Retail supply chain responsiveness: Towards a retail-specific framework and a future research agenda

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Retail supply chain responsiveness

- Towards a retail-specific framework and a future research agenda

Purpose

The purpose of this paper is to review existing research on retail supply chain responsiveness, develop categories to be included in a retail-specific responsiveness framework, and identify future research areas within the scope of retail supply chain responsiveness.

Design/methodology/approach

This paper presents an inductive systematic literature review of 46 academic, peer-reviewed articles. Based around the two major review questions on (1) retailers' role in the creation of supply chain responsiveness and (2) future research areas, an inductive, qualitative, content-analysis was conducted. Further analysis was conducted by using the software NVivo 11.

Findings

Existing research are grouped into a framework of four categories that together span the existing research. The categories are labelled supply chain orchestration, market orientation, supply chain operations, and supply management. 2-3 subthemes in each category are presented. Thereafter promising future research areas are outlined, covering methodological issues, theoretical underpinnings, inclusion of context variables and outcomes of retail supply chain responsiveness.

Research limitations/implications

The conducted systematic literature review has been limited to academic, peer-reviewed articles.

Practical implications

The findings of the paper constitute a promising initial step towards a retail-specific framework on retail supply chain responsiveness.

Originality/value

The article questions the comprehensiveness of established models in responsiveness, and argues that existing “general” literature on supply chain responsiveness gives little guidance and structure to retailers' specific role and involvement in supply chain responsiveness. In particular, the article focuses on the retailers' role for *creation* of supply chain responsiveness, which has not previously been addressed in research.

Keywords: retail, responsiveness, flexibility, agility, supply chain

1. Introduction

Today's competitive business landscape requires addressing changes in market and customer requirements promptly and properly. Much academic effort in supply chain management (SCM) has been devoted to addressing the challenges caused by competition, environmental uncertainty and dynamism, as well as meeting extremely demanding customer requirements (Gligor, 2016, Kozlenkova et al., 2015, Lau, 2012). To tackle these challenges, responsiveness has become a major research topic in logistics and SCM, and operations management literature,

and considered as a key concept which significantly contributes to sustainable competitive advantage (Reichhart and Holweg, 2007; Singh, 2015; Hoyt et al., 2007). Responsiveness corresponds to “the ability to respond and adapt time-effectively based on the ability to 'read' and understand actual market signals” (Catalan and Kotzab, 2003: 677) from some sort of external stimuli – mainly customer and market demand (Reichhart and Holweg, 2007).

Very similar to that of flexibility, the majority of the body of the literature on responsiveness pertains to the manufacturing setting since manufacturing is considered as the main source for creation of responsiveness in the supply chain. Other supply chain members such as retailers, distributors or service providers are generally neglected in literature (Jafari, 2015; Chaudhuri, 2008; Sohail Rana et al., 2015) and as a result, retailer's role for the creation of responsiveness has not yet been explored in detail. Thus, a fundamental starting point for this research is that although manufacturing still holds a key role in creating responsiveness, the other supply chain members deserve more research attention, given the overall developments of supply chains.

What is evident in the structure of supply chains over the course of the recent decades is that the distribution and downstream side, especially retailers, have come to the forefront of attention as they have obtained an unprecedented power (Geylani et al., 2007; Sandberg, 2013). The unique position of retailers in supply chains in confronting shoppers and suppliers, in the context of extreme environmental uncertainty, calls for revisiting conventional management approaches (Reynolds et al., 2007; Ganesan et al., 2009), and responsiveness of retailers is no exception. The fact is, retailers face individual shoppers and consumers who take higher quality, on-shelf availability, wide assortments, speedy delivery, after-sales services, fun shopping experience and lower prices for granted. Internet and mobile services such as price-comparison apps and social media reviews have made it easier for shoppers to cross-shop in a transparent omni-channel setting. Accordingly, retailers need to be even more responsive to handle for instance shopper reactions to new merchandise, early seasonal weather changes, and last-minute promotions to meet quarterly sales goals (Thomas et al., 2010). Altogether, this development calls for improved capabilities of retailers to create responsiveness in their supply chain.

Despite the relevance and importance of responsiveness, and its subcategory retail supply chain responsiveness that is the focus of this research, there is still confusion about the actual meaning and operationalization of responsiveness that goes beyond superficial definitions (Holweg, 2005; Hoyt et al., 2007). Furthermore, several scholars have questioned the existing research on responsiveness for being confined to specific methods. For instance, Seth and Panigrahi (2015: 1071) state that supply chain responsiveness is “much more than inventory management as wrongly exaggerated by modelling-based studies”. The same type of concerns seems to be relevant for several similar concepts such as flexibility, agility, and adaptability (Reichhart and Holweg, 2007; Jafari, 2015).

The purpose of this paper is to review existing research on retail supply chain responsiveness and develop categories to be included in a retail-specific responsiveness framework. In addition, a future research agenda on retail supply chain responsiveness is outlined. We question the comprehensiveness of established literature on responsiveness and argue that existing “general” literature on supply chain responsiveness gives little guidance and structure to retailers' specific role and involvement in supply chain responsiveness. In particular, we focus on the role of retailers in the *creation* of supply chain responsiveness. In light of the increasingly demanding and dynamic end customer requirements, responsiveness that stems from the retailers is an important and vital complement to responsiveness that is created further upstream in the supply chain, i.e. at the manufacturers. In terms of contribution, our literature review results in outlining four categories of responsiveness that could function as a first step towards a retail-specific responsiveness framework. In contrast to other existing general frameworks, such a

framework brings forward aspects other than manufacturing as important for creating responsiveness. For practitioners, this could inform and improve decision-making in the retail supply chain environment.

The remainder of this paper starts with a presentation of our methodology approach which has been an inductive systematic literature review (Denyer and Tranfield, 2009; Tranfield et al., 2003). Thereafter, a descriptive quantitative overview of the reviewed articles and a thematic analysis of their content are provided. Finally, future research topics and some final remarks conclude the paper.

2. Methodology

In order to avoid preconceptions and provide an independent, exhaustive review of existing research in the area of retail supply chain responsiveness, this study has adopted a systematic literature review approach. Given the confusion and relatively sparse existence of relevant research, in line with our exploratory purpose, the review can be described as inductive. The review process can be described in accordance with Denyer & Tranfield's (2009) approach, following the five steps of (1) Question formulation, (2) Locating studies, (3) Study selection and evaluation, (4) Analysis and synthesis, and (5) Reporting and using the results.

