Understanding logistics-based competition in retail: a business model perspective

Erik Sandberg

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Understanding logistics-based competition in retail

– A business model approach

Erik Sandberg

Abstract

Purpose - Logistics scholars, as well as strategic management scholars, have in recent years shown that capabilities in logistics and supply chain management may be the foundation for a company's sustainable competitive advantage. It can be argued that beside product-, production-, or market-oriented companies, there are also flow-oriented companies, in which the business models are based on superior logistics performance. The purpose of this study is to explore the characteristics of logistics-based competition, i.e. how a logistics-based business model is designed.

Design/methodology/approach - The research is based on a case study at a German do-it-yourself retailer. The case company can be considered as a best practice company when it comes to logistics-based competition, where a committed top management team guarantees the importance of logistics in the strategic development of the company.

Findings - Logistics-related characteristics of the three business model components external environment, internal factors and offering, are elaborated.

Originality/value - This research adds to existing theory by developing the meaning of logistics-based competition. The strategic role of logistics is described through a business model approach.

Key words - Logistics, Strategy, Competition, DIY, Business model

Paper type – Case study

Author contact details

Erik Sandberg, Associate Professor
Logistics Management, Department of Management and Engineering,
Linköping Institute of Technology, Sweden
Tel: +46-(0)13-28 44 92, Email: erik.sandberg@liu.se

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1 Introduction

Most retail companies in Western European markets today face fierce competition and the search for new ways to increase competitiveness is accelerating. Companies seek to innovate throughout the entire supply chain, developing new strategies and business models. The do-it-yourself (DIY) sector, from which the case company in this study comes, is not an exception. This sector, typically defined as “home maintenance and improvement work conducted by household members on their own household without the paid services of a professional” (Williams, 2008, p. 312), is characterised by low brand loyalty among end customers, to whom highly undifferentiated products, services and low switching costs are offered (Datamonitor, 2009). Price and cost efficiency therefore become essential tools for competition. This, together with the fact that the sector in general is expected to continue to grow with further internationalisation, implies increased competition in the future.

Given this situation for retailers in the DIY sector, but probably also for retail companies in general, logistics operations, including purchasing, storing as well as distribution activities along the supply chain, are crucial for retailers’ overall strategic performance. Indeed, logistics-related capabilities might be a key competitive weapon for retail companies (Schramm-Klein and Morschett, 2006; Renko and Ficko, 2010; Ganesan et al., 2009). As argued by the logistics director of the case company presented in this study; “Retailing does not have logistics, retailing is logistics”. Some companies are not at first hand “product-“, “production-“ or “market-oriented”, but “flow-oriented” in their strategic profile.

From a strategic management perspective, logistics has traditionally been considered as an operational issue and thus treated as a pure outcome of, rather than something that can also provide input for, a company’s strategy (Sandberg et al., 2011). Instead of
discussing how logistics performance may be related to overall company performance measured in terms of profitability and growth, logistics scholars have stayed inside the “logistics-box”, developing specific logistics strategies with a vague relationship to profitability and growth (Abrahamsson and Rehme, 2010; Schramm-Klein and Morschett, 2006).

However, the logistics research discipline is changing, and a recent, more strategic trend has brought logistics research closer to strategic management research (Ketchen & Giunipero, 2004; Hult et al., 2007; Mentzer et al., 2004). Logisticians have started to acknowledge the importance of linking logistics (and logistics strategies) to companies’ overall corporate performance and encourage logistics development related to profitability and growth (Tracey et al., 2005; Schramm-Klein and Morschett, 2006). At the same time, interestingly, strategic management scholars have recognised the importance of operations and operational resources as a source for sustainable competitive advantage (Cheng & Grimm, 2006).

A key task for this type of research is to better understand and explain the logistics role in the strategy of the firm, for example, by explaining how logistics contribute to, and sustain competitive advantage to the company. One promising research stream for doing this is to apply a business model approach (Abrahamsson, 2008; Sandberg et al., 2011). Describing the business model, which can be seen as an “operationalization” or “blueprint” (Osterwalder et al., 2005) of the company’s strategy, can offer a means of identifying and understanding the “logistics content” of the company’s strategy. Based on a business model approach, the purpose of this study is to explore the characteristics of logistics-based competition. Through a case study on a German DIY
retailer, this research aims to describe how logistics can be related to the creation of a sustainable competitive advantage in the DIY sector.

