

# Strategizing in industrial networks

## Fallacies of customer order based production

**Benedikte Borgström**

Jönköping International Business School, bobe@jibs.hj.se

**Susanne Hertz**

Jönköping International Business School, hesu@jibs.hj.se

### **Abstract**

Recently, it was claimed that the overall contribution of the IMP approach to the strategy literature has been insignificant and that, within the strategic management field, the strategy-as-practice research is of particular interest to exchange ideas regarding industrial network's strategising. In this paper, we are theoretically concerned with how people's activities links to organizational strategies, both in term of content and in term of process. The promise of customer order based production is related to customer orientation as well as to cost reductions. Our standpoint is that strategy is not something an organization or a supply chain has; it is a practice that people do. Therefore dynamics is important to understand fallacies of customer ordered based production and thereby strategic development.

Our purpose is to describe and analyse how strategizing influences the intended outcome of a customization strategy.

The theoretical framework is based on supply chain strategies, especially, customer order based production. Strategizing in industrial networks is the major theoretical contribution. We use illustrations based on an automotive in-depth case study to analyse dynamics of the strategy. The strategy in practice forms phases of a pattern in the strategy development. Interactive strategizing (such as new-owner rhetoric) reframes and realigns goals while procedural strategizing (such as routines for supply chain planning and production) resists unplanned change. Shifting demand and irregular profitability are examples that create goal ambiguity regarding standardization / customization and that influence especially interactive strategizing towards increased importance of costs. When low costs become a means to an end of increased profit it is fallacious to expect retained customer responsiveness.

**Key words:** Strategising, supply chain, automotive, customer order based strategy, practice.

## **Introduction**

The latest decades the industry has changed its management of production and distribution to improve quality and decrease costs. In addition, firms tend to embrace customer orientation as a strategic key word. The change process involves increased efficiency and effectiveness. Efficiency is achieved by coordinating the supply chain to decrease waste and costs and effectiveness by adapting to the customer and becoming customer oriented to increase profits.

The promise of customer order based production is to meet the requirements of individual customers (Gunasekarana and Ngai 2005). It involves cost reductions as well as improved profits. If the supply chain only produces based on customer orders then risks and costs are reduced (Hines, Holweg, and Rich 2004; Womack, Jones, and Roos 1990). The role of logistics herein is distinguished. Also, if the supply chain interacts and develop in line with customers' need and expectations then profits will increase (Kaplan 2002; Webster 1994). This promise of cost reductions *and* customer responsiveness is to some extent in contradiction to beliefs that strategies must either be cost-focused or focus on differentiation (see for example Fisher's (1997) categorization that divides efficient and responsive supply chains as incommensurable in line with Porter's (1985) view of competitive advantage).

The strategic trade-off between cost-leadership and differentiation in supply chains is questioned (see e.g. Sellidin and Olhager 2007), and further research is needed (Waller, Dabholkar, and Gentry 2000). Strategic development is characterized by interdependencies between the strategic content and the strategy process (Johnson, Langley, Melin, and Whittington 2007). One illustrative example of how the employment of "contradictory" strategies affects development over time is the case study of National Bicycle Industrial Company that are employing mass production in one site and mass customization in another site, this case study illustrates how learning enriches both strategies in use, the efficient as well as the responsive (Kotha 1995). Possibly, in some situations different strategic capabilities to achieve low costs or to be responsive are contradictory but complementary over time. Kaplan describe that strategies for increased efficiency and strategies for increased responsiveness are combined differently over time even though responsiveness, in total, is becoming more important (2002).

Fallacies of customer ordered based production are related to customer orientation as well as to cost reductions. Problems might relate to dynamics, such as shifting demand, irregular profitability, and goal ambiguity. We will describe and analyse how strategizing influences the intended outcome of a customization strategy. Situations, when customer order based production is side-stepped, might illustrate fallacies in the promise of reduced costs as well as of increased profits.

The continuation of the paper is structured as follows. First theoretically, we will define and discuss supply chains and supply chain strategies. Especially, customer order based production is discussed and related to customer orientation and costs. To explain the strategic development we will use strategic management researchers' development of strategizing and apply this in a supply chain context. Second, the method is explained. The illustration is based on an in-depth case study and interviews with supply chain actors, such as retailer, distributor, and manufacturer. Third, empirically we use automotive problems-and-opportunities experiences of customer order based production to discuss strategic development. In the automotive industry customer order based production corresponds to a built-to-order strategy. Fourth, we will analyse strategic arguments and intended outcome of the strategy. Finally, we will conclude the paper.

## **Supply chain strategies**

A typical model of industrial networks includes actors, resources and activities. Actors perform activities and control resources, activities use resources to change other resources. Resources are utilized in activities by actors. These elements might be seen as nets and are interwoven in an industrial network (Håkansson and Johanson 1992). A supply chain is a delimited part of a network,

i.e. a level of analysis which includes three or more interlinked firms (Harland 1996). Here, supply chain management is defined as