Step 1: Question formulation

A first important step of this research was, based on the purpose of the research, to develop more precise inquiries that could enable the necessary focus and direction of the systematic literature review process. As a major review question, we have focused on the retailers' responsiveness creation in the supply chain. More specifically, this typically incorporates strategies, role as well as specific tools available for creation of supply chain responsiveness. A secondary review question has been to identify future research topics suggested in the reviewed articles. Beside these two review questions, the authors also decided early in the research process to identify in each reviewed article the following issues:

Formal publication information: Author(s); Year of publication; Title; Volume/No; and Journal

Content-related information: Purpose; Level of analysis (firm level or supply chain level); Paper type (Empirical or theoretical); Methodology approach; Retail sector(s) discussed; Theoretical basis for the paper; General findings/conclusions; and suggested future research topics.

In parallel to the review question formulation phase, another important part at this stage of research was a scoping study (Tranfield et al., 2003), where 5 articles (Holweg, 2005; Hoyt et al., 2007; Jafari, 2015; Reichhart & Holweg, 2007; and Singh, 2015) presenting general models or frameworks of supply chain responsiveness (or flexibility) were reviewed by the authors. The purpose of this scoping study was to better understand the larger research field of overarching (i.e. including all supply chain members) supply chain responsiveness. An overall understanding of the academic definitions of responsiveness and related terms – such as flexibility and agility – were also attained, which provided this research with valuable input for constructing the search strings.

Step 2: Locating studies

Based on the scoping study, three search strings were constructed with “responsiveness”, “flexibility” respectively “agil*”, each term combined with “retail”. Due to the scarcity and

fragmentation of existing research on retail supply chain responsiveness it was decided to keep the search strings open and inclusive, with relatively few limiters. However, in order to ensure the quality of the articles, being “academic research” was used as a major limiter; as a result, white papers, consultancy reports and books have consciously been outside the search scope for this study. The academic, full text, peer-reviewed journal articles have been targeted in the two databases of Business Source Premier (Ebscohost) and Scopus. Together, these two databases were considered to have valid coverage of the supply chain literature, including journals from e.g. Taylor & Francis, Emerald, Elsevier, Inderscience and Springer.

Step 3: Study selection criteria

Figure 1 shows the selection process from 677 hits to the 46 articles that were read in full.

Please insert Figure 1 here

Figure 1: The article selection process

After article selection and deletion of duplications (98 articles) the abstracts of the remaining 579 articles were all scanned as a means to identify the articles clearly outside the scope of our research.

To ensure reliability and validity, all abstracts were reviewed by both authors. The exclusion or inclusion of the articles was discussed and the precise selection criteria could be developed and refined. During this process another 500 articles could be removed (from 579 articles to 79). Major reasons for removing articles were: (1) lack of focus on retail supply chain responsiveness (i.e., the key terms had been used clearly in another context and given another meaning), (2) poor retail focus, i.e., the article discussed for instance the manufacturer's flexibility rather than the retailer's, and (3) specific focus on the banking sector in which customer responsiveness appears to be a major research topic as well.

The relatively large amount of deleted articles was expected due to the broad search strings. The construction of more well-defined search strings including terms such as “supply chain” or “logistics” would certainly have, on the one hand, narrowed down the initial amount of hits, but, on the other hand, increased the risk for excluding relevant articles. In all, 579 articles were considered as a reasonable amount of articles possible to review at an abstract level.

The 79 articles were then read through in full text independently by both researchers. Another 33 articles were judged to be outside the scope of this research, mainly due to their lack of focus on retail supply chain responsiveness. As a result, the selection process provided the researchers with 46 relevant articles. To quantitatively measure the level of agreement of the two involved researchers, the measure of Cohen's kappa (Lombard et al., 2002) was calculated to 0.80 during the last, critical review round. Landis & Koch (1977) (in Seuring and Gold, 2012) suggest that if the value of Cohen's kappa is less than 0.60 the discrepancy among the reviewers might be too high and the data material be recoded.

Step 4: Analysis and synthesis

During the last step of the selection process, the articles were read through carefully and their contents were individually scrutinised and broken down into constituent parts that were inserted in a data extraction sheet in Excel. This coding process was first conducted individually by each researcher, and thereafter the authors' two excel sheets were merged into one after joint discussion, following what Seuring & Gold (2012) label “discursive alignment of interpretation”. As such, during this process of merging the data into one single extraction sheet, reliability and validity were ensured (Seuring and Gold, 2012).

Overall, a content-analysis approach as elaborated by Seuring & Gold (2012) was thereafter taken in the analysis. Given the fragmented and ill-defined research area targeted, i.e. retail supply chain responsiveness, we argue that content analysis is a suitable tool for strengthening and developing a more solid understanding of the area. A content analysis “represents an effective tool for analysing a sample of research documents in a systematic and rule-governed way” (Seuring and Gold, 2012: 546), and aims at an objective identification of the content in a data set (such as selected articles). It overlaps with the concept of thematic analysis, which is mainly a qualitative method for uncovering different “themes” within a data set (Fugard and Potts, 2015; Jonsson and Tolstoy, 2014).

An inductive approach was applied during the content analysis. First, as a means to structure the reviewed articles, an overall categorisation into four groups depending on their supply chain focus was made, in the article labelled supply chain orchestration, supply chain operations (internal matters related to responsiveness), market orientation, and supply management. Based on this overall categorisation, the contents of each category were thereafter further elaborated in a clustering process, inspired by Owen's (1984) criteria of (1) recurrence (of the same message with different words), (2) repetition of words and terminology, and (3) forcefulness, i.e., how much a certain message was emphasised in an article. In particular, the latter criterion guided the analysis in this study. Major findings related to the review questions were highlighted in each article, and through an iterative process, the major messages were condensed beyond simple word or phrase counting, and related to the findings of other articles in the category. Later on, as a final step in the content analysis process, some further coding was conducted using the software NVivo 11 to categorize retail supply chain responsiveness in existing research, as well as to provide some insights on directions for future research from methodological and theoretical perspectives. Using qualitative data analysis software tools – such as NVivo – are increasingly being used in systematic reviews to increase to overall validity of such studies (Bazeley and Jackson, 2013).

Regarding the second review question pertaining to the future research areas, in the content analysis process, all potential areas for future research highlighted by the reviewed articles were compiled. Then, in an iterative process - and based on our own general judgement on what appears to be more relevant or worthy of further research – these areas were clustered into four major categories using NVivo. These categories are discussed in detail in Section 4 below. Therefore, a combination of objective and subjective approaches were used for coding and classification of the future research areas.

