

The effect of strategy on the use of supply chain management tools – exploratory survey in the Hungarian automotive industry

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Abstract

Supply chain management (SCM) usually goes beyond company borders. Cooperating parties are required, who decide to work together. The way how this cooperation evolves depends on the strategies and practices of the parties. In this paper we examine the connection between strategies and SCM practices. Our objective is to analyze how strategy determine the SCM tools used among supply chain parties. The analysis is based on 17 interviews within two supply chains from the Hungarian automotive industry, where supply chains are defined through the car makers (Audi, Suzuki) as focal companies.

Our results support the proposition that the connection between strategy and supply chain tools (configurations and practices) is very strong. It is underlined with not only the comparison of the two supply chains but can also be detected in the strategic change at one of the focal companies which resulted in supply chain changes, as well. Besides the main objective a detailed view is provided about the past, present and future of the Hungarian automotive industry.

Keywords: Supply chain, supply chain management, strategy, automotive industry, Hungary

Introduction

Supply chain management (SCM) theories say that partnerships can be an important source of competitiveness, where both partners can win with the close collaboration. These beneficial partnerships require *strategic thinking* and openness from both parties in order to succeed (Christopher-Jüttner, 2000; Mentzer et al, 2000). In our development stages model in SCM (Demeter-Gelei, 2003) we also found strategy as a prerequisite to become from a transaction dominated company into an internally integrated company. Only if *strategy exists* and internal integration took place can a company develop its external relations on the long run, and become an externally integrated company with well developed inter-organizational processes and coordination systems, and with strategic partners. Certainly, it does not mean that companies have to make strategic partnerships with all of their partners (Bensaou, 1999), but a consistent set of values and

content of strategy is required to operate successful partnerships (Dyer – Nobeoka, 2000). So the way how supply chain is developed and managed is highly dependent on the existence and content of the strategy that the collaborating partners have. This is a connection we want to look at by analyzing two actual supply chains in this paper.

We examined this relationship in a special context, in the Hungarian automotive industry, where several multinational subsidiaries started operations in the last decade.

During the research we did not give a formalized definition for strategy. Rather, we expected our interviewees to identify its key elements as they use it in their practice. This represents the descriptive approach to strategy. Similarly, we defined SCM very broadly, as any kind of conscious cooperation along the supply chain.

First, the main features of the two investigated car makers' strategies are described. After analyzing

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the most essential strategic differences, the SCM differences are set in focus, also discovering the connections between strategies and SCM tools.

Survey methodology

Our research is exploratory in nature. Although we had some previous quantitative research earlier in the Hungarian context through the IMSS (International Manufacturing Strategy Survey) (e.g. Demeter, 2001), we do not know any study which would have analyzed an actual supply chain issue in Hungary. Thus we did not have too much preliminary information on the topic, what explains why our research is based on interviews (17 altogether). We selected the automotive industry because supply chain management is the most developed in the automotive industry. Due to its global nature, networking is one of the primary sources of competitiveness.

The interviews, which lasted from one hour to almost three hours in some cases, were made at three levels of two supply chains: the car makers (Suzuki, Audi), two integrators and nine second tier suppliers. Interviewees were general managers, purchasing/logistics managers and sales managers. We ourselves selected the car makers, the integrators and two second tier suppliers. In case of car makers we were looking for two very different companies, who represent the focal company, and thus in itself define the two supply chains. One of the integrators was selected on an automotive industry exhibition while the other was directly approached because of its Japanese cultural background. One of the second tier suppliers was selected because several informational sources stated how good they are. Another one was selected from a list provided by a car cluster manager. All other second tier suppliers were suggested by the interviewees on the basis of good performance. In other words, second tier suppliers represent the best Hungarian suppliers of the automotive industry in Hungary. There were only three subjects who refused the interview, two of them because of time constraints, one because his company was in the middle of an ownership change.

Focal company strategies

In this chapter first we search for the motivations of multinationals which urged them placing subsidiaries in Hungary. Then the main features of the two investigated car makers' strategies are described.