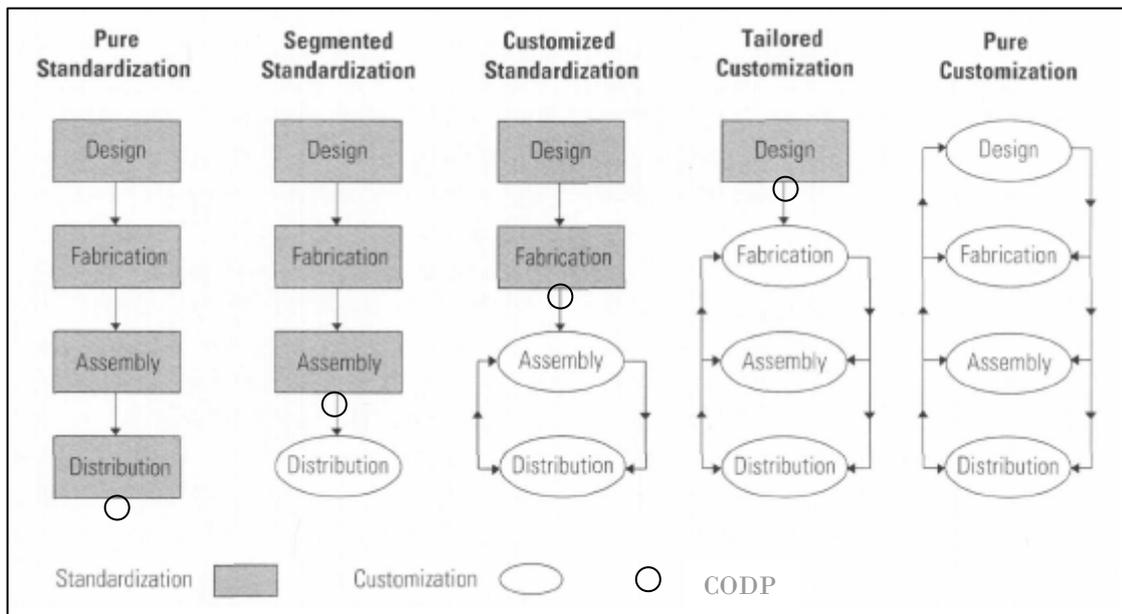
*The systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across business within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole. (Mentzer, Dewitt, Keebler, Min, Nix, Smith, and Zacharia 2001:18)*

This definition emphasizes the strategic effort to coordinate parts as well as the whole towards improved performance. The supply chain is like a quasi-organization because different firms are autonomous parts within it and in concurrent supply chains. Supply chains are bonded by strategic commitment in long-term relationships and activities are based on high commitment and integration into a whole (Lambert, Cooper, and Pagh 1998; Mentzer et al. 2001). The chain activities are interdependent. These dependencies might be seen as serial, parallel and reciprocal to facilitate economies of scale, scope and customer-oriented product and process development (Håkansson and Persson 2004; Thompson 1967).

In the strategy literature the term value chain is more common than the term supply chain and we use these interchangeably with each other. The main difference is that the term value chain says little about involved actors, i.e. about the supply chain structure. Rather, added product value and business models seem to be scrutinized. Lampel and Mintzberg (1996) discuss a strategic continuum of standardization and customisation for a manufacturing firm with four stages in its basic value chain: design, fabrication, assembly and distribution. The increasing degree of customisation in these configurations makes up five different strategies (Figure 1):

- Pure standardization that is reliant on a broad group of customers willing to take the same offer thereby admitting firms to take advantage of economies of scale.
- Segmented standardization that is reliant on aggregated clusters of buyers as in the designer market. The strategy aims to offer a huge variety and customized delivery but not to the customers' request, i.e. the product offer is standardized.
- Customized standardization implies customized assembly but standardized fabrication. The configured components are mass produced for the aggregate market. The configuration is constrained by the range of available components and a central core such as an automobile body.
- Tailored customization, a product prototype is modified and adapted for particular customer's wishes.
- Pure customization, customization reaches all the way to the design. Buyers and sellers are deeply involved in each others decision-making as in specific, non-recurrent projects.

The division between customized activities and standardised activities is, in operations management research, conceptualised as the customer order decoupling point, CODP, in Figure 1. Pure standardisation strategy means that the whole supply chain is decoupled from customer orders and is fully forecast-driven. The segmented standardisation is decoupled from customer orders before the distribution activities, and so on.



**Figure 1 A continuum of strategies. Source Lampel and Mintzberg 1996:24**

Common to the right hand strategies in Figure 1 is that the main part of the value chain is configured to be customer responsive. Customer orientation means that firms focus on customers and that sense-making (for future innovation) is based on firm-and-customer interactions (Webster 1994). Customer responsiveness is achieved by postponement of value-adding activities until the order is received, i.e. after the CODP. Customization strategies decrease uncertainty of demand (Hulthén 2002; Kaplan 2002). A built-to-order strategy is an example of customization strategy that is applied, among others, in the automotive industry. The objective of a built-to-order strategy is to meet the requirements of individual customers. The flexibility is facilitated by outsourcing and information technology (Gunasekarana and Ngai 2005). Outsourcing of different activities increases specialization of the actors and thereby interdependencies among the actors in the supply chain. Information technology is used to bridge the gap that is created between the interdependent, specialized actors, especially to keep the supply chain customer oriented and improve its flexibility. Supply chain flexibility is crucial to align production to customer demands and involves flexibility in distribution, final assembly, fabrication of components and modules (Fredriksson 2002).

The built-to-order strategy involves cost reductions as well as improved profits (Holweg and Pil 2004; Waller and Bartolini 2002). If the supply chain only produces based on customer orders then risks and costs are reduced (Hines et al. 2004; Womack et al. 1990). Also, if the supply chain interacts and develops products and processes in line with customers' need and expectations then profits will increase (Kaplan 2002; Webster 1994). The built-to-order supply chain advantage is independent of finished goods inventories as the final customer waits for configuration. Flexibility towards customer orders and logistics that is fast, reliable, and customized. Uncertainty of supply and demand is managed in collaborative supply chain relationships by strategic component and module buffers and information management (Gunasekarana and Ngai 2005; Hoek 2001). Inventories of modules in connection to the customer order decoupling point facilitates postponement of assembly activities until the customer order is known and a shorter delivery time. The built-to-order strategy does have characteristic problems that decline profits, these costs are related to order-processing, multiple revisions of specifications, last-minute changes in orders and in production plans and unreliable delivery dates (Gunasekarana and Ngai 2005).

