier applies some of its resources to perform or take responsibility for an activity normally carried out by its customer. According to resource dependence theory, the attractiveness and availability of the resources used then affect the customer's dependence on the supplier.

While the terms coercive and non-coercive power are used in this thesis to describe ways of exercising power, dependence is described as a determinant of power, and therefore a prerequisite for exercising it. Brown, Lusch and Muehling (1983) claimed that dependence is influenced by the power bases, and not the other way around. Therefore, it can be argued that dependence is required for power bases to be exercised, but also that an exercise of power bases affects dependence (Bacharach and Lawler, 1986; Frazier and Rody, 1991).

When discussing dependence in buyer-supplier relationships, it is important to distinguish between relative dependence and one actor's dependence on the other actor. The buyer's dependence on the supplier is not related to the supplier's dependence on the buyer. With this view of dependence, not only imbalances can be described, but mutual dependence can also be distinguished from independence. Cox et al. (2000) described this in a power matrix for dyadic relationships where four basic power positions can be distinguished: supplier dominance, buyer dominance, interdependence and independence. An adaptation of the power matrix is shown in Figure 1. In the analysis of how situational factors affect the interdependence between the supplier and the retailer when supplier integration is initiated, a distinction is therefore made in this thesis between the supplier's dependence on the retailer and the retailer's dependence on the supplier.

Figure 1: Buyer-supplier dependence matrix, adapted from Cox et al. (2000)

2.3.5 Consequences of perceived and exercised power

According to Bacharach and Lawler (1986), the most readily available tactic for manipulating the dependence of another and thereby secure long-term profits is to give benefits; that is, to exercise non-coercive power. When an integrated supplier provides supply chain knowledge that improves a buyer's offering, the difference between what is received from the current supplier and what can be received from alternative suppliers increases. Giving benefits as a supplier requires that the supplier holds some resources that are attractive and not available elsewhere for the buyer (cf. Emerson, 1962; Pfeffer and Salancik, 1978). Perceived non-coercive power increases the buyer's dependence on the supplier, as the buyer is dependent on the supplier to receive benefits. Therefore, the exercise of non-coercive power is not affecting the buyer's dependence; instead, dependence is created by the buyer's perception that the supplier can provide benefits – in other words, the potential to exercise power. As the buyer does not resist these changes, or no extra costs are inflicted, no power has been exercised according to resource dependence theory (Emerson, 1962). This explains why the actual power exercise does not cause any change in dependence between the buyer and the supplier.

On the other hand, the second form of power exercise, using coercive power, is in line with power exercise according to resource dependence theory. When coercive power is used, the buyer needs to be dependent on the supplier if it should accept the proposed changes. The change is resisted because the buyer perceives that it will decrease its received benefits (cf. Ailawadi et al., 1995; Messinger and Narasimhan, 1995; Cook and Henderson, 1998; Ailawadi, 2001). If the change concerns the prices between the buyer and supplier, the buyer experiences a direct decrease in share of received benefits gained from the relationship. If the supplier uses coercive power to implement some other change, the buyer resists it because it believes the change will indirectly decrease the benefits gained from the relationship. In these cases, the buyer will become less dependent on the supplier. The attractiveness of the supplier's offering is decreased, as the retailer receives fewer benefits from it. The dependence is consumed by the supplier in exchange for a higher value appropriation. As the

buyer is less dependent on the supplier when coercive power has been used, the buyer is more inclined to terminate the contract with the supplier.

Based on the reasoning above, clear differences can be distinguished between coercive and non-coercive power. In Table 3, characteristics of different kinds of perceived and exercised power are proposed. For the exercise of coercive power, a distinction is made between power exercises intended to change how the value created in the dyad is shared and other power exercises intended to change the behavior of the two parties. A forced reduction in value appropriation is met with resistance, and coercive power is therefore required for increasing one's share of value gained. This distinction is made to illustrate the two possible consequences of coercive power exercises in terms of the influenced party's anticipated change in value appropriation and creation.

Table 3: The differences between perceived and exercised coercive and non-coercive power, from the influenced party's view

	Influenced party's resistance	Influenced party's dependence	Influenced party's anticipated change in value appropriation and creation
Perceived non-coercive power	N/A	Increases dependence	N/A
Exercised non-coercive power – change in behavior	Unresisted	No change	Increased value creation in dyad
Perceived coercive power	N/A	Requires dependence	N/A
Exercised coercive power – change in behavior	Resisted	Decreases dependence	Decreased value creation in dyad
Exercised coercive power – change in value sharing	Resisted	Decreases dependence	Decreased value appropriation by influenced party

2.4 Summary of literature review and an analysis model

From the section on supplier integration, four different kinds of affecting factors are developed and described. In a retailer-supplier context, these four kinds of factors are: external factors, retailer factors, supplier factors and relationship factors. The situational factors that affect supplier integration will be categorized into these four categories. In answering the research questions in this thesis, the literature review also provides a basis for analyzing the consequences on relationship performance and interdependence that can result from supplier integration.

In the section on relationship performance and supplier integration, I present literature that is useful in the analysis of how situational factors affect relationship performance. The relationship performance during supplier integration is analyzed by looking at the alignment of resources held by the retailer and the supplier, and the transaction costs that are incurred in supplier integration. In the resource alignment framework, performing resources held by two actors are described as either similar or dissimilar, thus making them either complementary or supplementary resources. In transaction cost analysis, frequency, uncertainty and asset specificity are situational factors that affect transaction costs of different forms of governance. Based on this reasoning, research questions one and two analyze how situational factors affect transaction costs and the alignment of resources. While research question one identifies which

situational factors affect the relationship performance of supplier integration in category management, the second research question investigates relationship performance in relation to the four specific category management activities.

In the section on dependence in supplier integration, I draw on resource dependence and power literature to conceptually explore how different kinds of power work differently, depending on whether the power is only perceived by the influenced party or whether it is exercised, and depending on whether the power is of a coercive or non-coercive nature. If changes occur in one party’s perceived power, or if power is exercised, there will be consequences for the interdependence between the parties. In the third research question, I explore how the perceived and exercised power in supplier integration is affected by situational factors, and consequently how situational factors affect the relationship between increased supplier integration and interdependence. As changes in interdependence will affect the competitive situation of firms engaged in supplier integration, this is an area worth investigating.

Based on the literature review, a model of analysis can illustrate how this thesis aims to explore supplier integration in category management. The model of analysis is seen in Figure 2.

Figure 2: Model of analysis

3 RESEARCH APPROACH

“Person 1: Some professor from the US is here again and wants to interview us about our strategy. He had a long form with almost 50 factors. He wanted to know what factors have an influence when we enter into a new market.

Person 2: What kind of factors were they?

Person 1: Same old, you know – market potential, competition, political stability and those kinds of things.

Person 2: So what did you tell him?

Person 1: Well, you go through them and put some marks and show some market strategy plans and then you send him to some other people in the organization. But I don’t know what he gets out of all this.

Person 2: You don’t seem particularly enthusiastic about his research?

Person 1: No, you know that’s not how we do it. I can tell you what we did when we decided to enter the Latin American market. There were four of us eating dinner in New York. It was one of the divisional managers, a technical director, one of the departmental managers and me. We were discussing this but did not agree. Finally we had a vote: Two for, one against and one didn’t know. So we decided to enter. Then on Thursday, two men went down to see how the land lay.

Person 2: Did you tell this to the professor?

Person 1: Are you insane? He could think that we’re not serious.”

(Gummeson, 1985, my translation)

3.1 Research purpose

The purpose for this thesis evolved along with the development of the research project. This evolution has been influenced both by demands from the company that funded me during the first three years of this project and by the academic demands on originality and novelty. This section tries to explain the journey from an idea towards the final research purpose.

3.1.1 Finding a relevant subject

As the initial aim of this project was to improve the product assortment of builders’ merchant (BM) stores, and thereby increase efficiency in the distribution channel, the natural starting point of the research was found in assortment management. This field of research is mainly comprised of quantitative studies, often in operations management, which aim to identify optimal assortments for retailers (e.g. Campo and Gijsbrechts, 2005; Ton and Raman, 2010; Kurtuluş and Nakkas, 2011). Much effort is put into determining optimal assortments before determining what subjects are related to assortment management, and how assortment management can be understood. Kök et al. (2009) stated that practice and academia complement each other, as they focus on different aspects in assortment management. It could also be argued that much of the assortment management literature is of limited use for practice, as the models created are too complex to be implementable. As applied research is conducted in this thesis, and as the thesis seeks to make some contributions to practitioners, pragmatic and applicable conclusions are desirable.

With this in mind, the research turned toward category management as a broader concept that encapsulates the strategies used by retailers, and most importantly, how the actors in the distribution channel can collaborate to take advantage of each other's resources and expertise. Many of the obstacles to the introduction of a more efficient assortment management did not concern the assortment per se, but rather the fact that the supplier would have to become better integrated in category management.

3.1.2 My main motivation in research

Within the dialogue that forms the introduction to this chapter, some clues are given about my epistemological view. There is always a risk of discrepancy between the answers obtained in a questionnaire and the answer to a research question. In addition, when correlations are made between, for example, business model innovation and profitability (Giesen et al., 2007) or power sources and satisfaction (Hunt and Nevin, 1974), I am sometimes left with unanswered questions about how the constructs used can be interpreted. For a similar reason, Alvesson and Sköldbberg (2008) were skeptical about the usability of strictly quantitative research approaches for social sciences. In their trilateral view of truth, the meaning of a phenomena is presented as one of three aspects of truth that should be included in most theories (Alvesson and Sköldbberg, 2008). As I see it, this aspect is often lost in quantitative research, even though it deserves more attention, especially in management research.

This insight has spurred me to explore category management and supplier integration. Even though I have also encountered numerous examples of perfectly good explanatory or normative research, this is not what has caught my interest. Instead, I want to explore practical problems experienced by organizations and understand them through combining stories from the business world with a theoretical body of knowledge. Through my close contacts with practitioners during this research project, I have realized that our findings in management research, regardless of whether they are qualitative, quantitative or conceptual, are not an absolute reflection of reality, but rather a research group's effort to structure their views on the contemporary business landscape. This has to be kept in mind to avoid being blinded by our own results and simplifications. Because of my aspiration to decipher the meaning of phenomenon, I am mainly attracted by explorative research.

3.1.3 An explorative research purpose

Only a handful of previous articles tackle supplier integration in category management (e.g. Bowlby and Foord, 1995; Aastrup et al., 2007), and they use starting points that clearly differ from this thesis', this being one factor that supports the use of an explorative purpose. As explained above, there can also be a need for explorative studies of phenomena that have already been heavily researched previously, as the foundations of such research might need a thorough investigation. During this research, one of my purposes has been to question the assumption that 'optimal configurations' (Das et al., 2006) of supplier integration exist. Lastly, explorative studies are useful when the aim is to analyze the nature of a problem (Saunders et al., 2007), as is the case in this project. As this understanding is perceived to be partly missing in current literature on category management, this study refrains from a descriptive or explanatory research purpose.

An explorative study requires flexibility from the researcher, and the initially broad focus of the study has to be narrowed as the study progresses (Saunders et al., 2007). Conducting explorative research does not mean that no efforts are made to explain certain phenomena found in theory or in the empirical data. However, that which is explained is not completely determined beforehand, and the result is presented as a possible rather than a confirmed relationship between variables (Saunders et al., 2007; Yin, 2009).

3.2 Research setting and context

The conditions for supplier integration in category management are different in different kinds of retailing. In this thesis, I study builders' merchants (BMs) and their suppliers. Builders' merchants have stores from which builders, joiners and other craftsmen buy the products they need for their businesses. Technically, BMs are not considered to be part of retailing, as they mainly do not sell directly to private consumers. However, they do share many characteristics with retailers and are largely inspired by other retailers when they develop their business. Most importantly for this thesis, BMs perform category management, which is described as something retailers do. Therefore, builders' merchants are described in this thesis as a kind of retailer. I will use retail literature to understand the actions of builders' merchants and to provide a research context for my findings.

The choice to look at BMs and their suppliers in this thesis is made because BMs are prone to integrate suppliers in the business, and because the choice to use supplier integration is primarily made with the aim of increasing efficiency and effectiveness in the dyad, rather than to take advantage of a power situation. In the building-material sector, merchants and suppliers have clear roles and distinguished skill sets; as opposed to DIY retailers, there is also a tradition to cooperate, and BMs often involve suppliers in category management. The knowledge of suppliers is needed by the BMs, since they mainly sell to professional customers with high demands on quality and service. For these reasons, BMs are prone to integrate suppliers in their category management. This enables a thorough investigation of when and why supplier integration in category management takes place. The selected context also proved suitable because brands do not play a great role in this context; consequently, power and interdependence have a relatively limited effect on the way supplier integration is carried out. Therefore, the decisions to integrate are made with an aim to improve relationship performance. In my view, it is more important to investigate how supplier integration affects relationship performance, although I also find it relevant to consider the effects on interdependence. Relationship performance is more related to how value is increased for end customers, and if supplier integration in category management should be a sustainable governance structure, it has to improve the relationship performance of retailers and their suppliers.

In addition, BMs provide a new setting for the study of category management, thereby enabling new conclusions to be drawn and new insights to be made. Here, two reasons for this context to be able to provide new insights are explained: the unique network surrounding the merchants and their supplier, and the demand on BMs to renew their strategies in order to survive in the competitive landscape.

First, several actors are involved in the BMs' category management. The professional builders that shop in BMs often buy large quantities and are more prone to build close relationships with the branch staff. Therefore, the builders can be more influential over category management decisions than consumers normally are. The individual BM branches also have a strong influence over their own business, even though they are part of a larger BM chain. As the BM stores are perceived to have the best knowledge about the builders operating in their area, they are often responsible for many category management decisions. This creates a challenge when integrating suppliers, as the store managers have to be taken into account. The negotiation over when and how to integrate suppliers in category management is not only dependent on the central management of the BM and the supplier, but also on the wills of all the store managers.

Second, there is an ongoing consolidation among BMs, and mega-retailers focusing on price and cost efficiency are becoming dominant in the marketplace (Brege et al., 2012). It has been argued that this new competitive landscape has created a need to renew the strategies and business models of BMs and their suppliers (Brege et al., 2012). It is also acknowledged among many BMs that they need to modernize their ways of conducting business. Thus, the BMs and their suppliers constitute a beneficial environment for conducting research. In this thesis, the proposed solution to the challenge of keeping costs down while still responding to customer demand is for suppliers to become more integrated in the category management of BMs. As supplier integration is also discussed both by suppliers and BMs as a possible way of increasing relationship performance, a study of this empirical setting can provide new ways of understanding supplier integration in category management.

The characteristics of builders' merchants and their suppliers make this a relevant sector to study in order to understand how to manage categories and integrate suppliers in retailing. In addition, builder's merchants in Sweden have a shared turnover of about five billion euros and constitute about seven to eight percent of the total retail trade (Rämne, 2010; Gustavsson, 2013). Compared to other kinds of retailing of a similar size, such as fashion or electronics (c.f. Rämne, 2010), builders' merchants constitute an under-researched area.

3.3 Research design

The section on research design describes and justifies the choice of the data collection method, the selection of cases to include and the research reasoning used in this thesis.

3.3.1 A qualitative case study

Due to the explorative nature of this study, a qualitative case study approach was chosen. The lack of a well-established frame of reference for understanding supplier integration also necessitates a qualitative study. When collecting data from managers, they are more accustomed to qualitative methods (Mintzberg et al., 2005), which further encourages a qualitative research approach for explorative purposes.

Conclusions about supplier integration in category management are likely to look different in different situations. Exploring a phenomenon through case studies has been criticized for the inherent difficulties of generalizing from the case, but it has also been seen as an opportunity

to understand the interaction between a phenomenon and its context (Dubois and Gadde, 2002). For this thesis, one industry has been studied, but several firms from two countries are included. Therefore, the challenges specific to this industry are understood. Nonetheless, with several firms included, a multitude of views on supplier integration in category management have been obtained from slightly different environments.

To describe this research project, the data collection can be divided in two parts, based on when the data was collected. The first part of the data collection was conducted between the year 2011 and 2012, and consists of interviews and participative observations of several builders' merchants and one timber supplier in the UK market. The second part of the data collection was conducted between the years 2013 and 2014, and includes interviews with four builders' merchants in Sweden, and interviews with one builders' merchant and one timber supplier in the UK. The data collection and analysis are further described in 3.4 Data collection process and in 3.5 Data analysis.

3.3.2 Data collection method

Gathering relevant and reliable empirical data is one of the main challenges in social sciences. The discussion quoted as an introduction to this chapter, which took place between the researcher Evert Gummesson and a marketing manager in a multinational corporation, is a good illustration of this challenge. Access to the necessary data is not guaranteed by merely scheduling an interview or obtaining permission to send out a survey. Sometimes the beliefs and opinions of respondents are not revealed until you get to know them and gain their trust.

Because I was employed as an industrial PhD by a supplier to builders' merchants, I had good access to data and considerable freedom to decide what kind of data to collect within the distribution channel. The research project has been considered relevant both by the supplier and its customers in the builders' merchant sector. This has enabled me to secure a unique insight into the industry, and to gain an awareness of the beliefs and opinions of the actors involved in the supplier integration. Therefore, the conclusions in this thesis are drawn based on a solid understanding of its empirical context.

The traditional way of conducting qualitative research within the field of marketing is to conduct interviews. In the initial stages of the research project, there was a need to learn what the involved companies were doing and what their relationships looked like, and thus the interview method was found to be appropriate for obtaining this basic understanding. However, the interviews were carried out without a specific research question or analysis model in mind, providing a general overview of the empirical situation. These interviews can be described as loosely structured around the problems and challenges perceived by the interviewed firms. Later in the research process, the interviews were carried out with specific research questions in mind. Thus, more time was spent on creating interview guides, and these interviews can be described as semi-structured.

Equally important, participative observation was also used in Part I of the data collection. The main contributing factor enabling participative observation to take place was the close collaboration with the studied timber supplier. The participation enabled me to build trust

with the managers from both the timber supplier and its customers; it also enabled more relaxed and open discussions during the interviews – something that Alvesson (2011) referred to as demystification of the interview situation. Additionally, the participation enabled me to find inconsistencies between the image my respondents provided during the interviews and the way they acted. Finding and analyzing such inconsistencies is an important part of a pragmatic data analysis (Alvesson and Sköldbberg, 2008; Alvesson, 2011).