After an outline of the methodology, the business model concept is developed and three overall business model components are described: external environment, internal factors and offering. Based on these three components, characteristics of the case company’s logistics and how these characteristics relate to overall corporate strategy are analysed. Finally, conclusions are drawn and a discussion on a future research agenda is outlined.

2 Methodology

The data presented in this article has been extracted from a larger research project on the DIY retail sector in several Western European markets. For the purpose of this article, a German DIY retailer forms the empirical basis. Given the absence of production, or other production-related capabilities, retail companies in general provide a fruitful research ground for the exploration of the role of logistics in the strategy of the firm (e.g. Sandberg and Abrahamsson, 2010).

In line with Siggelkow (2007), this explorative case study motivates, inspires, and illustrates the important relationship between logistics operations and competitive advantage. The case company has shown proof of being a forerunner in a number of logistics-related areas over a number of years and has had a solid development when it comes to profitable growth, a major indicator for sustainable competitive advantage. As such, it can be considered as a best practice company when it comes to logistics-based competition, where a committed top management team guarantees the importance of logistics in the strategic development of the company. Thus, this company has been
chosen due to its richness of data and ability to illustrate new knowledge about logistics-based competition (Eisenhardt & Graebner, 2007; Yin, 2003; Siggelkow, 2007).

The collected data about the case company consists of three parts. First, facts and figures, academic works referring to the company some co-authored by employees, as well as short articles in newspapers, in particular those found on the website of the Lebensmittelzeitung (www.lz-net.de), have been used. Secondly, an interview with a top manager with very good insight in the overall company strategies and logistics functions was conducted. The interview followed a semi-structured interview guide (e.g. Yin, 2003), with questions focused on product range policy, purchasing strategy, and distribution operations. To capture the business model aspect, the interplay between logistics operations and corporate strategy as well as how the logistics function was related to other functions were especially focused. As logistics has since long been a prioritised area for top management in the company the interviewee was able to present and discuss several examples of how strategic advantages were gained from superior logistics performance. Thirdly, one of the company’s distribution centres (DC) was visited, which gave an opportunity to discuss the physical flow of goods more in detail.

The analysis of the case study has been based on a theoretical framework of business models where the three components of internal factors, external environment and offering are outlined. In an iterative manner, a number of specific logistics-related characteristics for the business model have been identified in each component. Following business model literature, it is argued that these characteristics constitute the sustainable competitive advantage of the company (Amit & Zott, 2001; Sandberg et al., 2011).
3 Business models

It has been argued that logistics research can be enhanced by borrowing theory from other disciplines (Stock, 1997). In this article, a business model approach developed in the strategic management literature is used as a means by which to explore the characteristics of logistics-based competition.

3.1 The business model concept

The business model concept originates to a large extent from market positioning theory (Porter, 1985) and the resource based view of the firm (Barney, 1991; Barney & Clark, 2007; Olavarrieta & Ellinger, 1997). The market positioning theory developed by Porter (Porter, 1985; Porter, 1996), suggests that firms succeed mainly through the possession of a superior market position, where a company outperforms its competitors based on a strategy of either cost leadership, differentiation or focus (Porter, 1985). The resource based view of the firm, founded during the 1990s partly as a reaction against the positioning school (Grant, 1991), focuses instead on the internal resources and/or capabilities of the firm that are valuable, rare and difficult to imitate for competitors (Barney and Clark, 2007). Such capabilities, it is argued, are the source for a sustainable competitive advantage.