Multinational corporation strategies related to Hungarian subsidiaries

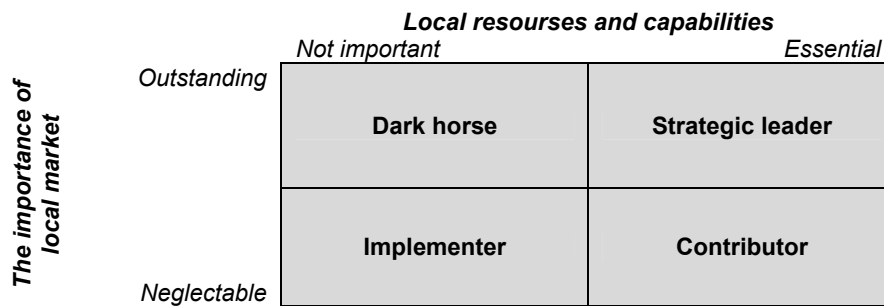
Let us start to discover why multinational companies decided to come to Hungary. We use the Barlett-Ghoshal matrix (1989) for this purpose (see Figure 1). In this matrix two dimensions are used to identify multinationals' strategy: 1) the strategic importance of local market, 2) the importance of local resources and capabilities. The first dimension is self-explaining, the second dimension relates to capabilities, which makes it possible to build sustainable competitive advantages (simple cost advantage is not such a capability, but human capital or supply network can be). In the matrix the *strategic leader* position means that the subsidiary plays an essential role in the corporation's market and growth strategy. This subsidiary can perform tasks, which can not be found at other subsidiaries (e.g. R&D, market research, central tasks). The *implementer* position is just the opposite of the strategic leader. The subsidiary plays an executing role; its exclusive task is to implement the centrally developed strategy as efficiently as possible. High cost efficiency produces high profit, which is returned to strategic leaders. The *dark horse* position is created if the appearance on the given market is essential. Thus the corporation can collect information about the growth opportunities and can directly sense the small changes in requirements. The most important objective of these subsidiaries is to provide the opportunity to step further either by creating strategic partnerships or by focusing on special product groups or market segments. (Bayer-Czakó, 1999). Finally, the contributors utilize the capabilities of local resources. Such capability can be the strong background industry, the creativity, skill, loyalty, diligence of local working force. In this matrix we can place Audi in the moment of arrival in the implementer position. It exploited the cost advantages of

resources; the local market was not used at all. Lately, due to the preliminary good experiences and the high skilled work force, the subsidiary slowly moves towards the contributor position. One of its clearest sign is that Audi replaced its engine development activities into Hungary¹.

For Suzuki it was an elementary interest to place a subsidiary somewhere in Europe, not only in order

to collect information, but also to invade the market², keeping the rules of EU legislation. Surely, cost aspects were important to select Hungary within Europe. It means that Suzuki is well suited into the dark horse category, but we can see a tendency of moving right (due to involving more and more European integrators) in the matrix.

Figure 1: Subsidiary strategies of global companies



Source: Bartlett-Ghoshal, 1989, cited in Bayer-Czakó, 1999

Table 1: The main strategy differences of Audi and Suzuki Hungarian subsidiaries

Strategy	Audi	Suzuki
Reason to settle down in Hungary	Resource basis (skilled and cheap labour, investment advantages)	Market and resource basis: European market and cost
Size of capacity	Large, produces for world market	Smaller, produces for regional market
Growth	Large initial investment and enlargement	Relatively small initial investment, step by step enlargement

Strategic characteristics of subsidiaries and their impact on Hungarian automotive industry

According to the interviews at Audi and Suzuki the main differences in strategy can be found at the corporate level³.

Audi made the decision inevitably on resource basis. It was searching for a place in Europe, which 1) help to reduce resource costs, which is essential in a matured industry characterized by fierce price competition, and 2) well fit into the network of other subsidiaries from a logistics point of view. The

decision in favour of Hungary was supported by high investment and tax advantages, and by good skill/wage ratio. This latter also provided guarantee for acceptable level of quality besides the cost advantages, which was not necessarily achievable in other Eastern-European countries. Settling down took place in huge greenfield investment, and the subsidiary supply the whole Audi network with its products (mainly engines).

Suzuki considers its Hungarian subsidiary as a strategic starting point, a pushed forward position in Europe. The decision to settle down here was due to

¹ We have to add two things here. 1.) The majority of multinationals who arrived to Hungary intended to place their subsidiaries into the implementer position, so the case of Audi is not exceptional. 2) At Audi it is a logical step to replace its engine development to the place where the production of engines actually takes place where the production of engines actually takes place. Moreover, Audi can exploit the cost advantages on this area, as well. In other words, it is an organic extension of its former strategy.

² It is rather the European, especially the Eastern European, than the Hungarian market.