3.3.3 Participative observation

As participative observations are not as common as interviews in qualitative research, I find it relevant to provide some arguments for and against this kind of data collection method in relation to this specific project. There are several benefits in using participative observation as a data collection method. First, access is given to information that otherwise would have been inaccessible (Yin, 2009; Justensen and Mik-Meyer, 2011). One finding from the initial interviews was that respondents were either reluctant or unable to describe the processes and the logic behind decisions on how to conduct their business. Through being present when these decisions were discussed, it was possible to access this tacit knowledge. This benefit was also highlighted by Gummesson (1985), as seen in this chapter's introductory dialogue. Access to the timber supplier's databases also enabled a better understanding of the studied situation. Second, within participative observation it is possible to manipulate events in a desired way (Yin, 2009). Meetings could be arranged and the development of the project could be steered in a way that placed focus on what I found to be critical. Third, it allowed me to analyze the impact of the context (Justensen and Mik-Meyer, 2011): by understanding the unique characteristics of the timber trade, it was possible to separate between context-specific conclusions and general conclusions. Finally, creativity is stimulated in participative observation as new things are discovered in the field (Justensen and Mik-Meyer, 2011).

On the other hand, there are also difficulties associated with participative observation. Participative observation can create bias, as the researcher might get too close to the organization and become a supporter of their conduct (Yin, 2009). However, as the purpose of the present research is to explore problems experienced by a specific company, the risk of this kind of bias is limited. If the purpose had required opinions about the company's current way of doing business, this risk might have been higher. A second difficulty in participative observation is that the researcher might be required to spend too much time participating and too little time observing, therefore failing to find enough time to take notes and ask the questions that the observer role would require (Yin, 2009). While plenty of time to ask questions was given in this project, sometimes the notes taken during the participations were not extensive. If I spent too much time writing down what was being said, I felt that the flow of the discussions was halted and the participants became restricted in what they said, as they felt like they were being interviewed. By only writing down key comments and answers, I perceive the discussions to have run more efficiently. To compensate for this, I wrote more thorough accounts of the participations after they had taken place.

3.3.4 Case justification – Part I

The case studied in the first part of this research project was the distribution channel through which a timber manufacturer supplies UK builders' merchants with moldings and planed timber products (see Figure 3). The timber manufacturer initiated this research project because it is trying to improve its cost efficiency in the supply chain. By employing me as an industrial PhD student, the company gave the project a high priority, which gave me good access to data within the company. The potential effects on research quality due to the fact that the research has been externally controlled are further described in section 3.6.1. The initial interest in the merchants' assortment management also developed into a more general interest in how a supplier can become more integrated in the category management of a builders' merchant. Thus, the timber manufacturer is a good example of a supplier that wants to integrate into its customers' category management. The fact that the timber manufacturer is operating in a stable market also enabled me to study the company and its situation during a longer period of time without any major changes taking place. These arguments, justifying the selection of the studied supplier in the case, are related to the data accessibility and generalizability of the case.

Figure 3: Visualization of the distribution channel used as the case in this thesis.

Having selected the supplier, the merchants studied would necessarily have to be customers or potential customers of this supplier, as the case should describe a buyer-supplier relationship. However, the selection of which BMs to incorporate was not made beforehand, and I had some influence over which ones to approach in the case study. The premise, as defined by the timber manufacturer, was that BMs – as opposed to DIY retailers – should be selected. This is because BMs represent the customer segment that is most in need of the timber manufacturer's expertise and that is open toward supplier integration.

When finding BMs to incorporate into the study, a more active sampling method was used to identify customers that suited the research purpose. Purposive selection (c.f. Saunders et al., 2007) was used with the aim of capturing typical yet heterogeneous cases from the timber manufacturer's group of customers. From the available BMs, three chains that differ greatly in terms of how they conduct their business were selected as the main focus in the case. Further detail on these chains and their differences are provided in the case description. In addition to the chains, a number of independent and smaller BMs were included in the study to provide a broader view of the market. In the sampling of chains and independent BMs, I was supported by managers from the timber manufacturer who possessed deeper insights into how the BMs differed from one another and which BMs would be suitable to include in the study.

The sampling of merchants was not carried out as a separate stage; rather, it can be described as a continuous process (c.f. Dubois and Gadde, 2002). As the project evolved, the interest in different kinds of merchants shifted. In the initial stage, the benefits of increased supplier integration were mainly associated with integration in bigger merchant chains. During the

project, a potential for more generic forms of supplier integration emerged, which increased my interest to also study smaller BMs. Consequently, some smaller independent BMs were also included in the study.

3.3.5 Case justification – Part II

The second part of the project included two studies – one in Sweden and one in the UK. The Swedish study involved the four largest builders' merchants in the market. They were specifically interviewed about the challenges in the four category management activities and about how their suppliers can contribute to these activities. This study, in contrast to the studies in the UK, was not specifically about timber supplier; rather, it was related to the suppliers' contributions to BMs in general.

In the UK, a single business relationship between a timber supplier and a builders' merchant was studied in more depth. Both firms were also included in Part I of the data collection. The supplier had recently been awarded the role of primary supplier of timber products to the merchant, and the relationship was chosen as a study object because it had some interesting features; the merchant demanded the supplier to disclose all its costs incurred by the sold products, and prices for the products are determined based on a fixed return on capital employed for the supplier. As this setup also requires close collaboration and supplier involvement in category management decision, it is also suitable to include in this thesis.

3.3.6 Abductive research reasoning

When research is conducted, the reasoning upon which the conclusions are drawn can vary. The purpose of this thesis originated from an empirically observed phenomenon and the challenge to collaboratively manage categories. Current theories were then used to explore it. The theoretical perspectives and the subjects included in each perspective were chosen using empirical – rather than theoretical – insights. By listening to how managers in the firms included in this study described the challenges they faced, different theoretical subjects were distinguished for inclusion. The decision on which subjects to include was not entirely based on the empirical insights, as the findings were related to previous literature and seen in a theoretical context. Therefore, the reasoning used here is best described as abductive reasoning, since theory and empirical observations were iteratively matched and developed in parallel processes. Abduction is a method in which theory and empirics are matched together to develop new theories (Dubois and Gadde, 2002). Alvesson and Sköldbberg (2008) stressed that abduction is not a combination of induction and deduction, but a third separate research reasoning.

3.4 Data collection process

The data collected for this thesis can be separated into two parts. Part I of the data collection was conducted between 2011 and 2012 in the UK, and part II was conducted between 2013 and 2014 in Sweden and the UK.

3.4.1 Part I

The first part of this research was carried out in collaboration with the studied timber manufacturer. The data collection for this part of the project was carried out during seven planned visits to the UK, where the case company and its customers are located. The visits, outlined in Table 4, ranged from two days to two weeks in duration.

Table 4: Date and duration of visits in the UK for data collection

Date	Duration
February 2011	2 weeks
December 2011	2 days
December 2011	2 days
February 2012	2 days
April 2012	2 days
June 2012	2 days
September 2012	2 weeks

The data was collected through participative observations and complemented with interviews. To a large extent, the participation and interviews took place simultaneously, although they are described separately in this paper.

3.4.2 Part I - Participative observation

I spent the majority of my time in the UK collecting data. During this time, I travelled around the country with account managers from the timber manufacturer and visited BM stores. During the visits I observed the account managers, the employees in the BM stores and the interactions between account managers and BM employees.

Between the BM store visits, I spent numerous hours on the road with the account managers. During this time I obtained a good insight into their daily routines and ‘observed’ their telephone conversations with customers and colleagues. This gave me an understanding of the business I was studying. These telephone conversations provided an overview of how orders can be handled, and how problems that occur in daily operations can be addressed.

During an early stage of the research process, I spent two days in a BM store, which gave me an understanding of the BM’s daily business routines. I was able to engage in discussions with employees in different roles in the store and to observe their customers.

During all participations, category management and assortment-related discussions became a recurring theme. For example, I discussed opinions on, reasons for, and problems and challenges with the current category management, as well as possible solutions to these problems and challenges. Altogether, I believe that my participative observations enabled me to understand the distribution channel and the actors in it to a sufficient extent.

3.4.3 Part I - Interviews

The interviews took place in parallel to – and sometimes as part of – the observations. Sometimes it was hard to distinguish between an observation and an interview, but the interviews are defined here as answers to written questions that I formulated with the purpose of taking my research forward. When I discussed anything with employees from the timber manufacturer or the BMs that had not been written down, I considered the results to be part of the participative observation. This distinction is provided in order to describe how many interviews were carried out, and with whom.

During the visits, a total of 68 interviews were conducted. In addition, four telephone interviews were carried out. Most of the interviews were informal and loosely tied to an interview guide. A total of 27 interviews were unscheduled short interviews conducted with builders, joiners, and others found in the BMs, and few of these lasted longer than 10 minutes. The remaining 41 interviews were longer, and were held with employees either from the timber manufacturer or from BMs. The distribution of the interviews can be seen in Table 5.

Table 5: Interviews with different actors in the UK

Actor	Short, unscheduled	Scheduled	Telephone interviews
Timber manufacturer		20	4
BMs		21	
Builders, joiners, etc.	27		

Seven interviews, which took place during my second, third and fourth visits to the UK, are considered to be key interviews that shaped the project and its results to a large extent. These seven interviews were recorded, and carried out with manufacturers and BM employees in key positions that are most affected by the relationships between the timber manufacturer and its customers.

The respondents included a mix of persons in different positions, from high management to regular staff and self-employed builders. Both large and small BMs were visited, as well as independent BMs and stores that are part of a chain. Thus, a broad view of the distribution channel was given. In Table 6, a specification of the interviews carried out with the timber manufacturer and BMs is provided (the 27 short interviews with builders and joiners are excluded from the table).

Table 6: Interviews with the timber manufacturer and builders' merchants in the UK

Company	Respondent(s) title(s)	Number of interviews conducted	Number of telephone interviews
Timber manufacturer	CEO	1	
Timber manufacturer	CEO + Sales and Marketing Director	1	
Timber manufacturer	Sales and Marketing Director + BM Sales Manager	4	2
Timber manufacturer	BM Sales Manager	1	
Timber manufacturer	BM Sales Director	1	
Timber manufacturer	Group Operations Manager	2	
Timber manufacturer	Financial Assistant Manager	1	
Timber manufacturer	Financial Director	2	1
Timber manufacturer	Account Managers (five different persons)	8	1
Timber manufacturer	Purchaser	1	
Timber manufacturer	Logistics Planner	1	
Timber manufacturer	Sales	1	
BM 1	Regional Manager	1	
BM 1	Branch Manager	6	
BM 1	Branch Sales Manager	2	
BM 1	Purchasing and Sales	1	
BM 1	Timber Seller	1	
BM 1	Group Negotiator, Timber	1	
BM 2	Buying Manager, Timber	1	
BM 2	Branch Managers (from two different branches)	2	
BM 3	Store Manager	1	
BM 4	Timber Manager	1	
BM 5	Assistant Manager	1	
BM 6	Timber Purchaser	1	
BM 7	Timber Manager	1	
BM 8	Branch Manager	1	

3.4.4 Part II - Interviews

The second part of the data collection consisted of fewer – but more focused – interviews with decision makers from the timber manufacturer, as well as interviews in Swedish and English builders' merchants.

In Sweden, managing directors or purchasing directors in the four largest builders' merchants were interviewed (see Table 7). In addition, the managing director of the Swedish BM Trade Organization was interviewed. The interviews ranged between one and two hours in duration. All interviews were recorded and partially transcribed. The interviews aimed to capture both the current situation and the intended evolution of the builders' merchants' category management. As the interviews were made for a paper regarding resource alignment (paper IV), the questions revolved around which resources were currently held and which resources were needed to perform the different category management activities. The different ideas about the development, and the respondents' descriptions of the challenges they face were used to understand how resources contribute to perceived relationship performance. Lin (2009) argued that researchers subscribing to the resource-based view often overemphasize a value-maximizing economical reasoning and disregard social aspects in alliances. Therefore, this study aimed to capture social aspects in the current and potential future situations, expressing these aspects in resource-based terms.

Table 7: The Swedish BMs included in this study

Company	Respondent
Swe BM 1	Managing Director
Swe BM 2	Managing Director
Swe BM 3	Purchasing Director
Swe BM 4	Managing Director
Swedish BM Trade Organization	Managing Director

In the UK, a relationship based on open-book accounting between a timber supplier and a builders' merchant was studied. Interviews were conducted with the two managers from the supplier and two managers from the merchant (see Table 8). The respondents are all involved in the relationship on a daily basis. The commercial director of the supplier and the timber category director of the merchant are mainly involved on a strategic level, while the other two respondents are responsible for the operational side of the business. The interviews were approximately two hours in duration. Two telephone interviews were held with the commercial director prior to the UK visit. In total, the commercial director was interviewed for four hours. All interviews were recorded and partially transcribed.

Table 8: Respondents for the UK case in part II of the data collection

Company	Respondent
Timber manufacturer	Commercial Director
Timber manufacturer	Key Account Manager
BM 2	Head of Supply Centres
BM 2	Timber Category Director

3.5 Data analysis

The answers to the research questions draw on and develop the findings from the appended papers. This is done based on a theoretical foundation provided in the literature review and on the empirical basis that is accounted for in the appended papers as well as in an appended case description. Table 9 clarifies which appended papers contribute to which research question. The table also describes the theoretical and empirical foundations for the research questions.

Table 9: Theoretical and empirical foundation for research papers

	Papers	Theoretical foundation	Empirical basis
RQ1	III+IV	RBV + TCA	The UK study + The Swedish study
RQ2	IV	RBV + TCA	The Swedish study
RQ3	I+II	RD	The UK study

Data analysis in this thesis was carried out based on field notes taken during and after participative observations, notes taken during interviews, transcripts of recorded interviews, and secondary data in terms of information from the timber manufacturer's ERP system as well as promotional material used by the suppliers and the BMs. Even though the collected data has been used in papers with slightly varying purposes, the role of suppliers in category management has been a common theme throughout all data collection.

3.5.1 Components in the model of analysis

The model of analysis includes situational factors and their consequences for relationship performance and interdependence. Here, a description is provided that explains how the gathered material has been analyzed to identify these three components and the interrelationships between them. I try to explore the interrelationships between the components, and reason about how relationship performance and interdependence are affected by situational factors.

The *situational factors* can be any characteristics that surround the transaction and that are emphasized in the empirical material as having a distinctive impact on either the relationship performance or the interdependence between the firms during supplier integration in category management. Because the situational factors should affect the firms' inclination to use supplier integration, the characteristics of the transaction as such are not included as situational factors. The situational factors describe the supplier, the BM, the external context outside the dyad and the relationship between the supplier and the BM.

Relationship performance has been measured in previous studies (O'Toole and Donaldson, 2002; Palmatier et al., 2007; Liang and Chen, 2009), but with slightly different theoretical underpinnings, and consequently the measures also differ slightly. In this thesis, a qualitative approach is used, and indicators of relationship performance are derived based on transaction cost analysis and the resource-based view. Based on these frameworks, relationship performance is analyzed through resource alignment, frequency, uncertainty and asset

specificity of transactions, and the risk of opportunistic behavior. Both RQ1 and RQ2 are answered through an identification of situational factors that affect resource alignment, asset specificity or opportunistic behavior.

Compared to the other two components, *interdependence* is more frequently researched, and there are well-established ways to understand it. In this thesis, the consequences of supplier integration on interdependence are analyzed through an exploration of the firms' actions and perceptions of possible future actions. These actions and perceptions correspond to the exercised and perceived power held by the two firms. Depending on the counterpart's resistance towards the actual and intended actions, they can be further categorized as coercive or non-coercive power. The different kinds of power will then have consequences on interdependence, as seen in Table 3 in the literature review. In this way, the empirical material can be analyzed to determine changes in interdependence that is caused by situational factors.

3.5.2 Considerations in the data analysis

In qualitative research, data analysis often consists of thorough and detailed categorizations of data gathered from interviews (Alvesson, 2011). Even though I have made structured categorizations of the interview data collected for this study, I have also tried to reflect over the meaning of the gathered material and how it can be used in my research (cf. Alvesson and Sköldberg, 2008; Alvesson, 2011).

To expect that a store manager in an interview should be both able and willing to share the thought processes behind the category management decisions made might be considered naïve. Thus, my standpoint is that research should be permeated by careful interpretations of empirical data; therefore, I have tried to interpret the gathered material and draw conclusions based on descriptions of the thoughts and ideas that the material has generated. This is argued for by Alvesson (2011), who promotes pragmatism in the analysis of data. According to Alvesson, doubt and self-criticism sometimes have to be faded down in order to achieve results. It is, then, important to be transparent about the interpretations made. Below, some examples are provided that can explain how interpretations are used in this thesis.

Indicators of dependence and power can be sensitive subjects to discuss in interviews, especially as I have conducted interviews with both parts in business relationships. As the project in which I worked was clearly associated with the timber supplier studied in this thesis, it is likely that the customers chose their words carefully when describing the relationship to the supplier. They could have seen me as loyal to the timber supplier and perhaps did not want to harm the relationship with the supplier. Therefore, pragmatism was needed in the analysis of power and dependence. When the customer indicated that coercions were seldom used, or when the firms mentioned mutual agreements, these statements were not considered as truisms. Claims that one firm's high dependence on another firm was not used to take advantage of the situation were questioned during the data analysis, and in consequent interviews I asked for examples of actions that supported the claims made by the respondents.

Trust is something that we often refer to in casual conversations, especially when discussing business relationships. However, the meaning we assign to the word can differ. For example,

Agndal and Nilsson (2010) distinguished between goodwill trust and competence trust. Thus, it is important to be sure of what respondents specifically mean when they claim to trust another firm. As I did not always ask respondents to develop their answers when they mentioned trust, I have been careful in my interpretations of their answers. In the analysis of trust as a situational factor, I have mainly used the parts where respondents explain why trust is needed and what the benefits with trust are. In these cases, their answers provide an understanding of how they use the term and what meaning they assign it.

The suggestions for how suppliers can become integrated in the pricing management of retailers are a specific shortcoming in this study. Due to antitrust regulation, it is illegal for suppliers to dictate the prices their customers charge for the suppliers' products. It is unlikely that suppliers do not provide any kind of support in the pricing management, but the respondents, especially in the Swedish study, have been reluctant to provide any information about this. For this specific problem, I have avoided to make clear statements about supplier integration in pricing management. The antitrust issue is also further described in '5.2.1 Suitability of supplier involvement in pricing management' in the discussion of research findings.

