

HOW DIFFERS OUTSOURCING OF CORE AND SUPPORTIVE ACTIVITIES IN SLOVENIAN SMEs

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Abstract

Companies are facing increasing and faster changes on the market, including globalization, shortening of life cycles, complexity of products, intensive technological development. Achieving and maintaining competitiveness can be done with different strategies and tools. One of them is also outsourcing. Outsourcing is widespread throughout the world and represents a commonly accepted business practice. An important feature of outsourcing is that it is determined by several characteristics at the same time. Since outsourcing is a multidimensional phenomenon, we examined its most important and distinctive dimensions, including share of outsourcing particular activity, duration of the outsourcing contract, and number, size and location of outsourcing providers. For the purpose of research we have examined which activities are companies outsourcing and divide them on core and supportive activities. On this ground we studied differences in particular characteristics between those two groups of activities. The paper is based on empirical study of 154 Slovenian SMEs concluded in 2008. Its findings are presented in the paper.

JEL classification: M11, M21

Keywords: outsourcing, activities, dimensions, SMEs

1. Introduction

In the paper we are researching outsourcing of particular activities among Slovenian SMEs. While the outsourcing phenomenon is very extensive concept we limit our research on examining its dimensions and characteristics of outsourced activities in the sense of core and supportive activities. In the empirical study we examined thirteen different groups of activities among SMEs in two different industries (manufacturing and services).

2. Methodology and data

The empirical study was performed on Slovenian SMEs. The studied population consisted of small and medium-sized enterprises in two industries – namely, (1) manufacturing (D standard classification) and (2) real estate, renting, and business (K standard classification) in accordance with the standard classification of activities from 2002. The size of the companies was defined by the number of employees; this study included companies with 10 to 249 employees in 2007. The sample ($N = 154$) comprised 31 percent respondents from the K classification and 69 percent respondents from the D classification. Given the number of employees per company, 21 percent of the companies were medium-sized (50 to 249 employees) and 79 percent were small (10 to 49 employees).

The study is based on outsourcing of particular activities. We predefined thirteen activities, namely purchasing, production, marketing, sales, distribution and transportation, accountancy and finance, administration, human resource management, information technology and information systems, research and development, legal services, after sales services and other services. If a company was outsourcing one (or more) of examined activities it was assumed that the company is involved in outsourcing. The main thesis of the study is that there exist statistically significant differences between outsourcing of core and supportive activities at outsourcing total or part of an activity, at duration of contract and at number, size and location of outsourcing providers.

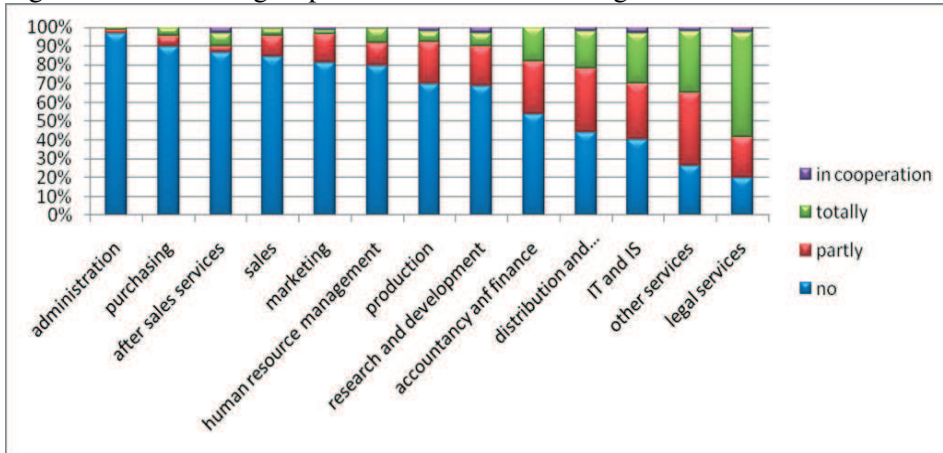
3. The outsourcing phenomena

Outsourcing is wide spread tool in companies of all sizes to achieve different goals, such as flexibility, competitiveness, efficiency and effectiveness as well as innovativeness, while the primary purpose of outsourcing is to contribute to the company's efficiency. For the purpose of the current study, outsourcing is defined broadly as the fundamental decision of a company regarding the external supply of certain products and services. Outsourcing can derive from two aspects (Gilley & Rasheed; 2000). First, the company may decide to outsource certain activities that have thus far been carried out internally. Second, the firm may make a decision regarding the external supply of products that, until now, were neither produced internally nor acquired on the market. Outsourcing represents one of two utmost possibilities to transform inputs into outputs. First one is internal and the second is external transformation from particular company point of view. Among those two possibilities exists a variety of possible combination of them, which also represents some of outsourcing's dimensions.

