

MANUFACTURING OFFSHORING AND RESHORING IN POLAND. EVIDENCE FROM THE FASHION AND ELECTROMECHANICAL META- SECTORS

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Abstract:

After decades of offshoring, in recent years, companies have sometimes revised their location decisions implementing one of the three alternatives of the so-called “relocations of the second degree”. More specifically, they have relocated manufacturing activities either in their home country (back-shoring), in their home region (near-shoring), or in a further away location (further offshoring). While offshoring and relocations of the second degree have been heavily analysed in US and Western European countries, there is no evidence regarding companies in Central and Eastern Europe. This paper focuses on Polish companies belonging to the fashion and electromechanical meta-sectors. More specifically, it investigates the relocation of both manufacturing and supply activities. Based on 602 questionnaires collected during 2020-2021, it emerges that Polish companies rarely offshored their production activities in both the investigated industries. This is mainly explained by concerns in terms of reduced responsiveness, higher coordination and quality appraisal costs, and patriotism. Finally, some differences emerged in terms of geographical location between the two meta-sectors, inducing speculation that fashion companies were mainly boosted by efficiency-seeking aims, while electromechanical companies by market-seeking aims. Due to scant evidence of offshoring strategies, relocations of the second degree are very few. However, differences emerge between the two investigated meta-sectors. More specifically, when considering “relocations of the second degree”, fashion companies preferred to back-shore, while electromechanical companies decided to relocate to a second host country.

Keywords: Reshoring, Offshoring, Relocation of the second degree, Poland, Manufacturing

JEL classification: F23, L23

1. Introduction

In the last three decades, Central and Eastern European (CEE) countries have experienced several extensive transformations which have greatly reduced the cost of international trade and Foreign Direct Investments (FDIs). Moreover, such countries have become members of both the World Trade Organization and the European Union. The combined effects of such factors have allowed such countries to become an integral part of so-called Global Value Chains (GVCs) (Dabic and Lamotte, 2017). In this respect, it is worth noting that the European Commission recently classified Poland in the “forward GVC integration group”, since it received huge FDIs but is still characterized by more limited internationalization of domestic firms. In other words, Poland is a “net sender” within GVCs (Comotti et al., 2020). Other CEE countries, meanwhile, have emerged as net FDI recipients (Ipsmiller and Dikova, 2021) since local companies rarely implement internationalization strategies. In this respect, Schuh (2014) defines the very few internationalizers as “local heroes”, that is well managed medium-sized firms with a strong position in their local markets and a relevant presence in foreign ones. Moreover, they generally own a leading technology/innovation position in their business, and implement low-cost or hybrid strategies.

More recently, FDIs by CEE countries have been increasing at a higher rate than those of other emerging countries. As a consequence, an increasing number of local companies have expanded their

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activities abroad, also due to the small size of their internal markets. Such firms are generally medium-sized; therefore they are underrepresented in the Financial Times Top 500 Emerging markets ranking of firms (Dabic and Lamotte, 2017).

Growing evidence on the internationalization strategies implemented by CEE companies induced several scholars to focus their attention on this phenomenon, as clearly shown by literature reviews published in recent years (see, among others, Ipsmiller and Dikova, 2021; Jaklič, 2020; Caputo et al., 2016). However, the extant literature was mainly focused on exporting activities, while the internationalization process of other value chains has generally been neglected. Following the suggestion of Dabic and Lamotte (2017) to enlarge the scope of research on the internationalization process of CEE firms, in this contribution we focus our attention on location decisions regarding production and supply activities. More specifically, we investigate two different phenomena for both activities, namely offshoring strategies and “relocations of the second degree” (Barbieri et al., 2019). By the term offshoring, we refer to a firm’s decision to locate production activities in a foreign country - either within the firm’s plant or to local contractors (production offshoring) - and/or supply activities (supply reshoring). Meanwhile, by “relocations of the second degree” we refer to any change of previously implemented offshoring strategies. More specifically, three alternatives have been proposed in the extant literature (Fratocchi et al., 2014a): a) back-shoring - when production and/or supply activities are relocated to the firm’s home country; b) near-shoring – when the investigated activities are relocated to the home region; c) further offshoring, when the relocation is to a foreign country further away.

Our research aims may be summarized as follows:

- a) Have CEE companies offshored their production or supply activities?
- b) After their initial offshoring decision, have CEE companies relocated their offshored production or supply activities?

In order to investigate such two innovative research questions, we adopted an explorative approach focusing on a set of Polish companies. Poland was chosen as the home country due to its high embeddedness in GVCs (Comotti et al. 2020). Moreover, it is the most investigated country in the extant literature on the internationalization process of CEE firms (Ipsmiller and Dikova, 2021). However, almost none of these specifically address the internationalization strategies of either manufacturing or supply activities.

