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Re-insourcing as a manufacturing-strategic option during a crisis—Cases from the automobile industry

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ABSTRACT

In response to the economic downturn following the recent financial crisis, the automobile industry switched to 're-insourcing'. The objective of this paper is to explore underlying motives and decision-making in manufacturing strategy, especially with regard to re-insourcing in the automobile industry. While there has been a lot of research on the topic of 'outsourcing', its opposite has not been researched widely. Even though there are some papers on the automobile manufacturing industry, a deeper industrial insight into re-insourcing is missing. Owing to the increased amount of re-insourcing implemented during the economic crisis, the latter lends itself well to gaining a deeper understanding of the phenomenon.

Six case studies – three of automobile manufacturers and three of automobile suppliers – with in-depth interviews are provided and consequently interpreted. All case studies indicate that the crisis had a significant influence on manufacturing-strategic decisions. Underutilized capacities appear to be a dominant motive for re-insourcing. Differences between automobile manufacturers and automobile suppliers become apparent with regard to both, motives and decision-making.

1. Introduction

The financial crisis of 2007 triggered a global economic downturn, which especially affected the automobile industry (OECD, 2009). Combined with a substantial increase in fuel prices, the financial crisis caused a decrease in car sales. Companies in the automobile industry for instance responded to the crisis by questioning their recent outsourcing decisions. Processes that were being outsourced to suppliers were re-insourced, making companies able to react independently of economic fluctuations (PRTM, 2009) and ensuring capacity of their production facilities as well as avoiding the loss of skilled employees. A study by the consulting company PRTM (2009) revealed that 27% of the surveyed automobile companies were planning re-insourcing activities (within a study population of 300, with 126 automobile industry companies). The study also identified a tendency towards re-insourcing in times of crisis after 2007.

The current paper explores both the underlying motives and the decision-making process. The objective is to analyze the influence of the crisis on manufacturing-strategic decisions in terms of the extent of vertical integration. We examine the decision-making, the motives, and the methods in six case studies from the automobile industry, and provide insight into the practice of manufacturing strategy departments.

2. Background

'Vertical integration' is defined as the share of in-house production of a company in the total value creation related to a final product. This can be altered by decisions to outsource or to re-insource (or also first-time insourcing). Motives for those decisions can be differentiated in the dimensions of manufacturing strategy with respect to costs, quality, flexibility, and dependability (Buffa, 1984 and Wheelwright, 1984). The main outsourcing motives identified in the literature are summarized in the following table (adapted from Quélin & Duhamel, 2003) (Table 1).

Compared to outsourcing, the motives for re-insourcing have been far less researched. Existing research does, however, hint at motives against outsourcing, such as the loss of know how (Adenäuer, Hoffmann, & Kayser, 2008; Hoecht & Trott, 2006; Lonsdale & Cox, 1998), or unexpected costs of outsourcing (Bergin, Feenstra, & Hanson, 2011; Jennings, 2002; Kremic, Tukel, & Rom, 2006). While those motives show the tradeoff between outsourced activities and internal or re-insourced activities, the transaction costs of changing a former decision indicate oncost of altering a status quo such as the process of decision-making shown in Fig. 1 (cf. Holl, 2008; Novak & Stern, 2008; Poppo & Zenger, 1998). Harbour, author of the Harbour Report, a leading benchmarking study on manufacturing performance in the automobile industry explains that re-insourcing activities by automobile manufacturers stem from own performance enhancement in terms of more efficient manufacturing models. This is also supported by Girma and Goerg (2004) indicating that the outsourcing intensity of a company is positively related to its productivity. This again shows a concentration on the factors enabling a company to gain competitive

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Table 1
Outsourcing motives identified in the literature.
Data: adapted from Quélin & Duhamel, 2003.

Main motives identified	Main references
Reduce operational costs	Lacity and Hirschheim (1993b), McFarlan and Nolan (1995), Barthélmy and Geyer (2000), Zhu et al. (2001), Kakabadse and Kakabadse (2002), Kremic et al. (2006)
Focus on core competencies	Quinn and Hilmer (1994); Saunders, Gebelt, and Hu (1997), Alexander and Young (1996b), Kakabadse and Kakabadse (2002)
Reduce capital invested	McFarlan and Nolan (1995), Kakabadse and Kakabadse (2002)
Improve measurability of costs	Barthélmy and Geyer (2000)
Gain access to external competencies and improve quality	Lacity and Hirschheim (1994), Quinn and Hilmer (1994), McFarlan and Nolan (1995), Kakabadse and Kakabadse (2002)
Transform fixed costs in variable costs	Alexander and Young (1996a)
Regain control over internal departments	Lacity and Hirschheim (1993a) Alexander and Young (1996a)

advantage. Enhanced productivity at the same time leads to the manufacturers asking themselves whether they might have a competitive lead, in some areas of production over their suppliers (Automobil Produktion, 2011).

