

CUSTOMER SEGMENTATION BASED ON BUYING AND RETURNING BEHAVIOUR: SUPPORTING DIFFERENTIATED SERVICE DELIVERY IN FASHION E-COMMERCE

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ABSTRACT

PURPOSE:

Designing supply chains and organisational strategies in the fast-moving consumer goods business, especially within fashion e-commerce, requires a profound understanding of customer behaviour and requirements. The purpose of this paper is twofold: firstly, to empirically test and support whether a "one size fits all" strategy really fits all in the fashion e-commerce business. Secondly, this study aims to evaluate whether consumer returns are a central part in the creation of profitability, and if so, the role of returns management in the overall supply chain strategy

RESEARCH APPROACH:

Historically, customer segmentation based on buying behaviour lacks empirical evidence to support its usefulness (Godsell et al., 2011). This study was conducted in collaboration with Nelly.com, a Nordic e-commerce site that specialises in fashion and beauty. Transactional sales and return data from a two-year period were analyzed. Data from four markets was used to categorize customers based on their buying and returning behaviour and investigated according to each customer's net contribution to the business.

FINDINGS AND ORIGINALITY:

In theory, segmentation based on the customer's buying behaviour should be performed using point of sales data or a more qualitatively based understanding (Gattorna, 2010). In the fast-moving business of e-commerce, customer returns are a valuable service parameter.

If return management is not effectively used, returns often decrease profitability. The e-commerce business collects and stores vast amounts of data; yet, this wealth of information is seldom used in developing service differentiation. Organisations often offer the same level of service to all customers irrespective of each customer's net contribution. In this study, behaviour patterns were analysed, and it was determined that grouping customers based on both sales and return patterns facilitates a differentiated service delivery approach. It enables the company to offer different delivery and return conditions to specific customers in order to increase their net contribution. Interestingly, we found that the most profitable customer is the repeat customer who frequently returns goods.

RESEARCH IMPACT:

The research reported in this paper empirically supports the theory that customer buying and returning behaviour could be used to categorize customers in order to guide a more

differentiated approach. However, to create a deeper understanding of the requirements for each customer group, future and more qualitatively oriented research is needed.

PRACTICAL IMPACT:

The main purpose for differentiating service delivery levels is related to the problem of over and underservicing when using a "one size fits all" approach (Gattorna, 2006). Our findings support and suggest the implementation of service delivery based on a more dynamic approach that nurtures resources and links the supply chain and/or organisational strategies with categorized customer buying and returning behaviour.

Keywords: Strategy, Customer Segmentation, Differentiation, E-Commerce, Buying Behaviour, Supply Chain Management

Paper type: Research paper

INTRODUCTION

In shifting market conditions, the choice of supply chain strategies is critical when competing to serve customers (Gattorna, 2010). It is accepted in theory that the "one size fits all" approach to supply chain design is no longer valid (Christopher *et al.*, 2006; Gattorna, 2010; Ericsson, 2011; Godsell *et al.*, 2011). Still organisations, even in the highly competitive e-commerce market, utilise a "one size fits all" strategy to create and deliver value to their consumers, thereby implicitly assuming that consumers' demands and buying behaviour are homogeneous, and therefore, there is no profitable reason to differentiate delivery in terms of service.

However, e-commerce consumers' buying behaviour is not homogenous, especially in the fast-moving consumer goods (FMCG) business. FMCG organisations compete not only in products and price, but also in a large variety of services. For example, accessibility and speedy delivery are critical determinants for success. Returns management (RM) is clearly a part of the parcel, and, if handled properly, it can decrease costs, while simultaneously increasing revenue and serving as a means of competition. The total offer is called the "value package" and consists of the physical product plus the services surrounding it. Some of these services are the order qualifiers, and some are the order winners (Ericsson, 2011).

