Financial information and the relocation choices of Finnish manufacturing firms

This policy brief reports findings on the role of financial information in strategic choices of manufacturing locations, particularly in offshoring and backshoring decision-making. The brief is based on 229 survey responses attained from Finnish manufacturing companies. The findings suggest that the financial information available or used in this decision-making context is not always sufficient according to the survey responses. However, companies that have made both production offshoring and backshoring relocations perceive their financial information more supportive compared to the other companies. Although cost considerations are seen more important drivers in offshoring than in backshoring, the backshorers perceive financial information more supportive. Access to financial information is positively associated with offshoring/backshoring decision-making.

The brief discusses the implications of these findings on the innovation policy, including the increased awareness about the financial considerations, in order to sustain competitive advantage of Finnish manufacturing. Increasing overall understanding among managers about the financial considerations and creating capabilities for extensive analyses of the financial consequences of relocation decisions would help sustaining the competitive advantage of Finnish manufacturing.

<table>
<thead>
<tr>
<th>Importance of financial criteria</th>
<th>No movement</th>
<th>Only offshoring</th>
<th>Only backshoring</th>
<th>Both offshoring and backshoring</th>
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</thead>
<tbody>
<tr>
<td>Availability of financial information</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
<td>Very high</td>
</tr>
<tr>
<td>Support for analyses</td>
<td>Medium</td>
<td>Medium</td>
<td>High, especially at plant level</td>
<td>High, especially at product level</td>
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<tr>
<td>Support for decision making</td>
<td>Low / medium</td>
<td>Low / medium</td>
<td>Medium, supplier selection supported</td>
<td>Medium, supplier selection supported</td>
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</tbody>
</table>
The brief focuses on decision-making of production relocation, especially on the decisions of offshoring and backshoring of manufacturing.

Introduction

The brief discusses company-level decision-making related to offshoring and backshoring, which is practically relevant, yet under-researched issue (Arlbjorn & Mikkelsen, 2014; Kinkel, 2014). Although financial benefits are seen as key drivers of the offshoring decisions, there is limited understanding on the actual role of financial information shaping such decisions (Gylling et al., 2015). The actual decision-making processes around offshoring and backshoring are not thoroughly understood, with respect to the potentially different roles of financial information to be actually supportive under different circumstances (Burchell et al., 1980).

Offshoring and backshoring decisions have recently gained attention as growing business phenomena with wider implications to managing global operations (Lewin & Peeters, 2006; Kedia & Mukherjee, 2009; Arlbjorn & Mikkelsen, 2014). Offshoring decisions have been made already for several decades, and the starting point has usually been shifting production to low-wage, or more broadly speaking, low-cost countries. However, cost savings are not necessarily the only or even the primary reason for offshoring, but offshoring requires wider considerations on the sources of competitive advantage for companies in the high-cost economies (Lewin & Peeters, 2006). Offshoring and backshoring refer to transferring production permanently from one geographic location to another location, either from Finland to another country (offshoring) or bringing it back to Finland (backshoring). In both offshoring and backshoring, the ownership of the transferred production may or may not change.

Backshoring is an increasingly important part of managing global operations and making decisions on production location. Understanding backshoring would clearly benefit from longitudinal examination of the business context evolution (Arlbjorn & Mikkelsen, 2014). For example, Gylling et al. (2015) studied a case, where offshore production was moved back because of more accurate cost allocation, changes in supplier costs, growing sales volumes and other external factors, as well as network learning. Identifying the antecedents, motivators or barriers of backshoring requires, however, further studies, and especially case-by-case examination (Stentoft et al., 2016). Further research is needed, particularly, to better understand the dynamics of (economic) factors underlying backshoring (Kinkel 2014). The brief opens the role of financial information in offshoring and backshoring decision-making through the following question:

What is the actual role played by financial information when manufacturing firms make offshoring and backshoring decisions?

Financial information may support managers in many different ways in their decision-making, by enhancing understanding about economic aspects in a given context, and by facilitating learning among the decision-makers (Burchell et al., 1980; Hall, 2010). The availability of useful financial information is a pre-requisite for supporting decision-making (Pizzini, 2006). Korhonen et al. (2013) argued that performance indicators and financial reporting should continuously respond to the current circumstances and enable decision-making accordingly. This is a valid viewpoint also in the offshoring/backshoring context, and requires companies’ attention on the potential support from financial analyses.
The brief is based on a survey, and particularly on questions addressing the availability of financial information and supportive financial analyses, as well as the perceived support on decision-making.