³ Certainly both multinationals considered economic and political stability as primary aspects, there is no difference between them in this area.

the favourable cost composition and advantages on the one hand, and to strong market considerations on the other hand. The company focuses on the Central and Eastern European market characterized by relatively weak purchasing power. The Suzuki started with small capacities in order to reduce risks, and due to the time demanding market building process, and extends its capacities in consistency with market requirements.

Analyzing the strategic characteristics of the two examined *car makers*, it is inevitable that their primary expectation (winning criteria) towards their suppliers is the lowest price possible. This fact stems more from the matured nature of the automotive industry than from the specific strategic characteristics, but the implementer and dark horse positions also relate to it (resources do not have any particular capability). However, the supplier can win order with low price only if other criteria – quality, delivery reliability – have reached the required level (qualifying criteria). The required levels are different from company to company and customers regularly make audits and performance evaluations to assure that their suppliers fulfill them.

Multinational integrators who created its subsidiaries in Hungary can easily fulfill these requirements. Their production processes and procedures are completely standard, strategic planning is carried out in the parent company, it is only executed in Hungary. Their decision to settle down in Hungary is very similar to car makers: 1) utilize cost advantages discussed so far, 2) utilize further cost, time and flexibility advantages stemming from logistics proximity.

For *locally owned or privatized companies*, who can be found mainly at second or third tier level, the largest difficulties are caused by matching the qualifying criteria, they have relatively good position on price. They have technological knowledge, although the applied technological level is behind the high-tech. It is rare that they combine several technologies which would be required to reach product competency. Their product knowledge and design capabilities are weak, fulfilling the quality and service requirements require huge efforts from them. The lack of capital is an essential problem, which imposes restriction on technological improvement and development.

Cultural roots of corporate strategies

In this detour we would like to attract attention to some of the differences between the supply chains of examined car makers which stem from the strong cultural background differences, and thus form the basis of strategy.

The differences described below are summarized on the basis of our interviews, as they were mentioned by the interviewees. It was obvious, that when our interviewees described the characteristics of their relations to partners, they thought in wider terms. Among the companies who took place in the research, several were in connection with more than one car maker. Thus they could draw their conclusions on the basis of these multiple experiences.

The two examined focal companies, Audi and Suzuki, were born and operate in different cultural atmosphere, in Europe and in Asia. The sharpest appearance of the strong cultural difference can be found in the *engineering culture*. As one of our interviewees told: “the Asian standards have not even a bowing acquaintance with the European ones”.

The cultural differences can be detected in the partner relations of cooperating companies in the supply chain. The operations of Audi are more formalized, the conditions of cooperation are fixed to the very details in a contract, and they strictly insist on these conditions during the cooperation. This formalized cooperation has both advantages and disadvantages. From a supplier’s point of view it is an advantage that the responsibility circles and thus the communication routes are obvious. On the other hand, impersonality and the resulting fragmentation is a clear disadvantage. High division and standardization of tasks suppliers have to hold connection with several people, who can see only one small segment of the total picture. Our interviewees think that this makes their connection a bit clumsy.

Suzuki builds much less on written rules or agreements. Its operations can be more characterized with the expression of “person oriented”. Naturally, the bases of cooperation is fixed in a contract here, as well, however, these contracts do not go into the details, and the signed contract does not have such a strong role, than in European supply chains. One purchasing manager at a supplier

told in relation to their most important Asian customer: “we naturally made a contract, but I have not seen it once in the last years”. Besides the written cooperating conditions, oral agreements, or so called gentleman’s agreements have at least as much importance. The relation in these supply chains is more personal, more direct, more mankind. This type of cooperation also has advantages and disadvantages. The latter is most visible, when a supplier who is not grown up in this type of culture has to behave according to it.

Interesting difference could be found in *evaluating supplier efforts*. In the European culture customers evaluate the actual performance, the visible results of efforts. In the Asian culture, the partners’ efforts are recorded even if these efforts did not reach the required positive result. For us this view emphasizes the importance of long term cooperation, which is a specific feature of Asian supply chains in the automotive industry (Dyer-Cho-Chu, 1998).

Supply chain structure and management tools

Let us see the supply chain analysis of the two examined supply chains. As it was already mentioned, our objective was to examine, if there is a relation between the focal companies’ strategy and supply chain management (SCM) practices of the supply chain – Audi and Suzuki in our case. On the basis of the interviews we found relations in two dimensions:

1. Relation between strategy and supply chain structure,
2. Relation between strategy and SCM tools.

1. Strategy and supply chain structure

Audi arrived with large capacities which made it possible for some elements of its international supply chain, especially for integrators to join. Since Audi already previously have had strong ties to the European supplier market actors, the relative geographical proximity further lightened the join of supplying partners. In consequence of the logic of global competition, the settling down of Audi in Hungary resulted in the appearance of the automotive

industry pyramid here, as well. Hungarian suppliers have to find their place in this pyramid.