In general, postponement is applied mid- and down-stream in the supply chain as a cost minimization effort (Hoek 2001). However, postponement facilitates also mass customization and agility efforts as the supply chain becomes customer responsive. Cost minimization and responsiveness is traditionally seen as a trade-off.

Fisher's (1997) categorization divides efficient and responsive supply chains as incommensurable. The assumption is that functional products have a predictable demand and innovative products have an unpredictable demand and that characteristics as product life cycle, contribution margin, product variety, forecast error, stock out rate, end of season markdown and required make-to-order lead time are correlated to the nature of the product. The bottom-line in this is that supply chains should be designed either to minimize costs or to maximize responsiveness. The Fisher-model has received considerable attention in logistics research literature as well as acting as guidelines in practice. Selldin and Olhager (2007) empirically tests a model that questions the Fisher relationship and identified some supply chains that are physical efficient as well as and market responsive. This fits well with the industrial network theory that shows that most business relationships are long term and that supply networks are stable and therefore, most certainly, impossible to design or configure on a short-term basis (see e.g. Håkansson and Ford 2002).

### **Strategic development in practice**

Strategy is not something an organization or a supply chain has; it is a practice that people do (Johnson et al. 2007). The strategic outcome relies on different premises and dynamics, which leads to different implications over time. Thus, the strategic content as well as the strategic process are important to understand strategic development in practice (Johnson et al. 2007). Strategy-as-practice perspective's assumptions is aligned with assumptions in the industrial network perspective (Baraldi, Brennan, Harrison, Tunisini, and Zolkiewski. 2007). The strategy-as-practice (S-A-P) perspective attempts to explain strategic action beyond the current orthodoxy of the strategic management discipline, i.e. content of strategy or strategy process that is linked to performance. S-A-P involves macro questions related to institutional field practices as well as micro questions related to activities and praxis (Johnson et al. 2007:18). In this paper, we are concerned with how people's activities links to organizational strategies, both in term of content, i.e. built-to-order strategy and in term of process, i.e. how the strategy develops. As Baraldi et al (2007) pinpoint, S-A-P has not yet explored industrial networks or inter-organisational actors as factors influencing to strategy, although these factors are clearly relevant to the practice of strategy. Traditionally, the top management team is seen as the major source of strategic change. We would like to pay attention to less obvious influencers in line with Jarzabkowski's (2005) analysis of how University strategies are constructed and changed in a dynamic and interactive way. Jarzabkowski's empirically based model of strategic development explains how interactive and procedural strategizing influences strategy. Strategizing is actions, interactions and negotiations of multiple actors in a setting of practices (practices is shared routines and procedures (Whittington 2006)), which is consequential for the strategic outcomes and directions of the firm (Jarzabkowski, Balogun, and Seidl 2007; Johnson, Melin, and Whittington 2003). The different actors make sense of how the strategies should be interpreted and executed. Different outcomes are traded off. Thus, the strategic actions are heterogeneous and depend on who is acting but are guided of practices.

Strategic development and its consequential outcomes differ as strategic activities are heterogeneous (Jarzabkowski 2005). Strategizing involves dynamics and complexity that might be explained by dependence on other firms and the praxis within and between these firms. Praxis refers to what people do in practice (Whittington 2006). Firms coordinate activities with important customers and suppliers to achieve increased efficiency and effectiveness. Strategizing and strategic outcome might therefore depend on interaction between actors in different firms that influence each other by procedures and interaction. Procedural strategizing is the use of formal administrative practices to shape strategy by structuring routines (Jarzabkowski 2005) and interactive strategizing is the use of face-to-face communications to shape strategy (Achtenhagen, Melin, Müllern, and Ericson 2003; Jarzabkowski 2005).

Basically, the strategising matrix (Table 1) outlines four strategizing types based on combinations of structural and interpretative legitimacy. When a strategy is embedded in routine practices to the

extent that it is persistent without managerial attention it has structural legitimacy. The embeddedness might lead to actions that are directed towards the practices instead of the goals (a strategic-drift pattern). Interactive strategizing is important for framing, for example, a new strategy or a strategy at drift. It is based on interpretative legitimacy that frames and controls legitimate actions.

**Table 1. The strategizing matrix and activity system dynamics. Source: Jarzabkowski (2005:107)**

<i>Strategizing type</i>	<i>Activity system dynamics</i>	<i>Role in shaping phases of activity</i>
<b>Pre-active</b> low structural and interpretative legitimacy	Weak dynamics of influence	Pre-active strategizing is difficult to trace as activities are localized, i.e. emerges bottom-up or in the early phases of development
<b>Procedural</b> high structural and low interpretative legitimacy	Influence is conferred to existing activity and its administrative practices	Historically embedded activities with goals-means displacement Activities that have hijacked the administrative practices
<b>Interactive</b> low structural and high interpretative legitimacy	Influence is conferred to top managers, in interaction with the community	Introducing new activities in order to counteract resistance to change Existing activities that are overly embedded, needing reframing and realigning with their goals
<b>Integrative</b> high structural and high interpretative legitimacy	Influence is primarily to top managers but tightly linked to interaction with the community, the activity and administrative and interactive practices	Stabilizing activities to prevent slide into strategic drift Incremental change in activities through ongoing reframing of meanings and modifying of administrative practices

