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THE IMPORTANCE OF RELOCATION FOR THE COMPETITIVE POSITION OF AN ENTERPRISE: THE PERSPECTIVE OF COMPANIES FROM THE CLOTHING AND AUTOMOTIVE INDUSTRIES LOCATED IN POLAND[**]

Value chain module relocation is nowadays a commonly used business practice. Its popularity is growing not only among companies originating from developed countries, but also among companies from Central and Eastern Europe. However, the attention of researchers and politicians from the latter region is often focused on the realization of particular modules of global value chains, rather than on the optimal integration of geographical and ownership structures of the national enterprises' value chains. At the same time, there seems to be a demand among entrepreneurs (potential decision-makers of the value chain module relocation use) for the more widespread knowledge of the possibilities offered by relocation, the problems and the consequences they bring, together with empirical evidence for them. The following paper focuses on the links between value chain module relocations and the competitive position of a relocating company. While doing so, it applies the perspective of companies located in Poland and operating in the clothing and automotive industries. In the paper, both secondary and primary sources of information were used. The reasoning applied in the study represents an analytical deduction. The research from the cited works was used as the background to prepare and conduct an empirical study. The paper attempts to explain what drives the importance of value chain module relocation for the achieved competitive position, by the use of ordinary least square regression models. The findings of the study indicate that the importance of value chain module relocation for an enterprise's competitive position can be partially explained by the importance of relocation for input competitiveness, the number of benefits resulting from those relocations, the competitive position achieved by the relocating company, its age and engagement in export activity. However, while the first three variables in the sample had a positive relation with the importance of relocation for the achieved competitive position, the remaining two had a negative one.

Keywords: relocation, delocalization, value chain modularization, enterprise competitiveness

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1. INTRODUCTION

Globalization has changed the way firms have been configuring their value chains (Buckley, Ghauri, 2004). Nowadays the achievement of sustainable competitive advantage requires a company to develop its geographic and ownership structures, together with their inter-linkages to match the global market potential of the particular industry (Craig, Douglas, 2000). Although the value chain module relocation is not a new phenomenon in economic reality, its popularity among economic entities has been rapidly growing recently. Value chain module relocations, and the particular forms they can take (especially offshoring and outsourcing), for diverse reasons have recently attracted a lot of attention from economists, businessmen and politicians. The phenomenon has been studied by scientists focusing on selected national markets (see: Murray, Kotabe 1999; Farrell et al., 2006; Farrell, Grant 2006; Beugelsdijk et al., 2008; Sharma, Chen 2008; Schwender, Leet 2008; Klincewicz 2008; Wei et al., 2008), selected industries (see: Sando 2008; Schwender, Leet 2008; Gupta et al., 2008; Mangieri 2008; Guzik, Micek 2008), MNCs' operations (see: Magretta 2000; Cantwell et al., 2008; Wei et al., 2008), selected forms of relocation (see: Maskell et al., 2007; Doh 2005; Sharma, Chen 2008; Pyndt, Pedersen 2006; Jensen, Pedersen 2007; Labrianidis 2008; Oshri et al., 2009; Parmigiani, 2007; Parmigiani, Mitchell 2009; Martínez-Noya et al. 2009; Perunovic, Christoffersen 2009), selected economic issues (see: Grossman, Rossi-Hansberg 2008; Piscitello, Santangelo 2008; Gwosdz, Domański 2008) and diverse combinations of those criteria. Additionally, many publications have been devoted to the subject of supply chain management (see: Christopher, 1998; Mentzer et al., 2004; Li et al., 2006).

On the other hand, from a microeconomic perspective, value chain module relocation can be viewed as a factor influencing the competitiveness of a relocating entity. While the benefits offered by value chain module relocation and its particular forms are often highlighted in the above cited literature, the links between use of relocation and the competitiveness of relocating companies are less common. However, this aspect has drawn attention of some scientists (see: Kotabe et al., 1998; Li et al., 2006; Cerruti, 2008; Di Gregorio et al., 2009; Jabbour, 2010; Wagner, 2011; Hensen, Pedersen, 2012). Research showed that the value chain module relocations (VCMR) allowed companies to increase their productivity (see: Burger, 2008; Thakur, Contractor, 2008; Un, 2009), innovativeness (see: Rodríguez, Nieto, 2009), reduce costs and have access to high quality intermediate

goods/services (see: Auer et al., 2006). Moreover, a change in sourcing strategies can enhance competition, stimulates sales and impacts heavily on the price of traded goods or services (see: Miroudot et al., 2009).

In Poland, the subject of competitiveness in relation to particular industries and companies has attracted the attention of researchers, entrepreneurs and politicians since the opening-up of the economy in 1989 (Gorynia, 1998). Currently, an opportunity for the Polish economy and Polish companies in relation to the disaggregation of the value chain, is seen as the realization of particular modules of global value chains (see: Panczyj, Gondek, 2008; Sińska, 2008; Jones Lang LaSalle 2009), rather than the optimal integration of geographical and ownership structures of Polish enterprises' value chains. Therefore their value chain module relocations have drawn relatively little attention from researchers and politicians. However, the mentioned phenomenon has been noticed by companies and over time its use has been increasing. This can be evidenced by the fact that in 1995, intra-industry trade amounted to 22% (Černoša, 2007) of total trade in Poland, while by 2007 it increased by up to 50% (Kawecka-Wyrzykowska, 2009). At the same time, the import content of export in 1995 amounted to 17%, while by 2005 it grew to 31% (OECD, 2010).

The studies concerning the value chain module relocation use in Poland taking the microeconomic perspective are very few (see: Guzik, Micek, 2008; Gwosdz, Domański, 2008; Jurczak, 2010; Choczaj, 2010; Kłos 2010; Tomaszewska, 2012; Dzikowska, 2012c), often limited only to outsourcing practice (see: Jurczak, 2010; Choczaj, 2010; Kłos 2010), use relatively small research samples and usually do not take into consideration the sectoral background of the analysed companies. Additionally, none of the mentioned studies focus directly on the competitiveness of Polish enterprises in relation to their relocations. On the other hand, there seems to be a demand among entrepreneurs (potential decision-makers of the value chain module relocation use) for the more widespread knowledge of the possibilities offered by value chain modules relocation, the problems and consequences they bring, and the empirical evidence for them. In fact, there are very few publications describing the results of CEE companies' attempts to relocate modules from their value chains. This paper attempts to partially fill this research gap. At the same time, the paper constitutes the continuation and further development of the author's previous studies concerning links between value chain module relocation and the competitiveness of an enterprise (see: Dzikowska, 2012a; Dzikowska, 2012b; Dzikowska, 2012c; Dzikowska, 2013).