3.6 Research quality

Social science research can – regardless of how structured or unstructured it is – always lead to dubious conclusions. The difficulty of drawing conclusions that are not biased was acknowledged by Mintzberg et al. (2005, p.165), who stated, “I see it when I believe it.” Dannefjord (2005) elaborated on the same subject, and concluded the following:

Within social science there are hardly any research results that cannot be claimed to be erroneous in the light of later, or other, results and theories. However, they are not necessarily of less quality or less valuable, but they have to be seen as a comment in a continuous discussion about how the society should be described, explained and understood from different aspects.
(Dannefjord, 2005, p. 15, my translation)

At one point or another, qualitative research relies on the interpretations of the researcher. Because I am fully aware that *the* truth might not be out there, and that the conclusions made in this thesis are strongly influenced by my personal interpretations, the situational factors identified in this thesis are not necessarily the ones that have, de facto, the most important consequences for supplier integration. With this in mind, this section discusses the validity and reliability of this research, as well as the possible effect the external funder of the first half of this research project might have had.

3.6.1 Validity and reliability

In a qualitative study, it is important to describe the measures that have been taken to improve the validity of the results. In this thesis, three measures for increasing validity can be distinguished.

First, the data collection was conducted using both participative observations and interviews. By using a mixed-methods approach, the shortcomings of one data collection method can be

balanced by the other data collection method. For example, the interviews can provide access to the thoughts and arguments used by actors for driving certain decisions, while the participative observations can validate the arguments and determine whether the thoughts are being turned into actions. As I had access to the timber supplier's sales and inventory data, I could also validate and compare the picture provided in the interviews with actual data.

Second, interviews and participative observations have been made with both the timber supplier and a number of BMs. Within the firms, data has been gathered from people at different levels of the organizations. In this way, I have listened to several views on how suppliers can support BMs, and have realized that the actors differ substantially in the challenges they associate with supplier integration. The different perspectives have been important in the data analysis, and it is safe to say that my findings would look different if only one side of the business relationship had been included in the data collection, or if only top level managers had been interviewed.

Third, I confirmed my own findings through follow-up meetings with the timber supplier studied in the thesis. By providing my own description and findings regarding the company and its customers to the managers of the timber supplier, I was able to make minor improvements to my own interpretations. In the Swedish study, the empirical material was sent to the interviewed builders' merchants, and they were given the chance to make clarifications.

It is difficult to ensure reliability in qualitative research, as the empirical material gathered reflects the thoughts of individuals working in specific firms at a specific point in time. Ensuring reliability is especially difficult in participative observations, as the events taking place cannot be controlled by the researcher. However, some measures are taken to increase the possibility of achieving similar results if the study is replicated. For the interviews, interview guides have been developed that describe topics and questions to cover in the different interviews; additionally, the most important interviews have been recorded. For the participative observations, notes were taken both during and after the events, which makes it possible to track what kind of information the observations provided.

3.6.1 Externally funded research

The first half of this research project was financed by the timber manufacturer described in this thesis. Thus, there is a need to describe how this might have influenced the thesis. A survey has been conducted by the union for Swedish university employees, among others, with the aim of increasing understanding of how external funders' interests influence the quality of research. From their survey, it was concluded that researchers can be influenced by commitments to the funder, and that the funder can exert influence through the kind of results that are expected. This can be interpreted as two separate problems. One is that funders influence the type of research that should be conducted (in other words, the purpose formulation). The second is that funders influence the research results. Regarding the purpose formulation, section 3.1 describes how the purpose of this thesis was shaped. As I have had high control over the purpose formulation, this is not perceived to have interfered with how research should be conducted. Instead, the influence of the purpose formulation enabled me to

conduct research that is more likely to be useful for the industry and aid companies in solving important problems. The second concern relating to externally funded research – influence of research – is not perceived to be an issue in the present project. As the funding company wanted to facilitate an unbiased exploration of the current and future business landscape, rather than hoping for results indicating certain developments, I have been free in drawing my own conclusions.

The external funding has enabled me to obtain good access to data. As I spent a considerable amount of time with the studied timber manufacturer, I have been able to build relationships with the people working there. As we got to know one another and they became accustomed to me being around them, they also became willing to share more of their opinions and thoughts. As an employee of the timber manufacturer, I also had access to its Enterprise Resource Planning system. In this way, I could compare the picture they provided in interviews with actual data on inventory levels and sales of different products to different customers. For these reasons, the external funding for this research has enabled me to gain an insight into the studied industry that would have been difficult to achieve as an independent researcher.

4 CONTRIBUTIONS FROM THE APPENDED PAPERS

Information about the appended papers is provided in Table 10. With the exception of paper II, I am the first author of all papers. I have had main responsibility for papers I and IV, for which I have planned the research, conducted the data collection (when applicable) and written the majority of the paper. The orientation of these papers and their conclusions have been discussed with my co-author and decided upon collectively. The co-author has also contributed with smaller sections of the text and made suggestions for how the text can be improved. The co-author has also taken part with me in some of the interviews conducted within the scope of these papers. For paper II, I have written and been responsible for the theory, method and findings sections. The introduction and conclusions have mainly been written by me or collectively, but we have had a shared responsibility for determining the orientation of the paper. I have been present during all data collection, sometimes alongside one of the co-authors. I have written paper III as a single author, therefore solely carrying out all activities, from planning the interviews to conducting the analysis and writing the paper. Paper V was written collaboratively between me and the second author. We have both been present during the data collection and contributed equally to the literature review, the data analysis and the writing of the paper.

Table 10: The appended papers

	Name	Authors	Data	Status
Paper I	The Dynamic Effects of Power in Buyer-Seller Relations – The Process of Gaining and Using Power to Increase Share of Profitability	Daniel Ellström, Jakob Rehme	Conceptual	Conference paper, previous version presented at Nordic Retail and Wholesale Conference, 2012
Paper II	Supplier Assortment Strategy for Balancing Power	Jakob Rehme, Daniel Nordigården, Daniel Ellström, Daniel Chicksand	Interviews and participative observations, UK	Accepted for publication in Industrial Marketing Management
Paper III	Supplier Integration in the Assortment Management of Builders' Merchants	Daniel Ellström	Interviews and participative observations, UK	Published in International Journal of Retail and Distribution Management
Paper IV	Resource Alignment in the Category Management of Builders' Merchants	Daniel Ellström, Jakob Rehme	Interviews, Sweden	Submitted to International Review of Retail, Distribution & Consumer Research
Paper V	Open-Book Accounting with Fixed Returns in an Outsourcing Implementation	Daniel Ellström, Martin Hoshi Larsson	Interviews, UK	Submitted to Qualitative Research in Accounting & Management

4.1 Paper I

Name: The Dynamic Effects of Power in Buyer-Seller Relations – The Process of Gaining and Using Power to Increase Share of Profitability

Authors: Daniel Ellström and Jakob Rehme

Previous version presented at the 3rd Nordic Retail and Wholesale Conference, 2012, Lund, Sweden

This conceptual study explores how different power bases can be used in buyer-seller relations. It contributes with an explanation of the dynamic effects of power utilization. The concepts of power bases (French and Raven, 1968) and dependence (Emerson, 1962) are used to explain what power is. A distinction is made between coercive power and non-coercive power, as there are important differences in how they are exercised and what they can achieve. Together with ideas originating from economic theories, which state that a relation exists between relative power and share of value gained in a buyer-supplier relationship (Ailawadi et al., 1995; Cook and Henderson, 1998), the outcomes of different kinds of power exercises are explored. This has resulted in a description of the dynamic process of how power is gained and used, as described in Figure 4. As seen in the figure, coercive and non-coercive power bases can be used for fundamentally different purposes, but are at the same time closely related to each other.

Figure 4: Suggested process describing the dynamic effects of power and how power can be used to increase share of profit

Non-coercive power is used to achieve changes that are unresisted by the influenced, meaning that the change is welcomed. This does not require the influenced to be dependent on the influencer, but may result in an increased dependence instead. As no resistance is overcome, the influencer is not losing any power – its power is only redistributed to other power bases. Therefore, a change caused by a non-coercive power base may create a coercive power base for the influencer.

Coercive power is used to achieve resisted changes, meaning that the change is unwanted by the other actor. Therefore, the exercise of coercive power requires the influenced actor to be dependent on the influencer, and dependence is then decreased in exchange for a more beneficially perceived position of the influencer. Coercive power can be used in a buyer-supplier dyad to create a change in behavior, or a change in how value is shared between the two actors. Therefore, an increased share of profitability is achieved through exerting power from a coercive power base.

Coercive and non-coercive power bases can be used for fundamentally different purposes, although they are closely related to each other. Gaining a greater share of profitability is achieved through exerting power from a coercive power base. The coercive power base may have appeared from changes caused by previous exertions of non-coercive power. Thus, non-coercive power can be used to increase dependence and indirectly enable an increased share of profit.

To conclude, the main contributions from paper I to this thesis are:

- The exercise of non-coercive power does not require the influenced to be dependent on the influencer, but may result in an increased dependence instead.
- Coercive power is required to overcome resistance and force a change to happen; non-coercive power is used when the change is unresisted.
- Resisted change in a buyer-supplier dyad can concern a change in behavior or a change in how value is shared between the two actors.
- The exercise of coercive power requires the influenced to be dependent on the influencer, and dependence is then consumed in exchange for a more beneficially perceived position of the influencer.
- Non-coercive power can be used to increase dependence, thereby indirectly enabling an increased share of profit.

4.2 Paper II

Name: Supplier Assortment Strategy for Balancing Power

Authors: Jakob Rehme, Daniel Nordigården, Daniel Ellström, Daniel Chicksand

Accepted for publication in Industrial Marketing Management

The power balance in a dyadic business relationship is dynamic, and power positions need to be constantly re-evaluated. This paper explores the possibility for a supplier to change the power situation in a distribution channel by adjusting the amount of resource utility and scarcity brought to the table. In this way, a move from buyer dominance toward interdependence between buyers and suppliers can be achieved. The paper is based on Part I of the data collection and examines how a timber supplier can support the timber assortment management of its customers in the builders' merchants sector. In the studied case, the supplier holds information about products, regional and local demand, and the usage of the products. These pieces of information can be regarded as resources with high utility and scarcity for the buyer's assortment management. With this view, the information can be used to alter the power positions of the two parties over time. In Table 11, the dynamic change of power position is described based on the scarcity and utility of resources held by the buyer and the supplier.

Table 11: Balancing power in the buyer-supplier relationship

Actor	Determinants of power	Ability to influence	Dynamic change of power position
Supplier	<p><i>Low market scarcity:</i></p> <p>1) Many suppliers with similar product offerings.</p> <p>2) Buyers can utilize expertise from other sources.</p> <p><i>Low resource utility:</i></p> <p>Supplier has a modest supply of information regarding costs and demand for their products.</p>	<p><i>Low ability.</i></p>	<p><i>Higher market scarcity:</i></p> <p>1) Buyers are becoming dependent on the supplier's market expertise.</p> <p>2) The supplier has unexploited resources in terms of the supply of information and financial resources.</p> <p><i>Higher resource utility:</i></p> <p>Buyer wishes for closer collaboration and higher supplier involvement (more or less unresisted change).</p>
Buyer	<p><i>High market scarcity:</i></p> <p>Few large buyers.</p> <p><i>High resource utility:</i></p> <p>1) Buyer's large purchasing clout.</p> <p>2) Provides supplier access to large market.</p>	<p><i>High ability:</i></p> <p>Buyer can place high demands on supplier and its offerings.</p> <p>Buyer is able to put pressure on the margins of the supplier.</p>	<p><i>Little or no change in market scarcity and resource utility situation.</i></p>

The move from buyer dependence to interdependence is not always met with resistance from the buyer. Some BMs from the study demand their suppliers to take more control over

assortment management, thus increasing their dependence on the supplier and moving from a situation of buyer dominance to interdependence. From the BMs' perspective, the move towards interdependence is accepted because the efficiency in the distribution channel can increase, and consequently more value is created by the two actors.

Practitioners are encouraged to exert non-coercive power resources, such as information asymmetry, in order to increase their firm's relative power in a buyer-supplier dyad. Furthermore, being clear and open about the power position between a buyer and a seller can foster a more efficient collaboration.

To conclude, the main contributions from paper II to this thesis are:

- Information asymmetry is a power resource (with high utility and scarcity) that can alter the power positions of two parties over time.
- BMs can demand that suppliers take more control over assortment management, thus increasing the retailer's dependence on the supplier and moving from a situation of buyer dominance to interdependence.
- BMs demand suppliers to use their information about (1) products, (2) regional and local demands and (3) the usage of the supplier's products.
- The changes are unresisted (or even demanded) by the BM, since they can improve the efficiency in the distribution channel and consequently the BM's customer offer.

4.3 Paper III

Name: Supplier Integration in the Assortment Management of Builders' Merchants

Author: Daniel Ellström

Published in International Journal of Retail and Distribution Management

The aim of this paper is to explore supplier integration in the assortment management of builders' merchants by identifying potential factors enabling supplier integration and potential factors mediating the success of supplier integration. To some extent, the enablers and mediators can be understood as situational factors that affect the suitability of supplier integration, and are therefore important for answering this thesis' first research question. While this paper focuses on assortment management, the thesis covers the broader concept of category management. Therefore, the findings in this paper are not directly applicable for this thesis. The paper is based on the interviews and participative observations conducted during part I of the data collection for this thesis. Thus, the case observed is a timber supplier and its builders' merchant customers in the UK.

Supplier integration is more likely to take place when the BM perceives that it will benefit from an adaptation to an integrated supplier's offering. The BM chains need to be of a certain size if it should make sense for the supplier to spend time integrating into the BMs' assortment management. Additionally, the BMs perceive the attractiveness of the supplier's knowledge to be higher when the BM is not specialized in the product category. Therefore, the paper concludes that the likelihood that a supplier and a merchant will implement supplier integration is positively affected by the BM's format as a large chain with several product categories represented in its stores. Furthermore, because the details of an offering from an integrated supplier cannot easily be established in a contract, trust between supplier and BM also increases the likelihood of supplier integration.

Based on the resource complementarity framework (cf. Das and Teng, 2000), three mediators of supplier integration success are also identified in the paper. First, supplier integration can be more successful in markets where many different merchant chains are represented. As merchant chains tend to differ in the assortments they offer, the supplier studied in this paper claims it can analyze how different combinations of products will affect sales, and suggests ways in which merchants can improve their sales by altering their assortment. Second, suppliers that understand how assortment drives costs in the supplier-merchant dyad are better suited for influencing the assortment. As most of the costs in the supplier-merchant dyad often appear within the domains of the supplier, the identification and realization of cost reductions is an important task for the supplier. Third, the success of supplier integration in assortment management can decrease when the local circumstances strongly affects the demand in the merchant stores. If this is the case, the supplier's knowledge about its products and the general market demands becomes less useful at the expense of the store's knowledge about local demand.

To conclude, the main contributions from paper III to this thesis are:

- The likelihood that a supplier and a retailer will implement supplier integration is positively affected by (1) the retailer's format as a large chain with several product categories represented in its stores and (2) the retailer's trust in the supplier.
- Effectiveness and efficiency of supplier integration is moderated by (1) the number of different retail formats represented by the retailers; (2) the ability of the supplier to determine cost drivers in its operations; and (3) a homogeneous market, meaning that local circumstances have limited effect on demand.

4.4 Paper IV

Name: Resource Alignment in the Category Management of Builders' Merchants

Authors: Daniel Ellström and Jakob Rehme

Submitted to International Review of Retail, Distribution & Consumer Research

The aim of this paper is to explore resource alignment among actors involved in the category management of builders' merchants. The alignment of resources in a supply chain has consequences for the supply chain's resource utilization. However, more research is needed to determine how resource alignment works in this setting. The paper is based on the interviews conducted with top managers in Swedish builders' merchants during part II of the data collection for this thesis. In the paper, category management is divided into four distinguished activities. For each activity, complementary and supplementary resources held by the supply-chain actors are identified. In addition, resources that are needed to develop the category management activities are distinguished.

Based on the identified resources, three propositions are formulated that explain how supplementary and complementary resources are interrelated, and how the supply chain influences the need for supplementary resources.

Without supplementary resources, the supplier's unique resources are partly nonperforming in the supply chain, and are therefore wasteful (cf. Das and Teng, 2000). For example, the suppliers are required to increase their understanding of customer value (a supplementary resource) in order for their product expertise to influence the BMs' category management decision. This is formulated in the proposition below:

Proposition 1: If suppliers that are integrated in BM category management have supplementary resources, it is more likely that their dissimilar resources are complementary rather than wasteful.

Supplementary resources are mainly needed in the relationship between the suppliers and the BMs' central management. The higher degrees of trust between BMs' central management and their stores – compared to the degree of trust between central management and suppliers – might decrease their need for supplementary resources. As the stores and the central management can divide responsibilities to a further extent, they do not need to share resources. This is formulated in the proposition below:

Proposition 2: For a supplier that is integrated in the category management of a BM, the need for supplementary resources is higher when trust between the supplier and the BM is low.

However, the supplementary resource need is only present for responsibilities that affect both the supplier and the BM. For example, the pricing decision does not directly influence the supplier, and then the resources of the supplier complement those of the BM, even though they lack supplementary resources. This is formulated in the proposition below:

Proposition 3: The need for supplementary resources among BMs and suppliers is higher when the resources are needed for category management activities for which the actors have a shared responsibility.

The description of resource alignment supports merchants and their suppliers with regard to how to assign roles and responsibilities in category management activities. While the merchants themselves are often well equipped to manage pricing and logistics management, the supplier can provide support in assortment and marketing management. The paper also highlights the specific resources needed by BMs and suppliers in category management. These resources can be seen in Table 12. In general, the BMs' knowledge of the market and customer demands needs to be complemented by the suppliers' product knowledge. To effectively conduct category management, the actors also need supplementary resources in terms of communication systems and a shared view on customer value.

Table 12: Complementary and supplementary resources needed in the category management activities of builders' merchants

Category Management Activities	Complementary Resources		Supplementary Resources
	BM	Supplier	Joint
Assortment activities	Local customer demand	Product knowledge and fit between products	Shared view on customer value
Pricing activities	Adapts prices to suit market demand	Recommends prices based on product costs	
Marketing activities	Local customer demand	Product knowledge	Shared view on customer value
Inventory management activities			Information communication system

To conclude, the main contributions from paper IV to this thesis are:

- The resource alignment framework provided by Das and Teng for understanding strategic alliances can also be useful for understanding other kinds of interorganizational relationships, such as supplier integration.
- Both supplementary and complementary resources held by the buyer and the supplier are important in category management.
- Actors might be required to hold some supplementary resources in order for their complementary resources to be beneficial.
- A lack of trust between buyers and suppliers increases the need for supplementary resources.