The matrix provides conceptual puzzle pieces in understanding how shifts in strategizing might shape strategy as a pattern over time (Jarzabkowski 2005:108 ff). The patterns of strategy development are shaped by tensions that come up when structural and interpretative legitimacy are balanced in different situations:

- Introducing localized activity into mainstream strategy, which may be intended or unintended and lacks either structural or interpretative legitimacy (Jarzabkowski 2005).
- Changing existing activity by different types of potential shifts in strategizing. First, from procedural to interactive to integrative. Second, from procedural to interactive but then back to procedural again (as greater interpretative legitimacy is needed). Third, ongoing integrative strategizing that enables incremental change (Jarzabkowski 2005).
- Stabilizing activity by ongoing interactive strategizing e.g. to avoid inertia (Jarzabkowski 2005).
- Unresolved activity by ongoing interactive strategizing as the interpretative legitimacy is not strong enough to gain structural legitimacy (Jarzabkowski 2005).
- Inertial activity by ongoing procedural strategizing as the structural legitimacy are so strong as it resists change although its initial interpretative legitimacy is lost. (Jarzabkowski 2005)

Jarzabkowski describe that Universities have multiple strategic activities that must coexist and so have most organizations. Most organizations have a core strategy related to its identity, which is prone to the inertial pattern. Non-core activities with competing rationales to the core’s might be seen as threatening to the core. Multiple strategies will therefore need continuous realignment of structural and interpretative legitimacy.

In the industrial network perspective, firm’s strategies influence and are influenced by other in the network. Baraldi et al (2007) imply that the IMP approach to strategy formation is that “Strategy emerges from interactions, negotiations and adaptations in each relationship and at network level” (p.17). Thus, strategy happens but with what influences? Is it the heterogeneity of resources, interdependencies between activities and organized collaboration that plays a major role to strategy development as suggested below (Gadde, Huemer, and Håkansson 2003)?

*From the standpoint of a single company, strategizing from an industrial network perspective implies that the heterogeneity of resources and interdependencies between activities across company boundaries, as well as the organized collaboration among the companies involved, must be considered simultaneously.*

Gadde et al 2003, p. 157

Interdependencies seem to be a strong impetus for strategic actions in the IMP approach. Also, interactions, negotiations and adaptations in relationships seem to be a strong influence to what Jarzabkowski (2005) describe as interactive strategizing. Actors as top managers, consultants, buyers and suppliers are the strategists. The praxis of what people do within firms is important to understand strategizing. Formal administrative practices as routines influence strategizing the persistence in strategies over time. The strategists are administrative staff and middle managers that together with influential buyers and suppliers dictate specific set of actions related to their routines.

## **Method**

Our study is based on a long term study of an automotive supply chain including about 60-70 interviews of different actors in the supply chain such as dealers, sales agencies, assembler, producer, transport firms, suppliers, etc starting 1993/94 (Hertz, Johansson, and Jager 2001). The earlier study continued over a period of three to four years with more than 40 interviews while the later study, with around 20 interviews, started three years ago and is still continuing. Extensive amount of secondary material such as OH presentations, annual reports, reviews, statistics are used together with the interviews to interpret the development. The earlier study concerned the premises and the effects on the firm and its supply chain network when shifting from scale economy and cost efficiency to a market responsive strategy by introducing customer order based production (Borgström and Hertz 2008). The later study has been researching the development and performance of customer order based production over time. The change from forecast based production was a large radical change for the automotive assembler and included change on all levels of its organization but also a change for all organizations in the supply chain. Customer order based production was introduced for expensive cars to customers that are willing to wait a few weeks for delivery.

To analyze strategic development more sources than the top management team is needed. We argue that different employees have different roles as strategic influencers (in line with Achtenhagen et al. 2003). Our case involves different network actors that influence strategy development (suppliers, organizational units as head office and production, dealers, sales agents in different countries) and we seek insights to the strategizing in different sequences in time.

The Car Corporation's introduction of a customer-based production strategy in the 90's is the starting point for this study (see Hertz et al. 2001). Then, the Car Corporation went through a radical strategic change; this started as a limited distribution project and proceeded to involve the order fulfilment process with suppliers, production, sales companies and retailers. In 1993 expert observers foresaw the fall of the company but this became a starting point for a new era. Customer orientation and faster innovation together with cost reducing efforts (as elimination of unnecessary stocks, lowering in-process inventories and reducing manufacturing costs) were at the renewed agenda. The Car Corporation is, basically, an assembler of premium cars and relies on just-in-time deliveries from suppliers. The customer-based strategy is untraditional in an industry that relies on scale economies. Moreover, the importance, in the industry, of scale advantages is decreasing and others in the industry have difficulties to catch up with the Car Corporations development in the order fulfilment process (Holweg and Pil 2004). In 2003 we participated in a collaboration project involving our university, the car manufacturer and an automotive industry institution. The project was about further integration in the supply network to facilitate the built-to-order strategy by increasing transparency of demand and supply in the Car Corporation's global supply chains. The collaboration project was active between 2003 and 2006 but is still alive (see Borgström and Hertz 2007). In 2007 different actors involved in the distribution of cars were interviewed about challenges and opportunities related to the build-to-order strategy over time (Borgström and Hertz 2008), these interviews focused on problems, opportunities, and how the build-to-order strategy has developed over time.