The research problem that the paper addresses is: which factors can be used to explain the importance of value chain module relocation for an enterprise's competitive position? The paper attempts to answer this question while taking into consideration the perspective of enterprises engaged in relocation, operating in two chosen industries in Poland (clothing and automotive). The industries under investigation in the study were chosen due to their high level of susceptibility to the value chain modularization of the enterprises operating within them. While answering the research questions, the article focuses on the links between enterprise competitiveness and its value chain module relocation practice.

In the paper both secondary and primary sources of information were used. The reasoning applied in the study represents analytical deduction. The research hypotheses were developed on the basis of the literature study and the author's own reflections. The following sections of the article present the theoretical framework that constitutes the background of the analysis and formulation of the hypotheses for empirical testing. Subsequently, the research methods are discussed including a description of the variables used, and their operationalization. Finally, the results are presented.

2. THEORETICAL BACKGROUND

The study has an interdisciplinary character. Due to its microeconomic perspective, its foundations relate to the theory of the firm. By focusing on enterprise competitiveness the paper connects with strategic management, and in particular with the activity-based view (Porter, 1985), resource-based view of the firm (Wernerfelt, 1984, 1995; Prahalad, Hamel, 1990; Barney, 1991, 2002; Barney, Clark, 2009) and, partially, also with the theories of industrial organization. On the other hand, the location and relocation of economic activity, the value chain module relocation and, in particular, some forms it may take (offshoring, offshore outsourcing) are incorporated in international business. In the following subsections of the article, the attention of the reader will be drawn to the theoretical aspects of enterprise competitiveness, applied in the study understanding of value chain module relocation and links between competitiveness and relocation.

2.1. Competitiveness of an enterprise

The enterprise competitiveness theory encompasses inter alia Porter's (1980, 1985) five competitive forces model and the value chain concept (activity-based view), and the resource-based theory (Wernerfelt, 1984, 1995; Prahalad, Hamel, 1990; Barney, 1991, 2002; Barney, Clark, 2009) influenced by Penrose (1959). Competitiveness is at the core of a company's success and failure in a market economy (Porter, 1980). This statement seems to receive worldwide appreciation and strong acceptance. However, researchers have failed to reach a consensus on the definition of competitiveness and, as a result, in the literature of the subject exists a number of different definitions of company competitiveness (Porter, 1998; IMD, 2004), among which some share common ground, while others do not. Table 1 provides a list of the selected definitions of company competitiveness. It is easy to notice that while some authors are relating the competitiveness of an enterprise to a firm's ability to sell products or services, other researchers refer to it as the ability to react to the internal and external environment, generate good financial results, or simply as a multi-dimensional concept.

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Table 1

Selected definitions of enterprise competitiveness

Study	Competitiveness definitions
Ambastha, Momaya, 2004	"the ability of a firm to design, produce and or market products superior to those offered by competitors, considering the price and non-price qualities"
Pace, Stephan, 1996	"in order to be competitive, any organization must provide products and services for which customers or clients are willing to pay a fair return or price"
US Competitiveness Policy Council, 1992	"the ability to produce goods and services that meet the test of international markets while citizens earn a standard of living that is both rising and sustainable over the long-run"
Chikán, 2008	"the capability of a company to perceive changes in both the external and internal environment and to adapt to these in a way that the profit flow generated guarantees the long-term survival of the firm"
Feurer, Chaharbaghi, 1994	"… depends on shareholder and customer values, financial strength which determines the ability to act and react within the competitive environment and the potential of people and technology in implementing the necessary strategic changes"
Nowakowski, 2000	"ability of an enterprise to face its competition, maintain and surpass its market shares and, as a result, earn a significant level of profits"
Moon, Newman, 1995	"competitiveness of an organization relates to its relative position against its rivals"
Dunford et al, 2001	"enterprises that are competitive are those that achieve a greater than average improvement in the quality of goods and services and/or a reduction in their relative costs that enable them to increase their profits (revenues-costs) and/or market share"
Buckley et al, 1988	"encompass competitive performance, its sustainability through the generation of competitive potential and the management of the competitive process"
Flak, Głód, 2009	"enterprise competitiveness is a multi-dimensional feature of a company, that results as well from its internal qualities, as from its ability to cope with environmental conditions"

Source: own literature study

One of the reasons for the existence of such a diversity of definitions, is that competitiveness is an abstract concept. Another reason might be the fact that a definition of a term suggests the measures which are directly linked to the perspective applied in the research and its aims. In this paper, it is assumed that company competitiveness can be deconstructed into dimensions that can also concern the result accomplished by a company as the factors used to achieved those results. This assumption stays in line with the reasoning of, among others, Buckley et al. (1988): "Competitiveness includes both the ends and the means towards those ends" (see also: Andreosso-O'Callaghan, Jacobson, 1996; Gorynia, 2002; Hitchens et al., 2003). In the case of the results achieved by a company, one can talk about output competitiveness or performance competitiveness (Andreosso-O'Callaghan, Jacobson, 1996; Hitchens et al., 2003), which may also be called a competitive position. In the case of the factors used to achieve particular results one can talk about input competitiveness (Andreosso-O'Callaghan, Jacobson, 1996; Hitchens et al., 2003), which encompasses competitive strategy and competitive potential. Competitive potential is understood as the means that are used to build a company's competitiveness. Competitive strategy is a broad-based declaration of how a business is going to compete, what its goals are, as well as the set of actions that are taken to achieve those goals and to cope with rivals and the five competitive forces in the industry (Porter, 1985). However, even the deconstruction of the competitiveness concept into competitive potential, competitive strategy and competitive position still does not allow to conduct its measurement, and therefore, all those dimensions (variables) need to be operationalized by variable indicators. In regard to competitive potential, answering to an issue raised in the literature (see: Collins, 1991; Porter, 1991; Dess et al., 1995; Spanos, Likoukas, 2001; Sheehan, Foss, 2009), the perspective applied in the article combines activities (Porter 1985, activity-based view) and resources (Wernerfelt, 1984, 1995; Prahalad, Hamel, 1990; Barney 1991, 2002; Barney, Clark 2009) as sources of a company's competitiveness (see also section 4.2. of this paper). Indicators of a competitive strategy variable may be competitive instruments encompassing: price, quality, flexibility of an offer, brand, promotions, payment conditions, etc., while indicators of a competitive position can encompass: market share, return on assets, return on sales, sales growth rate etc. (Kotabe et al., 1998).