Re-insourcing in times of decreased sales volumes can be seen as an interesting option for utilizing existing capacity in the form of machines and employees (Simon, 2009). Combined with the fear of bad publicity arising from layoffs and reduced working hours, a company can keep its own capacity and skilled employees in-house. This potential reason has been evident in media-effective news announcements, such as "Daimler Secures Jobs in Sindelfingen" or "Leoni Brings Purchasing Volume Back In-House" (Automobil Produktion, 2009). When costs for underutilized capacity show a high amount of fixed costs, re-insourcing can lead to lower costs per unit, fully cutting down on the costs incurred through an external supplier. At the same time, only variable costs occur internally. The time for such actions to become effective depends on the manufacturer's contractual engagement with the supplier. Possible contractual penalties may occur when terminating a contract prior than agreed. This can be seen as a trade-off against salaries paid to employees handling the re-insourced process or compensation money paid to a company's own employees, in case of potential layoffs when not generating work through re-insourcing.

Knowing the motive for outsourcing or re-insourcing, a company has to think about a process of decision-making. Here, the work of a department concerned with manufacturing strategy begins with evaluation methods and decision preparation. This is usually done in the form of a 'funnel', depicted the following stages. The motive for outsourcing or re-insourcing is the underlying target in all of those stages.

This selection in stages is the last phase following positioning, strategy development, and strategy evaluation (cf. Horváth, 2003). The strategy evaluation includes preparation of the decision at the stage 'Market analysis for potential manufacturing partners', or 'Selection of location and scope of operations on country level'. The re-insourcing process is different in as far as only the last stage has to be considered, because the re-integration possibilities are known in terms of location or own-plants. However, it is imaginable that there might be competition between a company's plants if a decentralized structure is in place, for instance, resulting in at least the use of a short list. This also applies for the evaluation of different possibilities.

Besides qualitative evaluation methods that are also important, as shown by the stages one to three counted from the top in Fig. 1, there are static and dynamic calculation methods for making a decision about vertical integration. These play an important role in the process when outsourcing or re-insourcing decisions are regarded from a cost perspective. First of all, there are easy to use static methods involving cost comparison, profitability, and amortization calculations. Second, there are dynamic methods with net present value, internal rate of return, annuity method or real options. The dynamic methods are an improvement over the static ones in two respects. The one-period average view of the static methods is determined by deposits and withdrawals over all periods. With dynamic methods, different times of payment with interest are taken into account. Karjalainen, Maijala, and Lindgren (1999) found that comparative profitability or cost calculations were not always used in outsourcing decisions, however. The main reason for this is that strategic factors seem to be the main influence on the decision.

3. Research method

Owing to the topicality of this work and its exploratory nature, the case study method has been chosen. The in-depth study of a small number of companies is especially suited (cf. Vissak, 2010; Voss, Tsikriktsis, & Frohlich, 2002; Yin, 1994).

In this study, five large automobile companies, either suppliers or manufacturers, agreed to participate in the research, providing us with six case studies (in total, 13 companies were surveyed). Although there is no ideal sample size, this fits the recommendations of Ellram (1996) and Eisenhardt (1989). All of the companies are global but have major operations or even their headquarters in Germany and implement manufacturing strategic decisions from that country. The companies range in size from under 50,000 to over 200,000 employees with an average of 112,000 employees in 2010. Annual sales revenue in the respective years ranges from under 5 billion Euro to over 80 billion with an average of 35 billion. The companies' sizes provide comparability and the opportunity of transparable observation of re-insourcing; however was not intentional theoretical sampling (cf. Pettigrew, 1988).

Through existing contacts in the companies, key informants were identified. Between August and October 2010, each company was visited in order to conduct on-site case study interviews and to collect

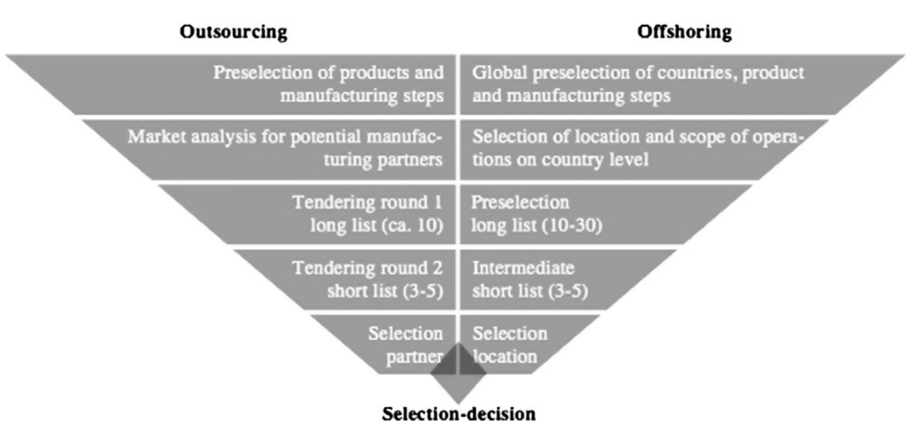

Fig. 1. Process of decision-making for outsourcing and offshoring (data: Horváth, 2003; Kinkel & Lay, 2004).