Our empirical data are not intended to explain outcome such as market share and profit that has shifted over time. It is rather the temporal evolution of sequences of events, activities and choices over time, which are important in process theorizing (Johnson et al. 2007). The interviewing part of the research project is ongoing and for now we are indicating possible explanations by illustrations rather than trying to generalize upon our findings. Strategy development is related to organisational outcome. Strategic outcomes are objectives that organizational members hold on to and try to influence. However, we cannot relate organizational performance to strategy development as our choice of method views performance to be seen as a starting point as well as an outcome for strategizing (Johnson et al. 2007). Performance, especially sense-making of performance, influence the legitimacy of different actions in strategy development

### **The built-to-order strategy and dynamics**

The story we are about to tell about strategizing concerns a built-to-order strategy and its development. It illustrates strategising in sequences of events and is interpreted in respective sequences, i.e. as a combination of an illustration and analysis. The reason for this is our interest in dynamic patterns rather than to interpret an end result.

#### *Introducing localized activity into mainstream strategy*

The built-to-order strategy aims to have high delivery precision, short lead times without unnecessary inventories in the chain. The order flow, the physical distribution as well as the communication flow are changed in planned, as well as emergent patterns.

The strategic development of the Car Corporations built-to-order strategy depends on what involved people do. In 1990, the Car Corporations goals were to reduce lead time to 14 days, delivery precision should be 95% and all production should be customer based. The project gained a high level of legitimacy among network members and new working procedures were created. Part and component suppliers had to improve delivery precision and quality. The production planning became more complex. The lead-time was reduced in different steps, first to 28 days and later to 14 days, which was needed to handle customer-based production. At this point, the pressure to succeed with customer-based production was high in the Car Corporation, among its suppliers and distributors but also among other institutions. The practices of how the integrated order fulfilment process should function became established then and involved the order flow (from dealer to factory to supplier), the physical distribution of frequent and reliable distribution from suppliers, short planning schedules for what should be assembled and frequent delivery of finished cars to dealers. In 1995 a dealer-based computer ordering system was in use that communicated the orders to the Car Corporation and the delivery status to the dealer. Sales companies were responsible for demand forecasting, which are important in customer-ordered production as orders had to be anticipated and preparations in the supply chain had to be made. The forecasts are input to the requirements planning process, the capacity planning process, and the purchasing and procurement processes. Thus, essential flows were restructured. Introduction of new activities and processes involves dynamics that are started by top managers and have high interpretative legitimacy. Eventually, after modifications structures and procedures are settled and gains also structural legitimacy. The strategizing is starting in a pre-active type and continues into an integrative type of strategizing (Jarzabkowski 2005). Meanings are reframed and administrative practices are modified.

The Car Corporation's change process is identified to start in production orientation, but being forced into a cost focus and later (after 1996) to develop into network orientation. In the change process newly defined processes emerged that turned out to be ignored in the ongoing daily operations. Reasons were that line managers didn't approve the processes; the processes' content and responsibility were unclear and the processes focused on day-to-day operations. The interpretative as well as structural legitimacy was too low to influence on activity systems. The processes was reorganised and senior managers became responsible for them along their ordinary tasks to increase legitimacy. The organisation developed into a process organization with a network structure that in large relies on frequent person-to-person interaction. The processes aim to link customers to products

and include suppliers, transport companies, sales companies and dealers. These are autonomous actors that have to be coordinated. The structural legitimacy needed interpretative legitimacy to counteract the resistance to change. Also the change of processes improved the structural legitimacy. The dynamics involved here relies on interaction in the network and especially central actors as line managers and senior managers of the processes, who act as sense givers while other actors as coordinators, purchasers and suppliers act as sense makers (Achtenhagen et al. 2003). The interactive strategizing have potential change into an integrative strategizing with an ongoing reframing of meanings and modifying of practices (Jarzabkowski 2005).

### *Stabilizing activity*

The build-to-order strategy gives the end-consumers a possibility to choose a configuration from a large variety and the car is built within an acceptable time for delivery. The car dealers have invested in fancy show rooms and focus on customer value rather than selling cars from stock. Dealers try to cooperate with their customers when specifying the car, this means that they can sell customised cars and that they get close to their customers. Dealer orders are sent direct to the manufacturer while forecasts are sent to their sales company. The national sales company has become a service provider that plays a key role in the forecasts and short term planning. However, the role that actual forecasts play in planning the production volume has decreased as top management give incentives to maximise production capacity. The built-to-order strategy has thereby turned to be a mix of customer-ordered cars and speculated cars that are specified in forecasts. As long as the speculated cars are in the order queue it is possible to change the specification to fit a customer order even though this procedure is problematic for the supply chain.

The car manufacturer assembles cars of modules that are planned and coordinated with precision in a time-consuming procedure involving network actors as internal coordinators, suppliers and purchasers. Modules are produced by system suppliers and delivered in sequence with the car manufacturer's assembly line, while supply to the modules is decoupled from customer orders and made to forecasts. Changed specifications are problematic to the supply network as their orders fluctuate in line with the changes. The fluctuations incur extra costs. The problems are related to interdependences among supply chain activities. The order to delivery process depends on serial dependencies among buyers and suppliers. Individual firms try to coordinate their activity chains to achieve economies of scale and scope. The emergent pattern in the strategic development seems to rely on reciprocal dependencies in activity chains that are important to increase customer-orientation and product and process development (Håkansson and Persson 2004; Thompson 1967). Different procedures in the value chain are used to handle these dependencies. An example is formalized ways to handle the order fulfilment process by car-manufacturer coordinators, who act as a fire brigade to facilitate the supply network efficiency and demand flexibility. Another example is formalized ways to handle the product development process. Both examples are complex practices that involve actors across the network. Especially the order fulfilment process has high structural as well as interpretative legitimacy giving integrative strategizing (Jarzabkowski 2005).