It is easy to notice that from this perspective, the above mentioned competitive dimensions are inter-linked. Competitive positions are results achieved thanks to the competitive potential used during a competition process, conducted according to a scheme set by a company's competitive

strategy that takes into account environmental conditions. Therefore from the most general perspective, it can be said that input competitiveness impacts on output competitiveness and that competitive dimensions can be organized in a multiple-level hierarchy structure (Gorynia, 2002). The described relations are presented in Figure 1.
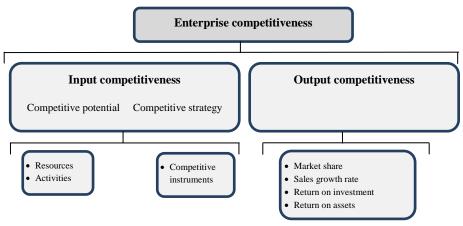

Figure 1. Enterprise competitiveness concept

Source: own literature study

2.2. Value chain module relocation concept

In the paper it is assumed that the implementation of the value chain modularization idea into economic reality can be explained by the achievements of several distinct, but at the same time, inter-linked research areas. It can be said that the theoretical background of those research areas has been creatively unified into the concept of the value chain module relocation. Not all the below mentioned theoretical concepts and theories may be used in an unchanged version to explain the phenomenon of value chain modularization. Some of the original assumptions have to be adjusted (by giving them a narrower or wider meaning) to current market conditions, and others omitted due to the lack of significance for the analyzed phenomenon. Therefore, the term "creative synthesis" has been used.

The value chain module relocation concept has been strongly influenced by Porter's value chain and activity-based view (1985), the idea of specialization, whose economic precursor was Smith (1776), the transaction

cost theory introduced by Coase and Williamson (Coase, 1937; Williamson 1985, 1996) and Ricardo's law of comparative advantage (1817) as modified by Grossman, Rossi-Hensberg (2006, 2008). The understanding of the theoretical foundations of the value chain modularization concept applied in the study, is discussed in more detail by Dzikowska (2012c).

In line with Porter (1985), in the paper it is assumed that all actions taken by an enterprise to manufacture and sell a product and/or service can be perceived as a company's value chain (Porter, 1985). The value chain can be divided into separate cell/processes (in the original concept called primary and support activities), which can be broken down into individual functions/tasks. In the paper both whole processes and individual functions are understood as modules of a value chain. The process of the identification of modules can be continued, singling out more and more detailed and, at the same time, less complex modules. Therefore the potential number of modules within a particular organization, depending on their aggregation level, can be high or low. At the same time, each of the modules can be important for a company's competitiveness (competitive advantage creation is connected to the nature, the means of implementation and the relationship occurring between the various modules) (Porter, 1985).

An enterprise understood in the presented way operates within a value system. It includes a value chain of a particular company as well as its suppliers' and buyers' value chains. Figure 2 provides a graphic representation of a company's value system. A company which operates within external ownership structures, has a group of external suppliers and customers, while a company that operates only within internal ownership structures is characterized by internal suppliers and customers. Possible solutions are also located between these two extreme cases.
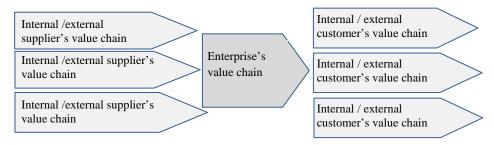
Figure 2: Value system of an enterprise

Source: adapted from Porter (1985)

With the use of value chain module relocations, modern enterprises can focus their actions on the creation of the highest value within specific modules, while seconding the ones that generate relatively low value to other specialized companies. Those specialized entities can be found in internal or external ownership relations against the relocating enterprise. As a result of the module relocation, both the value chain of a company and the whole value system change.

Enterprises deliberately using the value chain module relocation are trying to optimize their value chain by seconding particular modules to suppliers characterized with a specific ownership and geographical structure who deliver the modules with the relatively lowest cost/price level (the lowest level of costs relates to the relocation of a value chain module within the internal structures of ownership, while the lowest price applies to the relocation of a value chain module to the external ownership structures). In the literature of the subject, depending on the criteria adopted by the researchers, one can find various approaches to the forms of a company's value chain module relocation. Aron and Singh (2005), Labrianidis (2008), Rybinski (2008), Contractor et al. (2010) distinguish six types of the value chain module relocation forms. However, Pyndt and Pedersen (2006), Oshri et al. (2009) pointed out four types of such forms. In this paper it is assumed that a particular module can be delocalized to a non-related (external) company located in the home market – outsourcing or abroad – offshore outsourcing, as well as to a local subsidiary – in-house sourcing or a subsidiary located abroad – offshoring (for more detailed information on this classification and justification for its use see: Dzikowska (2012b)).

The main motivation for the use of the value chain module relocation is a desire to participate in the gains offered by this solution, while minimizing the problems resulting from it. The motives cited in the literature for value chain module relocation (see: Hagel, 2004; Couto, Lewin, 2007; Linares-Navarro et al., 2010) can be divided into four groups: cost related, resource related, organization related and market related. Table 2 provides an overview of the motives, while taking into consideration the proposed division.

Table 2

Motives for the value chain module relocation

Cost related	Resource related	Organization related	Market related
• Reduction of labour costs; • Reduction of other costs; • Change of fixed costs to variable costs; • Ability to forecast cost more accurately.	• Access to highly qualified personnel; • Access to new technology; • Concentration on key capabilities.	• Growth strategy; • Improvement of offer quality; • Improvement of the efficiency of the system; • Changes in business processes.	• Access to new markets; • Faster access to markets; • Decrease in time of reaction to market changes; • Adjustment to competitors' moves.

Source: own literature study

Yet value chain fragmentation and relocation also bring some threats. For example, it may lead to a decrease in the quality of intermediate or final products/services and possibly harm the reputation of the company. Moreover, it can enable the creation of a new competitor, lead to the loss of control over a module, create opportunities for the outflow of unique technology or knowledge and increase the level of dependence on suppliers. Therefore when deciding about relocation, the companies might also be aiming at the minimization of the threats and problems related to relocation.