Juxtaposing these two theoretical fields of literature in a combinative (Parnell, 2006) manner, a business model can be described as the logic and functioning of the firm (Tikkanen et al., 2005) and thus a tool to use in describing the interplay between operations and strategy in a company. For companies with large logistics content, a business model can therefore be used as a means to explain how the activities and processes of logistics are related to strategic considerations of the company. Afuah
(2004) states that a business model “is the set of which activities a firm performs, how it performs them, and when it performs them as it uses its resources to perform activities, given its industry, to create superior customer value (low-cost or differentiated products) and put itself in a position to appropriate the value.” (Afuah, 2004, p. 9). Another frequently cited definition is provided by Osterwalder et al. (2005), who define a business model as “a conceptual tool that contains a set of elements and their relationship and allows expressing the business logic of a specific firm. It is a description of the value a company offers to one or several segments of customers and of the architecture of the firm and its network of partners for creating, marketing, and delivering this value and relationship capital, to generate profitable and sustainable revenue streams.” (Osterwalder et al., 2005, p. 10)

In summary, a business model is “a distinctive description of how a company structures its operations and resources, perform on the market and makes profit in their daily business” (Sandberg et al., 2011, p. 128). Most of the business model research literature of today is to be found in the interface between management and IT, e.g. in E-business (Kindström, 2005). Thus the application of a business model approach in a logistics context is a relatively novel research initiative, but a fruitful one in developing understanding of logistics-based competition.

3.2 Components of a business model

To structure and describe the content of a business model, it is often divided into different components, and over the past decade a number of different constellations have been suggested (Osterwalder et al., 2005; Amit & Zott, 2001; Kindström, 2005). For instance, to cover the entire range of activities, resources and strategies included in the business model concept, Osterwalder et al. (2005) present nine “Building Blocks”
supporting the business model: values proposition, target customer, distribution channel, relationship, value configuration, core competency, partner network, cost structure and revenue model.

In a simpler form based on the two theoretical underpinnings of business models: the positioning school and the resource based view of the firm, Kindström (2005) argues a generic business model to have three components: the external environment, the internal factors and the offering in between that connects these two. Whereas the external environment incorporates issues on competitive positioning on the market, typically including Porter’s (1985) five forces: suppliers, buyers, potential entrants, substitutes, and inside-industry competitors (Hedman & Kalling, 2003), the internal factors are concerned with the activities and resources needed for the company’s operations. Typically, from such an inside-out perspective two questions emerge: (1) how is potential shareholder- and customer-value created in the company and/or supply chain, and (2) how are transactions enabled that can realise that potential value (Amit & Zott, 2001)? Finally, the offering component handles the exchange of products and services to the company’s customers and is hence what links the other two components to each other. These three very simple, but helpful, components will be used in this article, and are therefore the basis for the analysis.

4 Case company description

The case company, with Germany as its domestic market, has had a growth rate well above average and operates in a large number of countries in the Western European market. It offers a broad range of products including tools and electrical equipment,
wallpaper, flooring, interior decorations, a large range of different types of construction materials, and garden furniture.

Beside supportive functions such as finance, the internal structure of the company consists of three departments, which are also the major functions of the company: (1) Store operations, (2) Merchandising, and (3) IT and logistics. Store operations are responsible for the design and layout of the stores and internal handling in the stores. The merchandising department is considered the internal “innovation department”, with responsibility for managing the product range and sourcing issues. Products are divided into sub-groups, managed by a “captain” situated central headquarters. Local merchandisers at each store, who have the responsibility for the local adjustments of the assortment, including ordering and pricing, complement these central captains. In addition, since all products are given a landed cost (i.e. logistics costs per item) the local merchandiser is responsible for the net profit margin of his/her product range. The overall captain’s role is to consider the product range in the different subsidiaries and give the frames for the local merchandisers, in terms of e.g. use of IT systems and considerations for uniform design of the products. The merchandising department is also responsible for the sourcing of products, e.g. choice of supplier and the joint collaboration with suppliers about new products and new brands. The IT and logistics department has responsibility for IT and its development in the company, the physical flow of goods including ordering and control of transport from suppliers to the stores, the operation of distribution centres, as well as deciding the order quantities in the flow of goods. In addition, the IT and logistics department provides the merchandisers with cost calculations and logistics knowledge when it comes to sourcing decisions for example.
As a result of centralising the distribution system a couple of years ago, the company has concentrated their operations to a few larger distribution centres (DCs). These complement each other geographically and provide a suitable platform for further expansion into other European countries.