### *Introducing localized activity into "conflicting" mainstream strategy*

However, over time the strategy seems to have changed in content towards more standardization and mass production, which is the dominant strategy within the automotive industry. Another big car manufacturer, who relies on mass production, acquired Car Corporation without any attempt to change the Car Corporation's existing business model. However, some coordination and adaptation was executed to achieve synergies of, for example, R&D and purchasing, together with financial control. We will illustrate with two examples.

First, Car Corporation used forecasts (made in the distribution channel) as early information to the supply network. Without this information the suppliers cannot provide supplies. However, by new types of incentives to Car Corporation's business planning departments their way of acting changed. The goal of pure customization in assembly became diffused in order to achieve the incentives. The forecasts became misaligned with predicted demand and the supply network had to cope with late changes and feast or famine situations with their produced components. Those responsible for Car

Corporation's material planning and logistics faced increased number problems to handle in the order fulfilment process. Also, dealers notice that the business model seems to have shift in character. On a short-term basis, when sales are increasing, incentives are profitable for dealers but in the long run the incentives are problematic to their business model. The praxis of what the forecast procedure actually establishes was changed and the new praxis influence members in Car Corporation but also Car Corporation's business relationships.

Second, the car manufacturer and its suppliers were challenged by incentives to decrease costs and to compare their costs to other car manufacturers' cost of production. The supplier network has over time decreased Car Corporation's costs, as activities have been outsourced and the degree of specialization has increased. However, compared to car manufacturers with a cost-focused strategy they have higher costs. Naturally, increased specialization is a condition for mass production while increased flexibility is a condition for customized production (Lampel and Mintzberg 1996). The increased pressure to cut costs in the production resulted in less flexibility towards customer orders. The practice of what the purchaser should negotiate about changed and costs became more important than flexibility. Based on our empirical experiences it is clear that the strategy no longer is interpreted as "100% customer order based production" in the Car Corporation. Over time the importance of capacity utilisation has increased and customer orders are one input among others to what is produced. However, the supply network is structured as if the same strategy was in use. Still, the customer order decoupling point is situated in first tier suppliers' assembly of modules. Also, the distribution network is marketing the Car Corporation's wide array of products but dealers are actively selling lots of streamlined mass-produced cars. A shift in strategic content, i.e. towards standard products, emerged. The network structure and rhetoric supports the customization strategy.

What people in Car Corporation's supply chain do has changed in practice although the intended strategy of customer ordered production rhetorically is still of importance. The shift in strategic content might illustrate how interactive strategizing is used by top management to reinterpret strategy in use and align behaviour to the dominant strategy in the automotive industry.

#### *Unresolved activity*

In quite another process, based on the collaboration project, we realized that it is difficult to change the information structure in the supply network even if it might facilitate the strategy in use. Information about demand and supply is key to increase flexibility. In the project strategic logistics developers worked very hard to use supply chain monitoring in critical chains to accomplish increased transparency and thereby decreased flexibility costs. The supply network turned out to be reluctant to the investment costs and it was difficult to get internal resources although it was seen as a top priority project. Competition for internal project resources was fierce especially after the acquisition. The organization was busy to cut costs. Consequently, the project has not yet received funds for trial and the suppliers are reluctant to invest. The existing activities and practices have high structural legitimacy and resists change despite initial interpretative legitimacy. The dynamics involved in this scenario was too weak; this pre-active strategizing has low structural as well as low interpretative legitimacy. The only reason to that we are able to analyse this pre-active strategizing is that we were there. We will come back to pre-active strategizing that are visible also in hindsight.

#### *Stabilizing and inertial activity*

Automotive supply chains are known to be highly integrated and therefore we might expect that interactive strategizing is predominant. We find it difficult to distinguish *one* supply chain strategy independent of if we take the Car Corporation or its supply chains as our case. Lampel and Mintzberg describe a continuum of value chain strategies. The Car Corporation's R&D process might be seen to be pure customization strategy where target buyers and developers are deeply involved in each others decision-making in non-current projects. The R&D process is separated from the order fulfilment process. In the recurrent order fulfilment process the strategy seems to shift dynamically between tailored customization, i.e. when customer orders are used to initiate production to 100%, and customised standardisation, i.e. when also forecasts are used to initiate

production. In the customised standardisation strategy the customer configuration is constrained to what is possible in a specific point in time with regard to available components and pre-ordered car model. However, the value chain involves more actors. Taking account also to up-streams suppliers, it is evident that the segmented standardisation strategy exists as many suppliers deliver automotive products to different car manufacturers although, for example, delivery is customised. Also pure standardisation strategy exists among upstream suppliers, who are likely to deliver to other upstream suppliers and offers more or less standardised products. Consequently, although the Car Corporations order to delivery strategy shifts in content over time between customised standardisation and tailored customisation the supply chain strategy involves pure and segmented standardisation strategies among upstream actors. The order to delivery process is basically the same over time but the involved decision making differs. In times when costs are more important the customer configuration is constrained by available components that are mass produced for the aggregate market while when customer orientation increase in importance the car is adapted for particular customer's wishes.