A descriptive analysis focusing on the quantitative aspects such as year of publication, methodology used, etc., was also conducted using Microsoft Excel. Next section starts with a brief overview of this descriptive analysis, before the content analysis is presented.

3. Findings

3.1. Overview of the reviewed articles

The results of the study show that articles addressing responsiveness in a retailing context have appeared in a myriad of academic journals. Half of the published articles are mere instances in the respective journals they have appeared in. As shown in Table 1, *International Journal of Retail & Distribution Management* has been the most popular forum with over 13% of the articles published appearing in it.

Table 1 - Journals of studied articles and frequency of appearance

Please insert Table 1 here

As depicted in Figure 2, apparently, an increasing interest in responsiveness issues in retailing has been shown by researchers. The trend shows that from 1999, when the first article was published, until 2005, on average only one article was published per year. However, this number raised to five articles in 2006, and a record number of six articles in 2014.

Please insert Figure 2 here

Figure 2 - Years of appearance of the articles

Almost 70% of the reviewed articles can be labelled as “empirical”, from which the majority apply a case study approach, see Table 2. Interviews seem to be the most popular form of primary data collection. Interestingly, purely theoretical articles appear to be relatively unpopular, among which just over 14% are of literature review type. Even those two literature review articles are carried out and reported in a generic fashion and lack a systematic character.

Table 2 - Method in the reviewed articles

Please insert Table 2 here

In terms of theoretical grounding, in total, 61 instances were found in which the scholars had addressed one or multiple specific bodies of literature or theories, see Table 3. However, these literature fields or theories were in most cases vaguely applied and sparsely defined.

Table 3 - Theoretical basis or literature addressed

Please insert Table 3 here

In conclusion, the general overview of the reviewed articles reveals that just as for the more general literature on responsiveness, also retail-specific research in the area is fragmented and lacks clear theoretical rigidity, origin and focus. A striking indicator of this is that there are relatively few articles with clear definitions of the targeted topic. Of the reviewed 46 articles, we have only found precise, explicitly stated definitions of (in the article) used key terms such as responsiveness, flexibility or agility in 16 articles. In the other articles, these terms are only vaguely described and at a very overall level.

3.2. Categories of retail supply chain responsiveness

The reviewed articles can be grouped into 4 loosely defined categories, each covering 2-3 main topics, see Figure 3.

Please insert Figure 3 here

Figure 3 - Reviewed articles grouped into 4 categories

3.2.1. Supply chain orchestration

A first category of papers concerns the retailers' involvement in and efforts for the creation of responsiveness at a supply chain level. It is claimed that retailers must align an agile strategy in their supply chains, i.e., their entire supply chains must be coordinated and managed towards an agile strategy (Sohel Rana et al., 2015; Storey et al., 2005; Randall et al., 2011). Christopher et al. (2004) points out that in an agile supply chain, there is often a need for network arrangements along the supply chain, with a strong focal firm acting as an “orchestrator” of the supply chain. According to the article, large, international fashion retailers may be such firms, taking the role as champions of the supply chain, and hence achieve responsiveness in the supply chain. In a similar vein, Randall et al. (2011) reports that retailers identify a future need to invest for further agility improvements, in processes, infrastructure, technology as well as people.

A recurrent message in this theme of literature, and related to the suggested network approach, is that responsiveness is created by the retailers mainly through relationship management upstream toward suppliers as well as downstream towards consumers. The replenishment process, in which the matching of supply and demand is conducted, is considered crucial. D'Avolio et al. (2015) focuses on this process, and argues that retailers' partnerships and collaborations toward suppliers as well as customers concerning replenishment are fundamental for a supply chain's ability to react timely to changes in customer desires.

For successful achievement of responsiveness towards end customers, it is important that all parties of the supply chain are coordinated and organised towards joint goals. For instance, Barnes & Lea-Greenwood (2010) investigate the concept of fast fashion and its resulting responsiveness at a store level, and demonstrate that at this stage of the supply chain, there is still a lot to do for the retailers in order to achieve supply chain responsiveness. The combination of rigid, centralised control and lack of resources at store level, results in a retail environment that is ineffective at the point of sale, and hampers the entire supply chain's ability to respond

to end customers' demands. In order to avoid such obstacles, responsiveness at a supply chain level may be created by the launch of supply chain-wide SCM-based concepts such as quick response, Just-In-Time (JIT), efficient consumer response (ECR), collaborative forecasting, planning and replenishment (CPFR), etc. (Bhardwaj and Fairhurst, 2010; Storey et al., 2005). Common for these practices is that they are expected to enhance responsiveness towards end customers through integration efforts focusing on collaboration, information sharing and trust among supply chain members.

3.2.2. Market orientation

Another group of articles are focusing on the market-oriented capabilities needed for creating supply chain responsiveness. Being the last member of the supply chain with a position towards end consumers, the retailers' market-oriented capabilities may be of vital importance for the entire respective supply chains. Thus, retailers' market orientation is a crucial starting point for proper supply chain responsiveness, and for such an orientation, an appropriate set of market sensing capabilities by the retailer is required. Important retailing strategies such as customer segmentation, pricing, etc. originate from these capabilities (Lau, 2012).

From the textile sector, Masson et al. (2007) acknowledge that the sophisticated efforts conducted by the retailers to identify emerging fashion trends are of significant importance for agile supply chain practices. In their paper, carefully specified market segments were identified and trends for each individual segment were outlined and monitored. Similarly, Christopher et al. (2004) conclude that apart from carefully monitoring point-of-sales data, examining emerging fashion trends and future customer demands is crucial.

Atapattu and Sedera (2014) point out that market sensing capabilities need to be well aligned with responding capabilities in order to achieve customer satisfaction. Thus, for retailers, a major task is to match these two types of capabilities with each other in order to achieve responsiveness. The need for alignment of capabilities is exemplified by Helo and Luomala (2011), who present a conceptual framework that illustrates the potential areas where consumer data can be integrated in the logistics planning process. To have knowledge about consumer behaviour, and have the ability to incorporate this knowledge into the logistics planning process, may facilitate proper market responsiveness activities.