2.3. Enterprise competitiveness and the value chain module relocation concept – the shared area/perspective

The use of the value chain module relocation changes the enterprise's environmental conditions and the enterprise itself. These new internal and external conditions may influence a company's competitiveness. On the basis of the previously mentioned work concerning enterprise competitiveness and the value chain module relocation phenomenon, an analytical framework investigating the influence of the value chain module relocation on the competitiveness of enterprises was developed. To maintain the readability of the framework, the factors related to relocation were divided into five groups: geographical location related factors, additional foreign market related factors, specialization related factors, trade related factors, technology and management transfer related factors. The framework is presented in Figure 3. More detailed information on the framework is provided in Dzikowska (2013).
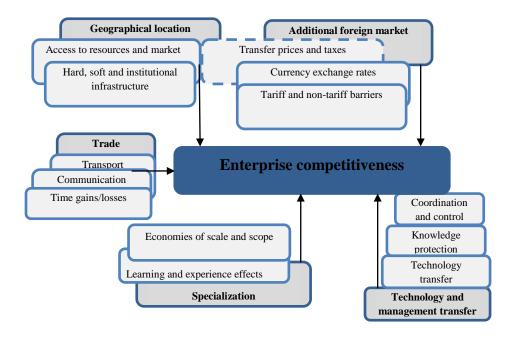
Figure 3. Framework – influence of VCMR on enterprise competitiveness

Source: own study

Each of the identified factors related to relocation influences directly at least one of the applied competitive dimensions. Table 3 provides a summary of the factors and dimensions that can be influenced.

Table 3

VCMR related factors influencing enterprise competitiveness

Factor	Competitive dimension under direct influence	Influence channels
Geographical location related factors		
Access to resources and market	➜ Competitive potential ➜ Competitive strategy ➜ Competitive position	Relocation changes amount accessible resources and/or effects of their work. This situation influences a possible price and financial situation of a relocating company – costs that are generated and a potential amount of sales and, as a result, also the share of a market.
Hard, soft and institutional infrastructure	➜ Competitive potential ➜ Competitive strategy ➜ Competitive position	Hard infrastructure influences directly costs of module realization as well as quality and the amount of accessible resources, and therefore also the quality and price of the company's offer. Soft infrastructure to some extent limits accessible suppliers, and therefore also features the available supplies and their prices. An institutional infrastructure regulates conditions of the access to resources and to some extent their prices.
Trade related factors		
Transport	➜ Competitive strategy ➜ Competitive position	Costs of transport influence directly competitive instruments possible to use and the financial situation of a relocating company.
Communication	➜ Competitive strategy ➜ Competitive position	Costs of communication influence directly competitive instruments possible to use and the financial situation of a relocating company.
Time gains/losses	➜ Competitive strategy ➜ Competitive position	Time gains/losses can influence the amount of stock that has to be kept by a company, the speed of reaction to market changes, and time needed to deliver an offer to the market. Therefore, it can also influence the company's financial situation and share of market.
Additional foreign market related factors		
Tariff and non-tariff barriers	➜ Competitive potential ➜ Competitive strategy ➜ Competitive position	Tariff and non-tariff barriers mainly influence the final costs of an offer. However, quantitative limits, technological barriers concessions and licenses also directly influence available resources.

Currency exchange rates	➔ Competitive strategy ➔ Competitive position	Risk related to currency exchange rates fluctuations and actual fluctuations of currency rates influence the cost level and competitive instruments (i.e. price) that are possible to use as well as the financial results of a relocating company.
Transfer prices and taxes*	➔ Competitive position	The levels of transfer prices used and taxes paid directly influence the amount of financial results.
Specialization related factors		
Learning and experience effects	➔ Competitive potential ➔ Competitive strategy ➔ Competitive position	Relocations encourage specialization, and therefore, create opportunities for occurrence of learning and experience effects, which can result in faster and/or cheaper supplies of modules. These effects can also influence features of potential offers and results achieved by a company.
Economies of scale and scope	➔ Competitive strategy ➔ Competitive position	Economies of scale and scope can influence competitive instruments and financial results of the company.
Technology and management transfer related factors		
Technology transfer	➔ Competitive potential ➔ Competitive strategy ➔ Competitive position	Technology transfer directly influences available resources. Additionally, it can also influence competitive instruments that can be used by a company while creating an offer. It also has an impact on company performance.
Knowledge protection	➔ Competitive potential ➔ Competitive strategy ➔ Competitive position	Knowledge protection conditions can influence resources available to a company, competitive instruments that can be used by a company and, finally, its costs and financial results.
Coordination and control	➔ Competitive potential ➔ Competitive position	Coordination and control responsibilities can influence activities that are conducted by a company. They also have their impact on financial results of a company.

* These two factors in certain conditions can be also taken into consideration in the case of in-house sourcing.

Source: own study

The value chain module relocation by distinct, but at the same time often inter-linked factors exerts a direct influence on the competitiveness of an

enterprise; however, as is noticeable from the provided list of factors, it also relates to opportunities as to risks, and therefore it does not necessarily lead to an improvement of relocating a company's competitiveness. The actual results of the relocation for enterprise competitiveness seems highly dependent on the strategic fit between environment conditions, the vendors' features and the relocating company's features and needs. The relocating company's features relate to its ability to take advantage of the opportunities arising from relocation, and to protect itself from the potential risks.

3. DEVELOPMENT OF THE HYPOTHESES

During the hypotheses development process five hypotheses were formulated. All of them refer directly to the importance of relocation for an enterprise's competitive position. The following parts of this section present the justification for the hypotheses' formulation.

3.1. Relocation's importance

According to Porter's activity-based view (1985), a company can be perceived as a collection of interrelated activities that create an economic value. These activities can be conducted in a better way and/or at lower costs than their rivals. Competitive strategy defines the configuration of those activities. Therefore, a competitive advantage results from those activities (Porter, 1985, 1991). On the other hand, representatives of the resource-based view of a firm (Wernerfelt, 1984, 1995; Barney, 1991) claim that companies' results differ because of resources that are unevenly distributed and tied semi-permanently to the firm. Since resources are responsible for value creation, they are perceived as the source of competitive advantage. The more valuable, rare, imperfectly imitable and well organized the resources are, the more sustainable source of competitive advantage they constitute (Wernerfelt, 1984; Barney, 1991).