In case of Suzuki, the relatively small capacities did not make it possible to bring their own existing pyramid into the region. Naturally, in case of some parts Suzuki has built on this home pyramid. It is mainly true for the supply of large value products; where irrespective of large distances and relatively small quantities, logistics cost could be kept low. Such a typical product is the engine. In case of smaller parts and subassemblies, however, the smaller lot sizes due to small capacity made it uneconomical for home integrators to deliver directly from outside Europe. Besides (or instead of) the integrators of Suzuki’s own pyramid and other larger suppliers, in theory, integrators working on the European market could have joined Suzuki’s supply chain. The relatively small orders, however, appeared as an economic burden for them, as well. Moreover, when Suzuki started to build its supply chain, it was important to them that integrators on the European market, as compared to their small lot sizes, would have provided very limited bargaining power for Suzuki. Thus, in spite of the classical hierarchical organizing principle (in other words the pyramid), the Suzuki, more or less as a must, has organized the system of direct relations, where smaller, experienced car parts suppliers, who produce simple parts, could join the supply chain. Due to this fact, the Suzuki pyramid is much flatter, and works in several cases as a network of dyadic relationships.

Another difference between the structures of the two supply chains can be found in the number of suppliers delivering various parts and subassemblies. At Audi it is an essential objective to divide the purchased volume between two suppliers in order to reduce Audi’s risk. The strategy of focused and global production (one part on one location) supports the economic lot sizes for both suppliers.

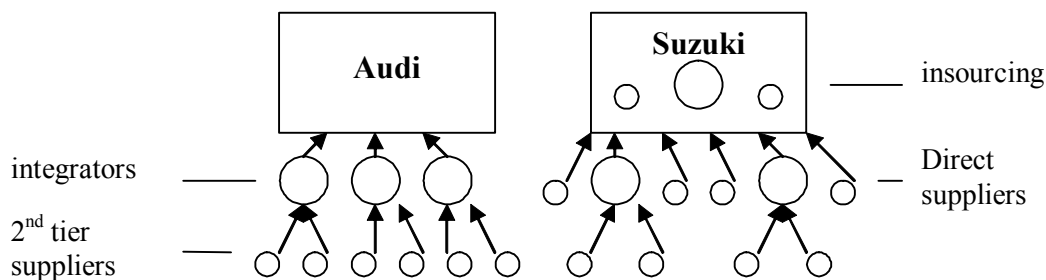
Suzuki can not practice this multi-legs strategy, although it would not have been unfamiliar from its management culture. However, small lot sizes do not make it possible to economically divide the supply between two or more partners. It would not have been economical because of the high costs of product specific tooling (in case of two suppliers these should

be doubled), and because of the higher unit costs due to low volumes.

The two car makers are different not only in their chain structure, but also in the process of forming the supply chains. Audi intervenes in cooperating partners' relationships. If one of the integrators becomes too strong, and thus the bargaining power of Audi would decline, then Audi reduces orders to the given supplier, and raises a second tier supplier to the

first line instead. When Audi redefines its relations, it rarely uses insourcing. In other words, except strategically important subassemblies it does not withdraw any other manufacturing activity inside. On the contrary, Suzuki used this alternative much more frequently due to its underdeveloped supplier relations both in Hungary and in Europe. If they could not achieve agreement with suppliers, they made it themselves in house (see Figure 3).

Figure 2: The supply chain structure of Suzuki and Audi



2. The SCM tools

We discuss two groups of tools. First, the particular features of SCM are examined through buyer-supplier relationships. Then we turn to the tools which go beyond the partners and affect at least three companies within a supply chain.

Specifics of buyer-supplier relationship management

Here we analyze relationships, where the buyer is a car maker (Audi, Suzuki), or an integrator and the supplier works in Hungary, locally owned, or privatized by foreigners in the last years (and thus has local past). We examine if there are specifics in these relationships comparing the two supply chains dominated with the car makers and with their strategy. A particular feature of our survey that while the literature deals with well operating, long term relations (Dyer-Cho-Chu, 1998, Haffmans-Weele, 2003), our study analyzes an economic and business situation where the relations are new or just to be born, and/or the competitive supplier market is only under the way. Although before the transition there were some vehicle manufacturing (mainly vans and buses) due to the division of labour among ex-socialist countries, the multinational companies who

arrived and settled down in Hungary did not find considerable, competitive, experienced and referenced supplier network here, this process started after their arrival.