Within the wider scope of research on market sensing capabilities, internationalisation and adaptation to local market requirements are discussed in a number of articles reviewed. A particular focus is given to the importance of understanding cultural peculiarities and the ability to adapt to these circumstances. A proper alignment to local culture is hence key for the retailer's supply chain responsiveness (Swoboda et al., 2014; Boulay et al., 2016). Okongwu and Santosa (2008) present some best practices that enable supply chains in France and Indonesia to maintain high level of efficiency, flexibility and responsiveness, and demonstrate that cultural market differences results in different strategies for success. In a similar vein, Yu and Ramanathan (2012) investigate foreign retailers' operations in the Chinese customer market and stresses the need for adopting to local culture such as customer shopping habits. Franchising could be an option for increased local responsiveness according to Boulay et al. (2016). An important ingredient for successful adoption to local circumstances may be the ability of service innovation. For such service innovation, the retailers' entrepreneurial proclivity is an important capability. The entrepreneurial proclivity and the resulting ability for market responsiveness, is driven, in particular, by knowledge about the supplier-side, e.g., breadth of product offerings, pricing of products, and existing and potential suppliers (Griffith et al., 2006). From a similar service innovation perspective, the Chinese domestic retailers' successful response to foreign multinational companies' entrance on the Chinese customer market are studied by Shi and Au-

Yeung (2015). The authors argue that the Chinese retailers are smaller, independent and have a simpler organisational structure (compared to multinational, foreign companies). This makes them faster in responding to the rivals' movement and China's constantly changing retail market. Another strategy to meet competition from foreign competitors on the domestic market is to implement principles of a high reliability organisation. This is defined as organisations that “performs successfully in highly volatile environments by adopting flexible practices and the continuous pursuit of improvement and learning in its operations” (Ciravegna & Brenes, 2016, p. 4500). Ciravegna & Brenes (2016) demonstrates, based on such principles, how Selectos, the leading food retailer in El Salvador, succeeded to compete when WalMart entered their domestic market.

3.2.3. Supply chain operations

Another group of articles concerns a wide range of retail supply chain operations aimed at improving responsiveness. In common for this research is the focus on logistics planning and distribution as a facilitator and driver for improved supply chain responsiveness, e.g. replenishment of stores (Leung et al., 2003), IT tools, such as a dynamic picking system (Gong and de Koster, 2008), sharing of supply information with demand in a timely manner at retail outlets (Jain et al., 2009), centralised vs. decentralised ordering processes (Ganeshan et al., 2007), and design of ordering policies (order quantities) to enhance responsiveness (meet customer demand quantities) (Yu et al., 2011).

Although focusing on separate, narrow operational concerns, together, these articles demonstrate a wide range of tools and areas for retailers to improve their responsiveness towards customers. Inventory levels and associated information flows (ordering, safety stock policies, etc.) are typically in focus, (i.e., responsiveness at this operational level is mainly considered to be enhanced through high product availability, which in turn requires adequate information sharing). From the reviewed literature, there still seem to be potential for further improvements in information sharing in retail supply chains. Masson et al. (2007) indicated that even if information sharing and related technologies were relatively well developed close to the customers in their study, they were less developed upstream in the studied supply chain. These shortages represent a future improvement area in which retailers may play an important role.

A frequently discussed aspect of information sharing in the reviewed articles is the use of RFID technology as an enabler for, among others, improved supply chain responsiveness. Major advantages associated with the use of RFID in the retail environment are improved cost performance, as well as responsiveness-related performance such as reduction of lead times, improvement of accuracy, on-shelf availability (Azevedo and Carvalho, 2012), increased visibility, quicker flow of information, improved information sharing and easier and quicker identification of products (Azevedo and Ferreira, 2009). RFID is also expected to improve decision-making since it provides management with information (1) earlier (faster), and (2) with higher quality (accuracy, relevancy, completeness, etc.) (Sellitto et al., 2007). A disadvantage of particular importance is still the costs associated with the technology (Azevedo and Carvalho, 2012; Azevedo and Ferreira, 2009) and lack of know-how in the organisation (Azevedo and Ferreira, 2009).

3.2.4. Supply management

A fourth theme in the reviewed literature is responsiveness as a part of the larger area of supply management, including topics such as implications of global sourcing and supplier relationship management. Global sourcing is often discussed as a necessary development for retailers, in

which longer lead times, cultural differences and other barriers might jeopardise responsiveness of the retailers. The major trade-off related to global sourcing is the search for low purchasing prices on the one hand, and ability to respond rapidly to changed customer demands, which normally requires short lead times and flexibility, on the other. Lawson (2001; 2002) highlight the many illusive traps with global, off-shore sourcing in comparison to domestic sourcing. Lawson points out that from a cost perspective, there are apart from many hidden costs (e.g. delays, use of air freight, administrative and quality costs etc.) also inflexibility costs that must be taken into consideration when sourcing globally. These inflexibility costs “involves issues such as longer lead-times and a general lack of flexibility as part of a response to demand changes” (Lawson, 2002: 80). In the article, Lawson (2002) constructs a model that assesses these inflexibility costs and takes them into account in the discussion whether off-shore sourcing or domestic sourcing are to be preferred.

As an alternative to global sourcing, proximity sourcing is in general associated with improved market orientation and ability to respond to changes in customer demands. For instance, Abernathy et al. (2006) conclude that in a rapidly changing industry such as fashion and textile industry (which is in focus in their article) proximity sourcing can be advantageous based on a design, marketing, and production point of view. These potential advantages need however to be proper exploited by the retailer. In a similar vein, Barnes & Lea Greenwood (2006) concludes that for many retailers proximity sourcing, improving geographical as well as cultural proximity towards the supplier, may leverage higher ability for end customer responsiveness.

The retailers' relationships toward suppliers and manufacturers is another theme discussed in the reviewed articles. Supply chain responsiveness concerns the entire supply chain and appropriate relationships in the supply chain could therefore be of crucial importance for responsiveness performance. Doyle et al. (2006: 279) means that close relationships with suppliers are essential for responsiveness, and that retailers may "benefit from an informal series of strategic alliances that serve to create efficiency and agility simultaneously". Coordination between the manufacturer and retailer that are based on quantity-flexibility contracts, in which retailer commits to order quantities given certain prices, could here serve as an important platform (Li et al., 2016; Bicer & Hagspiel, 2016).

Wong and Johansen (2006) study the relationship between a manufacturer and a so-called JIT retailer, i.e. a retailer with only inventory in store, which requires quick response processes from the manufacturers. The authors identify six specific coordination strategies for how to align the two companies and achieve responsiveness towards the retailer's customers. In a similar vein, Richey et al. (2012) examines the importance of collaboration at an operational level between supplier and retailer in order to achieve time-based logistics advantages. The authors conclude that in order to achieve a successful, reciprocal collaboration, the retailer must be able to adapt to the supplier conditions. Another crucial factor is the retailer's ability to invest in technology that is compatible with the supplier's.