Lampel and Mintzberg (1996) describe a continuum of value chain strategies while Fisher (1997) seems to view these separate strategies as incommensurable. In the Car Corporation's order to delivery process the customer order decoupling point separates the standardised components from the customized modules in the first tier of suppliers. Individual upstream suppliers coordinate to the Car Corporations needs but their strategy is not aligned. However, the business model has gained increased importance in the automotive industry due to its promises but existing order to delivery processes seems to act as hinders to this strategic development (Holweg and Pil 2004; Waller and Bartolini 2002). High structural legitimacy stabilises activity within the administrative practices and this leads to procedural strategizing. Coordination to settle requirements and tuning capacity is complex when a built to order strategy is at work. We have seen that although customization is dominating within a strategy the degree of customisation shifts over time (see also e.g. Kaplan 2002) and in the Car Corporation's case the procedural strategising is ongoing while the interactive strategizing is less persistent and influence to deviations.

The structures that are at work to facilitate customer-order based production are easily re-interpreted and used to achieve other goals that co-exist with customer orientation as low costs. However, in interactions and negotiations in the supply network the customer oriented model is important and different actors are discussing the potential problems. The adaptation in the supply network to decrease costs also led to decreased flexibility. If the interpretative and structural legitimacy in the network continues to enforce customer orientation then it is likely that the strategy is realigned. However, the process organisation has decreased in importance and even if one of the processes, the order to delivery process, still has structural legitimacy the interactive legitimacy has decreased, which indicate inertia in the strategy development.

### **Synthesis of the strategic development**

The build to order strategy is reliant on interactive as well as procedural strategizing. The interactive strategizing is illustrated, for example, by frequent interactions and discussions among actors that create problems if the interpretative legitimacy is low. The supply chain monitoring project lacked interpretative legitimacy in critical negotiations internally and externally. Interpretative legitimacy facilitates the strategy development (Jarzabkowski 2005). A complex supply network's functioning is reliant on structured routines of how the order flow, the physical flow and communication work. These routines have a structural legitimacy and actions that are in line with the routines are expected to facilitate the strategy without any particular managerial attention (Jarzabkowski 2005). Based on the strategizing in the Car Corporation case it is possible to see how strategy is shaped over time. The patterns in Table 2 might occur simultaneously or sequentially, only in hindsight it is possible to find a coherent pattern.

**Table 2 Strategizing and strategic development**

<i>Patterns of strategy development</i>	<i>Illustrative examples</i>	<i>Explanation</i>
Introducing localized activity into mainstream strategy	The move towards a low cost strategy were intended by top management but lacks structural legitimacy	A pattern of pre-active strategizing that moves into interactive strategizing. It has top management sponsorship but is perceived to be contentious regarding the long-term survival
Introducing localized activity into mainstream strategy	Aiming for reduced lead-time, delivery precision and customer based production that are accompanied with practices and cheered by top managers; structural and interpretative legitimacy increased	From pre-active strategizing into ongoing integrative strategizing that enables incremental change
Changing existing activity by different types of potential shifts in strategizing	Reorganisation to emphasise processes that first failed due to a lack of acceptance, i.e. low interpretative and structural legitimacy. After a redefinition of the processes and legitimacy by senior management in leadership roles structural and interpretative legitimacy increased. Both interpretative and structural legitimacy leads to the built to order strategy acceptance (the supply network, dealers and sales companies)	From pre-active strategizing into ongoing integrative strategizing enabled by interactive as well as procedural strategizing. The activities are re-framed as well as re-embedded
Inertial activity	The importance of customization has faded (low interpretative legitimacy due to cost rhetoric) while the structural legitimacy enforce the customized order to delivery process	By ongoing procedural strategizing, as the structural legitimacy is strong and change is resisted although initial interpretative legitimacy is lost
Stabilizing activity	Network rhetoric regarding, for example, problems related to sidestep forecasts and problems because low cost becomes more important than flexibility.	Ongoing interactive strategizing stabilizes customer orientation. There is a balancing between the rhetoric for low costs (alignment to the dominant automotive-industry strategy) and the rhetoric for flexibility.
	Network practices that are sustaining the customer based production	
Unresolved activity	Supply chain monitoring never received enough interpretative legitimacy to gain structural legitimacy	Ongoing interactive strategizing cannot on its own create strategic change

Table 2 explains different phases in the strategic development. Strategy is what people do and actions are ongoing at the same time in different levels in the network. Therefore, a localized activity might be introduced to mainstream strategy at the same time as other existing activities are being changed, stabilized, unresolved or inertial. Our case analysis of strategy in practice defeats linear cause and effect relationships of strategy and outcome. The actual strategic development implies problems to cost reduction as well as customer orientation.

### **Analysis of intended outcome of the customer order based production**

The arguments of built-to-order strategy are that it decreases costs (of uncertainty) and that it increases customer orientation (facilitated by flexibility in the order to delivery process). Each argument is composed of premises, i.e. reasons or evidence. Fallacies are defects that weaken the arguments to some degree. Based on the experiences of the built-to-order strategy, as is illustrated, and the provided synthesis of the strategic development, we have reasons to believe that arguments that exclude dynamics are fallacious. We have discussed how strategizing and activity system

dynamics play a role in shaping phases of activity. Reasons to strategizing are, for example, shifting demand, irregular profitability, and goal ambiguity.

The strategic arguments regard cost reductions *as well as* improved profits. The conflict with lean manufacturing (long stable runs, stable schedules, etc.) principles and agility that requires short runs, customer responsiveness and unstable schedules is well-known in theory (Gunasekaran 2005). However, our illustration gives evidence to correlation among short lead-times, high delivery precision and customer based production. A factor of importance seems to be the ability to meet the requirements of individual customers (Gunasekaran and Ngai 2005). Lean and agile paradigms are different, since in the first case the order winner is cost, whereas in the second case the order winner is availability (Christopher and Towill 2000). Also, value adding costs in the lean paradigm is not necessarily relevant in the agile paradigm. However, in practice these paradigms are less distinctive. Supply chains involve firms that identify different order winners and, consequently proponents of this argument argue that lean is often identified as appropriate upstream while agile is appropriate downstream. We described in the illustration that the customer order decoupling point is where the postponed modules are assembled. Postponement are often applied as a cost minimization effort but facilitates also agility efforts as the supply chain becomes more customer responsive (Hoek 2001). Thus, the strategic development of postponement is likely to reduce costs and increase profits from responsiveness.