In the automotive industry suppliers can join supply chains basically in three ways (Haffmans-Weele, 2003). The main characteristics are summarized in Table 2.

- a) *Capacity/process focused suppliers*: they take their capacity to the market, which is capable to transform, build, or manufacture the product as it is specified by the buyer.
- b) *Relation/system focused suppliers*: Besides manufacturing they have the core capability to coordinate suppliers of given parts or module. Relations with suppliers can cover contracting, production planning and coordinating distribution logistics to buyers.
- c) *Product focused supplier*: Capable to design, manufacture and market its own product.

The majority of second tier suppliers belong to the group of capacity focused companies. The main competitive edge of these companies is price (and as we will see later technological flexibility, adaptation capability is more and more important), their bargaining power is small. It is particularly true in

Table 2: The main characteristics of supplier types

Supplier type	Capacity focused	Relation focused	Product focused
<i>Product package</i>	Capacity	Relations and harmonized processes	Product developed in house
<i>Source of competitive advantage</i>	Low cost, technological flexibility	Process and relationship management	Innovating capacities
<i>Bargaining power</i>	Small	Medium	Large
<i>Main developing area</i>	Technology, in house production	Processes, supply chain	Product
<i>Relationship type</i>	Short term – market exchange relationship	Medium term or long term relationship	Long-term – Partner relationships

Source: Haffmans – Weele, 2003

cases, where the supplied part is manufactured with one technology. (The combination of used technologies can make the offered capacity more unique, and thus the supplier’s bargaining power or its capability to win order can increase.)

In automotive industry supply chains two-sided relations have been typified by Bensaou (1999) on the basis of relation-specific investments (see Figure 3). Bensaou found three factors which affect the extent of relation-specific investments:

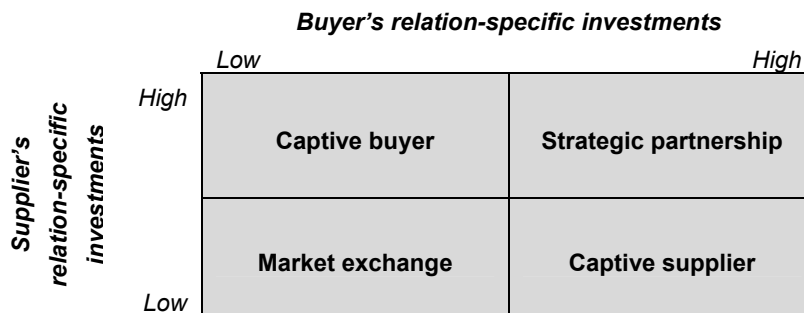
a) *Product features*: the complexity and innovation capacity of the product, or the technology behind.

The more complex and innovative the product and/or the technology, the more important is the supplier to the buyer.

b) *Intensity of competition on the suppliers’ market*: the size and structure of the suppliers’ market. The extent of supplier’s bargaining power from other sources, e.g. the existence of patents.

c) *The characteristics of demand*: the number and size of potential buyers. The stability of demand, the level of market growth.

Figure 3: Dependency of buyer-supplier relationships



Source: Bensaou, 1999

The extent of relation-specific investments show how important is the given partner relationship for the parties. This importance can be interpreted as dependency. Each relation types can be described by different relation dependencies, and thus by particular management characteristics. Some of the outstanding management characteristics are a) information sharing mechanisms, b) boundary spanners’ task characteristics, c) climate and social characteristics. In Hungary, as we will see, two types of relations can

be found – the market exchange and the strategic partnerships. In Table 3 we summarize the characteristics of these two categories.

As we mentioned before, Hungarian suppliers usually belong to the capacity focused group. This position, however, which results in low bargaining power, sometimes show the characteristics of a market exchange relationship, while in other cases is more similar to a strategic partnership. This duality can be explained with the different strategic

Table 3: Characteristics of market exchange and strategic partnerships

Type of relationship Relationship characteristics	Market exchange	Strategic partnership
Information sharing mechanisms	“Narrow-band” and limited; operational coordination	“Broad-band”, frequent; considerable knowledge transfer
Boundary spanners’ task characteristics	Impersonal, highly routine and structured tasks	Build on face to face relations; problem oriented
Climate and social characteristics	Positive	Positive; mutual trust is high

Source: Bensaou, 1999

objectives of examined car makers (Audi, Suzuki). Due to these differences the market position, the bargaining power and the nature of the partnerships with these car makers has evolved differently.