4. Future research areas

Addressing the second review question, this research has identified future research areas within the scope of retail supply chain responsiveness. Based on the directions provided by the reviewed articles, we categorize the potential areas for future research into (1) methodological issues, (2) theoretical underpinnings, (3) inclusion of context variables and (4) outcomes of retail supply chain responsiveness.

4.1. Methodology issues

The most common area for future research appears to relate to methodology concerns, in particular study design, research in different sub-sectors of retailing, and perspective.

In terms of *study design*, several scholars call for in-depth case studies or survey studies with larger sample sizes to shed light on the various aspects of responsiveness in the retailing context (e.g., Seth and Panigrahi, 2015; Doyle et al., 2006). Many contributions suffer from being limited to reporting perceptual information from a few managers within the retail firms. In this regard, Combe et al. (2012) and Adjei et al. (2009) stress the importance of including multiple informants per firm in such studies. Comprehensiveness as well as triangulation would strengthen the rigidity of the research results.

Although all retail sectors are different from each other, and “one size doesn't fit all”, some articles reviewed suggest that there are potential learnings to be made *across different sub-sectors* of retailing. For instance, Wong and Hvolby (2007) see room for replicating their study, which was done in the toy retail supply chain context, to other volatile industries such as fashion clothing and ski-wear. Similarly, several retail sectors have been considered to be in the “infancy” phase, and hence deserve further attention, including fast-fashion retailing (Barnes and Lea-Greenwood, 2010; Barnes and Lea-Greenwood, 2006). Common context factors across retail sectors are also discussed, e.g. product characteristics. One can expect that the results of the existing research could be dependent on whether or not the products are innovative (Masson et al., 2007) or durable (Bowersox et al., 1999).

Existing research on responsiveness could also be criticized regarding *unclear perspectives* taken in the studies. In particular, the market perspective is indicated as a promising future research topic among the reviewed articles. Since retailers are the final links in the supply chains facing consumers, and the fact that responsiveness is in direct relation to the customers or markets, some scholars draw the attention to including a consumer perspective in future research (Atapattu and Sedera, 2014). Of particular importance from retail perspective is how retailers can leverage on their position close to the end customers, being “match-makers” between supply and customer demand. The called-for market and customer perspectives are however, unclear and the existing literature is vague when it comes to definitions and details about the suggested perspectives to be taken.

4.2. Theoretical underpinning

The findings from this study reveal that relatively few articles are anchored in more rigid theory. Here, opportunities for improved sharpness and further development are still open. Promising combinations that are briefly suggested in literature are dynamic capabilities (Griffith et al., 2006) and coordination theory (Wong and Johansen, 2006). Another interesting theoretical ground would be power. Both in articles on general supply chain strategy (e.g., Bourlakis et al., 2014) but also in articles discussing supplier-retailer relationships the question of power emerges.

In addition to the lack of grounding in more rigid theory, several supply chain initiatives and practices have been repeatedly underlined by the existing literature for further exploration in relation to supply chain responsiveness, including integration and IT, and postponement. A future research area that deserves particularly more attention from a retail research perspective is the integration of information and capacities among supply chain members so that improved overall responsiveness of the entire supply chain can be achieved. The supply chain-wide orchestration of capacities and information is in the very heart of the traditional SCM philosophy and the retailers are in pole position to take the initiative for increased supply chain-wide responsiveness (Randall et al., 2011; Helo and Luomala, 2011; Swoboda et al., 2014). Particularly investments on RFID and its application seem to be a promising area for future research. While some scholars stress the room for exploring the functionality of RFID in

retailing (Sellitto et al., 2007; Azevedo and Carvalho, 2012; Azevedo and Ferreira, 2009), others call for taking a profitability perspective to consider the fixed costs associated with RFID (Goebel and Günther, 2009).

4.3. Inclusion of contextual variables

Inclusion of contextual variables is another common topic discussed for future research among the reviewed articles. In line with the general lack of rigidity and superficial case study methodologies, context variables are often not in-depth discussed. To address this, Yu and Ramanathan (2012) suggest including various dimensions of environmental complexity in future research. One example of this is inclusion of the international nature of retail supply chains, where findings could be scrutinised in relation to different countries and cultures (Okongwu and Santosa, 2008). Similarly, from a market point of view, Lowson (2001) maintains that various demand behaviours should be considered. In a later work, the same author stresses the paucity of research in investigating the volatility of product categories (Lowson, 2002).

For appropriate inclusion of context variables, changes in the environment over time must be captured, and since dynamic capabilities evolve over time, Richey et al. (2012) and Ganeshan et al. (2007) underline the relevance of longitudinal studies. Related to the existing research on dynamic capabilities, a general criticism is also that dynamic capabilities – such as responsiveness – are studied in isolation. Therefore, Griffith et al. (2006) highlight the need for developing an integrative framework for holistically capturing the contextual factors and responsiveness capabilities.

4.4. Outcomes of retail supply chain responsiveness

Although the research on retail supply chain responsiveness is on the rise, few studies actually address the direct or indirect outcomes resulting from responsiveness in retailing. Specifically, supply chain performance resulting from responsiveness requires more exploration (Sohel Rana et al., 2015; D'Avolio et al., 2015). Shi and Au-Yeung (2015) emphasise the room for further research on the relationship between such competencies, market performance, and competitive advantages. Another research topic that has already been covered in the existing research, but continuously calls for updating and improvement, is different means for quantification and comprehensive calculations on the total costs involved in global sourcing practices (Lowson, 2002; Lowson, 2001), as well as the trade-off between these costs and service performance (Bygballe et al., 2012; Randall et al., 2011).

5. Discussion

This paper explored the relatively sparse academic research done on retail supply chain responsiveness. Methodologically, our study has applied a systematic literature review approach, which not only systematically and validly categorized and organised the existing literature, but also identified the main potential areas for future research. A particular attention has been given to the creation of supply chain responsiveness.

Overall, existing research on retail supply chain responsiveness can be described as fragmented and few cross references occurs among the 46 articles reviewed. The articles are in general provided with sparse theoretical groundings and have superficial results. We contend that from a theoretical point of view, retail supply chain responsiveness is a relatively immature area,

with similar deficiencies to that of the general supply chain responsiveness literature. For instance, a majority of the reviewed articles are vague when it comes to definitions of the key terms such as responsiveness, flexibility and agility (the key words that were used in this research), and quite a few of the articles typically call for further in-depth studies.