In the paper it is assumed that while analyzing company competitiveness, it is important to take into consideration not only the possessed and used resources, but also the activities required to utilize those resources. The possession of resources itself, without the actions needed to utilize them, is not enough to achieve the aims of the company, for example, as is suggested in the resource-based concept (see: Barney, 1991); to improve a company's efficiency and effectiveness. Such an approach could have been suggested

by Porter, when he highlighted that "… resources are only meaningful in the context of performing certain activities…" (Porter, 1991, p. 108). On the other hand, it is difficult to talk about economic value creation within an enterprise only from the perspective of performed activities, since all activities are being performed by and with the usage of resources. Moreover, the characteristics of resources may influence the final quality of the performed activities. Therefore, in line with Sheehan's and Foss's (2009, p. 255) remark, it is assumed that only the integration of the approaches presented in Porter's activity-based view and the resource-based theory can provide the most comprehensive explanation for generating economic value and creating, sustaining or improving its competitive advantage.

Possession of a competitive advantage can be assessed by output competitiveness, as a company possessing a competitive advantage has a good competitive position (is better than its rivals), while a company that does not achieve a competitive advantage is characterized by a bad competitive position (its results are worse than its rivals) (Porter, 1991). Therefore the unique strengths a company possesses, that are seen as central to competitive success (Porter, 1991), could come from a company's resources and actions (competitive potential), and the strategy of configuring them (competitive strategy), that all together constitute input competitiveness. Furthermore, an attractive position is an outcome and not a cause (Porter, 1991). This brings us to the conclusion that the better the company's input competitiveness, the better the competitive position the company achieves.

As highlighted in the framework presented in section 2.3, relocation can influence not only output competitiveness, but also input competiveness. Hence, a competitive position depends on input competitiveness; the importance of relocation for a competitive position depends on their importance for input competiveness. Therefore, the first hypothesis is:

H1: The higher the importance of relocation for input competitiveness, the more important relocations are for a company's competitive position.

At the same time, as mentioned in section 2.2., the main motivation for the use of the value chain module relocation is the desire to participate in the benefits offered by this solution, while minimizing the problems resulting from it. Against this background, the idea that a number of benefits/problems influence the importance of relocation for the company seems justified. And so, the second and third hypotheses are:

H2: The higher the number of benefits resulting from relocation, the more important relocations are for a company's competitive position.

H3: The lower the number of problems resulting from relocation, the more important relocations are for a company's competitive position.

Additionally, it seems intuitive that the more relocations a company uses, the more important their use becomes for the company. At the same time, a higher level of value chain module relocation use could allow to get access to a higher number of benefits resulting from them. Therefore the fourth hypothesis is:

H4: The higher the level of relocation use, the more important relocations are for a company's competitive position.

Since competitive position measures are directly or indirectly related to the sales a company is generating, all the positive influence a particular factor has on the sales of a company should have its reflection in the importance of this factor for a competitive position. Therefore the fifth hypothesis is:

H5: The wider the relocation's positive influence on sales, the more important relocations are for a company's competitive position.
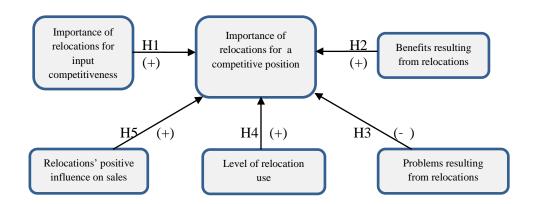
The above hypotheses are presented in Figure 4.

Figure 4: Diagram of hypothesized relationships
Source: own study

4. METHODOLOGY

4.1. Introduction to the research method

The empirical study used a micro-economic perspective. The research sample consisted of Polish enterprises (understood as enterprises registered and located in Poland) from two selected industries (clothing and automotive), which differed between each other in terms of intensity of capital and labour use. The industries were selected since they were identified as respectively low-technology (labour intensive) and high-technology (capital intensive) sectors (OECD, 1996) and both of them had a high level of globalization potential and VCMR possibilities (Farrell, 2004). In the study, both companies founded by Polish and foreign capital were taken under investigation. If there were more than one company originating from the same capital group, only the leading one was analyzed. In the case of foreign subsidiaries, the research focused only on their value chain module relocation practice, and not on their mother-company actions.

The analyzed companies were classified in accordance with the Polish Classification of Products and Services (PKWiU). The clothing industry (PKWiU 14) included worn apparel, except fur apparel (14.1), articles of fur (14.2), knitted and crocheted apparel (14.3). The automotive industry (PKWiU 29) included motor vehicles (29.1), bodies (coachwork) for motor vehicles; trailers and semi-trailers (29.2), parts and accessories for motor vehicles (29.3). The research tool used to gather data for the study was a standardized interview with the use of a questionnaire. The questionnaire consisted only of closed questions. The results presented in the article are partial, selected findings of the study.

In 2010 in the Polish clothing industry there operated ca. 2700 companies (PAIIZ, 2011), while in the automotive industry approximately 900 (http://www.paiz.gov.pl/sektory/motoryzacja). The statistically representative sample sizes for the whole population at a 5% margin of error, 95% confidence level and 50% response distribution amounted to 337 enterprises for the clothing industry and 270 firms for the automotive industry. However, the exact numbers of companies operating within these industries in reference to their size (understood as the number of employees) were not available. Due to the time and financial constraints, the scope of the research was strongly limited: 91 interviews were conducted between September 2011 and April 2012. The interviews were carried out by specially trained staff with one respondent representing the top management

level of the respective company. The staff was supposed to provide all explanations concerning possible answers provided in the questionnaire. The high position of respondents in the hierarchy of the analyzed company was one of the recruiting criteria, since answering to the questions in the questionnaire required extensive knowledge of the company's operations.

4.2. Variables operationalization

The main aim of the study was to explain what drives the importance of value chain module relocation for an enterprise's competitive position. Therefore during the empirical research the following topics were examined in detail: areas of operations where relocations were used; motives for and actual benefits resulting from relocations; risks related to and actual problems resulting from relocations; competitive potential, the competitive strategy and the competitive position of the company. In the questionnaire, a list of factors representing a particular area of the company's results/operations was given for each of the competitiveness dimensions. The dimensions of competitiveness were operationalized in a way allowing to obtain comparative results for the whole population – the respondents were asked to evaluate the factors in relation to their closest competitors (a Likert-type scale was applied). Since the achieved results could be explained by many other aspects of enterprise operations and not only value chain module relocations, the respondents were additionally requested to indicate the level of importance of the relocation use for the achievement of the given results (a Likert-type scale was applied). Table 4 provides a summary of the variables operationalization used in the study.