All respondents in our study outsourced at least one of examined activities. At the same time respondents also indicated what share of particular activity is

outsourced. (total, part or it is provided in cooperation). Figure one shows results of outsourced activities among Slovenian SMEs.

Figure 1: Outsourcing of particular activities among Slovenian SMEs



Source: Author's calculation

The most often outsourced activities are legal and other services, and at least outsourced are administration and purchasing. Other activities are in-between. Additionally, from the figure one could be seen differences in outsourcing particular activities partly, totally and in cooperation.

4. Outsourcing of core and supportive activities

In the literature, classification of outsourcing is frequently in accordance to support and core activities, which are often divided according to Porter's (1985) classification of functions and activities in value chains. In his definition among key activities are input logistics, operations, output logistics, marketing and sale, and services. However, among supportive activities are procurement, technological development, human resource management, infrastructure, planning, control, organisational structure and development of organisational culture.

According to general classification of activities to core and supportive is also outsourcing divided to core and supportive type. Additionally, companies can outsource individual activities, part of an activity, business functions and business processes (Greaver; 1999, 5-7).

Companies can achieve competitive advantages in a dynamic environment where the technological development is fast only on core activities while supportive activities can be outsourced (Quinn; 2000). However, the difficulty exists with the definition of core and supportive activities. Different authors use different approaches at investigating them. Some of them use Porter's

definition, other use companies own classification of core and supportive activities. In our study we asked respondents to define their core and supportive activities. We used construct of three questions, namely (1) the need for experiences and additional trainings to perform an activity, (2) simplicity of changing employees who perform activity and (3) importance of an activity for profitability. With correlation analysis we examined the connection between those three questions for each activity where Cronbach's Alpha was for each activity more than 0.6, what means that the construct is reliable. However, correlation coefficient between those three issues was for each activity high enough (over 0.3). From this construct we form new variables as average value of each construct of three questions. Furthermore, according to the literature (e.g. Espino-Rodriguez & Padron-Robaina; 2005) we used factor analysis to divide activities on core and supportive. Results of factor analysis are in table one.

Table 1: Factor analysis of core and supportive activities

Activities	Communalities	Rotated factors			Factors names	Reliability tests
		Factor 1	Factor 2	Factor 3		
Legal services	0.520	0.880	0.191	-0.149	Supportive activity	Kaiser-Meyer-Olkin measure of sampling: 0,891 Bartlett's test of sphericity: $\chi^2(78)=990,873$ $p=0,000$ Cumulative variance explained: 68,897%
Administration	0.728	0.867	0.095	0.141	Supportive activity	
Accountancy and finance	0.724	0.853	-0.031	-0.001	Supportive activity	
Other services	0.629	0.772	0.138	0.121	Supportive activity	
Human resource management	0.648	0.630	0.395	0.013	Supportive activity	
IS and IT	0.781	0.624	0.336	-0.133	Supportive activity	
Distribution and transportation	0.655	0.611	0.080	0.518	Supportive activity	
Research and development	0.552	0.276	0.761	-0.025	Core activity	
Marketing	0.731	0.430	0.732	0.101	Core activity	
Sales	0.703	0.434	0.713	0.078	Core activity	
After sales services	0.832	0.507	0.683	0.004	Core activity	
Purchasing	0.703	0.134	0.613	0.557	Core activity	
Production	0.750	0.089	0.101	0.856	Core activity	