As such, our findings signal that a way forward to overcome these deficiencies, and to enable new insights towards a more comprehensive understanding of retailers' role would be to develop a retail-specific framework of supply chain responsiveness. The four categories and their contents outlined in this paper could serve as a first attempt towards such a framework. Together, the categories comprise the opportunities for retailers to create responsiveness and could therefore serve as a basis for a future more comprehensive development.

It should be noted that responsiveness frameworks are already available in the "general" supply chain responsiveness literature, although to a limited extent (e.g. Reichhart & Holweg, 2007; Hoyt et al., 2007). However, as argued in the introduction of this research, applying such general frameworks may not be appropriate in a retail setting, mainly due to the retailers' lack of control of manufacturing capacity. The absence of manufacturing capacity gives that focus of retail supply chain responsiveness instead to be geared towards the end customer- and market-oriented efforts and capabilities. Indeed, retailers have a unique position close to end customers, which means a potential for rich information and in-depth understanding of end customer needs and requirements (Swoboda et al., 2014). The ability to sense and capture the end customer demand, i.e., "being close to the customers" (Christopher et al., 2004) is often discussed as a core competence for the retailers (Masson et al., 2007; Christopher et al., 2004; Atapattu and Sedera, 2014). This could, in contrast to manufacturing capabilities, be considered as the major tool for retailers for how to create supply chain responsiveness.

Although the presented four categories regarding retail supply chain responsiveness constitute a promising initial step towards a retail-specific framework, several possibilities for further developments are still open. For instance, an effort toward such a retail-specific framework could be made by addressing the four identified future research areas suggested in our research, e.g. in empirical studies. We judge all four areas to be important ingredients in the work towards a framework, either applied in isolation or in combination. For instance, linking responsiveness creation in the four categories with expected outcomes, and clarifying the role of different contextual variables, would make a contribution towards a more comprehensive framework.

In addition, such a work could also increase the practical relevance of the initial research that is presented in this paper. In its current state the practical relevance of the study at hand is limited to an overview and categorisation of four important themes that together spans retail supply chain responsiveness. In order to improve practical relevance, future studies should for instance provide guidance for how individual retailers in different contexts could develop and exploit different sources to retail supply chain responsiveness.

Beyond developing a specific framework, we also argue that the identified future research areas could serve as an important injection and encouragement towards more research in the area in general. The identified topics would all help to strengthen retail supply chain responsiveness as a research area and enable a ground for further structuring of existing fragmented findings. In addition, a major limitation with the research presented in this paper is its concentration on scholarly academic articles, further restricted by the language and publication format. Therefore, a future research opportunity would be to cover other type of publications (including books), and perhaps benefit from cross-comparing research results from different areas (e.g. extending the context to retail banking and services retailing).

References

- Abernathy, F. H., Volpe, A. and Weil, D. (2006), "The future of the apparel and textile industries: prospects and choices for public and private actors", *Environment and Planning A*, Vol. 38 No. 12, pp. 2207-2232.
- Adjei, M. T., Griffith, D. A. and Noble, S. M. (2009), "When Do Relationships Pay Off for Small Retailers? Exploring Targets and Contexts to Understand the Value of Relationship Marketing", *Journal of Retailing*, Vol. 85 No. 4, pp. 493-501.
- Atapattu, M. and Sedera, D. (2014), "Agility in consumer retail: Sense-Response Alignment through the eyes of customers", *Australasian Journal of Information Systems*, Vol. 18 No. 2, pp. 111-132.
- Azevedo, S. G. and Carvalho, H. (2012), "Contribution of RFID technology to better management of fashion supply chains", *International Journal of Retail & Distribution Management*, Vol. 40 No. 2, pp. 128-156.
- Azevedo, S. G. and Ferreira, J. (2009), "RFID Technology in Retailing: An Exploratory Study on Fashion Apparels", *IUP Journal of Managerial Economics*, Vol. 7 No. 1, pp. 7-22.
- Barnes, L. and Lea-Greenwood, G. (2006), "Fast fashioning the supply chain: shaping the research agenda", *Journal of Fashion Marketing and Management: An International Journal*, Vol. 10 No 3, pp. 259-271.
- Barnes, L. and Lea-Greenwood, G. (2010), "Fast fashion in the retail store environment", *International Journal of Retail & Distribution Management*, Vol. 38 No. 10, pp. 760-772.
- Bazeley, P. and Jackson, K. (2013), *Qualitative data analysis with NVivo*, London, UK, Sage Publications Limited.
- Bhardwaj, V. and Fairhurst, A. (2010), "Fast fashion: response to changes in the fashion industry", *The International Review of Retail, Distribution and Consumer Research*, Vol. 20 No. 1, pp. 165-173.
- Bicer, I. and Hagspiel, V. (2016), "Valuing quantity flexibility under supply chain disintermediation risk", *Internatinoal Journal of Production Economics*, Vol. 180, pp. 1-15
- Boulay, J., Caemmerer, B., Evanschitzky, H. and Duniach, K. (2016), "Growth, Uniformity, Local Responsiveness, and System-Wide Adaptation in Multiunit Franchising", *Journal of Small Business Management*, Vol. 54 No. 4, pp. 1193-1205.
- Bourlakis, M., Maglaras, G., Gallear, D. and Fotopoulos, C. (2014), "Examining sustainability performance in the supply chain: The case of the Greek dairy sector", *Industrial Marketing Management*, Vol. 43 No. 1, pp. 56-66.
- Bowersox, D. J., Stank, T. P. and Daugherty, P. J. (1999), "Lean Launch: Managing Product Introduction Risk Through Response-Based Logistics", *Journal of Product Innovation Management*, Vol. 16 No. 6, pp. 557-568.
- Bygballe, L. E., Bø, E. and Grønland, S. E. (2012), "Managing international supply: The balance between total costs and customer service", *Industrial Marketing Management*, Vol. 41 No. 3, pp. 394-401.
- Catalan, M. and Kotzab, H. (2003), "Assessing the Responsiveness in the Danish Mobile Phone Supply Chain", *International Journal of Physical Distribution & Logistics Management*, Vol. 33 No. 8, pp. 668-685.

Chaudhuri, R. (2008), "Mapping Flexibility in Retail Strategy. *Global Journal of Flexible Systems Management*", Vol. 9 No. 1, pp. 11-20.