- When buyers and suppliers share responsibility for an activity in category management, the need for supplementary resources is higher.
- Category management consists of four activities: assortment management, pricing management, marketing management and logistics management.

4.5 Paper V

Name: Open-Book Accounting with Fixed Returns in an Outsourcing Implementation

Authors: Daniel Ellström and Martin Hoshi Larsson

Submitted to Qualitative Research in Accounting & Management

Paper V takes a slightly different approach to retailer-supplier relationships and targets an interorganizational cost-management method in which the suppliers' cost data is shared with the retailer. This is called open-book accounting (OBA). Sharing sensitive information in a buyer-seller relationship is becoming increasingly common; therefore, there is a need to further understand the phenomena and the challenges associated with it (Möller et al., 2011; Windolph and Möller, 2012). As OBA is a relatively new and unexplored research area, there is a need to further describe its complexities. In this paper, we focused on OBA with fixed returns; that is, in which the price paid for the products depends on the costs held by the supplier. In this way, the supplier is guaranteed a price that covers its costs and gives a margin that is agreed on beforehand. The purpose of the paper is to identify the circumstances under which OBA with fixed returns takes place, how failures can be avoided and what types of benefits can be achieved through using OBA with fixed returns.

In this thesis, supplier integration means that a supplier engages in and supports the operations and activities normally carried out by the buyer. Often, OBA is carried out in supplier integration projects as a means for the buyer to keep some control over the activities that have been assigned as the supplier's responsibility. In the case studied in paper V, OBA was implemented in connection with an outsourcing project, in which a builders' merchant let go of its wood-product machining facilities.

The empirical findings in the paper show that OBA with fixed returns can take place despite low initial competence trust, and that both actors engaging in OBA have to see a benefit in doing business with each other, although only one of the actors has to see a benefit in using OBA. Failures in OBA implementation can be avoided by making sure that the people involved in the relationship understand the agreement, and by taking uncertainties in the environment into account in the contract. The benefits of OBA with fixed returns identified in this paper are cost savings, security in the sourcing and demand of material, a shift in risk to the less risk-averse actor, close cooperation, interorganizational learning and a mutual lock-in effect. Because OBA is often carried out at the same time as supplier integration, some of the findings from this paper can be interpreted as consequences of supplier integration. Mainly, the view on goodwill trust as a requirement for OBA to occur can be understood as a requirement for buyer-supplier collaborations in general to take place. This is supported by several other authors (Carr and Ng, 1995; Mouritsen et al., 2001; Kumra et al., 2012). The paper also contributes by making an important distinction between goodwill and competence trust, and argues that competence trust can be built as the relationship develops. In addition, the paper describes the incentives for buyers and suppliers to engage in collaborations as well as when these collaborations take place. It is argued that both actors need to see a benefit from the relationship as such, but that the specific way to integrate (for example, through open books) only has to be beneficial to one of the actors.

To conclude, the main contributions from paper V to this thesis are:

- Firms engaging in close interorganizational relationships (such as supplier integration) need to trust the other firm's intention to perform according to an agreement.
- Even though increased integration as such is not wanted by an actor, the integration can entail other positive consequences for that actor; for example, in the form of security in supply or increased volumes sold. When that is the case, the actor does not necessarily resist integration.

4.6 Links between papers and purpose

Even though the appended papers concern different aspects of buyer-seller relationships, they also share a common theme. Except for the first paper, which is conceptual, all papers use data collected from relationships between suppliers and retailers. The papers describe different developments in which the supplier takes or is given more responsibility in buyer-seller relationships. Ways in which suppliers can take more responsibility over assortment management are described in two of the papers (papers II and III); another paper targets the suppliers' increased responsibility in category management (paper IV), and in one paper the retailer outsources in-house manufacturing to a supplier (paper V). The conceptual paper (paper I) does not specify the kind of activities for which the supplier takes responsibility.

All papers analyze different consequences of the changes in responsibility. Papers I and II focus on consequences for interdependence between the supplier and the buyer. Papers IV and V mainly analyze consequences for relationship performance. Paper III targets consequences in both interdependence and relationship performance. The research questions also distinguish between responsibilities for either category management in general or responsibilities for specific category management activities, as well as between different kinds of consequences. The links between the appended papers and the purpose are shown in Table 13.

Table 13: Links between appended papers and purpose

	Name of paper	Kind of change	Consequence of change
Paper I	The Dynamic Effects of Power in Buyer-Seller Relations – The Process of Gaining and Using Power to Increase Share of Profitability	Change in responsibility	Change in interdependence
Paper II	Supplier Assortment Strategy for Balancing Power	Supplier takes responsibility for retailer assortment	Change in interdependence
Paper III	Supplier Integration in the Assortment Management of Builders' Merchants	Supplier takes responsibility for retailer assortment	Change in interdependence and relationship performance
Paper IV	Resource Alignment in the Category Management of Builders' Merchants	Supplier takes responsibility for category management	Change in relationship performance
Paper V	Open-Book Accounting with Fixed Returns in an Outsourcing Implementation	Supplier takes responsibility for manufacturing	Change in relationship performance

5 DISCUSSION OF RESEARCH FINDINGS

The discussion is based on the research questions and the purpose of this thesis. First, the answers to the three research questions are discussed, followed by a discussion around the fulfillment of this thesis' purpose.

5.1 Relationship performance of category management

This section aims to answer RQ1: What situational factors affect the relationship performance of supplier integration in category management? In Figure 5, the part of the analysis model that corresponds to this research question is highlighted.

Figure 5: Analysis of RQ1

Papers III, IV and V directly or indirectly investigate in which situations increased retailer-supplier relationship intensity can be beneficial for the two firms involved. These findings are useful for distinguishing situational factors that affect the relationship performance of supplier integration in category management. The papers and the empirical data are analyzed with a resource-based view and transaction-costs analysis. From the analysis, five situational factors are distinguished that can affect the relationship performance of integrated retailer-supplier dyads.

If supplier integration should increase relationship performance, the supplier has to apply its product knowledge to category management: According to the findings in paper III, an identified key resource that the supplier contributes with during supplier integration is its product knowledge. Similar findings are made in manufacturing settings, where it is claimed that an integrated supplier can provide the buyer with access to technological and operational resources (Droge et al., 2004; Narasimhan et al., 2010). Supplier capabilities (Lockström et al., 2010) and supplier manufacturing competitive capabilities (Swink et al., 2007) are also associated with more successful supplier integration. This can also be related to Kim's (2013) statement that the aim of supplier integration is to leverage the innovative capacity or technical skill of the supplier. Suppliers are generally perceived to understand the technical features of their own products, but the challenge is to make this knowledge useful in category management. The supplier has to apply its technical product knowledge, and be aware of how

different features are used and when they are needed by the customers. The knowledge of technical features and the ability to transform this knowledge into an understanding of how products are used by customers is referred to here as supplier product knowledge. This knowledge-based resource can be combined with a retailer's knowledge of customer demand; together, they can improve category management. This likely contributes to relationship performance, as their combined knowledge gained from integration is a scarce resource (Danese, 2013). These knowledge-based resources are also less vulnerable to imitation (Das et al., 2006), and it has been previously established that knowledge-sharing routines are an important source of interorganizational competitive advantage (Dyer and Singh, 1998). To a large extent, this conclusion is therefore in line with previous research on supplier integration and interorganizational relationships.

A homogeneous market increases the relationship performance of supplier integration in category management: As paper III points out, the effectiveness and efficiency of supplier integration is reduced in a heterogeneous market where local and regional circumstances strongly affect the customer demand in different stores. In a heterogeneous market, category management decisions about the assortment and marketing of products are more dependent on the customer demand in that particular area. When that is the case, knowledge of customer demand becomes more important relative to product knowledge, as differences in customer demand will affect category management to a greater extent. As the supplier generally contributes with product knowledge, and the retailer generally contributes with knowledge of customer demand, the supplier's knowledge and resources are less useful in a heterogeneous market. In resource alignment terms, the supplier's product expertise is a supplementary resource that is less performing when knowledge of local variations are relatively more important for a successful management of the category (cf. Das and Teng, 2000). In the UK study, several respondents mentioned the differences in local and regional demand as an argument against supplier integration, and claimed that the decision makers in the individual stores were better suited to manage most of the activities included in category management. As supplier integration aims to leverage a supplier's expertise (Kim, 2013), it is necessary that this expertise is useful for the retailer. In a homogeneous market, the supplier's expertise likely becomes more important relative to the retailer's expertise in local demand variations; therefore, the benefit of supplier integration increases. Market heterogeneity, as described above, is also a component in demand uncertainty. Demand uncertainty has been determined to have a negative moderating effect on the relationship between supplier integration and customer delivery performance (Boon-itt and Wong, 2011). According to Boon-itt and Wong, the benefit of integration is higher in supply chains where demand uncertainty is low (that is, where there is market homogeneity) because of the possibility to share accurate information about the demand and work collaboratively to fulfill this demand in an efficient manner. Supplier integration has also been associated with improved financial performance during market diversifications (Narasimhan and Kim, 2002) and when entering new markets (Mabert and Venkataramanan, 1998). It is then assumed that integration is carried out with suppliers that are located in the new market and that have useful information about the new market. Similarly, Yeung et al. (2009) identified collaborative relationships as successful in dynamic market environments, based on an underlying assumption that the supplier has important

resources for understanding and dealing with these dynamics in the market. When the environmental uncertainty is manifested in heterogeneous demand, the findings in this thesis suggest that uncertainty is likely to weaken the relationship between integration and performance. This is partly in line with the findings by Boon-itt and Wong (2011), although contrary to many other findings about supplier integration in manufacturer-supplier settings. In a retailer-supplier setting, the retailers – through their stores – often hold more expertise about the local market than suppliers normally do. Therefore, it can be concluded that a homogeneous market increases the relationship performance of supplier integration only when the customer holds more expertise about the local market, as is normally the case when supplier integration takes place in a retailer's operations.

Suppliers and retailers are required to share a view on customer value in order for their complementary resources to be beneficial in supplier integration: In paper IV it is argued – based on the resource alignment framework proposed by Das and Teng (2000) – that suppliers and retailers need to share a view on what customers value if they should be able to take full advantage of each other's resources. A shared view on customer value creates leverage on the supplier's product expertise, as it enables the supplier to better apply its product knowledge in a way that provides value to both the supplier and the retailer. In this way, the supplier's product knowledge and the customer's knowledge of demand can be combined in an aligned effort to improve customer value creation. Even though this is not explicitly supported by previous research, some earlier findings follow the same vein of reasoning. Fawcett and Magnan (2001) described how managers tend to sub-optimize supply chains, as they cannot visualize them from beginning to end; they consequently stated that buyers and suppliers are required to establish a common vision in order to achieve effective supply chain integration. The view on customer value is likely one of the areas where a common vision would be needed. Kim (2013) claimed that the level of uncertainty affects the benefit of supplier collaboration. It can be argued that differing views on customer value is a possible reason for uncertainty to arise: when the supplier does not share the retailer's view on customer value, the retailer becomes uncertain about how the supplier will use its complementary resources and whether it will contribute to delivering increased customer value, as defined by the retailer. The retailer can then be reluctant to include the supplier in category management. However, the need for a shared view on customer value during supplier integration can be self-fulfilling, as strong partnerships are anticipated to facilitate the supplier's understanding of the buyer's needs (Flynn et al., 2010). When a supplier becomes aware of a retailer's needs, it is likely that the two parties also obtain a shared view on customer value. In a long-term perspective, it is therefore possible that this requirement will play a less significant role, as supplier integration usually means that the supplier and the retailer eventually obtain a shared view on customer value.

Large size of retailer needed for supplier integration to be cost-efficient: Drawing on the findings in paper III, it can be concluded that supplier integration suits large retailers better than small retailers. According to paper III, the selling to large retail chains is an enabler for suppliers that want to integrate into the retailer's assortment management. Supplier integration requires the supplier to understand the positioning and the needs of the individual

retailer chain. Thus, the specificity of assets needed in the relationship increases when supplier integration takes place. This requires the supplier to make transaction-specific investments, which have to be compared to the potential gains from supplier integration. With larger retailers, the investments are more likely to pay off, as the volume of the business is higher. For small retailer chains, suppliers have limited resources available to individually adapt their offerings and make suggestions for how to change the retailers' category management. With a smaller volume in a supplier integration contract, the transaction costs associated with the contract become higher in proportion to the possible gains from supplier integration. Therefore, the size of the retailer is a retailer-related factor that affects the relationship performance of supplier integration. In addition, paper III concludes that smaller retailers seldom see how the knowledge of the supplier can be useful for them. With limited resources available to invest in the individual relationship, suppliers may not be able to communicate with small retailers and convince them of the potential benefits of supplier integration.

As is seen in the literature review, buyer firm size has previously been investigated as a situational factor that potentially affects supplier integration in non-retail settings (Wagner, 2003; Koufteros et al., 2007). As supplier integration in category management is associated with high transaction-specific investments, the costs are also high for negotiating and ensuring contracts, in line with transaction cost reasoning (Heide and Stump, 1995). To compensate for these costs, the contract cannot be worth too little. The use of supply chain training and documenting procedures are other moderators of effective supply chain integration found by Fawcett and Magnan (2001) that can explain why larger retailers see more benefit in supplier integration.

On the other hand, it has been argued that internal integration – that is, that a firm integrates and collaborates across traditional functional boundaries within the firm (Chen and Paulraj, 2004) – is important for the performance and competitiveness of integrating suppliers (Fawcett and Magnan, 2001; Droge et al., 2004; Yeung et al., 2009; Flynn et al., 2010). Independent retailers that own their own stores are likely to be more internally integrated, as there are fewer managers that work more closely together (if there is more than one manager) in these firms. As supplier integration has been previously studied mainly in larger manufacturing firms, the suitability of supplier integration in small firms is seldom discussed in marketing literature. The conclusion in this thesis is that small retailers are not suited to integrate suppliers, and this can be an explanation for the lack of research interest in supplier integration in small firms.

Mutual trust between supplier and retailer increases relationship performance: An identified relationship factor that affects relationship performance of supplier integration is the trust between the supplier and the retailer. In paper IV, it is noted that when firms trust each other to a larger extent, they are also more open to divide responsibilities. Paper V deals with the effect trust has on retailer-supplier collaboration, and provides an example of the importance of trust in interorganizational relationships. According to this paper, firms engaging in close interorganizational relationships (such as supplier integration) need to trust the other firm's intention to perform according to an agreement. This is referred to as

goodwill trust (Nooteboom, 1996). Zhang and Huo (2013) and Yeung et al. (2009) also showed that trust between suppliers and customers increase the chance that supplier integration takes place. When trust is lower, the firms often spend more resources on monitoring and evaluating the activities carried out by their partners. According to transaction cost theory, this is a symptom caused by the risk of opportunistic behavior, and something that increases the costs of transactions (Williamson, 1979; Rindfleisch and Heide, 1997). It is often assumed that all dependence relations are characterized by high degrees of trust (Etgar, 1976), but Andaleeb (1996) argued that an actor can be dependent on another actor that it does not trust, simply because of the benefits the relationship brings. In line with Andaleeb's (1996) reasoning, and considering the broad definition of supplier integration provided in this thesis, it is possible that supplier integration can take place between suppliers and retailers with low mutual trust for each other. However, a high level of trust across the organizations was described as a requirement for *effective* supply chain integration by Fawcett and Magnan (2001) as well as by Yeung et al. (2009). Supplier integration is claimed to facilitate the sharing of complementary resources, information and tacit knowledge, (Danese, 2013) and to enable the companies to reduce duplicate activities (Monczka and Morgan, 1996). However, this is based on an underlying assumption that the two actors involved in supplier integration trust each other. Without high levels of trust, monitoring efforts will be needed and the sharing of resources will be difficult, thus impeding relationship performance. For this reason, trust can reduce the transaction costs associated with supplier integration, and therefore improve the relationship performance of supplier integration.

5.2 Relationship performance of category management activities

This section aims to answer RQ2: For what specific category management activities do the situational factors identified in RQ1 affect the relationship performance of supplier integration? In Figure 6, the part of the analysis model that corresponds to this research question is highlighted.

Figure 6: Analysis of RQ2

The same five factors that are identified as affecting relationship performance of supplier integration in category management in general are also assumed to affect the relationship

performance of supplier integration in specific category management activities. However, not all activities are affected by all situational factors, and therefore the different factors can make it beneficial to integrate in certain activities, whereas other activities should perhaps be kept within the retailer's responsibility in that specific situation. Similarly, Song and Thieme (2009) described how – depending on the setting – integration can be more suitable in different tasks in innovation projects. In Table 14, the four different category management activities are combined with the five factors suggested to affect the relationship performance of supplier integration. The explanations regarding how the five factors affect the suitability of the four category management activities are provided below.

Table 14: For what activities of CM the different situational factors positively affect the benefit of supplier integration

	Supplier characteristics	Retailer characteristics	Relationship characteristics		External characteristics
	Supplier product knowledge	Large size of retailer	Shared view on customer value	Mutual trust	Homogeneous market demands
Assortment	X	X	X	X	X
Pricing	N/A	N/A	N/A	N/A	N/A
Marketing	X	X	X	X	
Logistics		X		X	

5.2.1 Suitability of supplier involvement in pricing management

Because of antitrust regulations, supplier integration in the pricing management of products in the retailers' stores is a sensitive subject (Desrochers et al., 2003). If a supplier would dictate the prices retailers charge for their products, competition between the different retailers would be thwarted. Even though suppliers frequently influence their customers' prices through recommended prices, the respondents in this study have been reluctant to elaborate on their views on the subject. Instead, the respondents have claimed that pricing management is carried out collaboratively by the stores and the retailers' central management, and that the suppliers do not possess any critical resources that could improve the pricing management. As sufficient data has not been provided to determine the suppliers' roles in pricing management, this thesis does not draw any conclusions regarding how the situation affects the suitability of supplier integration in pricing management.

5.2.2 Assortment, marketing and logistics management

For the other three activities of category management – assortment, marketing and logistics management – supplier integration might be beneficial for the dyad, depending on the situational factors. For assortment management, all the factors identified in this study are proposed to affect the relationship performance of supplier integration. Therefore, it can be claimed that the benefit of supplier integration in assortment management is highly dependent on situational factors. For marketing and logistics management, only some of the factors are proposed to affect the benefit of supplier integration. The factors that affect supplier integration in the three activities, as well as how they affect it, are further elaborated below.