Overall, the DCs are considered to have two main functions: first, they serve as a hub for the cross-docking activities, i.e. the split of larger deliveries from suppliers and bundling of different products to different stores. Second, they provide a traditional inventory for seasonal and imported products which, because of the lot size, cannot be directly delivered to stores. Increased internationalisation of procurement means that the DCs have increased in importance during recent years and are now seen as a source of competitive advantage towards competitors.

As well as the supply from the DCs, goods are also delivered directly from suppliers to the different stores. Approximately 50% of the total amount of goods is delivered directly by the supplier to the stores. The flow of goods is carefully monitored, to ensure optimum efficiency across the entire supply chain.

5 Analysis

Following the structure of a business model outlined above, a number of logistics-related characteristics in each business model component have been identified. A summary of the characteristics is shown in Figure 1 below:
Figure 1: Characteristics of the business model components

5.1 External environment

*Well-defined target customer group*

In a retail sector suffering from fierce competition, where most companies are hard to distinguish from each other from a consumer perspective (Schommer et al., 2005; Schäfer, 2008) it is a priority to differentiate the company from competitors. The case company has therefore deliberately focused their business towards a customer segment labelled "project consumers", defined as private consumers about to carry out a large construction- or renovation project at home or in the garden, either by themselves or with assistance from professionals. This customer type is offered a large range of products across a number of product areas, as well as complementary services such as advice and selection of quality, making it possible for consumers to have one single supplier and partner for their entire project. Typically, the customer visits the store Monday to Friday and buys everything needed, and then the renovation takes place during the weekend.
The targeted customer group sets the frame for the logistics function and what the company should achieve. Logistics challenges include the management of a broad and deep range of products with high demand on availability of inter-related products (in terms of demand structures) in order to ensure one stop shopping.

A multiple set of positioning strategies

From a market positioning perspective (Porter, 1985; 1996), the case company offers a good example of where the application of more than one of Porter’s (1985) generic strategies (low cost, differentiation and focus) does not mean a market position “stuck in the middle” – this position should not be considered as a failure, but rather as an accomplishment.

Competitive prices are, as for all companies operating on the European DIY markets, seen as core for the company; in particular good value for money is strived for. To achieve this, logistics and supply chain issues have been an area of focus for many years; above all an efficient cross-docking system together with IT system has been crucial (see next section). The case company also has a clear goal to provide low prices on a continuous basis and thus avoid occasional discounts, which makes it difficult for customers to plan their purchases and their projects in advance. Clear communication with customers and an ambition to clarify business objectives is hence important.

Several independent market surveys confirm this picture, and the company is highly ranked when it comes to ability to offer “good value for money”.

When it comes to differentiation strategy, market surveys and academic research also indicate that the case company has a long record of being considered service oriented. Together with an exhaustive product range this is suitable for their targeted customer
group, the project consumers. Besides service and assortment, there is a long history of being an innovative company when it comes to new store concepts and the assortment. Indeed, following the company over a number of years, it has several times been a forerunner for new thinking in the DIY sector, as acknowledged in market surveys as well as by competitors.

*Geographical expansion*

Like many competitors, the case company has expanded their business to a number of other European markets. This has been a prioritised goal from management and thus an important part of the business model. Although the financial situation on the world markets in recent years has decreased the pace of expansion, aggressive growth targets are set for the future. The company is maintaining their strong domestic position on the German market, however most of the growth is planned to further penetration of foreign markets and to the development of new ones. In this long term planning, logistics plays a decisive role and often sets the agenda for the expansion; without secured supply and well planned deliveries, the expansion and opening of new stores will fail. Careful control and calculation of logistics costs is considered a key weapon in the search for new establishments.

**5.2 Internal factors**

*Integrated functions and strict division of responsibility*
As previously stated, the case company has for many years had a strong focus on logistics and the optimisation of the complete flow of goods from suppliers to the shelves in the stores. By taking control of the entire chain themselves - instead of “just wait for the goods to come” standing at the end of the chain - the case company has been able to take advantage of this by making considerable cost improvements in the supply chain. As noted by the Logistics director, “retailing does not have logistics – retailing is logistics”.