If customer groups exist with different service requirements, then it makes sense to try to match these with differentiated supply chain strategies (Godsell *et al.*, 2011). Gattorna (2010) argues that organisations, or rather supply chains, need not only to understand the competitive forces, they need also to understand their customers' buying behaviour. Furthermore, they need to understand how to use the knowledge internally to offer and deliver suitable value propositions. In e-commerce this has implications on service delivery as well as the sourcing of products and thus on how we design the supply chains. In designing supply chains, Godsell *et al.* (2006) express a need to replace the focus from the product to the end-customer and specifically on the end-customer's buying behaviour. Traditionally there are two different schools of thought in supply chain design (Godsell *et al.*, 2011). The first theory is the lean-agile supply chain design, which is product driven. The second school of thought is that strategic alignment is driven by customer buying behaviour. Both schools take a supply chain approach; thus, neither theory focuses on the consumer or the end-user as is done in this research.

Supply chains are omnipresent (Gattorna, 2010), and e-commerce organisations exist in many supply chains or supply networks. As noted earlier, it is accepted that the "one size fits all" approach to supply chain design is no longer valid, and the suggested number of parallel supply chains varies and is naturally context dependent. It depends upon diverse variables such as demand uncertainties, product characteristics, replenishment lead-

times, etcetera. Traditionally literature describes supply chain design from a manufacturer's perspective, trying to link the supply side with the demand side, often with a product focus (see Croxton et al., 2001; Christopher et al., 2006). In e-commerce, the focus would naturally shift to the e-commerce organisation, which changes the focus from manufacturing towards sourcing of and delivery of finished goods. However, as e-commerce organisations grow, they are likely to try to design and produce their own products and brands in search of greater margins, which shifts the focus back towards manufacturing or at least a combination of sourcing and manufacturing. This exemplifies the need for at least two supply chains, probably even more. In e-commerce, the critical focal point is to match the demand from consumers with an appropriate set up of sourcing, final distribution and returns-handling activities. If demand variations for different products exist, it is probably useful to apply diverse sourcing strategies in order to match demand uncertainties with responsive supply strategies. Gattorna (2010) argues that in a typical supply chain three to four dominating customer buying behaviours exist that need to be understood in detail. Further, these dominating behaviours cover approximately 80% of the customers, and the same dominating patterns fit other markets as well.

Christopher et al. (2011) explain the need for combining both product characteristics and market considerations when designing supply chain capabilities and selecting supply chain pipelines. In the selection of pipeline types there are eight theoretical types to choose from depending on whether products are standard or special, demand is stable or volatile and lastly if the replenishment lead-time is short or long (Christopher et al., 2006). According to Christopher et al. (2006), standard products tend to be more stable in demand with longer life cycles, whilst special products tend to be the opposite, i.e. erratic demand and shorter life cycles. Therefore, there is a connection between demand predictability and product characteristics, which reduces the amount of theoretical pipeline types to four (Christopher et al., 2006, p. 282). Depending on product demand and supply characteristics, Christopher addresses a lean, agile or a combination of the two, i.e. a *leagile* approach (see Christopher et al., 2006, p. 283).

In many markets, especially the e-commerce market where several organisations are competing, i.e. selling the same brand or similar products with little or no difference in price, it is difficult to maintain a competitive edge through the product itself (Christopher, 2005). Therefore, the service level and the delivery service as such becomes a critical determinant for market success. The e-commerce supply chain often appears, in theory and practice, as a one-dimensional chain. However, in reality, it is a spaghetti bowl of interrelated activities or processes sourcing thousands of SKU's, receiving, storing, picking, packing and distributing them to the end user and later receiving and handling consumer returns. In the e-commerce business, especially in fashion, delivery from stock to consumers makes it difficult to apply the lean/agile approach for the final distribution. However, customers buying and returning behaviour might affect the profitability if it is not matched with a suitable delivery and return strategy.

In the fashion e-commerce business, a trend towards more liberalised delivery and return conditions as a way to cope with competition inside the industry has become evident. Additionally, these lenient return policies attract new consumers from the traditional retail chains. Consequently, return policies are a part of marketing practice (Autry, 2005), and therefore returns management (RM) is surely a part of the value creation process. RM is the part of supply chain management that includes returns, reverse logistics, gatekeeping and avoidance (Rogers *et al.*, 2002, pp. 5). Mollenkopf et al. (2011) investigate the marketing/logistics relationship relative to RM. They found that the effectiveness of RM was enhanced when firms coordinated their strategic and operational activities. Clearly RM needs to be efficient; in some cases, however, it seems that it is also a part of the value creation not only the value recovery. Stock (2009) emphasises that product returns will

continue to be a part of business operations, and literature indicates that competition is increasing and consumer demands are surely following this development. Therefore, there is a need to align RM within the supply chain strategy where the whole supply chain needs to operate efficiently and effectively and returns are no exception (Stock, 2009).