Christopher, M., Lowson, R. and Peck, H. (2004), "Creating agile supply chains in the fashion industry", *International Journal of Retail & Distribution Management*, Vol. 32 No. 8, pp. 367-376.

Ciravegna, L. and Brenes, E. (2016), "Learning to become a high reliability organization in the food retail business", *Journal of Business Research*, Vol. 69, pp. 4499-4506.

Combe, I. A., Rudd, J. M., Leeflang, P. S. H. and Greenley, G. E. (2012), "Antecedents to strategic flexibility: Management cognition, firm resources and strategic options", *European Journal of Marketing*, Vol. 46 No. 10, pp. 1320-1339.

D'Avolio, E., Bandinelli, R., Pero, M. and Rinaldi, R. (2015), "Exploring replenishment in the luxury fashion Italian firms: evidence from case studies", *International Journal of Retail & Distribution Management*, Vol. 43 No. 10, pp. 967-987.

Denyer, D. and Tranfield, D. (2009), "Producing a Systematic Review", In: Buchanan, D. A. and Bryman, A. (eds.) *The SAGE Handbook of Organizational Research Methods*. London: SAGE Publications Ltd.

Doyle, S. A., Moore, C. M. and Morgan, L. (2006), "Supplier management in fast moving fashion retailing", *Journal of Fashion Marketing and Management: An International Journal*, Vol. 10 No. 3, pp. 272-281.

Fugard, A. J. B. and Potts, H. W. W. (2015), "Supporting thinking on sample sizes for thematic analyses: a quantitative tool", *International Journal of Social Research Methodology*, Vol. 18 No. 6, p. 669-684.

Ganesan, S., George, M., Jap, S., Palmatier, R. and Weitz, B. (2009), "Supply Chain Management and Retailer Performance: Emerging Trends, Issues, and Implications for Research and Practice", *Journal of Retailing*, Vol. 85 No. 1, pp. 84-94.

Ganeshan, R., Ring, L. J. and Strong, J. S. (2007), "A mathematical approach to designing central vs. local ordering in retail", *International Journal of Production Economics*, Vol. 108 No. 2, pp. 341-348.

Geylani, T., Dukes, A. J. and Srinivasan, K. (2007), "Strategic Manufacturer Response to a Dominant Retailer", *Marketing Science*, Vol. 26 No. 2, pp. 164-178.

Gligor, D. M. (2016), The Role of Supply Chain Agility in Achieving Supply Chain Fit. *Decision Sciences*, 47: 524-553. doi:[10.1111/deci.12205](https://doi.org/10.1111/deci.12205)

Goebel, C. and Günther, O. (2009), "Benchmarking RFID profitability in complex retail distribution systems", *Electronic Markets*, Vol. 19 No. 2, pp. 103-114.

Gong, Y. and De Koster, R. (2008), "A polling-based dynamic order picking system for online retailers", *IIE Transactions*, Vol. 40 No. 11, pp. 1070-1082.

Griffith, D. A., Noble, S. M. and Chen, Q. (2006), "The performance implications of entrepreneurial proclivity: A dynamic capabilities approach", *Journal of Retailing*, Vol. 82 No. 1, pp. 51-62.

Helo, P. T. and Luomala, H. T. (2011), "Linking consumer behaviour data into logistics planning in the food industry: analysing the potential of integration", *International Journal of Logistics Systems and Management*, Vol. 9 No. 4, pp. 438-457.

- Holweg, M. (2005), "The three dimensions of responsiveness", *International Journal of Operations & Production Management*, Vol. 25 No. 7, pp. 603-622.
- Hoyt, J., Huq, F. and Kreiser, P. (2007), "Measuring organizational responsiveness: the development of a validated survey instrument", *Management Decision*, Vol. 45 No. 10, pp. 1573-1594.
- Jafari, H. (2015), "Logistics flexibility: a systematic review", *International Journal of Productivity and Performance Management*, Vol. 64 No. 7, pp. 947-970.
- Jain, V., Wadhwa, S. and Deshmukh, S. G. (2009), "Enhancing flexibility in supply chains: Modelling random demands and non-stationary supply information", *International Journal of Computer Integrated Manufacturing*, Vol. 22 No. 8, pp. 812-822.
- Jonsson, A. and Tolstoy, D. (2014), "A thematic analysis of research on global sourcing and international purchasing in retail firms", *International Journal of Retail & Distribution Management*, Vol. 42 No. 1, pp. 56-83.
- Kozlenkova, I. V., Hult, G. T. M., Lund, D. J., Mena, J. A., & Kekec, P. (2015). The role of marketing channels in supply chain management. *Journal of Retailing*, 91(4), 586-609.
- Lau, H. C. W. (2012), "Demand management in downstream wholesale and retail distribution: a case study", *Supply Chain Management: An International Journal*, Vol. 17 No. 6, pp. 638-654.
- Leung, R. W. K., Lau, H. C. W. and Kwong, C. K. (2003), "On a responsive replenishment system: a fuzzy logic approach" *Expert Systems*, Vol. 20 No. 1, pp. 20-32.
- Li, X., Lian, Z., Choong, K. and Liu, X. (2016), "A quantity-flexibility contract with coordination", *International Journal of Production Economics*, Vol. 179, pp. 273-284
- Lombard, M., Snyder-Duch, J. and Bracken, C. C. (2002), "Content Analysis in Mass Communication: Assessment and Reporting of Intercoder Reliability", *Human Communication Research*, Vol. 28 No. 4, pp. 587-604.
- Lowson, R. (2001), "Retail Operational Strategies in Complex Supply Chains", *The International Journal of Logistics Management*, Vol. 12 No. 1, pp. 97-111.
- Lowson, R. (2002), "Assessing the Operational Cost of Offshore Sourcing Strategies", *The International Journal of Logistics Management*, Vol. 13 No. 2, pp. 79-90.
- Masson, R., Iosif, L., Mackerron, G. and Fernie, J. (2007), "Managing complexity in agile global fashion industry supply chains", *The International Journal of Logistics Management*, Vol. 18 No. 2, pp. 238-254.
- Okongwu, U. and Santosa, K. (2008), "Best practices in distribution and retail networks: the case of Indonesia and France", *International Journal of Integrated Supply Management*, Vol. 4 No. 1, pp. 16-33.
- Owen, W. F. (1984), "Interpretive themes in relational communication", *Quarterly Journal of Speech*, Vol. 70 No. 3, pp. 274-287.
- Randall, W. S., Gibson, B. J., Defee, C. C. and Williams, B. D. (2011), "Retail supply chain management: key priorities and practices", *The International Journal of Logistics Management*, Vol. 22 No. 3, pp. 390-402.
- Reichhart, A. and Holweg, M. (2007), "Creating the customer responsive supply chain: a reconciliation of concepts", *International Journal of Operations & Production Management*, Vol. 27 No. 11, pp. 1144-1172.