As a result of the supply chain focus, the company has been working for several years to find a suitable design of their organisation. In particular the interface between the merchandising department on the one hand, and IT and logistics on the other, has undergone many improvements. The objective has been to develop strict, clearly defined areas of responsibility for the different departments so that processes become smooth. For instance, whereas the product captains at the merchandising department are estimating and deciding total amount of product that will be bought over a prolonged period of time, e.g. a year, the IT and logistics department is responsible for defining delivery dates and order quantities. In addition, both departments work with strict time schedules for the sourcing process of new products, in order to avoid delayed deliveries and better internal communication of the progress of different projects. Indeed, the high degree of integration between the two departments demands strict management and clear lines of responsibility for the different processes.

The logistics department is one of the driving forces behind the internal integration of functions and the development of cross-functional business processes. Employees at this department consider themselves as “process engineers”, with the tasks of making the supply chain visible, clarifying the potential for improvements, and bringing internal as
well as external supply chain members together in order to be able to optimise the flow of goods. Along with the other departments, IT and logistics are working towards the goal of having control of the entire supply chain from suppliers to end-customers. In this work, long-term agreements and trust-based relationships with suppliers are an important issue. Indeed, the design of efficient processes is at the very core of the business, and are thereafter linked to efficient IT solutions that can further support the supply chain operations. The statement of “process leads – IT serves” is a typical managerial principle for the company.

Designing the supply chain does not only encompass traditional logistics activities such as transportation in the form of choice of third party logistics (3PL) and a smooth physical distribution network, but also how these operations are aligned with the product range, sourcing relationships and the targeted customer group. In short, the entire logistics system (which in itself is well integrated in terms of DC operations, transportation performed by 3PL companies, ordering activities from the stores, etc.) is effectively linked to marketing and other strategic issues.

*Efficient logistics system*

Considering the more traditional logistics activities, these are dominated by transportation, handling, storing and cross-docking activities in the DCs. Efficiency in this system is considered as key to the cost efficient flow of goods. This is an area where the case company has shown proof of being very successful. In fact, if considering company costs (i.e. costs for operations as well as fixed costs for warehouses and stores, personnel, etc.) as a percentage of the total turnover, this figure is one of the lowest
among German DIY retailers according to a recent research study. The cross-docking system is considered as the most influential factor for this efficiency and to further improve it the share of goods that are cross-docked is continuously increased.

*Control of costs and operations with IT*

Efficiency in the logistics system requires control of costs and operations, hence IT plays a decisive role for the case company’s logistics and is also the reason for the integration of IT and logistics in one department. Having developed its own system, the case company has built up a competitive advantage over a number of years, in terms of, for example, procuring transport services and providing merchandisers with cost information (landed cost) for potential new products, as well as for different sourcing alternatives of a product. The system is hence an important tool for decisions of whether materials should be taken to inventory to be cross-docked, or delivered directly to the stores. Overall, the IT system links and enables supervision of direct supplies to stores, indirect deliveries via central warehouses and all cross docking activities in the supply chain. Additionally, during the past years, the IT system has enabled provision of detailed information about landed costs – a crucial success factor for the expansion to new markets, thus laying a foundation for further growth.

The information system also plays an important role when it comes to collaboration with suppliers. Here the IT and logistics department exploits a well-developed system of rating all suppliers of the DCs according to the deviation of their deliveries from the originally negotiated terms. Too early and too late deliveries as well as variations in the amount of delivered material are recorded. This information, measuring the effectiveness of the suppliers, is sent to the suppliers in regular reports. This knowledge
has over the years been an important prerequisite and platform for successful collaboration and development of supplier relationships.

5.3 Offering

Good value for money and adjusted service

As previously described, the targeted customer group is labelled project consumers that are about to carry out a construction or renovation project in their home or garden. These customers are not willing to make their purchases in several different stores, chasing the lowest price or discounts; furthermore, they need proper services and advice for their relatively advanced building projects. Thus, relatively low, day-to-day prices combined with proper services are seen as a necessary cornerstone of the offering. From a logistics perspective, this is fundamental for the possibility of long term planning. Services, including knowledge about products, can also be developed and ensured through a relatively stable product mix.