The aim of the changes in delivery and return conditions is to attract and create loyal and repetitive customers, thereby increasing sales. However, a liberal return policy increases returns (Wood, 2001). There is, however, no direct correlation between increasing sales and maximizing profitability. Differences in service requirements might affect both sales and profitability. When utilizing a "one size fits all" strategy correctly, one would expect to find a uniform response or behaviour from consumers, i.e. no grouping when analysing consumers' loyalty in terms of repetitiveness and profitability in terms of contribution margin.

This study set out to characterise customer segments in terms of buying and returning behaviour as a starting point for grouping customers and their response to a "one size fits all" approach. If there are considerable differences in how customers behave, then one ought to investigate these differences in more detail and analyse how it might reflect upon product characteristics and the sourcing of finished goods. Gattorna (2010) indicates that the most critical point to start with is the customers' buying behaviour, especially in the e-commerce business focusing on sourcing of finished goods and delivering from stock. Segmentation as such is a well-established concept (Gattorna, 2010; Christopher et al., 2011), but ways to segment are quite widespread. (For reviews of traditional segmentation techniques see (Bonoma and Shapiro, 1984; Cooil *et al.*, 2008)). Identified segments, regardless of the technique used, indicate a need for a differentiated product and service delivery, thus abandoning the old and out-dated "one size fits all" approach.

Designing the matching supply chain should mirror the demand side requirements, and in e-commerce this means delivering the appropriate product and service to the consumer/end-user. If differences exist in how customers respond to a "one size fits all" strategy, then it is logical to increase the understanding of customers buying behaviour. Gattorna (2010, pp. 62-63) presents five different ways to perform the behavioural segmentation. These methods would likely fit, although they are quite time consuming. Often literature presents business techniques developed for customers. In the rapidly evolving business to consumers (B2C) e-commerce, the fifth method where Gattorna (2010) creates consumer insight using point of sales (POS) data and uses sophisticated data mining techniques could be used. However, e-commerce business maintains a vast amount of transactional data that could be used to segment the consumers based on their behaviour. It could be used to segment consumers based on their buying and returning behaviour measuring their net contribution. A "one size fits all" supply chain strategy inherently assumes that there is one large segment of customers in the market with the same requirements and demands for products and services. It is assumed that a homogenous customer group with the same requirements and demands share a similar buying behaviour.

Organisations perform a vast number of different activities and procedures, such as the delivery and return processes. These activities drive costs that affect the price charged for products and services. In addition, these activities mean different things to different consumers, i.e. they are more or less important. Therefore, performing activities better or more efficiently might result in a competitive advantage (Porter, 1996). Performing different activities than competitors might also result in a competitive advantage; however, this is not necessarily cost dependent as it might deliver a value advantage. According to Porter (1996), differentiation arises from a choice of activities and from how organisations perform them. In the rapidly growing e-commerce business, especially in fashion, the competition is quite fierce. Depending on what products e-commerce

consumers are purchasing, the delivery and return policies might be more or less critical. Non-adopters or new customers might therefore hesitate to purchase products where fit and size problems are apparent, such as shoes or certain non-flexible garments. Certain companies in the shoe business (Zappos.com, Brandos.se, Hippo.se) are truly generous and offer all customers (Zappos only domestic customers) both free delivery and free returns. This is an indication that these companies see the delivery and return conditions as critical to their business. However, even here the strategy is "one size fits all" and they are therefore likely to over-serve some customers (Gattorna, 2010). Overservicing is costly and will affect profitability, and customers who misuse this service will increase costs that will have to be paid by all customers returning or not. Misuse occurs when the liberal delivery and return policies affect a consumer's buying behaviour, i.e. ordering more than one size, etcetera when returns are free. In the global retail industry, companies are likely to see the surrounding complexity but attack it with an operational sledgehammer (Gattorna, 2010). It might be easier and cheaper to deliver only one service level to all customers; however, it is not the most profitable way, as it will undoubtedly under or overservice some customer groups.