Another argument claims that if the supply chain only produces based on customer orders then risks and costs are reduced (Hines et al. 2004; Womack et al. 1990). The argument in this case is based on customer orders as the driver for production and logistics that can handle individual orders. A fallacy is that few actors in the supply chain are able to interpret end-customer orders as the product changes character and are value-added along the chain in a dynamic and complex way (Naim, Disney, and Towill 2004; Sivadasan, Efstathiou, Calinescu, and Huatuco 2004). We illustrate that the Car Corporation extends the term customer order and includes the forecast that later are substituted with a feasible order. Forecasts are important for the supply chain. When a standardization strategy is applied, forecast errors are common and imply a price reduction to sell of the car. When a customization strategy is applied the supply chain is responsible for flexibility and forecast errors are a burden in the supply chain. As long as the strategizing was integrative and strengthened the customer order based production (that was based on forecasts) costs was reduced. However, risks and costs tend to increase when shifts in strategizing occur (misaligned procedural and interactive strategizing).

Also, if the supply chain is responsive to customers' need and expectations then profits will increase (Kaplan 2002; Webster 1994). This claim is strong and despite evidences from this case and, for example, Kaplan (2002), doubts about the outcome are reasonable. Profit is difficult to evaluate as it might differ in a short- versus long-term perspective. The Car Corporation as well as dealers took advantage of the mass distribution incentives and lots of customers value a possibility to decrease costs by compromising some expectations. In the long term, the interpretative legitimacy of mass distribution was questioned as the supply chain structure facilitates a customization business model. Thus, the mismatch in procedural and interactive strategizing seems to undermine both cost minimisation and supply network flexibility. Naturally, there are learnings from mass distribution development that facilitates customisation (see e.g. Kotha 1995) and as illustrated in the case: Short lead times and high delivery precision facilitates decreased operating costs as well as customer based production. However, dual goals of cost minimisation and supply network flexibility might decrease profits if improvement in one of them becomes a disadvantage to the other.

## **Conclusion**

Strategic development involves both the strategic content and the strategy process from a strategy-as-practice perspective. Strategizing is actions, interactions and negotiations of multiple actors. The content of customer order based production is negotiated by actors as end customer, dealer, sales

company, car manufacturer, and the supply network. What these actors do will influence the strategic development. The strategizing i.e. their activities are based on different degree and mix of structural and interpretative legitimacy, which give rise to a dynamic pattern of pre-active, procedural, interactive and integrative strategizing. The dynamics of procedural and interactive strategizing has a role in shaping phases of activities. Patterns of strategy development seems to co-exist and overlap, for example, a localised activity is, regardless of intent, introduced into mainstream strategy simultaneous as another activity is stabilized and yet another is changed by shifts in strategizing. Our illustrated patterns are explored in Table 2. The tendency of these patterns is that strategic development in the supply chain has over time drifted towards standardisation, even though structuring routines resist that development. The dynamics result in problems to the intended outcome of the customization strategy.

In the planning phase, in the 90s, reduced lead time, delivery precision and customer based production was initiated and the Car Corporation was a first mover of this strategy. Over time that move proved to be successful. However, the meaning of these goals is changed. As the degree of standardization has increased many cars are produced based on forecasts and it seems like the strategic content has drifted toward a standardisation strategy. It is common that strategies vary in a continuum between standardization (low cost) and customization. Short lead times, delivery precision and postponement integrates low costs and customization. However, shifting demand and irregular profitability are examples that create goal ambiguity regarding standardization / customization and that influence especially interactive strategizing towards increased importance of costs. When low costs become a means to an end of increased profit it is fallacious to expect retained customer responsiveness as the dealers often focus on selling forecasted standardized cars instead of letting the customer order a customized car.

Thus, in phases the practice in the Car Corporation indicates that they deviate from their strategy, these phases are parts of an emergent pattern in the strategy development. Interactive strategizing (such as the new-owner rhetoric) reframes and realigns goals while procedural strategizing (such as routines for supply chain planning and production) resists unplanned change.

Theoretically we have discussed customisation strategies, and illustrated with the case of customer order based production. Strategies develop over time. The importance of the premises to built-to-order strategy does also vary over time and we derive fallacies of customer order based production from this dynamics. In our analysis the premises to customer order based production of low costs and flexibility are scrutinised. Supply chain cost minimisation and supply chain flexibility has different inherent logic that is a strategic opportunity if integrative strategizing is influencing administrative practices and interactions but is problematic if procedural and interactive strategizing counteracts. In our case the interactive strategizing is used to emphasize goals of a standardisation strategy by reframing meanings. Different actors interpret and reinterpret the strategy. As administrative practices are the same it is likely that the decrease in costs, in addition to customer responsiveness, is circumscribed. An unclear relationship between standardization and customization creates conflicts in the supply chain and decrease the structural as well as procedural legitimacy of organisational action. The fallacy of customer order based production is connected to the complexity in supply chain, to procedures and interactions. Over time the importance of costs and responsiveness shifts but the strategic development continues in a pattern.

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