Audi made the decision to come to Hungary in the mirror of global competitive situation. The incoming manufacturing capacity has built on local resources – skilled and relatively low paid labour –, but they did not consider as a first priority to involve suppliers from Hungary. On the contrary, with the huge capacity transferred, they could mobilize their existing integrators and suppliers. The potential Hungarian suppliers could join Audi’s supply chain only if they could stand the competition with the existing suppliers. As a result, the number of Hungarian suppliers has been extremely low. The few, who could join, can be placed in the market exchange position. This market exchange position is true even for those innovative Hungarian suppliers, who were capable to develop a part or subassembly from their own resources. It is because the innovations what we heard about during the interviews, were made on parts which affected the core competence of the buyers only to a very limited extent. Thus these products were not appropriate to increase the bargaining power of the product owner directly or on the long run.

In case of Suzuki the reasons behind settling down were different. Also, due to the small steps policy suppliers have competed not on a global, but on a regional scene. In this regional competition local companies have had the advantage that administrative, logistics and linguistic difficulties have still existed in relation to other Eastern European countries. Thus the Hungarian supply base became more or less a must for Suzuki. However, the level of development, performance, and especially the size of

capital was very much lower as compared to integrators, with whom the Suzuki did not want (due to its low bargaining power) and could not (due to the uneconomical lot sizes) make relationships. Thus the Suzuki did not have any other choice then to intensively develop the supply base, which meant intensive information exchange, substantial technology and knowledge transfer, direct and personal relationships. These characteristics of cooperation are the belongings of strategic partnerships.

Suzuki inevitably has had a high bargaining power towards local suppliers, however, due to its strategy, has been thrown back on these suppliers. This type of relationship with a mutual dependency bears the characteristics of strategic partnerships. But this strong mutual dependency is based not on the internal characteristics of relations (e.g. on strong innovative capabilities on the supply side), but on external – already explained – factors. Thus this relationship can not be considered as a real strategic partnership, we call it as “quasi strategic partnership”.

It is interesting to see, how Suzuki has strived to keep the dependency of its suppliers on the long run. This is implied with the following tools:

The supplier does not necessarily have to have the quality certificates in order to become a supplier. Thus the threshold to become a supplier is lower than at other car makers. However, companies on this level are not able to become suppliers to other car makers.

The tools required to manufacture a given part at the supplier for the car maker, is made by Suzuki, who gives it free to the supplier.

Suzuki usually has one supplier for one product, and strives to reach as high ratio in its supplier’s sales as possible.

The main differences are summarized in Table 4.

Table 4: SCM tools at Audi and Suzuki

Tools	Audi	Suzuki
Scope of supplier competition	Global	Regional (local and European)
Supplier network structure	Classical supplier pyramid	Flatter pyramid, several direct relationships
Number of local suppliers	Very limited	More significant
Local suppliers' ownership structure	Each supplier in foreign majority ownership	More local majority ownership
Number of suppliers per product or product group	Usually 2, competition (even in product innovation)	Usually 1, captive supplier
Partner selection	Audit after preliminary screening (existence of ISO, QS)	Certifications (ISO, QS) are not prerequisites for audit
Tools – relations-specific investments	Always Supplier produces	Usually Suzuki produces
Supplier training	Minimal, passive	Intensive beginning, active

Specifics of chain level management tools

Suzuki controls its supply base much more rigorously than Audi. This is possible due to the flatter supplier pyramid, and stronger dependencies, since supplier capacities are mainly tied up in Suzuki orders. Also, the certificate of origin has a higher significance at Suzuki. Thus it can happen more often that suppliers have to work with an assigned party.

Since both car makers compete in a price based global competition, thus both use the tool to directly negotiate with suppliers' supplier in order to reduce prices. The higher bargaining power and higher orders can easily result in more favourable prices. In the same time it certainly means the reduction of freedom for the supplier, since the buyer specifies where they have to purchase materials.

Another tool which can be found at both car makers (although Audi has started only lately, while Suzuki has used it for years) is to build industrial parks, or module centres directly in the neighbourhood of the car maker. This geographical proximity results in faster reactions, lower inventory and delivery costs. Also, it makes possible to increase the level of control over suppliers, since facility related fix costs, or sometimes even the labour costs can be directly affected.