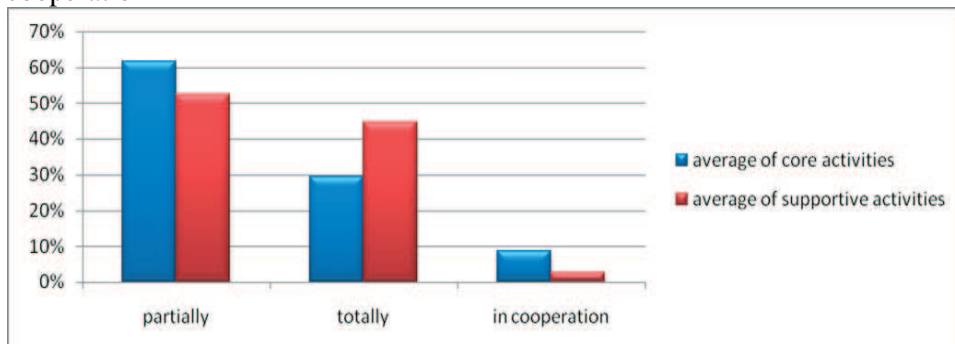
Source: Author's calculation

Based on factor analysis among supportive activities are legal services, administration, accountancy and finance, other services, human resource management, information systems and information technology, and distribution and transportation. Activities of factors two and three we were used as core activities. Based on average value of the activity production we add it to core activities. Based on that, among core activities are research and development, marketing, sales, after sales services, purchasing and production. Results of our study are similar to other studies in the literature (e.g. Arnold; 2000, Espino-Rodriguez & Padron-Robaina; 2005, Gilley & Rasheed; 2000) and differ from Porter's classification.

For the need of further analysis we used average value of sum of core activities and of supportive activities to compare above mentioned characteristics and dimensions of outsourcing those two groups of activities.

Figure two shows results of analysis between core and supportive activities at outsourcing them totally, partially or in cooperation.

Figure 2: Outsourcing of core and supportive activities totally, partially or in cooperation



Source: Author's calculation

From the figure 2 can be seen that on average SMEs are in a greater share totally outsourcing supportive activities. On the other hand they are outsourcing core activities partially and in cooperation than supportive activities. Although, there are differences in outsourcing core and supportive activities, they are not statistically significant. The results of the t-test show that there are no statistically significant differences between core and supportive activities neither at outsourcing activities totally ($t(11)=-2.070$, $p=0.063$) nor partially ($t(11)=1.017$, $p=0.331$) or in cooperation ($t(11)=1.907$, $p=0.083$). However, there is statistical significance at level $p<0.10$ when outsourcing core and supportive activities totally and in cooperation.

5. Dimensions of outsourcing

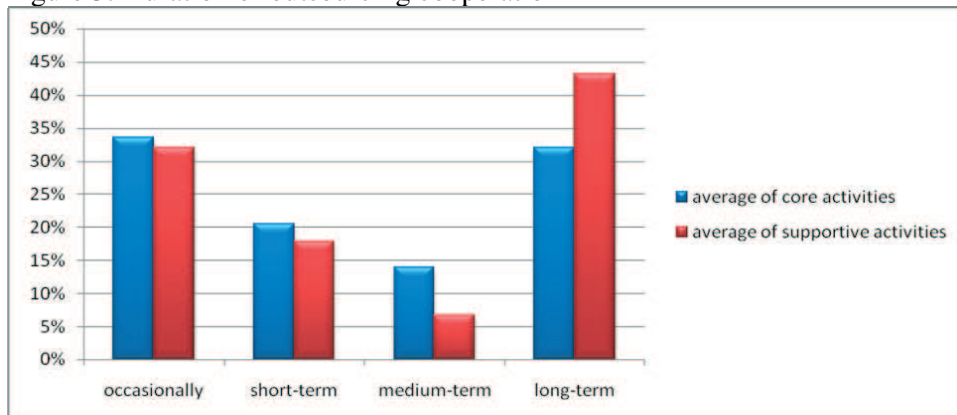
Outsourcing is a very complex concept, which has different dimensions and is in practice manifested in several ways, based on different criteria. Mol (2007) argues that the outsourcing differs from other forms of cooperation because it is characterised by greater number of different dimensions. We prepared the overview of most important dimensions that could be found in the literature. As already mentioned before, the outsourcing could be classified by part of activities outsourced on partial, total and in cooperation. Partial outsourcing refers to the outsourcing of part of activities or functions while the part is still performed in-house (Lacity & Hirschheim; 1995, Lacity & Willcocks; 2001, Fill & Visser; 2000, Mylott; 1995, Datar; 2005). Outsourcing in cooperation appears when two or more companies jointly implement activities (Datar; 2005). This form is particularly significant for long-term cooperation in more complex activities, such as research and development and innovation. In the total outsourcing the entire activity is carried out outside the company (Datar; 2005).