Table 4

Variables operationalization

Variable	Operationalization
Dependent variable	
Importance of relocations for a competitive position	The variable is a composite of 3 items measuring the importance of the relocation for the results regarding the competitive position on a five-point Likert-type scale (1= not important at all and 5 = very important) for the following items: • Market share; Sales dynamics; Return on assets *Cronbach Alpha =0.79*
Independent variables	
Importance of relocations for the input competitiveness	The variable is a composite of 26 items measuring the importance of the relocation for the results regarding the input competitiveness on a five-point Likert-type scale (1= not important at all and 5 = very important) for the following items: • Human resources; Tangible resources; Financial resources; Intangible resources; • Inbound logistics; Operations; Outbound logistics; Marketing and sales; Service; Company infrastructure; Human resource management; Technology development; Procurement; • Uniqueness of an offer; Quality of an offer; Price of an offer; Flexibility of offer adjustment to customer needs; Width of an offer; Frequency of new offer introduction; Payment conditions; Accessibility of an offer (place and time); Brand; Company image; Advertisement; Conditions and duration of a guarantee; Width, quality and price of aftersales services. *Cronbach Alpha =0.94*
Level of relocation use	Number of areas where relocations were used. Areas were listed according to Porter's concept of the value chain (1985). Value = number from 0 to 8 (outbound and inbound logistics were unified in one activity – logistics).
Benefits resulting from relocations	Number of benefits resulting from relocation use. Benefits were listed according to a provided list. Value = number from 0 to 19.
Problems resulting from relocations	Number of problems resulting from relocation use. Problems were listed according to a provided list. Value = number from 0 to 6.
Relocations' positive influence on sales	Number of markets where relocation directly caused or helped to achieve an increase in sales (none, home market, foreign market). Value = number from 0 to 2.
Control variables	
Competitive position	The variable is a composite of 3 items measuring competitive position on a five-point Likert-type scale (1= much worse than crucial competitor and 5 = much better than crucial competitor). The items were: • Market share; Sales dynamics; Return on assets. *Cronbach Alpha =0.80*
Company's age	Number of years the company is present in the market.
Export activity	Dummy indicating if the company is an exporter (value = 1).
Import activity	Dummy indicating if the company is an importer (value = 1).
Industry	Dummy indicating the industry (automotive industry value = 1).

Source: own study

Besides the dependent and independent variables, some control variables were included into the models to tease out other factors potentially affecting dependent variables. For example, in the model an additional variable concerning the competitive position was used in order to control for badly performing companies that might use relocation to survive. This variable was a composite of three items measuring output competitiveness on a five-point Likert-type scale (1 = much worse than closest competitor and 5 = much better than closest competitor). The items were: market share; sales dynamics; return on assets; the Cronbach Alpha for this variable amounted to 0.80). Also companies operating in the industry for a longer period had more time to find potential suppliers of value chain modules and develop their relations with them. Therefore, the age of a company, expressed by the number of years since the company started its operations, was also controlled. Additionally, there is evidence that a foreign market entry, regardless of its mode, significantly increases a company's profitability and performance (Daniels, Bracker, 1989), and export was the most popular mode of international expansion among the analyzed population. Therefore the models include a dummy variable (export engagement) to control for this issue. This variable took the value of 1 when the company was an exporter and 0 otherwise. Additionally, a variable concerning import engagement was used, since some companies might be more competitive because they import modules that are responsible for the creation or the strengthening of their competitiveness. This variable took the value of 1 when the company was an importer and 0 otherwise. An industry variable was also included in the models (the value of 1 when the company was from the automotive industry). Since the study was encompassing companies operating in two different industries, discrepancies between the values of dependent variables were tested to control the occurrence of multilevel problems. The importance of relocations for output competitiveness was used as the dependent variable, while the industry was used as the grouping variable. A U Mann-Whitney test was used with H_0 = *importance of relocation for output competitiveness is the same for both analyzed industries*. The results of the test are shown in Table 5.

Table 5

U Mann-Whitney test results – Industry (Total N=91).

Dependent variable	Z-value	p-value	Mean (autom. - 43)	SD (autom. - 43)	Mean (cloth. - 48)	SD (cloth. - 48)
Importance of relocations for a competitive position	1.52	0.13	3.43	0.78	3.16	0.38

Source: own empirical study

The test did not provide reasons to reject the null hypothesis (Z=1.52, p=0.13), and therefore it can be assumed there are no statistically significant differences between the analyzed companies from the automotive and clothing industries in regard to the importance of relocation for their output competitiveness. As a result, the model will not be separately tested for the analyzed industries.

All the data for the analyses came from one source (single-source data), and so, there existed a possibility that a common method bias would artificially inflate the observed relationships between variables (Campbell, Fiske, 1959). To control its level, a Harman's single-factor test was conducted for the used data sets (Harman, 1967). This test is a diagnostic technique for assessing the extent to which a common method variance may be a problem (Podsakoff et al., 2003). As suggested in the following work (see: Andersson, Bateman, 1997; Aulakh, Gencturk, 2000), the exploratory factor analysis was used to examine the unrotated factor solution determining the number of factors that were necessary to account for the variance in the variables. If a single item accounted for a majority of the covariance of the variables, it would be an indication that a common method bias was present in the data and is of great concern (Podsakoff et al., 2003). However, the first factor extracted accounted for approximately 25.65% and 26.50% of the variance respectively for the second and third models. Therefore it was concluded that no substantial amount of a common method bias was present in the data (see: Podsakoff, Organ, 1986).

5. ANALYSES AND RESULTS

As mentioned before, 47% the analyzed population constituted of companies from the automotive industry, while the remaining 53% were from clothing companies. All of the analyzed companies were using at least one form of value chain module relocation, however companies engaged in more than one form of relocation constituted 56% of the population. All the companies under investigation were using outsourcing, 31% of them offshore outsourcing, and only 13% and 12% were engaged in, respectively, in-house sourcing and offshoring. 46% of the analyzed companies were exporters, while the share of importers constituted 53%. On average an analyzed company used relocation in three areas of operations (out of a possible 8) and 73% used value chain module relocation in three or less areas. In the analyzed sample, relocations were most commonly used in marketing and sales (68%), technology development (58%) and procurement (46%) areas. Only around 6% of the analyzed companies have ever had their value chain studied by an internal or external researcher.