The main objective of our research was to have an insight into the operation Hungarian supply chains in the automotive industry, and thus map the steps of

setting up the local supply market. We wanted to analyze the current situation, and the future development opportunities. Above we described how the strategy and objectives of car makers affect the characteristics of the developed supply chain, including the role and situation of local suppliers. As we could see, there are several different practices. At Audi the followed strategy did not make important to build and improve local supplier relationships. Thus the number of Hungarian suppliers is very low, and even lower if we consider only companies with Hungarian ownership. The Suzuki, due to its strategic objectives and market position, was forced to localize a substantially higher ratio of its purchases. This force led to the active development and support of joining companies. Thus Suzuki in the last decade has actively contributed to the improvement of the Hungarian automotive industry.

The effects of strategic change on the supply chain

In the last few years we can observe significant changes which forcefully affect the Hungarian supplier market. Some of these changes can be directly linked to Suzuki's strategy, which will result in a modification of its market situation. Another stream of changes is due to the reduction of the economic competitiveness of Hungary, which leads to regional

realignment of supply chains in the automotive industry. Let us have a look at the changes in Suzuki's strategy and its consequences.

Lately Suzuki has increased the dynamisms of its activities considerably. This dynamism can be caught in the intensive capacity expansion. The increase in capacities could be observable earlier, as well, but the source of this increase was achieved through more efficient internal resource utilization. Now, however, the Suzuki decided to execute a leap capacity increase instead of step by step development. The increased dynamism can also be detected in the speeded up model changes. For Hungarian suppliers both changes (capacity expansion and faster model changes) can hide opportunities and threats.

Naturally, the larger orders stemming from larger capacities will appear at suppliers' side, as well. Thus this is a good opportunity for the Hungarian supplier market to get additional orders on the basis of their previous experiences. The question, if they can take this opportunity, depends on the availability of capital required for development and expansion.

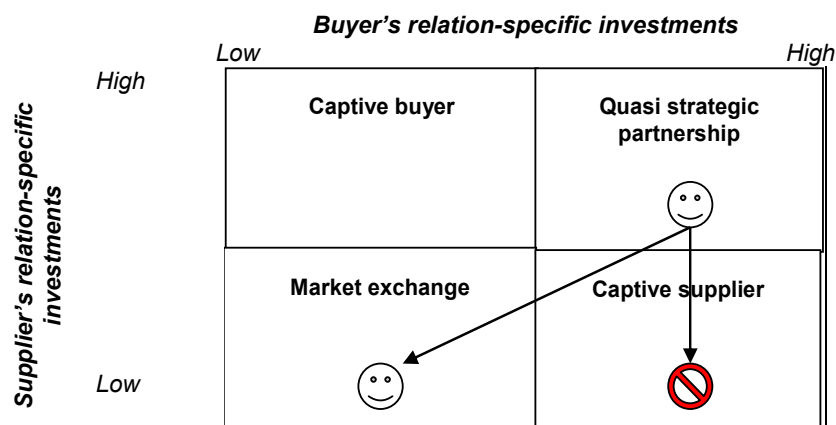
The threat lies in the fact, that the intensity of Suzuki's activities in Hungary in the last years can mainly be explained by the small manufacturing and ordering lot sizes. If these capacities increase, then it can easily happen, similarly to Audi, that Suzuki can mobilize its own Japanese supply base (especially its integrators). Furthermore, the new car makers who have settled down lately in Central and Eastern Europe (Peugeot, Renault, Hyundai) contribute to the intensification of competition. These processes results in a geographically concentrated demand for

modules and parts, which will attract large integrators into the region and lead directly to market loss of certain Hungarian suppliers.

The speeded up module changes establish new claims towards suppliers. The Suzuki manufactured and sold one model for years (Suzuki Swift) when it arrived to Hungary. When it set up the supplier network, Suzuki provided considerable knowledge and technology transfer for its new suppliers. The joining Hungarian companies could learn the product specifications and technology required to produce the given part. The accumulated knowledge, due to the lack of car model change could be directly used without any additional improvement or development. We have to add, that in the automotive industry it is widespread – and works at Suzuki, as well – that suppliers have to decrease their costs yearly by 2-3 percent. In order to reach this requirement suppliers continuously have had to improve the manufacturing technology. This improvement, however, is far from the level, which will be expected in the world of fast model changes. Thus in the long term success, product and related high tech knowledge will be even more essential than before.