Traditionally organisations have seen commercial product returns as a nuisance (Blackburn et al., 2004; Guide and Van Wassenhove, 2006) and a necessary evil, a painful process, a cost centre and an area of potential customer dissatisfaction (Stock et al., 2006). Organisations have realized that effective RM can provide a number of benefits, such as improved customer service, effective inventory management and product dispositioning (Norek, 2002; Rogers et al., 2002; Stock et al., 2006; Mollenkopf et al., 2007a; Mollenkopf et al., 2007b; Frankel et al., 2010; Mollenkopf, 2010). If organisations view returns as a cost driver rather than a competitive edge, they miss the potential value it could add to them and their customers (Mollenkopf et al., 2007a). From a consumer's perspective online purchases represents a certain level of risk (Mollenkopf et al., 2007b) relating to product quality, size and fit issues. The customer has to await the delivery and the execution of service delivery as well. Mollenkopf (2007b) argues that a well executed handling of returns could act as a service recovery opportunity, where the customer evaluates the ongoing service delivery during a particular purchase experience. According to Andreassen (2000), service recovery affects customer loyalty. This also follows the arguments of Harrison and van Hoek (2008) that service performance is important, as customers' perception of delivered products and services is what creates loyal customers. Thus, the importance of RM should not be underestimated in distance sales. RM has started to gain a strategic role in organisations (see Rogers and Tibben-Lembke, 1999). It is time to position RM in its proper place in the supply chain strategy.

This paper views segmenting customers based on their buying behaviour as the starting point and driver for supply chain strategies. Globalisation has reduced consumers' behavioural homogeneity within countries and increased commonalities across countries (Broderick et al., 2007). This facilitates a development of global strategies targeting similar segments in different countries. In a consumer context, behavioural homogeneity deals with the decision-making processes that lead to a purchase-decision, and it is used to predict and explain market segment responsiveness (Broderick et al., 2007). Hoyer (1984) investigated consumer decision processes regarding repeat purchases and Broderick et al. (2007) used this in their study of consumer behaviour. They performed a survey using questions such as "How often do you purchase?" to analyse behavioural homogeneity. Asking questions regarding future purchase and/or historical return behaviour will likely present bias, as one can evaluate how questions and answers are interpreted as well as the accuracy of the responses. It is possible that respondents say one thing and then do another (Alreck et al., 2009). Further, there are also problems when trying to foresee the future and/or remembering the past. Observing customers' behaviour online presents other methodological issues, especially post purchase behaviour, as certain decisions might involve a continuous rather than a discrete

processing (Hoyer, 1984), i.e. whether or not to return a purchased item. Any data tend to be an historical snapshot of a phenomenon under study. In this case, consumers are a moving target in a continuous change due to increased competition and an increased focus on service delivery. Kim and Kim (2004) investigated customers' purchase intentions for clothing and expressed that their conclusions might not hold for long given the rapid development in e-commerce. In the fast moving global e-commerce business, it is probably difficult to predict and/or explain consumer behaviour using any type of data. However, customer (consumer) insight can be created using transactional data, and according to Gattorna (2010), using behavioural data alongside transactional data makes it possible to better predict customer behaviour. Transactional data including purchase and return behaviour, can therefore be useful when segmenting customers. Utilizing actual purchase and return data to uncover how customers behave regarding delivery and return policies, reduces certain methodological issues regarding data collection, i.e. perceptions about the future or remembrances of the past. The data as such follows a buying behaviour over time (not a snapshot) and should, therefore, result in fewer validity problems as it measures and follows (if data is updated) a real behaviour, not intentions or perceptions.