The *product knowledge of the supplier* affects the relationship performance of supplier integration in assortment and marketing management, but not in logistics management. A main reason for firms to integrate is to gain access to resources held by another actor (Ragatz et al., 2002; Koufteros et al., 2007; Danese, 2013; Kamal and Irani, 2014). For category management, the key resource held by the supplier is its product knowledge. According to the respondents in this study, product knowledge is needed both for selecting an appropriate mix of products and for deciding how to market the products. However, the distribution of products is seen as unaffected by the characteristics of the products; therefore, the distribution is not dependent on the supplier's product knowledge.

The *size of the retailer* affects the relationship performance of supplier integration if integration in the activity affects the transaction costs (cf. Williamson, 1979). If a supplier should contribute to assortment and marketing management, it needs to make transaction-specific investments in order to better understand the positioning and needs of the individual retailer chain. These investments become higher when the offering should be individually adapted to a retailer, due to the increased asset specificity of the transaction. Therefore, the size of the retailer affects relationship performance of supplier integration in assortment and marketing management. For logistics management, the transaction costs will also differ, but the amount of investments needed depends on the extent to which the supplier is integrated. If the supplier takes responsibility for distribution, they need to set up a distribution network, which requires larger investments from the supplier. But even if the supplier is only integrated, for example, in replenishment decisions, it still needs to spend resources on setting up a system for this endeavor. Since the transaction costs can increase as a consequence of increased asset specificity in supplier integration, the gains from supplier integration has to be placed in relation to these potentially increased transaction costs. Size of the retailer is an important retailer-related factor, as the gains from the relationship tend to be larger in absolute terms when the retailer and the supplier integration contract are large. To conclude, integration in all three activities entails increased transaction costs. If these increased costs should be counterweighed, the retailer's business has to be of a certain size. Therefore, the size of the retailer is a situational factor that affects the relationship performance of supplier integration in assortment, marketing and logistics management.

As argued in paper IV, suppliers need to share the retailer's *view on customer value*, should they be able to contribute to assortment and marketing management. The supplier's understanding of customer value has to supplement and correspond with the retailer's understanding of customer value, if the supplier should be able to use its product knowledge to influence the assortment and marketing in a way that the retailer believes will benefit the dyad. According to Das and Teng (2000), the supplier's understanding of customer value is a resource that supplements the retailer's resources. Hence, this is a relationship factor that is proposed to positively affect the relationship performance of supplier integration in assortment and marketing management. Regarding logistics management, the respondents in the study did not perceive that they needed to share a view on customer value for supplier integration to take place. It can be argued that the supplier needs to be aware of the retailers' view on stockouts and how the retailers value high service levels to their customers. But

according to the respondents, delivery precision for logistics services can be regulated in contracts, thus eliminating the need for a shared view on customer value. Therefore, a shared view on customer value is a relationship factor that affects the relationship performance of supplier integration in assortment and marketing management, but not in logistics management.

Mutual trust is a relationship factor that improves the benefit of supplier integration in assortment, marketing and logistics management. According to Gruen and Shah (2000), it is difficult for retailers to detect opportunistic behavior in category management. Therefore, the need for trust is present in all category management activities to which the supplier is able to contribute. When trust is low, both firms need to spend more resources to make sure the other firm is not acting opportunistically; when the supplier and retailer do not need to spend these resources, more intense supplier integration becomes more beneficial.

Finally, when the *demands of the market* are heterogeneous, the customers in different stores want different products. As this external factor affects which products to keep in the different stores, it also affects the suitability of supplier integration in assortment management. When the demands of the market are heterogeneous, the individual store management should be given more responsibility over the assortment, at the expense of the supplier. Therefore, compared to a heterogeneous market, a homogenous market increases the benefit of supplier integration in assortment management. There are no indications that market-demand heterogeneity would affect marketing and logistics management.

5.3 Interdependence during category management

This section aims to answer RQ3: What situational factors affect the changes in interdependence between the retailer and supplier when supplier integration is initiated? In Figure 7, the part of the analysis model that corresponds to this research question is highlighted.

Figure 7: Analysis of RQ3

There is a larger amount of writing on how to succeed in supplier integration than on how to manage the interdependence of firms involved in supplier integration. Perhaps surprisingly, high dependence on the supplier is found to increase the satisfaction of a buyer in a dyadic exchange relationship (Andaleeb, 1996). Satisfaction of the actors in a marketing channel promotes channel efficiency (Lusch, 1976), and the actors' dependence on one another is likely to determine when supplier integration takes place and when it is avoided. Therefore, it is relevant to consider how the situation in which supplier integration takes place affects the power and dependence of the actors involved.

High supplier product expertise increases retailer dependence on the supplier: Dependence is created when one actor has resources that another actor perceives to be attractive and when the availability of these resources is low (see e.g. El-Ansary and Stern, 1972; Etgar, 1976; Provan and Gassenheimer, 1994). In paper II, it is stated that the studied supplier has important information about (1) its products, (2) regional and local demands and (3) the usage of its own products. When retailers lack this information, information asymmetry is created and the retailers become dependent on their suppliers (c.f. Cox, 2001; Lonsdale, 2005).

During the data collection for paper IV, the Swedish BMs described how suppliers are mainly integrated in the assortment and marketing management of their own products. In the paper, it is also shown that the expertise of the suppliers is mainly needed in the assortment and marketing management. In other words, the supplier's expertise is mostly needed where supplier integration takes place. With an increased intensity in supplier integration, the attractiveness of the supplier's expertise increases and retailers become more dependent on the expertise. Therefore, a situation where the supplier holds important expertise would increase the retailer's dependence on the supplier during a move towards more supplier integration.

The change in the actors' dependence on each other depends on who initiates supplier integration, and whether coercive power is used or not: In addition to supplier product expertise, I will argue for the existence of two general relationship factors that affect the interdependence in which increased supplier integration would result: who initiates the integration and what kind of power is used to implement the change. If coercion is used to implement integration, the passive firm will resist the change and become less dependent on the initiator, as the integration is then forced upon the passive firm. On the other hand, if non-coercive power is used and integration is welcomed by the passive firm, this firm will become more dependent on the initiator of supplier integration.

Paper I consists of a theoretical argument that explains how dependence, change and different kinds of power exercises are interrelated. When an actor proposes a change to the relationship that is not resisted by the other actor, the latter's dependence on the former is increased. In paper II, this reasoning is applied to supplier integration in the assortment management of BMs. When the supplier is the initiator of supplier integration, and if the change is unresisted by the retailer, the retailer's dependence on the supplier will increase, in line with the reasoning provided in paper I. When the supplier initiates supplier integration, it often appeals to the retailer by using their product expertise as an expert power base. When the retailer

perceives this expertise to be attractive and not available elsewhere, it becomes more dependent on the supplier (cf. El-Ansary and Stern, 1972; Etgar, 1976; Provan and Gassenheimer, 1994), and it is likely to allow the supplier's increased influence. When the retailer initiates supplier integration, the cases have provided examples where either reward or coercive power has been used, and consequently where the change has been unresisted and resisted, respectively. In paper V, a case is described in which a merchant wanted to drastically increase the volume bought from a supplier if the supplier agreed to share costs and become more integrated with the merchant. Even though the supplier did not want the increased integration as such, it did not directly oppose it. As the deal also meant that the supplier would receive a reward in terms of a large contract with an important customer, the supplier became highly dependent on this merchant. In another case, a merchant and a supplier maintained the volumes traded, but the merchant wanted the supplier to increase integration. In this case, there was no direct benefit for the supplier to integrate, and it had to spend more resources on the relationship. There was an indirect threat to lose the business if the suppliers did not provide these services for the merchants. In this way, a retailer can coerce the supplier to become integrated, and the supplier's dependence on the retailer decreases as a result of the use of coercive power. This is also illustrated in Figure 8.

Figure 8: How interdependence is affected when the intensity of supplier integration increases, depending on who initiates the integration and if the change is resisted

As the merchants in this study were relatively independent of their suppliers, no examples were found in which suppliers coerced merchants into more supplier integration. When a retailer is independent of the supplier, efforts from the supplier to coerce the retailer are likely to result in a damaged relationship and loss of the business. If a retailer would be dependent on a supplier, and that supplier coerced the retailer into more supplier integration, the retailer's dependence on the supplier would decrease, according to the reasoning in paper I. As no examples of this were found in the cases, this part of the figure was excluded.

5.4 Supplier integration in category management

This thesis intends to *describe and analyze how situational factors affect the relationship consequences of supplier integration in category management*. From the four categories of

factors – customer-related, supplier-related, external, and relationship-related – seven situational factors are identified that affect relationship performance or interdependence between firms engaged in supplier integration in category management. While the customer-related and external factors affect relationship performance, the supplier- and relationship-related factors affect both relationship performance and interdependence during supplier integration in category management. The factors and their expected consequences are illustrated in Figure 9.

Figure 9: Situational factors affecting the consequences of supplier integration in category management

Although this study has not found any direct impact of customer or external factors on interdependence, it is still possible that these kinds of factors can affect dependence. When the market is homogeneous, product knowledge becomes relatively more important in category management compared to knowledge of customer demand. Therefore, homogeneity of market demands can be seen as a leverage of the supplier’s product knowledge, indirectly making the retailer more dependent on an integrated supplier. Firm size has also been assumed to be connected with relative power (Holmlund and Kock, 1996; Johnsen and Ford, 2006). However, even though firm size affects interdependence in general, it is not certain whether a retailer’s size will affect interdependence during a move to increased supplier integration. No indications are given that a large and powerful retailer will become more or less powerful when supplier integration is implemented.

When the situational factors are considered individually, five of the factors affect relationship performance, and three of the factors affect retailer-supplier interdependence. One of the factors – the supplier’s product knowledge – affects both relationship performance and retailer-supplier interdependence. For the two first research questions, the resource-based

view and transaction cost analysis is used to theoretically support the findings, while resource dependence theory is used in the third research question (see Table 15).

Table 15: Situational factors' effect and theoretical underpinning

Situational factor	Effect on	Theoretical reasoning
Retailer firm size	Relationship performance	TCA
Supplier product knowledge	Relationship performance / Interdependence	RBV/RD
Homogeneous market	Relationship performance	RBV
Mutual trust	Relationship performance	TCA
Shared view on customer value	Relationship performance	RBV
Initiator of integration	Interdependence	RD
Coercive power used in implementations	Interdependence	RD

Four of the situational factors – mutual trust, customer firm size, supplier product knowledge and a homogeneous market – can be related to general research on how situational factors affect supplier integration (see Table 1 in the literature review). However, their effects on category management are described differently in this thesis. The remaining three situational factors that are identified in this thesis – homogeneity of market demands, initiator of integration and whether coercive or non-coercive power is used to implement the integration – have not been recognized in previous research on supply chain integration, and can likely be attributed to the unique characteristics of category management as the setting for supplier integration in this thesis. Here, all seven situational factors, their relation to previous literature and their effects on relationship performance and interdependence are described separately.

Customer firm size is used by Koufteros et al. (2007) as a moderator for the hypothesis that supply base rationalization and supplier selection strategies impact the use of supplier integration. Wagner (2003) investigated the direct correlation between customer firm size and supplier integration. In this thesis, it is proposed that supplier integration is more beneficial for the dyad when the customer is a larger firm. Even though Koufteros et al. (2007) differ slightly in what effects they anticipate from customer firm size, their justification for the importance of customer firm size as a retailer-related factor resembles the reasoning in this thesis. Both Wagner (2003) and Koufteros et al. (2007) argued that larger firms can devote more resources to strategic activities such as supplier integration, and small firms may be unable to evaluate, train and monitor suppliers. Such arguments also support my proposition that a customer's large size increases the benefits resulting from the dyad using supplier integration in category management.

In this thesis, *supplier product knowledge* is argued to positively affect relationship performance in supplier integration as well as to increase the customer's dependence on the supplier. Previously, Swink et al. (2007) hypothesized that the manufacturing competitive capability of a supplier mediates the association between customer integration and supplier performance. Even though they only measured the performance of the supplier, and although the hypothesis was not supported, their reasoning is in line with this thesis'. Lockström et al.

(2010) proposed that collaborative supplier capabilities, such as process management, learning and engineering, are antecedents to supplier integration in the automotive industry. This is also in line with the reasoning in this thesis, although the needed supplier capabilities differ between a retail setting and an automotive setting. Resource dependence theory proposes that organizations avoid doing business with other organizations unless the other organization has something attractive to offer (Pfeffer and Salancik, 1978; Hillman et al., 2009). Thus, for supplier integration to be considered, the supplier has to be able to contribute with some resource or capability that the customer lacks; the supplier's product knowledge is then a resource that complements the retailer's resources (cf. Das and Teng, 2000). Given the wide recognition of these arguments, it is surprising that so few investigations have been carried out regarding the supplier's competences and their effects on supplier integration performance.

A *homogeneous market* will leverage the supplier product knowledge, as the supplier's product knowledge becomes more important in relation to the retailer's knowledge of local market demands. As market homogeneity can be seen as a component of demand uncertainty, this partly supports the findings by Boon-itt and Wong (2011); that is, that demand uncertainty is a moderator of the relationship between supplier integration and customer delivery performance. However, Boon-itt and Wong's customer delivery performance construct is more focused on reliable, on-time deliveries of goods to customers, rather than the financial performance that the relationship will return for the two involved firms. In this way, the finding in this thesis broadens the view on how market homogeneity affects the consequences of supplier integration.

Mutual trust is used by Yeung et al. (2009) and Zhang and Huo (2013) to explain integration – although they use it as a factor that increases the degree of supplier integration. As I investigate how situational factors affect the relationship performance of supplier integration, I propose that trust increases relationship performance when supplier integration is used. I also argue that mutual trust is important for supplier integration to be beneficial for the dyad. Zhang and Huo (2013) hypothesized that trust with the supplier is needed for customer integration, and that trust with the customer is needed for supplier integration. Due to our different definitions of supplier integration, their arguments can be understood as a need for mutual trust should both the supplier and the customer agree to allow supplier integration. Given that firms tend to use supplier integration more when it will benefit the dyad, my proposition for supplier integration in category management resembles previous findings about supply chain integration in general.

The three remaining situational factors are not previously recognized in supplier or customer integration literature, and therefore provide possible extensions to supplier integration literature. The need for a *shared view on customer value* is emphasized by the case companies as a requirement from the retailers to allow further integration of suppliers in category management. The shared view on customer value provides leverage to a supplier's product expertise, and enables the supplier to use its knowledge in a way that corresponds to the retailer's expectations. While this factor may indirectly affect interdependence when

increased supplier integration is implemented, its main effect noted in this study is on relationship performance.

The *initiator of integration* and *whether coercive or non-coercive power is used* to implement supplier integration are two connected situational factors that together affect the interdependence between the supplier and the retailer when supplier integration in category management is implemented. These situational factors are mainly identified through a theoretical reasoning, even though they have been confirmed to be important by the empirical data. Yeung et al. (2009) investigated the general use of coercive power as a situational factor that affects the existence of supplier integration. However, this is different from investigating the use of coercive power in the actual decision to implement supplier integration; additionally, the consequences in terms of interdependence are disregarded in their article. While research on supplier integration has not acknowledged the use of coercive power as important for interdependence during implementations of supplier integration, the relation between dependence and the use of coercive power when changes are proposed is debated in resource-dependence literature (cf. Hunt and Nevin, 1974; Bacharach and Lawler, 1986; Frazier and Rody, 1991).

6 CONTRIBUTIONS AND IMPLICATIONS

Here, I account for the theoretical contributions and managerial implications of this thesis. This is followed by a discussion about the generalizability of results and propositions for further research in the field.

6.1 Theoretical contributions

Situational factors have to be considered in the analysis of supplier integration in category management: Literature on supplier integration, and on the broader concept of supply chain integration, has frequently debated about the benefits of integration (e.g. Song et al., 1998; Frohlich and Westbrook, 2001; Horvath, 2001; Koufteros et al., 2005; van der Vaart and van Donk, 2008; Flynn et al., 2010; Cao et al., 2015). While most research aims to find a general answer for the benefits of supplier integration, some recent articles have argued that such benefits depend on the situation in which they take place (Koufteros et al., 2007; Song and Thieme, 2009; Danese, 2013; Kim, 2013). This thesis draws on this reasoning and suggests that situational factors affect the relationship performance and interdependence of supplier integration in category management. To identify situational factors, a separation is made between external, supplier-, buyer- and relationship-specific factors. The findings in previous literature on situational factors and their consequences for supplier integration have been condensed and adapted to a retailer-supplier environment. It can be concluded that there are several situational factors that strongly affect the consequences of supplier integration in category management. Because most research on supplier integration is carried out in supplier-manufacturer settings, the situational factors identified in this thesis differ considerably from the findings in other supplier integration literature. In this way, a more nuanced view of the consequences of supplier integration in category management is provided. To further our understanding of the potential benefits of supplier integration in category management, the situational factors identified within this thesis must be taken into consideration.

Authors of category management research need to specify what parts of category management they are referring to, as this can have implications for the findings: In previous literature, what is meant by category management it is often taken more or less for granted (Chen et al., 1999; Dhar et al., 2001; Cachon and Kk, 2007), and these assumptions vary between authors. Here, category management is broken down into the following activities: assortment management, pricing management, marketing management and logistics management. Because the four category management activities show important differences, the conclusion from one paper can be difficult to transfer and compare to findings in other papers if the author is not clear about which specific activities the papers concern. For example, it is difficult to integrate suppliers in issues related to pricing management, and logistics management requires a different set of skills than other, more demand-oriented activities. Therefore, it is desirable that authors writing about category management clarify which of the four activities they include in their views regarding category management.

The resource-based view complemented with transaction cost analysis can be used to analyze relationship performance in retailer-supplier dyads: The resource-based view was originally developed to analyze the competitiveness of individual firms (cf. Wernerfelt, 1984). Later, the resource alignment framework was developed to analyze the performance of strategic alliances (Das and Teng, 2000; 2003). Several previous authors have also used the resource-based view to understand how resources made available in a supply chain or alliance can increase performance (e.g. Gulati, 1999; Rungtusanatham et al., 2003; Grant and Baden-Fuller, 2004; Squire et al., 2009). This thesis applies the resource-based view and the resource alignment framework to the context of supplier integration in category management. It is shown that the resource-based view can also contribute to the understanding of retailer-supplier relationships. However, as strategic alliances are characterized by closer cooperation than supplier integration in category management, opportunism and the costs of transactions play a greater role in supplier integration (John, 1984; Yeung et al., 2009). Therefore, the resource alignment framework and the resource-based view are complemented with transaction cost analysis in this thesis. This draws on O'Toole and Donaldson (2002) and Palmatier et al. (2007), who argued that performance needs to be understood with a broad theoretical background. As collaboration between retailers and their suppliers is becoming increasingly common, it is necessary to suggest a theoretical foundation for the analysis of relationship performance during supplier integration in category management. Hopefully, these frameworks can provide insights as to why some retailer-supplier dyads are more successful than others.