Table 6 shows a correlation matrix for the analyzed variables. To detect potential problems of multi-collinearity, the correlation coefficients among the independent variables of the model were checked. The data seemed not to involve multi-collinearity problems as none of the correlations were above a level of 0.5 (the usual level indicating possible multi-collinearity (Hair et al., 1995). An exception was one pair of independent variables (benefits resulting from relocation and the level of relocation use), for which the correlations coefficient amounted to 0.60. Therefore, these variables were not included in the same model, but were used individually in separate models (see Table 7).

Additionally, for all independent variables tolerance and variance inflation factor (VIF) levels were estimated (see Table 7). All the VIF values were close to 1, therefore far below the level indicating potential multi-collinearity problems.

Table 6

Correlation matrix for the analyzed variables (N=91)

	1	2	3	4	5	6	7	8	9	10	11
Importance of relocations for a competitive position	1.00										
Importance of relocations for input competitiveness	0.67***	1.00									
Benefits resulting from relocations	0.42***	0.26*	1.00								
Level of relocations use	0.26*	0.29**	0.60***	1.00							
Problems resulting from relocations	-0.05	-0.22*	0.15	0.26*	1.00						
Relocations' influence on sales increase	0.00	0.16	0.14	0.02	-0.29**	1.00					
Competitive position	0.43***	0.42***	0.24*	0.38***	-0.11	0.24*	1.00				
Company's age	-0.14	0.01	0.15	0.11	0.03	0.22*	0.10	1.00			
Export activity	-0.01	0.06	0.42***	0.33**	0.17	0.06	0.21*	0.13	1.00		
Import activity	0.02	0.15	0.26*	0.28**	0.09	0.08	0.12	-0.05	0.39***	1.00	
Industry	0.22*	0.32**	0.14	0.33**	0.28**	-0.03	0.23*	0.13	0.14	0.19	1.00
Mean	3.29	3.17	3.58	3.04	0.85	0.92	3.30	17.74	0.46	0.53	0.47
St. dev.	0.62	0.62	2.98	1.35	0.59	0.45	0.59	16.86	0.50	0.50	0.50

Dependent variable - 1 , independent variables - 2 -6, control variables - 7 -11

***, ** and * indicate significance levels of 0.001, 0.01 and 0.5 respectively.

Source: own empirical study

Table 7

Variance inflation factor analyses (N=91)

	General		Model 1		Model 2		Model 3	
	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF	Tolerance	VIF
Importance of relocations for input competitiveness	0.64	1.55			0.65	1.54	0.66	1.50
Benefits resulting from relocations	0.55	1.83			0.72	1.39		
Level of relocations use	0.50	1.99					0.66	1.52
Problems resulting from relocations	0.68	1.47			0.71	1.41	0.68	1.46
Relocations' influence on sales increase	0.80	1.24			0.81	1.23	0.82	1.22
Competitive position	0.69	1.45	0.91	1.10	0.75	1.34	0.70	1.44
Company's age	0.89	1.12	0.95	1.05	0.89	1.12	0.90	1.12
Export activity	0.70	1.43	0.80	1.25	0.70	1.43	0.76	1.32
Import activity	0.78	1.28	0.81	1.23	0.79	1.26	0.78	1.27
Industry	0.71	1.41	0.91	1.10	0.72	1.38	0.72	1.38

Independent variables, control variables

Source: own empirical study

Similarly to examples from the work concerning some aspects of relocation (see: Kotabe et al., 1998; Jensen, Pedersen, 2012) the ordinary least squares regression model (OLS) was used to test the hypotheses. The developed models are presented in Table 8. For all the formulated models the F values were statistically significant with R-square above 0.25, some independent variables were statistically significant, the mean of the error terms was equal to 0 and the models had a mean-zero residual random component. Moreover, the Durbin-Watson test values were very close to 2 (approximately 1.85) for all the models, which confirms that there were no significant problems with residual autocorrelation, while the tolerance values for independent variables did not indicate multicollinearity problems (see Table 7). Therefore it was concluded that the models fitted very well to the empirical data.

Table 8

Ordinary regression models with importance of relocations for a competitive position as
dependent variable (N=91)

	Model 1			Model 2			Model 3		
	Beta	Standard error	t (85)	Beta	Standard error	t (81)	Beta	Standard error	t (81)
Hypothesized variables									
Importance of relocations for input competitiveness				0.54****	0.08	6.46	0.63****	0.09	6.76
Benefits resulting from relocations				0.08****	0.02	4.65			
Level of relocations use							0.02	0.04	0.37
Problems resulting from relocations				0.05	0.08	0.66	0.12	0.09	1.27
Relocations' influence on sales increase				-0.17	0.10	-1.63	-0.12	0.11	-1.03
Control variables									
Competitive position	0.46***	0.10	4.49	0.24***	0.08	2.93	0.25***	0.09	2.67
Age of a company	-0.01*	0.00	-1.98	-0.01**	0.00	-2.40	-0.01*	0.00	-1.77
Export activity	-0.11	0.13	-0.85	-0.22**	0.10	-2.21	-0.08	0.11	-0.75
Import activity	-0.05	0.13	-0.35	-0.14	0.09	-1.53	-0.11	0.10	-1.05
Industry	0.20	0.12	1.62	-0.02	0.10	-0.17	-0.06	0.11	-0.51
Intercept	1.87	0.33	5.63	0.91***	0.32	2.83	0.63*	0.36	1.75
N	91			91			91		
F-value	5.73****			15.48****			10.35****		
R-square	0.25			0.63			0.53		
Adjusted R-square	0.21			0.59			0.48		
Durbin Watson	1.84			1.83			1.96		

*, **, ***, **** indicate significance levels of 0.1, 0.05, 0.01, 0.001

Source: own empirical study

The further reasoning will focus mainly on the second model since it explains the highest part of the dependent variable's variance and allows to

verify most of the hypotheses. The second model was highly significant with the F-value amounting to 15.48 (p<0.00000) and a highly satisfying R-square of 63%, indicating that more than half of the variation in the importance of relocation for a competitive position was explained by the model. The model allowed to verify four out of five formulated hypotheses, of which two were supported and had the expected positive coefficient. The results supported H1 and H2, that companies for which relocation is more important for input competitiveness achievement (measured as a composition of indicators related to a competitive potential and a competitive strategy) and companies which achieve a higher number of benefits resulting from relocation (measured as the number of such benefits) tend to notice the higher importance of relocation for the achievement of their competitive position. The coefficient for importance of relocation for input competitiveness was 0.54 (p<0.00000) and for benefits resulting from relocation 0.08 (p<0.00001).