- Reynolds, J., Howard, E., Cuthbertson, C. and Hristov, L. (2007), "Perspectives on Retail Format Innovation: Relating Theory and Practice", *International Journal of Retail & Distribution Management*, Vol. 35 No. 8, pp. 647-660.
- Richey, R. G., Adams, F. G. and Dalela, V. (2012), "Technology and Flexibility: Enablers of Collaboration and Time-Based Logistics Quality", *Journal of Business Logistics*, Vol. 33 No. 1, pp. 34-49.
- Sandberg, E. (2013), "Understanding logistics-based competition in retail – A business model approach", *International Journal of Retail and Distribution Management*, Vol. 41 No. 3, pp. 176-188.
- Sellitto, C., Burgess, S. and Hawking, P. (2007), "Information quality attributes associated with RFID-derived benefits in the retail supply chain", *International Journal of Retail & Distribution Management*, Vol. 35 No. 1, pp. 69-87.
- Seth, D. and Panigrahi, A. (2015), "Application and evaluation of packaging postponement strategy to boost supply chain responsiveness: a case study", *Production Planning & Control*, Vol. 26 No. 13, pp. 1069-1089.
- Seuring, S. and Gold, S. (2012), "Conducting content analysis based literature reviews in supply chain management", *Supply Chain Management: An International Journal*, Vol. 17 No. 5, pp. 544-555.
- Shi, J. and Au-Yeung, A. Y. S. (2015), "An innovation perspective on Chinese retailers' competitive advantage", *The International Review of Retail, Distribution and Consumer Research*, Vol. 25 No. 2, pp. 120-144.
- Singh, R. K. (2015), "Modelling of critical factors for responsiveness in supply chain", *Journal of Manufacturing Technology Management*, Vol. 26 No. 6, pp. 868-888.
- Sohel Rana, S. M., Osman, A., Bahari, A. and Solaiman, M. (2015), "Determinants of supply chain performance: a strategic point of view", *International Journal of Supply Chain Management*, Vol. 4 No. 3, pp. 94-102.
- Storey, J., Emberson, C. and Reade, D. (2005), "The barriers to customer responsive supply chain management", *International Journal of Operations & Production Management*, Vol. 25 No. 3, pp. 242-260.
- Swoboda, B., Elsner, S. and Morschett, D. (2014), "Preferences and Performance of International Strategies in Retail Sectors: An Empirical Study", *Long Range Planning*, Vol. 47 No. 6, pp. 319-336.
- Thomas, R. W., Esper, T. L. and Stank, T. P. (2010), "Testing the Negative Effects of Time Pressure in Retail Supply Chain Relationships", *Journal of Retailing*, Vol. 86 No. 4, pp. 386-400.
- Tranfield, D., Denyer, D. and Smart, P. (2003), "Towards a methodology for developing evidence-informed management knowledge by means of systematic review", *British Journal of Management*, Vol. 14 No. 3, pp. 207-222.
- Wong, C. Y. and Hvolby, H. H. (2007), "Coordinated responsiveness for volatile toy supply chains", *Production Planning & Control*, Vol. 18 No. 5, pp. 407-419.
- Wong, C. Y. and Johansen, J. (2006), "Making JIT retail a success: the coordination journey", *International Journal of Physical Distribution & Logistics Management*, Vol. 36 No. 2, pp. 112-126.

- Yu, D. Z., Tang, S. Y. and Niederhoff, J. (2011), "On the benefits of operational flexibility in a distribution network with transshipment", *Omega*, Vol. 39 No. 3, pp. 350-361.
- Yu, W. and Ramanathan, R. (2012), "Effects of business environment on international retail operations: case study evidence from China", *International Journal of Retail & Distribution Management*, Vol. 40 No. 3, pp. 218-234.

Creation of retail supply chain responsiveness
– A systematic literature review and a future
research agenda

Figures and Tables

Figure 1: The article selection process

Table 1 – Journals of studied articles and frequency of appearance

Journal	Frequency
International Journal of Retail & Distribution Management	6
The International Journal of Logistics Management	4
International Journal of Production Economics	3
Industrial Marketing Management; Journal of Fashion Marketing and Management: An International Journal; Journal of Retailing; Production Planning & Control; The International Review of Retail, Distribution and Consumer Research	2
Others (23 different journals)	1

Figure 2 – Years of appearance of the articles

Table 2 - Method in the reviewed articles

Paper Type (Total)	Method (Total)		Frequency
Empirical (32)	Case Study (20)	Multiple	8
		Interviews	7
		Secondary Data	2
		Observation	1
		Simulation	1
		Content Analysis	1
	Survey (12)	Structural Equation Modelling	3
		Chi-Squared	3
		Descriptive Statistics	3
		Regression Analysis	3
		t-Test	1
		Clustering	1
Theoretical (14)	Conceptual (5)	Conceptual Modelling	2
		Fuzzy Logic	1
		Hypothetical Scenarios	1
		Other	1
	Literature Review (2)	Generic	2
	Mathematical Modelling (7)	Optimization	5
		Simulation	2

Table 3 - Theoretical basis or literature addressed

Theories/Literature	Frequency
Agility/Flexibility, Lean	16
General SCM	11
Retail Logistics Initiatives	8
RBV, Dynamic Capability	7
RFID/Information Sharing	4
Internationalization and Global Sourcing	4
General Marketing/Consumer Behaviour	3
Innovation Management	3
Coordination Theory	1
Fuzzy logic	1
Knowledge Management	1
Network Theory	1
Performance Measurement	1

Figure 3 - Reviewed articles grouped into 4 categories

Supply chain orchestration (13 articles)

- Application of an agile supply chain strategy
- Implementation of SCM-based management concepts

Supply management (12 articles)

- Proximity sourcing
- Coordination towards suppliers

Operations (9 articles)

- Flexibility in logistics operations, e.g. through product availability
- Information sharing and use of RFID as an enabler for improved responsiveness

Market orientation (12 articles)

- Application of market-sensing capabilities
- Local culture awareness