6.2 Managerial implications

Both suppliers that consider becoming integrated in a retailer's category management and retailers that consider supplier integration can use the findings in this thesis to support their decision-making. Here, three implications of the research in this thesis that can prove useful for supplier and retailer managers are described.

Supplier integration has to fit the overall positioning and strategy of the supplier: The suitability for a supplier to integrate should be seen in the larger context of the entire company. Becoming integrated implies major changes for a business, and has to be supported by the overall structure of the firm. The findings in this thesis reveal that supplier integration is not beneficial for all types of suppliers or in all parts of the retailers' category management. Suppliers need to question if they are willing and able to make a move in that direction. As a supplier, integration can provide an opportunity to differentiate from other suppliers and make customers more dependent on the services provided. This development has been argued for by proponents of servitization of manufacturing (e.g. Vandermerwe and Rada, 1989; Neely, 2008), and makes the supplier's offering more focused on delivering customer value. On the other hand, it does require competences that can be difficult for suppliers to acquire. For supplier integration to take place, the supplier has to convince the retailer that it has something with which to contribute. In this thesis, the most distinguished requirement is expertise about the supplied products. The supplier also has to convince the retailers of the usefulness of this expertise. If the retailer does not see how the supplier's expertise can contribute to their offering, it will not be interested in supplier integration. Therefore, it is

important that supplier integration and the associated required competences fit with the way the supplier wants to develop its business.

It is important that both suppliers and retailers evaluate situational factors when considering supplier integration in category management: Supplier integration provides an opportunity to improve business for both suppliers and retailers, if managed wisely. In this thesis, I explore how suitability of supplier integration depends on situational factors, thus encouraging retailers to consider which situational factors surround their different product categories and different category management activities. An understanding of these situational factors will provide support for retailers in their decision-making regarding which suppliers to integrate where, and the extent to which they should be integrated. Similarly, suppliers are encouraged to consider the situational factors that surround the product categories they deliver to retailers, and find opportunities where they can contribute. Even though differences between different kinds of retailers exist, the situational factors identified within this thesis would likely look similar for other kinds of retailers and suppliers as well. However, it is possible that there are other situational factors that play an important role in other industries or settings. For firms that want to adapt this framework to suit their own context, it can be relevant to consider whether there are any other situational factors that reflect the challenges and opportunities in the business' needs to be added to the seven factors identified within this thesis. It is also important to understand that supplier integration in itself – and most of the situational factors – are scales that range from low to high, rather than binary variables. This means supplier integration can be implemented to various degrees, depending on the situational factors. For example, according to research question two, four situational factors are anticipated to affect the relationship performance of supplier integration in the marketing management of retailers. The retailer-supplier relationship can then be categorized from low to high in terms of the retailer's size, the supplier's product knowledge, the extent to which they have a shared view on customer value and the extent to which there is mutual trust. Based on how they judge the relationship, some clues are given as to what the relationship performance will be when the supplier is further integrated in the retailer's marketing.

A holistic view is needed, in which both interdependence and relationship performance are taken into account: In addition to the consequences on relationship performance, increased supplier integration will also affect the interdependence between a supplier and a retailer. Depending on who initiates the integration and whether the change is resisted, the interdependence between the supplier and the retailer will change. These effects also have to be assessed when intensified supplier integration is considered. Even though the total relationship performance increases, it is important for the individual firm to take the changes in interdependence into account, as interdependence impacts how value and benefits are shared between the two actors (Bacharach and Lawler, 1986; Ailawadi, 2001). As the relation between the situational factors and the suitable level of supplier integration is complex, this thesis does not intend to quantify the situational factors' effects or to provide ways to calculate a suggested level of supplier integration. Instead, practitioners are encouraged to use a holistic view in their interpretation of the situational factors and their effect on supplier integration.

6.3 Generalizability

The seven situational factors that affect relationship performance or interdependence during supplier integration in category management are identified in a study of builders' merchants and their suppliers, with a focus on timber suppliers. The generalizability of the situational factors to other retailer-supplier settings cannot be taken for granted. For example, heterogeneity of demand has been emphasized as particularly prevalent for wood moldings and splines in the UK market. For other products, and in other markets, homogeneity of demand might be a non-issue, as the regional differences in demand are limited. Demand heterogeneity does not exist in all markets, but the anticipated effects of the situational factor are likely still valid.

Even though the effects of the situational factors are similar in other retailer-supplier settings, there might be additional situational factors that play a greater role in other settings. For fresh foods, delivery accuracy and inventory management play crucial roles in the category management. Here, the supplier's distribution capabilities may be as important as its product knowledge. For high-tech or design product categories, the supplier's abilities to predict future trends might be an important situational factor that affects the relationship performance of supplier integration category management. In categories or industries where suppliers are more powerful than retailers and are able to demand that retailers allow supplier integration, the need for mutual trust may be lower. Despite the possible differences between industries, the seven situational factors identified in this thesis provide a general view of important factors to take into account when the consequences of increased supplier integration in category management are anticipated.

6.4 Limitations and further research

Here, four suggestions for further research are presented, based on the limitations of this study.

Investigation of situational factors among other kinds of retailers: Because this study relies on empirical data from only one kind of retailing, the findings need to be validated for other kinds of retailer-supplier relationships as well. It is possible that other situational factors are important for other kinds of retailing, but similarities between industries can also be expected. There is much research concerned with the performance of supplier integration carried out in different industries, but less is known about how supplier integration shapes the interorganizational relationship and the interdependence between the firms. Therefore, this is particularly interesting for further research on supplier integration in category management.

Thorough investigation of how transaction costs are affected by supplier integration in category management: This study has only used transaction cost analysis as a complement to the resource-based view and the resource alignment framework in the analysis of relationship performance of supplier integration. Future studies could conduct a more thorough investigation of how transaction costs are affected by supplier integration in category management. While the general consensus seems to be that closer cooperation through supplier integration reduces transaction costs (cf. Das et al., 2006; Danese, 2013), this study

has provided an example in which the main benefit of integration lies in an improved offering to the retailer's customers, rather than in decreased transaction costs.

Empirical use of resource alignment framework: Although Das and Teng's (2000) article is heavily cited, surprisingly few efforts have been made to apply their framework of complementary and supplementary resources to empirical settings. The use of this framework in RQ1 and RQ2 shows a possible avenue for further research. This thesis has highlighted the necessity of supplementary resources for obtaining complementary resources in a buyer-supplier relationship. Therefore, I see potential in a broader empirical investigation of the use of supplementary resources in business relationships or networks.

Application of the power-dependence framework to other studies that examine the influence of situational factors: In RQ3, the outcome from different kinds of perceived and exercised power is used to understand how supplier integration affects interdependence in different situations. This reasoning regarding the way power affects dependence can be applied in other studies that examine how situational or environmental factors affect the interdependence between two or more firms. For example, outsourcing decisions or developments of service offerings can be analyzed based on how perceived and exercised power affect dependence in different situations.

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Appended Papers

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Case Report

BUILDERS' MERCHANTS AND TIMBER TRADE

This thesis is based on empirical findings from builders' merchants and their suppliers in the UK and in Sweden. The main case is the timber distribution channel in the UK, including the timber supplier SCA Timber Supply UK (SCA), builders' merchants and the customers of builders' merchants. The second case is the entire business of builders' merchants in Sweden, i.e. not confined to timber products. These two cases are further described here.

Scope of the UK study

SCA Timber Supply UK (SCA) is an importer, manufacturer and distributor of timber products in the UK. When referring to SCA within this appendix, I am referring to the part of SCA that supplies BMs with softwood products. This study describes three sets of actors: SCA, the BMs and the customers buying from the BMs. As the intention of supplier integration is to influence the category management of BMs, the main emphasis is on describing the BMs and their category management. An integrated supplier is involved in the activities traditionally carried out by the buyer, or the builders' merchants in this case. Therefore, the activities associated with category management are given more attention than the activities normally carried out by the supplier or the end customers (the builders). This does not mean that the end customers or the internal characteristics of SCA will be disregarded.

To better understand the scope of the study, it is useful to refer to the broader context of SCA's entire UK business. Between 40 and 70 percent of the products sold by SCA (in the UK) are sourced internally from SCA Sweden, and the remainder are sourced from other suppliers. However, some of these products might originate from SCA Sweden even though they have been manufactured elsewhere. Products sold to BMs are mainly manufactured in the production site in Welshpool, and products for DIY retailers are mainly manufactured in the production site in Stoke. Distribution is carried out separately for DIY retailers and BMs from their respective sites. Exceptions to this are BM branches in the south-east region of England, closer to London, which are supplied from Stoke. The logic behind this is that the demands on packaging, order quantities and product lengths from these BMs have more in common with DIY stores. BM products produced in Welshpool are therefore transported to Stoke for further distribution to customers in London and the surrounding area. The flow of products within SCA is shown in Figure 1.

Figure 1: Distribution channel of SCA's products in the UK market. The continuous arrows represent the main distribution channel and the dotted arrows represent smaller flows. The rectangle emphasizes the focus of the UK case study

In this study, the relation between SCA and the BMs is the primary target, and therefore the case presented here will target distribution through BMs. As the problem with a too-deep product range mainly originates from the BMs and their differing demands, the area of BM distribution is naturally of more interest in this study. To some extent, the BM and DIY markets are competing for the same customers and the markets are converging, and thus looking increasingly similar to each other. Because of this, the DIY stores must not be neglected altogether. In Figure 1, the focus of the case study on distribution to BMs is represented by a rectangle.

Furthermore, mouldings and planed timber are the focal products in this case. The logic for this is also related to necessity, as the deep product range consists, to a large extent, of these products. Other products, such as treated timber or door lining sets are also sold by SCA to BMs, but here the product range is more limited, and these products are therefore largely disregarded in this case.

As the majority of customers in most BMs are builders, and as builders are perceived to be far more concerned about product assortments, the description of customers in this case will mainly revolve around builders and their demands on assortment. Private consumers shopping in BMs account for an increasing amount of sales, but as their demands are known to be more flexible they are not affected to the same extent by supplier integration. Even though the entire group of customers has to be considered, the description of builders and their demands is more relevant.

SCA UK

Product range

In SCA there are about 1000 different SKUs that are sold to BMs. In order to understand the range of products sold by SCA to BMs, a brief description of SCA's manufacturing process is required. First, the logs that enter into sawmills are cut into what is called "sawn timber". Sawn timber has a rough finish, but can still be used in construction or where the finish of the timber is of less importance.

Often, the sawn timber is machined into planed or profiled timber. These products have a smooth finish and are suitable for interior use. Due to their smooth finish, these products are often used where they can be seen and are therefore sometimes referred to as "appearance softwood". Mouldings are machined with different profiles to suit a range of purposes and preferences. When sold directly, they are usually used as skirtings, architraves, cladding, flooring, rails or window boards. Machined products with a rectangular profile are called planed timber, PAR (planed all round) or PSE (planed squared edge). They can be used for a variety of purposes and are usually found in construction works. These machined products are called "mouldings" or "planed timber" and are, as mentioned previously, the focus of this study on supplier integration in category management.

The machined products can also be further processed. Timber for outdoor use is often treated to resist fungus or rot. Some mouldings, usually used for skirtings or architraves, are primed, meaning that they are painted with white primer to simplify usage for the buyer of the product. Door casings and linings are usually wrapped into a pack containing all the timber pieces required, also to increase simplicity for the buyer of the product. Other products can be wrapped into packs of products in smaller lengths for the same reason, but this is mainly done for DIY stores rather than BMs.

Thus, the mouldings and planed timber which are the main focus of this case have been machined, but not further processed. Today, the cutting of logs into sawn timber is done in the sawmills in Sweden, but the machining and further processing of products sold in the UK is carried out in the production sites in Welshpool and Stoke, UK. In addition to the products manufactured in-house, SCA also buy mouldings produced using MDF. This material is produced from wood fibre, and is gaining in popularity for use in mouldings. The different material groups and how they are produced can be seen in Figure 2.

Figure 2: Timber manufacturing and distribution in SCA for builders' merchants in the UK

Of SCA's 1000 SKUs sold to BMs, about 350 are additionally processed materials, meaning that they are treated, primed or wrapped. Raw materials and MDF products account for about 140 of the SKUs on offer. The remaining 510 products are machined softwood timber products (mouldings and planed timber) that are not further processed, and it is these products that are studied in this case, as they cause of the production inefficiencies and can benefit mostly from the supplier's forward integration, according to the Managing Director of SCA Timber Supply. The distribution of SKUs in different product groups is shown in Figure 3.

Figure 3: Distribution of SKUs among different product groups

Range of mouldings and planed timber

The reason why there are about 510 SKUs of mouldings and planed timber can be found in the many dimensions of variance for these products. The assortment of mouldings consists of products that vary in terms of quality, length, size, profile and pack size. Planed timber only comes in one profile, but, like the mouldings, can vary in terms of quality, length, size and pack size.

Quality dimensions: SCA's timber products originate from either redwood (pine) or whitewood (spruce), giving it different characteristics and making it suitable for different purposes. Depending on where in the log the material is taken from, the material is labelled "ex boards" when it is taken from the outer parts of the log, and "deep cut" if it is taken from the centre of the log. Deep-cut materials are generally considered to be of poorer quality, as they tend to bend and cup more than ex board products do. A third quality measure is concerned with how many knots and splits there are in the material. The timber is then graded as "unsorted", "fourth grade", "fifth grade" or "sixth grade", where the best-quality timber is (surprisingly) called unsorted. Finally, products can be labelled as either "premium" or "contract", again depending on their quality. There are some relations between the grading and this final quality aspect; for example, unsorted products are never of contract quality, but fifth grades can be both premium and contract quality.

Length: The unique properties of the log that a product originates from mean that its length will vary. As the products are used in different places, and the length demands often varies from customer to customer, many BMs are content with buying their timber in the mixed lengths that are produced in the sawmills. Some BMs must apply length restrictions to what they are buying due to the size of the racks on which the products are placed. Because of this, some products are available in specific lengths ranging from 4.2m down to 1.8m. The shorter sizes have to be cut from the longer lengths arriving from the sawmill, and are appealing to private customers who want to fit the timber in their cars.

Sizes: In addition to the length, the heights and depths of the timber can vary as well; here this is referred to as the "size" of the timber. Mouldings are usually 19mm or 25mm in depth, but their height can range from 50mm up to 225mm. Planed timber has similar variations, even though its depth can be 50mm or sometimes even 100mm. Historically, timber sizes have been specified in inches, but nowadays the metric system is used. As the old sizes still influence the industry, the heights and depths of the timber continue to be expressed as multiples of 25mm, corresponding to the imperial inch.

Profiles: As mentioned earlier, mouldings come in different profiles. Some mouldings have one profile on each side, making it possible to have a choice between two profiles in the same moulding. These mouldings were introduced to reduce both SCA's range, and the product assortment in BMs. However, as the single-sided profiles are still available through SCA, it has rather led to an increase in the products SCA has to keep in stock. In total, there are about nine different profiles of skirtings and architraves available in SCA, and six double-sided profiles. In addition, there are three profiles of rails: one for window boards, five for cladding and one for flooring.

Pack size: The last dimension of variance is the pack size, which is available as a full cubic metre or a half cubic metre. In Stoke, which supplies the BMs in the London area, it is also possible to buy less than half a cubic metre in "loose pick", meaning that SCA will manually pick the amount of products needed. About 110 of the 510 SKUs of mouldings and planed timber are half-cube packs, and the rest are full-cube packs. This dimension of variance is special, as the builders buying the products are unconcerned about the pack sizes delivered to

the BMs. It is however relevant for the logistics management activity in category management.

As there are four different quality dimensions, three physical dimensions, one profile and one pack size dimension of variance, having 510 SKUs might seem natural. However, the vast majority of combinations are not entirely fit for any purpose, and by better understanding the demand for the products it might be possible to remove many of the existing products from the range.

Stock-keeping and distribution

Of the 510 mouldings and planed timber products that have registered sales, about 390 are available in stock. The remainder is either temporarily out of stock or, more likely, only made to order. A total of 320 products are available on a standard list of products that is given to all BM customers, and from which they are free to order any product. The other 70 products in stock are mainly products that are only available to certain customers. If a BM commits to buying a certain volume of a product, SCA will make sure to keep it in stock for that BM. However, these customer-specific products are not made available on the standard price list; in addition, 120 of the products sold are, as of June 2012 when this data was collected, not available in stock. The number of SKUs in the standard list that are out of stock is also illustrated in Figure 4. Despite representing 37 percent of the SKUs, the products not on the standard list merely account for five percent of SCA’s sales value of mouldings and planed timber products.

Figure 4: Stock keeping of mouldings and planed timber products

BM’s in the south-east region of England are allowed to buy products by the meter, rather than only in full or half cubic meter packs. This is because rents are generally higher in this area, and they are not able to keep as much stock compared to other regions. The limitation for them is that all orders have to amount to at least £500, which corresponds to between one and two cubic meters of timber, depending on the product. For all other regions, customers cannot

buy by the meter. Bigger branches are only allowed to buy full cubic meter packs. There is no structure to ensure that customers buying larger packs get better prices, but as the customers are able to independently negotiate their own prices, it is claimed that larger-volume buyers generally get better deals.

Deliveries can normally be made twice a week, according to a delivery schedule. Closer to the production sites deliveries might be made more often, and in more remote areas deliveries are sometimes only available once a week. Orders from branches in the same region are then loaded together on a lorry that drops off the products at the appropriate locations. As the packaging and distribution takes two to three days, delivery times for the products in stock is approximately three to seven days. Products that are machined to order will have a slightly longer delivery time of approximately seven to ten days.

Supply-chain knowledge

SCA controls a large part of the supply chain, from the nurseries in which saplings, or young trees, are grown, to the forests, sawmills, and machining of the timber into finished products, all the way through to the distribution of products to BMs. This control over the supply chain is seen as a strong point for the company, and increases its reliability and trustworthiness as a knowledgeable timber supplier. This strength is also actively communicated to customers through the marketing message “we own the forest”, and constitutes an important part of the offering.