In terms of industry, our attention was focused on two meta-sectors, namely the fashion industry (NACE codes C14 and C15) and the electromechanical industry (NACE codes C25, C28, C29). The latter was chosen since it is the most important for the Polish economy, accounting for 27.4% of the total production of Polish industry and 45.82% of total exports (Statistics Poland 2020). Moreover, in the automotive sector, Poland has one of the highest percentages of forward linkages within the EU. The same feature is shared by the fashion industry (Comotti et al., 2020), which is also characterized by a large degree of offshored manufacturing activities on a global scale, but also accounts for a large number of back-shoring decisions at the European level (Eurofound, 2019).

Our findings show that Polish companies rarely offshored manufacturing activities, while supply offshoring was less infrequent. At the same time, while fashion companies implementing manufacturing offshoring sometimes relocated production activities in their home country, electromechanical firms preferred to implement relocations to a third country (either near-shoring or further offshoring). Finally, a small but not negligible percentage of supply offshoring firms relocated purchasing activities in Poland.

The rest of the paper is organized as follows: the next section is devoted to presenting the theoretical background on offshoring and relocations of the second degree. The second section summarizes the adopted research methodology, while the third presents the research findings. Conclusions, limitations and implications for scholars, managers and policymakers are proposed in the last section.

2. Theoretical framework

In this section, the extant literature on offshoring and relocations of the second degree will be briefly summarized in order to define what issues have mainly been investigated by scholars. Such variables will be then adopted in the empirical section to discuss findings related to the offshoring and relocation of the second degree strategies implemented by the Polish companies studied.

Since the early 1980s, manufacturing companies (especially ones headquartered in Western countries) have offshored their production/supply activities to low-cost countries (Mukherjee 2018; Theyel, Hofman, and Gregory 2018). The phenomenon was generally boosted by an efficiency-seeking approach (Dunning 1988) which led to the so-called ‘smile curve’ (Mudambi, 2008), according to which high-value activities (e.g. R&D and marketing) are located in the home country, while low-skilled jobs (such as assembling and/or manufacturing) are moved to low-cost countries.

Within the extant literature regarding offshoring (for a structured literature review, see Schmeisser, 2013), several theoretical perspectives have been adopted to investigate such a phenomenon. Among them are the Internationalization Process Model (Johanson and Vahlne, 1977; Johanson and Wiedersheim-Paul, 1975); the Resource Based View (RBV) (Barney, 1991; Wernerfelt, 1984); Dynamic Capabilities (Teece et al., 1997; Teece, 2007); Transaction Cost Economics (TCE) (Williamson, 1975); Dunning's “eclectic paradigm” (1988); Resource Dependence Theory (RDT) (Pfeffer and Salancik, 1978); and Contingency theory (Lawrence and Lorsch, 1967; Pennings, 1992). Based on these theories and concepts, scholars identified a large set of offshoring drivers for both offshore outsourcing – when production activities are managed by a contractor - and captive offshoring – when manufacturing is performed within the firm’s plants. More specifically, Di Mauro et al. (2018) found 24 offshoring motivations, among which lower costs and higher labour productivity in the host country are the most often cited.

However, a growing number of companies have experienced certain hidden costs of offshoring, in other words, the costs associated with producing/supplying abroad were higher than originally calculated (Larsen, Manning, and Pedersen 2013). Moreover, firms faced other negative effects such as the low quality of offshored production, reduced customer responsiveness, and delivery times higher than expected (Fratocchi et al., 2016). This evidence induced them to revise their earlier decision to offshore production/supply activities, and implement a relocation of the second degree strategy. As recently pointed out by Merino et al. (2021), in the extant literature scarce attention has been paid to the near-shoring and further offshoring phenomena, while the backshoring alternative has attracted several scholars (for a structured literature review, see Barbieri et al., 2018).

Within the extant back-shoring literature, scholars mainly investigated the drivers behind the decision to revise the earlier decision to offshore production/supply activities. In this respect, Di Mauro et al. (2018) found 42 different reshoring motivations within the extant literature and when these were compared with the ones belonging to the offshoring phenomenon, a certain overlapping was found. This induced the authors to suggest that some companies reshore since the expected offshoring benefits were not forthcoming, partially confirming the idea that back-shoring decisions are a type of correction of a previous managerial mistake (Kinkel and Maloca, 2009). However, other

back-shoring motivations also support the idea that relocation to the home country is due either to a change in the external environment (Martínez-Mora and Merino, 2014), or changes in the firm's strategy (Baraldi et al., 2018).

Another issue adopted to characterize backshoring strategies concerns barriers, that is factors hindering the relocation of production/supply activities in the home country. To the best of our knowledge, only Engström et al. (2018a, b) have offered a list of such elements, classifying them in terms of the home country, host country and the firm's specificity. However, Boffelli and Johansson (2020) recently stated that barriers are among the most relevant issues for adequately investigating the back-shoring decision.