In designing supply chain strategies, the literature describes, from a manufacturer perspective, that "one size fits all" is no longer valid, and further, that organisations or rather supply chains need to align with consumers' buying behaviour (Gattorna, 2010). Stock and Mulki (2009) argue for the importance of RM within supply chains, as returns are likely to continue to be a part of business operations. Consumer returns are a central part of e-commerce market operations. The overarching hypotheses for this paper are firstly, that the "one size fits all" strategy does not fit in the fashion e-commerce market either (Christopher et al., 2006; Gattorna, 2010; Ericsson, 2011; Godsell et al., 2011). Secondly, RM is a central part of the supply chain (Autry, 2005; Stock and Mulki, 2009; Mollenkopf et al., 2011) and should be aligned in the design of supply chain strategies. Therefore, the purpose of this paper is twofold: firstly, to empirically test and support whether a "one size fits all" strategy really fits all in the fashion e-commerce business. Secondly, this study aims to evaluate whether consumer returns are a central part in the creation of profitability, and if so, the role of RM in the overall supply chain strategy.

RESEARCH DESIGN, METHOD AND MEASUREMENT

Designing supply chain and organisational strategies in the fast moving consumer goods business, especially within fashion e-commerce, requires a profound understanding of customer behaviour and requirements. Therefore, the development of supply chain strategies needs to be both context specific and close to the competitive environment; therefore, it is relevant with a single case design for testing the well known "one size does not fit all" theory. To test the overarching hypotheses presented in the previous section, we need to select a case organisation, determine a unit of analysis and collect and analyse data. The selected case organisation Nelly.com was selected mainly because they fit the purpose to test specific theories, i.e. they do not segment customers or differentiate what they offer customers in terms of products or services. Further, the organisation was willing to support the research with transactional data to test the theory on an organisational and customer level. For the quantitative analysis, Nelly.com exported transactional data from their ERP system. The data contained all (256,233) customer orders for a period of two years (2008-2009) covering their four markets in Denmark, Finland, Norway and Sweden. As the analysis was performed on a customer level, the authors performed detailed calculations to reveal each customer's order sales figures, return figures, contribution margin, etc. Thereafter each customer was analysed in terms of total sales, average sales per order, total contribution margin, average contribution margin, total number of orders, and total number of returns. The organisation's operations manager was interviewed on site during the research and supplied the

researchers with vital information regarding freight costs, return freight costs and costs related to the handling of orders and returns.

To test the hypotheses in terms of construct validity, the financial contribution of customers was categorised according to their buying and return habits. Customers were categorised as either repeat or non-repeat customers, depending on whether they made only one purchase or several purchases during the period. They were also categorised as either returners or non-returners, depending on whether they returned at least one item during the period or not. Using this perspective, four different types of customers emerged, and they were categorised as Type A, Type B, Type C, and Type D (see Figure 7).

		Return Habits (RH)	
		Non-returner (0)	Returner (1)
Buying Habits (BH)	Non-repeat Customer (0)	Type A	Type B
	Repeat Customer (1)	Type C	Type D

Figure 7 The four types of customers

Differences in contribution per order and contribution per customer and year among the four types of customers were described on a country basis and were further analysed with two-way ANOVAs.

RESULTS

Contribution per order

Table 1 presents descriptive statistics regarding the contribution per order for all four countries.

Table 1 Contribution per order. Note: number of orders n* in 1000

		RH	SWE			NOR			DK			FIN		
			Mean	SD	n*	Mean	SD	n*	Mean	SD	n*	Mean	SD	n*
BH	0	0	327	356	80	559	523	23	438	414	15	376	385	12
		1	157	339	19	349	637	4	238	417	3	220	362	4
		Total	295	359	98	525	549	27	406	421	18	339	386	16
	1	0	327	272	29	571	413	8	440	313	4	385	309	4
		1	300	317	37	513	430	7	392	324	3	338	291	5
		Total	312	298	66	544	422	14	418	319	7	358	300	9
Total	0	327	336	109	562	497	30	439	396	19	378	368	16	
	1	253	331	56	448	528	11	318	380	6	287	329	9	
	Total	302	336	165	532	508	42	409	396	25	346	358	25	

Two-way ANOVAs were conducted on the data for all countries to explore the observed differences in contribution per order more in detail.

Table 2 presents the ANOVA for the Swedish subsample (the significant patterns are again identical for all four countries).