Despite being used in its marketing, the company’s knowledge about the manufacturing of its products is not applied to understand the costs incurred in the supply chain. Neither is it used to suggest or influence which products BMs should purchase from SCA. In other words, SCA is reactive to customer demand, in terms of both which products are manufactured and sold, and how they are priced relative to each other. SCA’s knowledge can potentially be used to shape the offering to a further extent, but it is not currently used for that purpose.

One reason for the reactive nature of SCA’s offering is the company’s lack of knowledge about its customers’ businesses. The company’s control over the supply chain from the nurseries to the finished product is not complemented by knowledge about the customers that use its products. The account managers spend considerable time with the BMs, but they do not perceive themselves to have a full understanding of the BM business or the customers of BMs. This is partly explained by the fact that the staff in BM branches does not fully understand its customers either. The account managers still have valuable insights into the BMs and their customers, but their role is to respond to customer demand, and therefore the collective knowledge held by them is not used to shape the offering in a broader sense.

Culture

Despite the difficulties involved in capturing a corporate culture, I feel confident in making several statements about the culture in SCA. The organization, as a distributor of products to retailers, is led, to a large extent, by its sales team. The account managers have a strong influence on what the product range looks like as they introduce more products as customers demand them, without removing any. This is an important point with regards to explaining

why SCA has come to hold such a deep product range. The company follows the ethos of never missing any opportunities to sell. Removing products is associated with a risk that customers will be disappointed and go somewhere else, and therefore it only happens when a product has not been sold for a long time, or has achieved insignificant sales during the recent years. The account managers are also rewarded through a commission scheme that encourages them to increase sales volumes, rather than profitability. An example of the lack of consideration for profitability can be found in a discussion between one of the account managers and a branch manager: the branch manager explained that a loyal customer could not fit a certain moulding in his van, and therefore had to cut all mouldings he bought in two before placing them in his car. The account manager consulted the standard product list, and realized that the moulding in question was not available in short lengths. This led to him enquire whether it would be possible to incorporate a shorter length of the mouldings in the standard price list. This example, wherein one customer in one BM branch made SCA add a product to its range, shows that the fear of losing customers has played an important role in the appearance of SCA's reactive offering.

This culture has partly stemmed from that of the BMs, where changes that risk upsetting customers are rarely made and few products are removed from the assortment. Both in SCA and the BMs, the strength of the fact that a product has been sold for the last 20 years is hard to counter with arguments of production efficiency. The general resistance to change also indicates that there is a conservative culture both in SCA and the BMs.

Pricing strategy

To change what products BMs are buying, the relative pricing of individual products can be reviewed. Today, pricing in SCA is mainly based on what customers are willing to pay, and what is called the "role cost" of products, which is calculated from the cost of buying and manufacturing the product. However, the role cost does not take the product sales volume into account to a sufficient extent. Products that are slow-moving and tie up much capital in stock, or give rise to high manufacturing costs due to small batch sizes, are not assigned the appropriate role costs. In addition, these costs were calculated a long time ago and the figures are becoming outdated. Because the role cost does not take sales volume into consideration, the prices of the products are not formulated in such a way as to encourage BMs to stop buying slow movers. The other factor determining relative price levels – what customers are willing to pay – is regarded as being largely determined by the size and quality of a product, but not its sales volume. This holds true for both BMs and their customers, and will be further described in the section on pricing in BMs. It can be established that neither SCA nor its customers encourage relative price levels in the distribution channel that enable fast sellers to be more competitively priced.

Competitors

In the UK, SCA has only one competing supplier of mouldings and planed timber that has the resources necessary to supply a nationwide customer base, called Metsä Wood. Metsä Wood is a larger company than SCA in the UK, mainly due to its contracts with many of the larger DIY retailers. The offering from Metsä Wood to the BMs strongly resembles that of SCA.

Both SCA and Metsä Wood are reactive companies and forest owners, with good knowledge about timber. Metsä Wood tries to maintain close relations with the BMs, and invests in a sales force that frequently makes visits to BM branches. In addition to this competitor, there are many smaller local or regional timber suppliers, but due to their limited coverage, they are only able to supply local or regional BMs, and not the national BM chains.

One explanation given by SCA for the deep product range of mouldings and planed timber is the threat from competing suppliers of softwood, which has made SCA accept its deep range. Even though there are few timber suppliers with a nationwide presence, it is argued that if SCA was to remove some products from the range, its customers would be likely to order these products from a competitor instead. More importantly, there is also a fear that complementing sales, or even all sales, would be lost to a competitor if SCA stopped holding a complete range of products.

Builders' merchants in the UK

The BMs are a heterogeneous group of companies, which vary greatly in how they run their businesses. Among the BMs in the UK there are a number of big companies with a nationwide presence. Other companies have several branches but only in one region, for example Jackson in eastern England and Boys and Boden in the West Midlands. There is an on-going trend of consolidation within the industry, which is driven by the need to cut costs (Agapiou et al., 1998; Nord, 2005). However, there are still many independent branches left, which are often owned by the branch manager operating the business. The description of BMs given here includes both the national chains and independent branches, but the emphasis is placed on the chains as most of the data collection process was conducted there. Three BM chains, here referred to as BM1, BM2 and BM3, are individually distinguished in this case report. Most of the data collection was carried out within these three BMs, and therefore it is possible to provide a richer explanation of their businesses. The chains are part of bigger, sometimes international groups of companies, and all the chains have several branches through which they conduct their business. This case is focused on the chain and branch level, rather than the group level.

BM1 has about 30 branches in the UK. The branches are all welcoming and easy to navigate, due to their centrally decided and well-planned layout. All branches are fairly large and have a turnover exceeding that of the average BM branch. BM1 can offer a competitive price to its customers, due to its standardized offering and hence low expenditures.

BM2 is the largest BM in the UK, with over 600 branches. BM2 offers high availability of the products it stocks, and knowledgeable staff that can help the customers. According to the group negotiator in BM3, BM2 are "obsessed by availability". When customers walk into their local BM2 branch, there should not be any surprises in terms of stock-outs, and the staff should know the products they are selling. By competing in this way, BM2 is able to maintain slightly higher prices than its competitors. Due to its size, the company is also able to have its own distribution system, with four big distribution centres (called feeder centres) and larger branches working as local distribution hubs.

BM3 has about 130 branches, but its total turnover is almost the same as BM1's, because it generally has smaller branches. At BM3, the general price level is known to be low, even though the company tries to maintain a high degree of service.

This section on BMs in the UK describes their relations with suppliers and the four activities that constitute category management: assortment, pricing, marketing and logistics management.

Supplier relations

The smaller BM companies are sometimes part of a buying group, which increases their negotiating power in supplier relations. In the UK, there are four major buying groups, all of which negotiate individual contracts with suppliers of BMs. The companies that are part of a buying group are limited in their purchasing to the nominated suppliers, and the purchasing

prices and delivery conditions are negotiated by the buying group. Normally, each buying group allows up to three different suppliers in each product segment.

Independent BM branches that are not part of a buying group can choose what to order from SCA's list of standard products. This product catalogue has several price lists with different levels attached to them to define the prices of the products. After negotiations, it is possible for the BMs to be given another price list, usually with lower prices. It is also possible for the independent BMs to negotiate prices on individual products, thereby resulting in deviations from the standard price lists.

National BM chains negotiate their prices with less aid from the price lists, and place more effort into negotiating the prices of individual products. The primary financial measurement used in the national BM chains is return on capital employed (ROCE). In supplier negotiation, this means that not only is the purchasing price important, but also the payment days and how deliveries impact stock weeks. A company providing a better delivery service but slightly higher prices can therefore be preferred. BM3 also evaluates the possibility of co-managing its stock together with its suppliers, since this decreases the amount of tied-up capital within the chain, and creates incentives for its suppliers to increase supply chain efficiency.

Assortment management

For products other than timber, BMs can have deep order assortments, meaning that products not available in the branch can be ordered for customers. However, for low value products, such as timber, there is no possibility to buy single products for an individual builder, as the product values are generally too low to make a single drop of one product economically feasible. This means that the assortment offered by a branch consists of the products on the shelf. Depending on the size of the BM branch and its priority regarding timber products, its assortment of mouldings and planed timber will vary. A small BM might keep around 20 products in stock, while larger BMs or pure timber merchants can stock around 60 softwood mouldings and planed timber products.

Assortment selection

Determining what and how many products to keep in a BM branch is an important task for BMs. Independent BMs are naturally responsible for their own assortment. The independent BMs that are part of a buying group are free to determine which products to keep, as long as they use any of the suppliers the buying group has a contract with. For timber products, the groups normally have three preferred suppliers. The central management in the national chains can have some influence over assortment selection, but mainly to the extent that they determine which supplier to use.

In BM1, one catalogue of available products is used by all branches. The branch managers have to ask for permission and provide justification to sell items not listed in the product catalogue, but usually this is allowed. In BM2, the decision of what assortment to keep in stock is made in conjunction with the operating side of the business, meaning that two branches can have very different assortments. However, according to the timber buying manager in BM2, there is a growing trend in BM2 of centralizing decision making and

decreasing the differences between individual branches. All BM3 branches should, when possible, use the preferred supplier as decided by the BM3 central management. Usually there are alternative suppliers to choose from if the preferred one is out of stock of a certain product, or if a product not included in the preferred supplier's range is demanded. For mouldings and planed timber, SCA is the preferred supplier of BM3. The branches individually determine what product to stock from a list of 143 products provided by SCA.

One reason why BM chains often give branches control over what assortment to keep relates to their knowledge about regional demands, which is perceived to be very important by all actors studied in this case. In selecting an assortment, branches are highly influenced by nearby competitors and what has historically been used in that region. By centralising the assortment decision, it is believed that the branches' attractiveness may be harmed, as they will not be able to adapt to regional or local differences in demand.

The main downside of letting BM branches select their own assortment is suggested to lie in their limited knowledge of the effect their assortments will have on the entire distribution channel, which means that they risk selling products that decrease distribution channel efficiency. In the selection and discontinuation of products, branch managers mainly study the volumes sold. Central management in BM chains want the selection to be based on ROCE, meaning that margins and the value of products should play a more important role. According to central management, this view is not applied in the branches to a sufficient extent.

Managing special orders

When a builder is carrying out a renovation in a house where the owners want to keep the same profiles on the mouldings as those used previously, the flexibility in relation to which moulding to buy becomes very limited. The larger the assortment held by a BM, the better chance it has of satisfying the demands of its customers. However, regardless of the size of a BM's assortment, there is still a possibility that a builder will ask for a product that is currently not in stock. Depending on the situation, this will lead to different actions from the builder.

In renovations of old houses, the mouldings are often large, with unique patterns that are not found in any BMs. In this case, the simplest solution is to take two or more mouldings and combine them so that together they create a profile that resembles the original moulding. It is often possible to cut a combination of the available mouldings and planed timber products and glue them together into a larger mould which resembles that found in old houses.

In other cases, BMs have a small machine shop in which they can take care of certain special orders from their customers. If it is simply a matter of cutting timber into an appropriate size, this is usually done directly and without charging the builder. Some BMs have a set of blades from which they can produce a larger number of profiles than what is found in stock. This process might take an hour, and requires the machine to be available at that time. It also comes at an additional cost for the builder. If a builder needs a profile the BM has never machined before, some BMs also have the possibility of creating a new blade for that particular order. This only happens in rare cases, when the end-consumer is willing to pay a high price to get the specific moulding.

In BMs in which the machining service is not available, the BMs sometimes know of a machine shop located nearby, and refer their customers there. Otherwise, they might have to ask them to look at a competitor's branch. If a builder asks for a product that is only temporarily out of stock, the BM might encourage the builder to wait a couple of days until a new order arrives from SCA.

Flexibility in product demand

Pure timber merchants or BMs that differentiate themselves through their knowledge of timber are perceived to be less flexible in terms of the products they want SCA to supply them with. They consider themselves to know their customers best, and to understand which products are good sellers in the region in which they operate. Other BMs are more open to new ideas from SCA regarding how to develop their assortment. They do not consider themselves as experts in timber products, and welcome SCA's efforts to improve their assortment.

To better understand the BMs' flexibility with relation to the assortment they want, the five dimensions of variance in the range of SCA can be used. To a large extent, the flexibility in demands from the BMs reflects the demands placed on them by their customers.

Quality dimensions: When builders have opinions about the quality of products, they are not concerned with individual products, but rather the general quality of the entire assortment of mouldings and planed timber products. The quality of products, as perceived by builders, is not only determined by the quality grades of the timber, but also by the time the products have been in stock. The longer a piece of timber lies in the racks, the more twisted and bent it tends to become. Because of this, the quality grading of individual SKUs is of limited importance for BMs. Instead, it is important that the timber has a sufficient inventory turnover, in order to avoid that products lose their quality.

Length: The requirements regarding product lengths are dependent on the layout of the branch. Most branches store their timber upright, and therefore the lengths of the timber cannot exceed the height of the ceiling. Some BMs prefer longer lengths in general, and others prefer shorter lengths. Regardless, they are reluctant to make changes to the lengths they buy, even if there are no physical obstacles to a longer or shorter length.

Size: The dimension of mouldings and planed timber can vary greatly, and no BMs stock all the different dimensions that are available from SCA. The regional variations play a smaller role in relation to size compared to profiles, and there are historical and habitual reasons for these differences. Despite the lack of an actual difference in demand between branches, branch managers are reluctant to buy products of other sizes than those currently kept on the shelves. Changing the size of a product is considered to be a rather radical change. Two products with different sizes but that are otherwise similar are considered to suit different purposes and are used in different jobs.

Profiles: Many BMs have a clear determination of what profiles of mouldings they want in their assortment. As there is no one standard in terms of what a profile should look like, different suppliers produce profiles that carry the same name but show slight differences in

appearance. As the differently named profiles might also look rather similar, confusion can arise in relation to what a particular profile should be called. For example, the two common profiles “bullnose” and “pencil round” look very similar, and some BMs buy what SCA label as a pencil round, but sell it as a bullnose, or vice versa. It is possible that some of these minor differences in profiles are not recognized by either builders or BMs. When it comes to profiles with bigger differences, the regional demands and architecture are claimed to serve as an important explanation for the differences between branches. Therefore, BMs are generally unwilling to replace the profiles they use with others that look different.

Pack size: In high street markets closer to London and in south-east England, SCA are required to sell timber in smaller quantities than half cube packs. Other BMs with cheap rents, big yards and high sales volumes are able to buy timber in full cube packs. The BMs buying full cube packs are naturally willing to start buying smaller packs or to purchase by the meter, but this is not anticipated to increase efficiency in the distribution channel. As most SKUs are offered in full cube packs, the main opportunity lies in removing the half cube packs, as a corresponding product is usually available as a full cube.

Competing products and materials

The most frequently mentioned competitor to softwood mouldings is MDF mouldings. As the acceptance of MDF products increases, and as their prices decrease, these products are gaining market shares from the softwood mouldings. MDF is now priced similarly to softwood products, or sometimes slightly higher, but in all BMs the assortment of MDF products is a lot smaller than the assortment of timber products. The explanation given by BMs for this difference is that there is variation in terms of how the materials are used. Where MDF is mainly used in new builds or extensive renovations, softwood is the primary material used for matching up to existing mouldings. The different purchasing situations are also further described in the section on customers. In terms of softwood mouldings, there is demand for a deeper assortment. When builders match up profiles to existing mouldings the need for a deep assortment appears, and softwood is then more frequently used than MDF.

Other materials that compete with softwood mouldings are oak or similar hardwood materials; however, these are more expensive and attract a less price-sensitive end-consumer segment.

For the planed products, the primary competing material to softwood is home-grown wood – that is, wood grown in the UK. This material is not as durable as SCA’s Scandinavian slow-grown wood, but it is cheaper and is often used where quality or appearance is not critical.

Pricing management

Independent BMs, including those that participate in a buying group, are free to decide how to price their products. In some national and regional chains prices are decided centrally to some extent, but in most cases it is up to the branch managers to set their prices. Among many merchants it is believed that the prices often determine who will get the sale. Because of this, market prices are often claimed to be the main contributing factor in terms of how prices are formulated. This means that prices generally do not differ substantially between competing BMs. If a BM increases its prices for a product to above its competitors’ prices, it is claimed

that its customers would complain. Because of this, they usually refrain from diverging from market prices.

The relative pricing between products, in other words how expensive some products are compared to others, is, to a large extent, influenced by BM customers and what they perceive to be a logical pricing structure. According to BM customers, logical pricing means that products of similar size and quality should be priced similarly.

Relation between product pricing and sales volume

The phenomenon of aligned market prices, meaning that all BMs in one region charge similar prices for their products, is especially applicable to the fast-moving products that builders frequently buy, where they often know by heart what their local BMs are charging. It is therefore important to keep a competitive price on these fast-moving items. On the other hand, slow-moving products might require a higher price, since they are more expensive for the BM to buy and carry, compared to fast-moving products, due to the inefficiencies related to producing and distributing them.

The group negotiator of BM3 stated that he wishes prices to be set very competitively in BM3 for fast-moving products, and to have better margins on slow-moving products. However, when comparing the actual pricing assigned in branches with purchasing prices, margins for fast-moving products are slightly higher than those of slow-moving products. Apparently, the strategy outlined by the group negotiator is not adopted by the persons responsible for making the final pricing decisions. The same phenomenon was highlighted by the timber buyer in BM2. He stated that he wants fast-moving products to be priced with low margins, but that this is not currently the case in reality. Among both salespersons in BMs and their customers, there is a view of logical pricing as being based on the size and quality of products, but not their sales volume. If neither the purchasing builder nor the salesperson is aware of the logic behind the prices suggested centrally, they might find the suggested price for a slow-moving product to be too high, and therefore agree on a bigger rebate for that product, making the margin shrink.

Price volatility

Because the demand and availability of timber can fluctuate independently of each other, the prices in the timber distribution channel can be volatile. When the availability is high and the demand is low, the suppliers want to get rid of their stock and increase sales volume, which puts the BMs in a good negotiating position and gives them good prices. On the other hand, when the availability is low and demand is high, the BMs have to compete for the deliveries by accepting price increases. The prices paid by the BMs are likely to be reflected in their selling prices. Hence, the prices builders have to pay for timber can also be volatile.