Depending on the country in which the outsourcing provider is located outsourcing is divided on domestic, international and global outsourcing, and outsourcing in the neighbour countries. Domestic outsourcing means acquiring services or products from outsourcing provider who is in the same country as a customer, while the international mean that the outsourcing provider is in a country other than the contracting authority (Brown & Wilson; 2005, Datar; 2005). Global outsourcing represents the extension of international outsourcing and means acquiring services or products from a broader, global area (Datar; 2005) or from several locations around the world (Brown & Wilson; 2005). During the time outsourcing was used in different areas of the company and also at various levels of management. On this basis we distinguish outsourcing of products and outsourcing of services, as well as the traditional, strategic, transformational type of outsourcing and one of the newest types is multi-sourcing. The traditional type of outsourcing represents outsourcing of routine activities with the primary purpose to reduce costs while strategic and transformational outsourcing's basic purposes are to achieve flexibility, competitive advantage and overall performance of a company. The strategic type of outsourcing is based on a long-term cooperation between companies that may be developed in a partnership (Greaver; 1999, Brown & Wilson; 2005). Transformational type is also used to redefine the company (Brown & Wilson; 2005). Multi-sourcing is relatively new type of outsourcing where the company acquire products and / or services from multiple outsourcing providers (Datar; 2005) and from inside the company (Cohen & Young; 2006) at the same time.

For the purpose of our study we select following dimensions of outsourcing: duration of outsourcing contracts, number, size and location of outsourcing providers.

According to the literature companies outsource supportive activities long-term, and core short-term. The reason for this is that the supportive activities are less important but still necessary for company's functioning. Since supportive activities are not a source of competitive advantage it is crucial to ensure their undisturbed implementation at appropriate level of quality and costs. In contrast, core activities contribute to achievement of competitive advantage and are therefore much more important for the company. Therefore, it is important that they are implemented properly, which is easier to provide in short-term contracts that are more flexible and can be quickly modified and updated. In our study we examined differences between core and supportive activities in duration of the outsourcing cooperation. The duration of cooperation was divided on occasional, short-term, medium-term and long-term. Figure three provides the results of analysing duration of outsourcing cooperation. Companies are outsourcing long-term supportive activities more than core activities. However, core activities are in a greater share outsourced occasionally, short-term and medium-term than supportive activities.

Figure 3: Duration of outsourcing cooperation

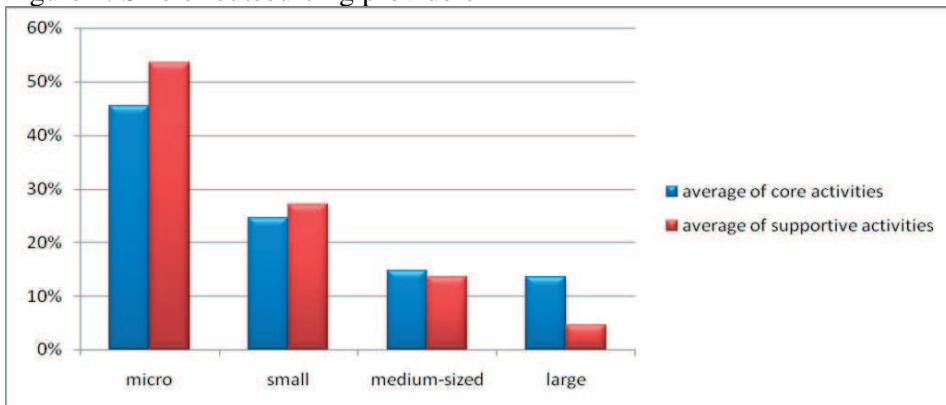


Source: Author's calculation

Figure three shows that there are differences between outsourcing core and supportive activities, but there are no statistically significant differences between outsourcing them occasionally ($t(11)=0.187$, $p=0.855$), short-term ($t(11)=0.495$, $p=0.630$), medium-term ($t(11)=2.006$, $p=0.085$) and long-term ($t(11)=-1.340$, $p=0.207$). However, at $p<0.10$ there is statistical significance between core and supportive activities at medium-term outsourcing.