Table 2 ANOVA on contribution per order in Sweden

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	456861012	3	152287004	1383	< 0.001	0.025

Intercept	9640321806	1	9640321806	8752 5	< 0.001	0.347
Buy habit	158668911	1	158668911	1441	< 0.001	0.009
Return habit	303417785	1	303417785	2755	< 0.001	0.016
Buy habit * Return habit	158949373	1	158949373	1443	< 0.001	0.009
Error	18127084710	164577	110143			
Total	33575189056	164581				
Corrected Total	18583945722	164580				

Repeat customers and non-returners generate a significantly higher contribution per order ($F = 1441, p < 0.001$ and $F = 2755, p < 0.001$ respectively). There is also a significant interaction effect between the factors ($F = 1443, p < 0.001$). For non-returners, the contribution per order is not significantly different depending on whether they are repeat customers or not. Returners, on the other hand, generate significantly higher contribution per order if they also are repeat customers.

Total contribution per customer and year

Table 3 presents descriptive statistics regarding total contribution per customer and year for all four countries. Note that the values for non-repeat customers are the same as in Table 1.

Table 3 Total contribution per customer and year, note number of orders n* in 1000

		SWE			NOR			DK			FIN			
		Mean	SD	n*	Mean	SD	n*	Mean	SD	n*	Mean	SD	n*	
BH	0	0	327	356	80	559	523	23	438	414	15	376	385	12
		1	157	339	19	349	637	4	238	417	3	220	362	4
		Total	295	359	98	525	549	27	406	421	18	339	386	16
	1	0	921	944	29	1599	1495	8	1152	996	4	1021	946	4
		1	1321	1747	37	2090	2450	7	1337	1486	3	1250	1270	5
		Total	1147	1467	66	1828	2012	14	1237	1249	7	1150	1145	9
	Total	0	484	630	109	824	989	30	579	644	19	532	636	16
		1	936	1542	56	1405	2127	11	807	1237	6	807	1111	9
		Total	637	1056	165	979	1412	42	635	835	25	629	845	25

Two-way ANOVAs were conducted on the data for all countries to explore the observed differences in total contribution per customer and year more in detail.

Table 4 presents the ANOVA for the Swedish subsample (the significant patterns are again identical for all four countries).

Table 4 ANOVA on total contribution per customer and year in Sweden

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	31762561573	3	10587520524	11475	< 0.001	0.173
Intercept	58055895333	1	58055895333	62922	< 0.001	0.277
Buying habits	24136466847	1	24136466847	26160	< 0.001	0.137

Return habits	413915532	1	413915532	449	< 0.001	0.003
Buying habits * Return habits	2537269709	1	2537269709	2750	< 0.001	0.016
Error	151849456970	164577	922665			
Total	250478290897	164581				
Corrected Total	183612018543	164580				

The fact that repeat customers generate a significantly higher total contribution per customer and year ($F = 26160$, $p < 0.001$) is not surprising, to say the least. More interesting is the fact that returners generate a significantly higher total contribution per customer and year than non-returners ($F = 449$, $p < 0.001$). The interaction between the factors is also significant ($F = 2750$, $p < 0.001$). For non-repeat customers, the total contribution per customer and year is significantly lower if they also are returners. For repeat customers, however, the total contribution per customer and year is significantly higher if they also are returners.

DISCUSSION AND CONCLUSIONS

Gattorna (2010) highlights the importance of understanding the dominating buying behaviour in a supply chain. This study tested whether the "one size fits all" strategy results in a homogenous behaviour in fashion e-commerce. The grouping of customers (see

Figure 7) performed in this paper is not a segmentation as such; however, it surely indicates a heterogeneous buying behaviour thus requesting further qualitative research regarding a differentiated service delivery. The results from the quantitative analysis show an interesting pattern which supports both Gattorna's (2010) theory that the dominating behaviour found in one market appears in the others as well. Further, the findings also support the theory about reduced behavioural homogeneity within countries and increased commonalities across countries (Broderick et al., 2007) as the analysis did find a heterogeneous pattern within markets and matching patterns among markets. The research design used does not allow for discussion as to whether the behaviour has changed over time as suggested by (Broderick et al., 2007); it only acknowledges the matching patterns.