Rebates and branch influence over pricing

The prices of products in BMs are often determined by the branches themselves. An important reason for this is that rebate systems are frequently used in BM branches, making price standardization difficult. A general view among BMs is that the rebate system is demanded by customers and cannot be abolished. When the builders invoice their customers, they can charge them the full price for the material and hence lower wages for themselves, making the

end customer perceive the builders as cheap. This is one of the cultural difficulties for the BMs that are making it harder for the central management to maintain a pricing strategy in their business. However, BM1 has proven that branches can be successful even without the rebate system. The DIY store Wickes also has a lot of professional customers buying from it, even though the company does not offer any rebates.

Some BMs have fixed rebates for all professionals, while others use a rebate system in which the annual sales to a customer determine how much rebate they get. However, there are usually no exact rebate systems, and the builders get individual rebates based on how hard they bargain and how important they are perceived to be for the branch from which they purchase their materials.

BM1 does not use a rebate system, and all prices for products are decided centrally. This is in line with BM1's streamlined offering, and general strict control over the individual branches. BM1 is also the only national company that is solely open to professional builders, so the prices in BM1 are, in a way, already adjusted to the builders' rebate. In the other merchants, DIY retailers are welcome to shop, even though they are not the primary customer segment and they have to pay the full list price.

BM2 has implemented a software tool for the branches, wherein four price levels are suggested to the staff member at the counter based on who the customer is and what products the customer is buying. This provides the possibility of making a qualitative decision, combined with benefits of using hard data for pricing.

In BM3, the salesperson decides on rebates based on what the branch is paying for the product. In this way, products are rarely sold at a loss, but there is limited possibility to control how pricing and margins vary between individual products. BM3 branches also have the freedom to decide on their pricing individually, as long as they do not go below a minimum price that is determined centrally. This price is set to make sure that branches do not sell products at a loss, and is calculated by adding a mark-up cost to BM3's purchasing price.

Marketing management

Marketing in BMs entails several activities and decisions that have to be made. While advertising and commercials might be the most obvious ones, the presentation of the products in the branch is frequently discussed between BMs and their suppliers. BM branches that are only intended for professionals benefit from the fact that builders appreciate being in a branch that is open to professionals only, and with prices set for them. Because of this, some BMs only allow professionals to buy from them.

A general trend that can be identified is that sales to DIY customers are increasing. This is probably due to an increased home improvement trend, as well as the fact that many consumers buy the products used for home improvements themselves, instead of letting builders buy them, as they want to avoid being cheated by an over-charging builder. Because of this, many BMs welcome DIY customers in their branches, and create promotional activities that appeal to the public as well. However, the majority of customers in most BMs are still builders.

The BMs' and DIY retailers' marketing and positioning converge when they try to gain market shares from each other. While the DIY stores improve assortment and customer service, the BMs focus more on the appearance of the branches. For example, the DIY store Wickes attracts a lot of builders due to its competitive prices. B&Q, the largest DIY retailer in the UK, has introduced more products, a better price list and improved the service available only for its professional customers. Each B&Q store now has a separate "Trade Point" exit and an accompanying warehouse for the extra product assortment provided. BMs are opening up to DIY customers, and some chains are becoming more consumer friendly by creating showrooms for their products and improving lighting and cleanliness. More effort is also being placed on branch layout in BMs, who are being inspired by DIY retailers in terms of how they place and present their products in a well-thought-out manner. This is a new kind of promotional activities that BMs traditionally have not focused on.

This change is not only related to the fact that BMs and DIY retailers are trying to compete for customers. BM1 is a company that does not allow DIY customers in its branches, and it is perhaps the most progressive company when it comes to adapting to the DIY retailers' promotional activities. The BMs and DIY retailers are realizing that they differ a great deal in terms of their cultural background, and that they can learn a lot from each other, even though they attract different kinds of customers.

The group negotiator in BM3 thinks that BM1 is successful because it maintains a level of uniformity in its branches' offerings. The company only opens new branches that fit with its demands on location, demographics in the area, branch size, etc. BM1 is described as strategy-driven, and does not compromise on its model. On the other hand, BM2 and BM3 are growing through acquisitions, which make it more difficult for them to achieve uniformity in their offerings. According to the group negotiator in BM3 the individuals running the branches are stronger than the institution, and the branches have different prerequisites in terms of location and size.

Logistics management

Logistics is an important activity for BMs, as they often give stock availability a high priority. BM2 measures suppliers on delivery precision and the amount of stockouts in the branches are monitored by the central management. For the professional customers that visit BMs, it is important to know what products they can get from a branch. Builders and joiners often visit their local merchant in the morning to buy what they need for the day. If some products are missing in the BM, it will have negative consequences for the builder's business, as they often do not have the time to wait for products to arrive.

Suppliers have an important role in the distribution of products. Usually the suppliers take responsibility for the deliveries to branches, even though the actual transport is carried out by a third party logistics provider. Orders of products from suppliers are usually carried out manually by the branch staff. They are present in the branches and therefore know what they are short on, but they are sometimes supported by stock monitoring systems that can suggest when new orders are needed.

Suppliers also need to ensure that products are available when they are requested by BMs. To be able to deliver on short notices, suppliers rely on good forecasts from BMs. Forecasts are usually managed by the central management and broadly describe how the demand from the entire BM chain will differ during the year. As the individual branches often have large influence over what products they should sell, the BMs cannot give guarantees about the accuracy of the forecasts. Independent merchants do not provide any forecasts to their suppliers.

Customers in the UK

In the BM distribution channel, the “customer” is not the same as the “end consumer”. The end consumer is the one using the products, and is usually a household, whereas the customer is the one buying the products, usually a joiner or any other kind of builder. For larger construction projects, the end consumer is involved to a lesser extent, and sometimes they remain unknown even when the construction is complete. But for the more frequent RMI (repair, maintenance and improvement) projects the end consumer’s preferences can have an impact and they can be more extensively involved in product choices.

Branch preference

Builders have one or several preferred branches to make their purchases of timber and other building materials. When asked why these branches are preferred, five different reasons can be distinguished from the builders’ responses.

Proximity: The distance to the branch is one factor determining where builders usually buy their materials. When they are doing a job that is far away from where they are normally located, they might also choose a different branch, which is closer to the job. As builders want to decrease the amount of time they spend on the roads, the proximity of the branch is important to them.

Familiarity: Familiarity means that a builder knows the employees working in a branch, as well as which products to find. Even though this factor was not the one most frequently mentioned by the builders when they were asked about the reasons for their branch preference, it was suggested by SCA’s BM sales manager that this was the most important factor in builders’ branch preference. Regardless of the accuracy of this suggestion, familiarity is created because the builder has been returning many times to the same branch, and they have done so because they find it attractive in other ways as well. This factor arises as a result of other reasons for going there in the first place.

Service and expertise: Some builders mentioned the knowledge and service provided by the employees in a branch as a reason for going there. This could mean that the staff members advise on qualities and materials, find similar patterns when matching up, or help in cutting the timber to required sizes.

Assortment and quality: The role of the assortment as a determinant of branch preference is closely related to the product range offered by SCA. Builders want to find what they need when visiting a BM, so the branches have to keep the right products in their assortment. As branches vary in size, they also keep a varying number of products in their assortment. Builders are generally content with the assortment kept by the BM from whom they usually make their purchases. The quality of the timber is one aspect of the assortment that is often mentioned by builders as important. Even though poor quality in terms of an individual product will not make them buy the product elsewhere, the overall quality of the timber in a branch affects their branch preference in the long run.

Price: Finally, price was mentioned as a reason for branch preference. Though it was seldom mentioned as the primary reason, the acceptability of prices seems to be a requirement for

many builders. Getting considerable rebates or discounts from a branch was also mentioned as a positive factor. The general view in BM branches is that prices are the most important factor for getting a sale. However, this view is not shared by the builders themselves, as they mentioned other reasons as being more important.

One factor that was not encountered when talking to the builders was what kind of shopping experience they prefer. However, the BMs suggested that some builders appreciate clean branches that are easy to navigate, while others feel more comfortable in a traditional yard that is designed for tradesmen, and not the public. According to SCA's BM sales manager, the convenience of the shopping experience is important for builders. Offering a large parking space and the possibility to buy a cup of tea and a sandwich are examples of conveniences that he associates with successful BMs.

As seen in the section on BMs, their offerings differ from one another to some extent. Depending on how builders value the factors above, they may find some chains or branch concepts more appealing than others. Where some branches try to differentiate themselves through having good prices, others will differentiate through having a deep assortment or competent staff.

Builders may also be more or less loyal to their preferred branch depending on what they value. If proximity is the main reason to shop at a particular branch, a builder will use the preferred branch only when it currently is the closest one. If price is an important factor, a builder may look for promotions and go the branch that can offer the lowest prices. On the other hand, a builder that values familiarity may tend to go to his or her preferred branch even though there might be a branch with better prices located nearby. Valuing the assortment of a branch also seems to be related to higher loyalty, as builders generally know what they will find in their preferred branch.

Different purchasing situations, different requirements

When builders are looking for mouldings, the kind of project they are working on and the kind of customer they are dealing with is important in determining the flexibility of their demands. In particular, the demand on patterns and sizes varies with the situation. From the end-consumer's point of view, aspects relating to quality or lengths are often disregarded as the consumer only wants something that is "good enough". Therefore, it is primarily the builders that are affected by quality and length aspects, as their job gets more complicated if lengths are not right or the quality of the product is poor. The builders' demands on quality and lengths are therefore not affected by the kind of project they are working on to the same extent as the demands on patterns and sizes.

When a completely new house is built, there is considerable flexibility in terms of what mouldings are needed. The main demand is to fit the architecture and style of the house. Generally, a house with a high ceiling requires a tall moulding, a traditional house needs a traditional moulding, etc. However, these demands can usually be satisfied even with the smallest of assortments, and builders could go to any BM and find the patterns and sizes they

are looking for. It can be the case that an end-consumer prefers a certain moulding, but then they are usually not tied to what has traditionally sold in that region.

When renovating a room, there is less flexibility in the demand of mouldings than in new builds, as there is usually a wish for mouldings that are similar to those in the rest of the house. There is still no need to find the exact same mouldings, and many builders perceive their customers as showing some flexibility in what they demand. A pattern that is similar to the existing one, or of a slightly different size, is usually accepted.

Flexibility in demand is lowest when only part of a room is renovated, or when an extension is added to a room. Then there is a need to match up the new mouldings with the existing ones. The difficulty of this task varies depending on how rare the existing mouldings are. Some machine shops or BMs with their own machining facilities can, if the customer is willing to pay for it, provide the service of designing a blade to fit the existing moulding and machine the mouldings as a special order. In other cases, where the customers will accept a cheaper moulding, the old mouldings are replaced in the entire room. If an acceptable similar moulding is found, the builders usually place the seam between the different mouldings in a corner, where the difference is difficult to spot.

Planed timber can be used for a wide array of purposes. It is therefore difficult to distinguish different purchasing situations with different flexibility in demand. In some situations the sizes are flexible to some extent; in others, where a good fitting is required, the sizes are more specific. Many BMs can aid in cutting larger pieces into appropriate sizes where needed. Flexibility in quality and length demands can be smaller than for mouldings. As planed timber products are sometimes load-bearing, the demands on quality and sufficient lengths can be of greater importance.

Builders' merchants in Sweden

Similarly to the UK market, builders' merchants in Sweden are national chains or smaller companies that either are or are not part of a buying group. Contrastingly, in Sweden the buying groups are involved in their members' business to a further extent than in the UK. In addition to negotiation contracts with suppliers, Swedish buying groups often provide signs, interior design, promotional material, a webpage and IT systems for their members. Therefore, builders' merchants that are part of the same buying group in Sweden are generally more uniform than their UK counterparts. Customers of builders' merchants often perceive the members of a buying group to be similar; thus, their loyalty can extend to all members of a buying group, rather than to one specific builders' merchant branch within the group.

Sweden's four biggest BMs targeting professional customers are included in this case. One of them is a national chain, and the other three are buying groups. These BM groups take central responsibility for some activities such as marketing, finance and IT. The manner in which responsibilities are shared between the central management and the individual branches differ between BMs. More details regarding the BMs included in this study are provided in Table 1.

Table 1: The BMs included in this case, data from 2012

	Independent or chain	Turn over [kSEK]	Number of branches	Profit margin
BM1	Independent	~7,000,000	~120	~3%
BM2	Independent	~6,000,000	~120	~3%
BM3	Chain	~5,000,000	~70	~6%
BM4	Independent	~4,000,000	~200	~2%

This section on BMs in Sweden describes their relations with suppliers and the four activities that constitute category management: assortment, pricing, marketing and logistics management.

Supplier relations

Each of the BM groups included in this study has contracts with 100 to 200 building material suppliers. To a large extent, the selection of suppliers is similar among the BM groups, even though some differences do exist. According to BM3, the BMs want to be prioritized customers, and in case of a shortage of supply, they want to be first in line to receive the products available. As suppliers cannot prioritize all customers and have relations with different BMs that are not equally close, some BMs will prefer certain suppliers, while other BMs will prefer others. In the case of BM2, they try to decrease the number of suppliers with whom they are involved in order to increase efficiency.

Many of the products sold in a BM are only available from a handful of suppliers, and BM3 categorizes many of the supplier markets as oligopolies. If a BM branch decides to change from one supplier in a category to another, the supplier, losing its previous business, will likely try to re-enter the local market by approaching competing BM branches in the area. According to BM3, the supplier is then likely to offer a low price to the competing BM branch; the benefit for the BM that had initially switched supplier is then likely lost. These

deficiencies in the supplier market prevent efficiency improvements and cost reductions from taking place, according to BM3.

In selecting which suppliers to use, BM1 and BM3 mentioned the following factors: security of supply, quality, price, commitment and service. BM3 also makes an annual evaluation of their suppliers, in which the branches express how they perceive the suppliers' service, market knowledge, value, communication skills, product knowledge and security of supply. BM4 expressed that it wants suppliers that share its view of the market. For example, BM4 wants its suppliers to view their own offering in the context of the entire supply chain and explain how their offerings can help reduce the total costs, rather than talking about what rebates they are able to offer. BM4 also expressed a want for suppliers that help them conduct retailing, instead of suppliers that only sell products. The demand for suppliers to take this kind of responsibility is less articulated by the other BMs included in this study.

Assortment management

The assortments in BM branches are, to a large extent, determined individually by the respective branches. BM3 is the BM chain where central management has the largest control over the assortment, with their branches being required to hold over 3000 articles. In addition, they have about 30,000 products from which the branches can choose. If the branches want to sell other products, they must obtain permission to do so from the central management. In BM2, about 10 percent of the branches' assortment is determined centrally, but the branches can decide which brands to use. Thus, central management is only deciding what *kind* of products they want all the branches to carry, and the branches can determine which supplier to use for those products. BM1 has a similar system, in which they require their branches to carry products that fulfill certain functions, but without interfering with the branches' choice of supplier. Their only restriction in terms of suppliers used by its branches is that 90 percent of the products bought should be purchased through the contracts negotiated centrally by BM1. In BM4, the branches are free to carry the products they choose; however, they are creating recommended assortments for the branches to use, as they want to move towards a more homogenous assortment across branches. BM2 is also trying to reduce the number of products held and number of suppliers used in order to increase efficiency.

There is a conflict between the BMs and their suppliers regarding what the assortment should look like: while suppliers want the BMs to carry and display as many of their own products as possible, the BMs have to consider their limited shelf space and the customer value of the assortment. Even though the branches have the formal responsibility to determine their own assortments, both BM2 and BM4 perceive the suppliers to be influential in making assortment-related choices. According to BM4, the branch managers lack the time and resources to thoroughly analyze the assortment, and follow the advice given to them by suppliers instead.

BM2 noted that its branches know what products are currently selling well, while its suppliers are aware of the product development trends. Therefore, the assortment will differ depending on how influential the supplier is in the choice of assortment. According to BM3, the suppliers need to ground product innovation on the customer value of products and spend

more resources on product development. BM3 also wants its suppliers to explain why there should be a price premium on new products and communicate the customer value of products to the branch employees. If the suppliers are able to do this, it is easier for the BM branches to decide which products to include in the assortment.

Pricing management

In the buying groups, the branches are free to determine their own selling prices. In the national chain BM3, list prices are determined centrally, but the branches are responsible for giving rebates to their customers; essentially, the branches are given a large responsibility for pricing in BM3. The suppliers also often give the BM branches a rebate on the purchasing price. According to BM4, this is the supplier's way of influencing the branches to use the 'standard' price as their selling price and consider the rebate to be the margin for the branch. In this way, the suppliers can influence the selling price branches use. According to BM4, this is not a good way to determine prices, as the BMs know the market better and market-based pricing should be applied. The rebate schemes used by the BMs when they sell to professional builders are perceived by BM4 to be another inefficiency in the market. The rebates make it difficult for builders to compare BMs and find the best prices. Partly for this reason, BM4 is working on a web store, through which builders can order products to their local branch and pay the prices listed online. In this way, the company aims to increase transparency and homogeneity in the pricing, and thereby appeal to the increasingly price-sensitive customers.

Marketing management

The BMs market themselves and their products in several ways. The different kinds of marketing activities are also managed differently: some activities, such as TV commercials and the information provided on the BMs websites are run by the central management, whereas other activities are carried out more or less in collaboration between suppliers, branches and central management. Both BM1 and BM3 expressed a wish for their suppliers to educate branch employees and customers about the suppliers' products. According to BM3, the challenge for suppliers in doing so is to understand and communicate the customer value of their products. BM3 perceives that the suppliers are often aware of the technical improvements in their new products, but that they can have difficulties in describing how these improvements will benefit the user of the product. According to BM2, the suppliers vary in their ability to transfer the knowledge about products to the BM branches.

Logistics management

For the BMs that are organized in buying groups, order placement to the suppliers is handled by the BM branches themselves. The decision of when and how much to order is made based on experience, in combination with support from the ERP systems. For the buying groups, responsibility for the distribution of products to the BM branches is then handled by the suppliers. In the national chain BM3, some products are shipped through distribution centers that are managed centrally. As the central management can monitor the product sales through the ERP system, they also take responsibility for ordering some of the products held by the branches. BM3 notes that a benefit of using distribution centers is that the supplier's distribution costs to other BMs increase as the distance between drops increases. In this way,

BM3 achieves a competitive advantage and a more cost-efficient distribution compared to other BMs. BM4 also sees the benefit of insourcing the distribution to the branches; as such, it is about to open up its own distribution centers. According to BM4, 20 to 25 percent of the product costs are order-related. The company believes that these costs appear because no company takes the overall responsibility for distribution and because supply-chain thinking is not applied to the distribution of building material.