The market changes mentioned above, and the new strategic objectives at Suzuki can modify the dependency relations, and thus the resulting relationship structure. Suppliers who are already part of the supply chain will face a redefinition of the relationship with Suzuki. Companies who enjoyed the benefits of the quasi partnership will move into the captive supplier or market exchange position (see Figure 4).

Figure 4: Change in local supplier relationships at Suzuki



The exact position will depend on how they used the initial support, and to what extent did they invest in knowledge and technology in the last few years. Companies, who did have a long term strategy, and did invest their profits into developments, will have the chance to keep the pace with new competitors. Companies who lost this opportunity will become defenseless; they will not be able to keep their position in the intensified competition. They will move into the captive supplier position, and on the long term they will lose their orders and market relations to car makers.

Unfortunately, not every supplier could meet the new expectations. During the first model change 10% of earlier suppliers have been removed from the supply chain of Suzuki. We can only hope that this tendency will not continue.

Our interviewees see clearly the change in Suzuki's strategy position and thus the change in the relationship with it. They expressed that it is much more difficult today to build relationship with it than before. They mentioned that at the beginning of a new relationship suppliers do not get such intensive support from Suzuki than they got before. An important signal of this changed strategy is the reorganization of the purchasing function at Suzuki, which started three years ago. Earlier purchasers at Suzuki were responsible for suppliers, today they are assigned to product groups. Thus one purchaser keep connection with all the suppliers of a given product group, and one supplier may have to keep connection with several purchasers depending on the number and structure of supplied parts. In summary, the close, often personal relationship so far is replaced by a more formalized, impersonal relationship.

Conclusions and further research

The results support our proposition that the strategy of the two examined automakers (Suzuki and Audi) lead to the use of different supply chain management practices, which we could discover along two major dimensions: supply chain structure and supply chain management issues. This result underlines the importance of strategy when a company wants to join a supply chain. It has to know

its own strategy, partner's strategy and the fit of the two in order to have a successful relationship within the supply chain.

There are changes of strategic importance at the examined multinational companies, and also at other multinationals in the region nowadays, which affect the further development of supply chains in the near future.

The strategy of Audi, the global competition of its existing and potential suppliers, gives the chance to join the supply chain only to the most competitive suppliers, where competitiveness means high quality, high reliability, high flexibility (especially on the production, logistics and product development areas), and most of all the best prices. Moreover, Audi suppliers have to have enough capacity to manufacture the required large quantities that are usual in the automotive industry. The high prerequisites make it very difficult to become a member of Audi's supply chain. However, those companies who succeeded can count on long term cooperation within the chain. In the last years very few Hungarian companies fulfilled the high requirements. These companies, we think, have not had to worry; their position will not be changed due to the events taking place in the region.

The special Hungarian supply circle of Suzuki will have to face much more difficulties. Their competitiveness and capacities often do not reach the level of suppliers that are selected on a global basis. Thus the large integrators who come into the region due to the appearance of several car makers can easily take the orders from them.

Looking at Hungary's interest and suppliers' chances it is still possible to direct the process in a favourable direction. Since it is very probable that large integrators will react to the moves of car makers into the region, it would be worth to found industrial parks to attract the integrators there. In this case, although Hungarian suppliers will lose direct connection to car makers, they can successfully fight for second or third tier supplier position, especially because of their geographical proximity. Looking at the supplier structure of Suzuki, several companies could find a more adequate place in the second or third line than where they are now.

On the basis of this research we discovered several prospective research topics.

- Perhaps the most important one is to try to identify how the capabilities of suppliers can be determined and developed. As we could see, the majority of Hungarian suppliers are capacity focused, and this supplier type will lose more and more markets, as the customers require more flexibility and new activities (design) from them. Thus these companies need help in developing new capabilities.
- Secondly, it seems to be interesting, why car makers selected the interviewed suppliers as the best ones? What are the factors which determine the quality of their relationship, and the quality of the supplier? To what extent is it determined by personal and organizational capabilities? What is the effect of trust on the evaluation of the relationship (this research topic is very close to the first one)?
- Finally, it is clear that the cultural background highly affects strategies and applied supply chains. But how foreign companies' culture can prevail in a different environment? How domestic people accept and think about the foreign culture and the resulting customs; and how this affects the structure and tools of supply chains. Separating the effect of strategy as opposed to culture helps to understand the logic beyond specific settings and helps to form adequate supply chain strategy.

We believe that our results contribute to the literature mainly by describing case studies for the connection between company strategies and SCM. The paper also gives some hints for practitioners showing the critical points and projected future for potential suppliers.

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