In general, companies are cooperating with other companies of all sizes. However, small companies are special, while they are mostly cooperating with smaller companies or companies with the same size. In our study a number of outsourcing providers was divided in four groups, namely micro, small, medium-sized and large companies.

Figure 4: Size of outsourcing providers

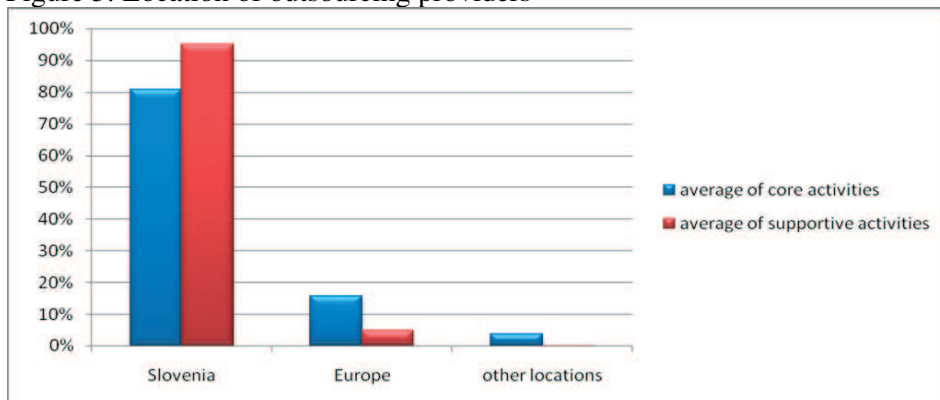


Source: Author's calculation

Differences between outsourcing core and supportive activities are not big. Slovenian SMEs mostly outsource activities to micro and small companies and much less to medium-sized and large companies. However, there are no statistically significant differences between outsourcing core and supportive activities to micro ($t(11)=-0.803$, $p=0.439$), small ($t(11)=-0.520$, $p=0.613$), medium-sized ($t(11)=0.183$, $p=0.858$) and large companies ($t(11)=1.734$, $p=0.111$).

Also locations of outsourcing providers could be all over the world. However, SMEs are mostly cooperating with companies from local environment and are rarely searching for providers from foreign countries. In the study we examined cooperation with companies from Slovenia, Europe and other locations. The results are provided in figure five. It could be seen that companies are outsourcing supportive activities in a greater share to Slovenian companies than core activities, and in opposition are in a greater share outsourcing core activities to companies from Europe and other parts of the world than supportive activities.

Figure 5: Location of outsourcing providers

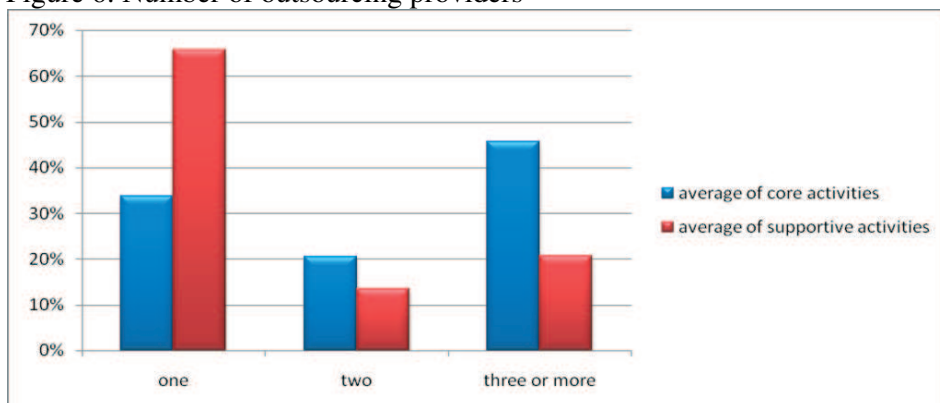


Source: Author's calculation

The result of t-test shows that there are statistically significant differences between outsourcing core and supportive activities when outsourcing to providers in Slovenia ($t(11)=-3.848$, $p=0.003$), Europe ($t(11)=2.655$, $p=0.022$) and other locations in the world ($t(11)=2.686$, $p=0.021$). Although there are significant differences in location of outsourcing providers between outsourcing core and supportive activities are SMEs mostly outsourcing activities to companies in local environment and much less to companies in foreign countries.