Materials

The brief builds on an extensive survey on offshoring and backshoring decisions in Finland. Offshoring and backshoring decision-making was one part of the wider survey, examining the drivers and consequences of the offshoring and backshoring decisions. More detailed role of financial information in decision-making was addressed by inquiring the drivers and benefits of the offshoring and backshoring, and, more particularly, by inquiring the characteristics of the cost accounting and financial reporting systems of the companies underlying the perceived performance of those decisions. In addition to the perceived support stemming from component, product and plant level cost accounting, also the perceived support for supplier selection, distribution channel selection and plant location decision-making was inquired. The targeted companies were all the manufacturing companies with more than 50 employees in Finland (949 companies belong to the target group). The companies were directly contacted and the survey link was sent to 433 potential respondents. 229 responses qualified to the analyses, thus resulting in 24% response rate.

In response to the research questions, the descriptive statistics provide insights into the decision-making behavior in the respondent companies, and represent a basis for further statistical analyses.

It is noteworthy that the responses are analyzed both at the general level and by dividing the companies into four categories: 1) no relocation of production, 2) only offshoring, 3) only backshoring, and 4) both offshoring and backshoring. This categorization enables more detailed analyses on the support of financial information in different decisions and their consequences.

Results

Altogether, 96 companies (42% of 229) reported that they have a corporate-wide strategy for guiding offshoring and backshoring decisions. In all, 151 companies (66%) have not made production relocations during the past 5 years. 48 (21%) companies had made only offshoring, 19 (8%) only backshoring, and 11 (5%) both offshoring and backshoring.

When addressing the cost accounting system, financial reporting practice and support for decision-making, we used a five-point Likert scale in the following way. We asked questions as to what extent the system or practice supports the decision-making, and the respondent chose the most suitable alternative: 1 = not at all, 2 = small extent, 3 = moderate extent, 4 = large extent and 5 = very large extent.

As a background information, the drivers and benefits of the offshoring and backshoring decisions were surveyed. Financial aspects (e.g., direct cost implications) seem to significantly affect the offshoring decisions, whereas the attention in the backshoring is paid more often to a broad set of non-financial aspects (flexibility, quality, delivery time).

Regarding the cost accounting systems, the respondents found the product level (mean: 4.11) and plant level (3.94) cost information more supportive for analysis purposes compared to component level (3.66) and process level (3.56) cost information. The process level costs represent, however, a crucial unit of analysis in offshoring and backshoring decision-making, as the decision means fundamentally the relocation of certain processes.
The financial reporting practices were found to be rather useful and supportive, especially regarding plant profitability (3.90), product full costing (3.85), and product profitability (3.69). Product full costing appeared to be surprisingly supportive, given the challenges observed in several empirical studies on cost accounting and management, in actually capturing the cost behavior at the product level (cf. Pizzini 2006).

It is noteworthy that financial reporting practices regarding the supplier selection (3.21), delivery channel selection (2.94) and plant location choices (2.84) was seen supportive to only a moderate extent. These viewpoints, however, constitute the background for many offshoring and backshoring decisions. It seems that the companies cannot utilize detailed financial information to guide the offshoring and backshoring decisions considering the entire process from supplier selection until the delivery of the end products.

We analyzed the companies separately regarding their offshoring/backshoring behavior. In Figure 1, data provided by the cost accounting system is presented separately in different company categories. The extent of the relocation decisions made in the companies seems to be associated with the availability of cost information from the cost accounting systems. Especially, in the groups of companies that have made offshoring and backshoring decisions, especially product level and component level cost data is reported to be available. In companies that have made both offshoring and backshoring decisions, the cost accounting systems provide data that allow better analyses at all the levels inquired. Furthermore, Figure 1 reveals that in companies that have made only backshoring decisions, the cost accounting system provides least support for process level analyses.

One logical explanation would be that the lack of process level visibility (to the offshore production) has led to backshoring decisions, in order to restore such visibility.