Large-scale and homogenous stores

To meet the requirements of the targeted customer group, i.e. offer them everything they need for their projects, the stores are very large scale. Whereas the average size of a German DIY store in 2008 was about 5,000 square metres (EHI, 2009), the stores of the case company are considerably larger. In addition to the large size, the stores are relatively homogenous, which potentials allows for economies of scale in operations, mainly transportation. Furthermore, it facilitates a rapid rollout of universal and/or innovative concepts to old and new sales areas alike in a “best practice manner”.
Given the economies of scale in transportation, the case company has long since realised the advantages of not having the transportation costs included in the price from suppliers, as still is the standard for most players in the sector. The large stores, and a sales productivity per square meter that is higher than competitors’, result in relatively large order batches to the stores.

*Balance between universal products and local presence*

Although homogeneity of stores is important, a successful market entrance often requires some customisation in terms of products, opening times, and additional services etc. (Kumar, 2008; KPMG, 2006). Management is aware of this and for instance full instructions and brand names in the language of the country is a widely recognised, important feature. It is therefore necessary to manage a mix between universal products to be sold at all stores in all countries, thus enabling economies of scale in purchasing and handling, and company-specific local presence with products that are sourced locally.

The local sourcing is also driven by the fact that it is not always more cost efficient to source everything internationally. From a logistics point of view, the need for a balance is recognised between the share of products that should be distributed to the stores via DCs and the share of products that should be sourced locally and delivered directly to stores from the supplier. Alternatives for sourcing are therefore scanned on a continuous basis, in order to find the most cost efficient solution. As a help for this, the IT and logistics department provides local merchandisers with figures on landed costs from the DCs so that the alternative with the lowest total cost (product price and landed cost) always is chosen.
6 Conclusions and further research

In today's business environment, logistics may be a source for a company's sustainable competitive advantage, contributing to overall company profitability and growth. Companies nowadays may not only be described as market-, product-, or production oriented, but also as flow-oriented. This is indeed valid for many retailers. This research is based on a case study that explores what is here labelled logistics-based competition, i.e. where superiority in logistics is decisive for the outperformance of competitors and contributes to the overall company profitability and growth.

As such, the research results point at the importance of combining and harmonising the content of the three business model components of external environment, internal factors and offering, as they are highly dependent on each other. For instance, a well defined targeted customer group facilitates a relatively stable and well-known demand, which in turn enables the offering of good value for money and adjusted (suitable) services. Another example is the development of large-scale, homogenous stores that permit the company to gain economies of scale in transportation, thus enabling an efficient logistics system. Overall, the case study results indicate a close relationship between logistics and other vital functions in a retail company such as marketing. This is in line with previous research by Schramm-Klein and Morschett (2006), who showed the importance of integration within and between the marketing and logistics functions, and their relationship to the overall corporate performance of retail companies. For logistics researchers in retail, this signals that further attention must be given to company operations outside the logistics scope. Simply put, without proper understanding and description of what is happening outside the "logistics box" it will not be possible to design a suitable logistics system that can contribute to overall
company goals. Therefore a business model approach that captures not only logistics issues, but also marketing and other strategic issues in the company, is a promising area for future research.

This type of research is still in its infancy, and as with any research, it has several limitations. More work in the area is needed to increase the validity of the findings; for instance, to increase the construct validity (Yin, 2003) an important next research step involves development of more specific business model components. This article has used a very simple model with three highly generic components, to develop these components into more detailed facets may form an even better ground for analysis in the future. Another potential area for research that would improve internal validity (Yin, 2003) would be to develop a longitudinal perspective on business models in retail, investigating for instance how different business model components are co-developed and intertwined with each other. The present research does not consider the establishment and creation of these and if, for example, there is a preferred chronology or cycle appropriate for this work. Finally, as often is the case in new research areas, the research results presented here are based on a single case study. A case study like the present one can typically shape existing theory by pointing to gaps and begin to fill them (Siggelkow, 2007) and, as was argued in the methodology, be considered valuable from a theoretical sampling perspective (Eisenhardt & Graebner, 2007). However, the results could be further strengthened and developed, and the external validity increased, through more and similar case studies (Yin, 2003).

For retail practitioners, a business model approach can aid in describing and analysing the role of logistics in the strategy of the firm, e.g. the organisational belonging and the domain of responsibility for the logistics division in a company (Abrahamsson and
As such, the case company and its business model represent a valuable, easy-to-understand showcase on logistics-based competition.

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