The last dimension examined in the study was a number of outsourcing providers. In the study we used three different categories, namely one, two and three or more outsourcing providers for particular activity. Results of analysing a number of outsourcing providers for average of core and supportive activities is provided in figure six.

Figure 6: Number of outsourcing providers



Source: Author's calculation

From the figure six could be seen that companies have a larger share of one provider for outsourcing supportive activities than core. And on the contrary, they have a larger share of two or more providers for core activities than supportive. It is consistent result with other studies while core activities are more important to companies than supportive. Therefore, it is safer to have more providers for one crucial activity. There are also statistically significant differences between outsourcing supportive and core activities to one ($t(11)=-2.366$, $p=0.037$) and three or more ($t(11)=2.058$, $p=0.064$) outsourcing providers at level $p<0.10$, while there is no statistical significance at having two ($t(11)=1.342$, $p=0.207$) outsourcing providers.

6. Conclusions

In the paper we have studied differences in selected dimensions among outsourcing of core and supportive activities in Slovenian SMEs. We can conclude that Slovenian SMEs are largely outsourcing activities partially and totally and much less in cooperation. However, comparison between outsourcing core and supportive activities shows that on average core activities are outsourced partially and in cooperation in the greater part than supportive activities which are largely totally outsourced. Such results are expected for several reasons. First, performing activities in cooperation with providers is the most demanding form of outsourcing, because it is associated with the greatest need of involvement of companies, and therefore it was expected that there will be less outsourcing in cooperation. Additionally, this form is more suitable for more risky activities because of unspecified or poorly specified results, such as are at research and development. Second, the partial outsourcing, which aims to complement company's internal resources, requires less engagement of a company, but still more than total outsourcing, while it still demands coordination with the outsourcing provider. Third, in general, the outsourcing is mainly intended to routine activities, which are simple and other specialist provide them more efficiently, faster or with better quality and at the same time do not require large investments for their development, which are all characteristics of supportive activities which are mainly totally outsourced.

While the outsourcing is a multidimensional phenomena, important are also other dimensions or characteristics. We studied the most essential among them – duration of outsourcing contract and size, number and location of outsourcing providers. Slovenian SMEs are mostly outsourcing their activities to micro and small companies. This is the consequence of negotiation power dependent of the size of a company. Remarkable is the result that SMEs are outsourcing core activities more to the large companies than supportive, while the last one are less important. Large companies have more accumulated knowledge and other resources than small companies, and offer access to new knowledge and faster

development of their key business areas, which enables to achieve competitive advantages. For the same reason, the companies outsource core activities more often to two or more outsourcing providers than supportive activities. With a greater number of outsourcing providers for one core activity companies ensure the undisturbed implementation of these activities and at the same time increasing the competitiveness between providers contributes to the quality of provided activities.

Also, the duration of outsourcing varies between supportive and core activities. Long-term are mostly outsourced supportive activities, while companies mostly outsource core activities occasionally, short- and medium-term. This is also the result of significance that the core activities have for the company compared to supportive. The implementation of core activities is much more dynamic and is also quickly changing because of necessity for development to maintain competitive advantage. The main weakness of outsourcing in Slovenian SMEs is that they have most of outsourcing providers from Slovenia. This finding, however, coincides with a low degree of internationalization of Slovenian SMEs and has a negative impact on increasing their competitiveness and innovation, which are in Slovenia still at relatively low level. Based on above discussed common features of relationships with outsourcing providers can be concluded that the outsourcing of core activities has quite different characteristics than the outsourcing of supportive activities which requires further studies that will go under overall characteristics and focus on particular dimensions and examine them more detail.

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