In Figure 2, the focus is on the financial reporting practices in different company categories. In fact, again, the companies with no production relocations get on average less support for financial analyses than the other companies. In companies that have made both offshoring and backshoring decisions, the product costing and product profitability analyses are enabled to a large extent (or up to a very large extent) by the financial reporting practices. In this group, however, the plant profitability analyses are not perceived that supportive. In some companies, the relocation decisions may be driven largely by the product level considerations and, therefore, the plant level reporting is not as advanced as product level reporting. In companies that have made only backshoring, the support from the financial reporting practice was perceived better than in the companies that have made only offshoring (or companies with no movement). Due to the offshoring/backshoring history of these companies, financial information maybe already available due to owning both alternative locations.

In Figure 3, the support of financial reporting practices in different decision-making situations is presented. As noted earlier, the support from the financial reporting practice to the supplier selection, delivery channel selection and plant location was perceived only moderate (or less) on average. Again, the support was perceived greater in companies that had made plant relocation decisions. Especially in companies that had made either only backshoring or both offshoring and backshoring, the perceived support was perceived better than in companies in general. The supplier selection was especially supported in companies that had made both offshoring and backshoring decisions.
Figure 1 – To what extent does cost accounting system provide data that allow analyses at different levels? (Means in Likert scale 1-5, the y-axis scale of 2,4 - 5,0 is used to highlight the differences).

Figure 2 – To what extent do the financial reporting practices support accurate financial analysis at the following levels?

Figure 3 – To what extent do the financial reporting practices support decision making at the following situations?

Cost accounting and financial reporting practice in supporting different decisions
Lessons learned from the findings

In all, first, the findings support the notion that financial criteria have a central position in the overall decision-making context of offshoring and backshoring (Lewin & Peeters, 2006; Arlbjorn & Mikkelsen, 2014; Gylling et al., 2015) (Table 1, cover page). Although financial information is perceived as a central component both in offshoring and backshoring related decision-making, more non-financial aspects are especially highlighted in backshoring. One reason for this may be that backshoring companies might have more experience on production relocation and, therefore, they are able to measure financial aspects more accurately and to take a wider range of factors into account.

Second, the findings suggest that there are still challenges in the availability of relevant financial information to actually support decision-making. However, there are significant differences between the company groups (different experience of production relocation) regarding the availability and support of financial information (Table 1). In fact, the difference between the categories may be due to the experience of the company in the relocation decisions or the size of the company and the operations in general. Larger companies with longer experience make more production relocations and can be assumed to be better supported with financial information. Further studies should address these factors more in-detail.

Companies that have made both offshoring and backshoring relocations perceive their financial information more supportive compared to other companies. Backshoring decisions were perceived to be better supported by financial information than offshoring decisions. One may assume that backshoring requires more accurate analyses, with new units of analysis (cf. Pizzini, 2006) at the product and plant levels, to actually anticipate and manage the financial consequences of the decision. This would facilitate cost-conscious decision-making and desirable performance (Velasquez et al., 2015; Pizzini, 2006).

Implications to the innovation policies

As a major implication, the findings suggest that innovation policy should support creating capabilities for financial analyses regarding relocation decisions. Indeed, offshoring companies require a lot of support from financial information to make accurate and informed decisions, while potential reshoring companies need to also understand the actual value of domestic flexibility, quality, and other relevant aspects. An increased overall awareness of the financial analyses and considerations is needed, as well as capabilities to design and utilize such analyses. Altogether, such awareness and capabilities would increase the effectiveness of the production relocation decisions.

Backshoring may be a result of different changes, the examination of which result in a better understanding about the profitability consequences of production relocation. Our findings imply that the financial reporting should enable performance-driven offshoring and backshoring in the changing business environment by enhanced understanding about antecedents of profitability. More broadly, decisions with high uncertainty could be better supported with financial considerations if enough attention was paid on these issues. In practice, use of financial information can be enhanced in many ways, both in control and facilitation.
The decisions with ambiguities and uncertainties could be better supported with financial considerations – increased awareness of the potential support is desired.

The sources of Finnish manufacturing firms’ competitive advantage should be understood comprehensively in financial terms. The findings suggest that there are still challenges in the availability of relevant financial information for offshoring and backshoring decisions. However, the companies that have made both offshoring and backshoring perceive their financial information more supportive compared to other companies. Supportive financial information, also beyond the traditional units of analysis and decision-making approaches, could increase the companies’ ability to make wise relocation decisions.

Further reading