The increasing competition of channels versus channels rather than companies versus companies puts the highlight on all types of relations between and among entities in the supply chain. Relationships grow deeper and more profound and develop into new areas. RM is one of the emerging and important new areas. It is important in all the consecutive dyads in the chain, but it is of particular vital interest in the link between the retailer and the consumer. RM is of great importance for building strong and lasting relations in most dyads, but ultimately, it is decisive in gaining competitive advantage and profitability. RMs role as order winner has not been studied explicitly previously, but this study shows that using purchasing and return data as bases for segmentation can improve performance considerably.

Most eBusiness companies have a wealth of data concerning returns. However, it can be stated that even though they are drowning in data, they are starving for information. This means that they need a guideline for how to analyze existing data and how to collect valuable information.

Experiments with different tariffs for transportation and returns show that consumer behaviour is influenced by differentiated costs. The question is how to use this in a

systematic segmentation model. This research shows one possible approach is to use return data as a vital part of the model and complement it with purposefully collected data concerning buying behaviour (Ericsson, 2011). This fits quite well with the evolving demand chain approach with its focus on consumer behaviour, insight and alignment of marketing, sales and logistics activities.

It also goes hand in hand with the development of retailing with increasing co-creation and reliance on social media. The term co-creation is not new, however, but it is now receiving more attention as companies endeavour to differentiate themselves from the competition. Where in the past value was created by companies in the chain, value today is co-created at multiple points of interaction. Not only the physical product, but also the services in the value package can be co-created. RM is one of the most promising areas for co-creation!

To summarise these research findings and relate the results to the overarching hypotheses and research purpose, the authors conclude that there is conclusive support for both hypotheses. The behavioural model described in this pattern shows that customers behave in a heterogeneous way and this indicates that the "one size fits all" theory is obsolete as the literature indicates (Christopher et al., 2006; Gattorna, 2010; Ericsson, 2011; Godsell et al., 2011). The results also support previous findings that RM is an important part of the supply chain (Norek, 2002; Rogers et al., 2002; Stock et al., 2006; Mollenkopf et al., 2007a; Mollenkopf et al., 2007b; Frankel et al., 2010; Mollenkopf, 2010), as consumer returns are an important part of e-commerce customer behaviour and therefore important both to the case organisation and its partners, including the customers. Further, Mollenkopf (2007b) highlights the risks involved in e-commerce and the importance of RM in the service recovery process.

This research empirically supports the importance of RM in the service recovery in fashion e-commerce, as quite a large group of customers are systematically returning. However, companies using a "one size fits all approach" are focusing solely on RM efficiency and therefore missing the opportunity to create a competitive edge. They are missing the potential value it could add to the organisation and their customers (Mollenkopf et al., 2007a) as well as their supply chain partners. A differentiated return service might attract new customers (non-adopters) and better support the customer groups with diverging patterns or returns identified in this paper as RM. Clearly, this is a part of the value creation, at least to certain customers.

We are all hard-wired with a range of values as humans, and we all have different expectations towards products and services. So, therefore there is an interaction between product/service categories and buying behaviour, but it is the buying behaviour that determines demand patterns (Gattorna, 2010) and therefore how we should engineer our supply chains, forward and reverse (RM). And it is the range of buying behaviours which determine the number of supply chains in the end- with a bit of approximation to make the whole thing workable.

FUTURE RESEARCH

The findings reported in this study show how customers behave and that there clearly is a heterogeneous response from customers on the "one size fits all" strategy. It is important though to stress that the segmentation is but a starting point for aligning resources of the firm (Gattorna, 2010) and the supply chain. Future research should include qualitative research that creates a detailed understanding of why customers behave differently, it is important to investigate their values, and how to, from a supply chain perspective, design and deliver matching value propositions.

E-commerce is an extremely competitive market place (Kim and Kim, 2004). Therefore, the demand predictability is troublesome, and customers returning goods increase the uncertainty and variability of demand. Early indications of demand, in season, might turn out differently and change the pattern when returns arrive later in time. This might have implications on how we source and replenish products. Therefore, future research needs to address the behaviour pattern described in this paper in combination with different product categories. This means testing Gattorna's (2010) dynamic alignment approach in e-commerce aligning customers/market, strategy, internal cultural capability, and leadership style.

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