Unexpectedly, in the sample there were no statistically significant proofs that a number of problems resulting from relocations influenced the importance of relocation for a competitive position (H3), and a similar situation occurred in the case of a relocation's influence on sales (H5) (either in the second or in third model). In reference to H3, these results might suggest that in the analyzed sample, the benefits resulting from relocation were more important for an enterprise competitive position, rather than problems resulting from relocation or simply that respondents paid more attention to the benefits. Another possible explanation is that the scale of the problems caused by relocation was very small, and so, in the respondents' opinion, it had no influence on the importance of relocation for a competitive position, however, used in the model variable (a number of such problems) did not allow to express it. In reference to hypothesis 5 it should be highlighted that the coefficient for the influence of relocation on sales increase, the variable amounted to -0.17 with p<0.11, which means that the relation between the importance of relocation for a competitive position and the influence of relocation on the sales increase (measured as in this study) had the opposite direction than originally expected. This is especially surprising as an increase in sales is closely related to the measure of a company's competitive position applied in the study. While looking for a justification for such a relationship between these variables, attention could be drawn to the possibility that companies, in which relocations helped to increase sales, could have other competitive advantages than just the one that resulted from the relocations' effect. In other words, it is possible that in the

presented sample relocations helped to increase sales only in those companies that also had sources of other competitive advantages. This seems to be supported by the weak statistically significant, positive correlation coefficient between a company's competitive position evaluation and the influence of relocation on the sales increase variable (r=0.38, p<0.001).

The third model was also statistically significant with the F-value amounting to 10.35 (p<0.00000) and a satisfying R-square of 53%. However, the fourth hypothesis (which represented the only difference between this model and the second model) had to be rejected. This means that the number of areas where relocations were used did not increase the importance of those relocations for the achieved competitive position.

In reference to the control variables that were used in the model, it should be highlighted that in the case of the second model there is evidence that in the sample the importance of relocation for a competitive position was higher for companies achieving better results in this area (coefficient of 0.24 with p<0.01, supported also by the third model), but at the same time they were less important for exporters (coefficient of -0.22 with p<0.05) and older companies (coefficient of -0.01 with p<0.05). The relations of all those control variables with the importance of relocations for a competitive position had the opposite direction than that originally controlled for. Most noteworthy is the statistically significant and negative result for export activity, which indicated that in the case of exporters, relocations were less important for the achieved competitive position. This suggests that for this particular group of companies, other factors were much more relevant for the achieved competitive position. In order to explore this issue further, additional analyses were conducted aimed at the evaluation of statistically significant differences between exporters and non-exporters in relation to relocation use. Table 9 presents the U Mann-Whitney tests results. The analyses indicated that between exporters and non-exporters there exist statistically significant differences in reference to the number of areas where relocations are used, the number of benefits resulting from relocations and the competitive position evaluation, while there was no evidence for such differences in the case of the number of problems resulting from relocations.

Table 9

U Mann-Whitney tests results – Export involvement (Total N=91)

Dependent variable	Z- value	p-value	Mean (ex. - 42)	SD (ex. - 42)	Mean (non-ex. - 49)	SD (non-ex. - 49)
Level of relocation use	-2.52	0.01**	3.52	1.58	2.63	0.95
Benefits resulting from relocations	-4.54	0.00***	4.93	3.62	2.43	1.58
Problems resulting from relocations	-1.1	0.27	0.95	0.70	0.76	0.48
Competitive position	-1.84	0.06*	3.44	0.70	3.18	0.46
Importance of relocations for a competitive position	0.30	0.76	3.28	0.68	329	0.56

*, **, *** indicate significance levels of 0.1, 0.05, 0.001

Source: own empirical study

Based on the analyses of the U Mann-Whitney tests and descriptive statistics (see Table 9) it was concluded that exporters, when compared to non-exporters, on average were using relocation in a higher number of areas, enjoyed a higher number of benefits and achieved better competitive positions. These results seem to support the assumptions that in the analyzed sample in the case of exporters other factors are much more relevant for the achieved competitive position than relocations.

The results of the study might also be used to draw more general proposals. On average the importance of the relocations for a competitive position is higher for the companies achieving more benefits from them, the relocations are also more important for the companies with better competitive positions and the higher importance of relocations for input competitiveness. The implementation of relocation should be preceded by a thorough analysis of the company value chain, while taking into consideration the resources used in a particular module. This recommendation is of special importance as the results of the study indicate that entrepreneurs devote little attention to value chain analysis. An analysis of value creation should allow to control the benefits and problems resulting from relocations, and therefore, enable a better preparation for taking

advantage of such opportunities or protecting from threats. A reasonable use of relocation, as a result of direct influence, should allow to improve the enterprise's competitive position and additionally support it by the influence of relocations on input competitiveness. However, it should be noticed that relocation cannot be the sole source of the competitive advantage, but rather a tool to complement other sources of competitive advantage. In the sample the positive result of such an approach was evidenced by, on average, the better competitive position of exporters.

While taking into consideration the above mentioned results of the study, the following answers can be addressed to the research question raised in the paper:

- The importance of value chain module relocation for an enterprise's competitive position can be partially explained by the importance of relocation for input competitiveness, the number of benefits resulting from those relocations, the competitive position achieved by the relocating company, its age and its engagement in export activity. However, while the first three variables in the sample had a positive relation with the importance of relocation for an achieved competitive position, the remaining two had a negative one.

The study could gain an additional insight if more variables were included in the models, e.g. the used forms of relocations, motives for relocation, and other measures of the benefits resulting from relocations. However, this was not possible since the number of variables would be too high when compared to the size of the analyzed sample. Additionally, the size of a company could not be used as an independent variable in this sample, since it was highly correlated with the other independent variables used in the models. Moreover, although the presented studies, to the author's best knowledge, constitute the biggest empirical investigation so far, taking into consideration the links between enterprise competitiveness and relocation in the Polish context, the research sample size was still not statistically representative. Therefore the research sample should be enlarged, and meanwhile, the research findings should not be generalized to the whole number of companies located in Poland operating in the clothing and automotive industries. Furthermore, in the future the research could be expanded in terms of the number of industries taken under investigation. Additionally, the results could be compared with research investigating similar companies from developed and transition economies. Further analyses should also investigate the direct relations between companies' competitiveness and relocation related issues and use other statistical models.

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