As far as reshoring strategies specifically regarding CEE countries are concerned, Fratocchi et al. (2014b) pointed out that "these countries are currently facing the challenge to attract the relocation of activities previously off-shored by European companies to farther away countries, while they simultaneously face the risk of losing foreign investment due to back-reshoring to the company home country" (2014, 103). At the same time, Stępień and Młody (2017) examined the economic and political grounds for reshoring activities in the Polish apparel and footwear industry. According to the authors, backshoring activities are still lagging behind when compared to more developed countries. In fact, at least in the fashion industry, Poland serves as a near-shoring location as it attracts foreign (mostly EU) premium and luxury brands aiming to relocate production within Europe. While investigating the potential impact of Industry 4.0 on the reshoring phenomenon in Hungary, Éltető (2019) also found no evidence of backshoring strategies implemented by local companies due to the adoption of such innovative technologies. However, he found evidence of nearshoring to Hungary by foreign companies. Finally, Młody and Stępień (2020) examined the possibilities for developing reshoring activities in the luxury goods sector, noting that they are spread unevenly regarding the luxury pyramid tiers. They show that near-shoring to CEE countries is a more frequent phenomenon in this sector than backshoring to more developed EU countries. Near-shoring strategies are mainly bolstered by a reduction of supply chain risk, improvement of quality, and prevention of brand infringement and image downgrading.

3. Methodological issues

In order to shed new light on the research questions described earlier, we adopted a quantitative approach, since such a methodology is consistent with the explorative aim of our research. When designing the quantitative survey, we decided that it should be descriptive as we rely on perceptual data reported by respondents, and this approach allows for the appropriate collection, analysis and interpretation of the results (Brians, 2011). We have fully accepted the fundamental assumptions and principles of quantitative research, including a clearly defined research question for which objective answers are sought. Data was collected using structured research instruments and tools, and all aspects of the study were carefully developed and tested before starting the actual research, thus the same study can be duplicated or repeated at different times and locations (Babbie, 2010).

Survey design

The survey contained 30 questions divided into four sections 1) general information about the company and its internationalization strategy, 2) offshoring of manufacturing activities, 3) relocation, and 4) offshoring and relocation of supply. In the first part, the respondents were asked, *inter alia*, about the intensity and directions of exports and the location of production activities. This evidence supported the authors in defining the internationalization strategies implemented by companies in the two investigated meta-sectors. The second part of the survey focused on

manufacturing offshoring activities, investigating motivations for either locating production abroad or “staying in the home country”. The companies involved in offshoring activities were requested to specify the scope, the adopted governance mode (e.g., captive offshoring and offshore outsourcing), the timeframe, and the chosen host country. The third part was related to the relocation decision; thus the motivations, scope and global evaluations of such decisions were investigated. The last part of the survey concerned offshoring and relocation of supply activities, with analysis of their motivations.

Sampling method and data collection

The sampling procedure included the identification of the units that make up the population, determining the size of the desired sample, and developing an appropriate course of action in the research process (Mukherjee, 2020, 78-80). Concerns about both coverage and non-response motivated us to use non-probability sampling, taking into consideration its limitations and advantages (Wolf et al., 2016, p. 321).

Our target population consisted of companies classified under the following NACE codes: C14 and C15 (for the fashion industry) and C25, C28, C29 (for the electromechanical industry). To create our population frame, we used a comprehensive and up-to-date database of firms operating in Poland, namely the Emerging Market Information System (EMIS). This electronic source provides access to macroeconomic statistics, forecasts and analyses on emerging markets. To extract our sample, we used non-proportional quota sampling as we intended both groups to be adequately represented in the study sample (Mohsin, 2016). Thus we specified the minimum number of sampled units in the two meta-sectors investigated: at least 300 companies for each meta-sector. The data was gathered between October 2020 and August 2021 by conducting direct interviews (CATI method) with 602 representatives, 301 in each of the two meta-sectors.

Sample structure

In order to verify the consistency of the distribution of companies in our sample, we compared it with one of the entire Polish population in the selected meta-sectors according to *Statistics Poland* (2020), that is the national Annual Statistics Report.

The distribution of the sample is largely similar to the distribution of the entire population in terms of industry classification (according to Statistics Poland 2020 data). Therefore, the collected data enables a detailed study of the behaviour of Polish companies in the field of international location and relocation of production activities.

Table 1 summarizes the main characteristics of the two meta-sector samples, and shows that fashion companies are generally smaller, both in terms of the number of employees and total sales. This may be explained, at least partially, by the lower vertical integration within such a meta-sector when compared to the electromechanical industry. At the same time, the two meta-sectors also differ in terms of the percentage of foreign sales to total sales, with the electromechanical industry more open to exports. This is consistent with data at the national level, where the electromechanical meta-sector accounts for 45.8% of total exports, while the fashion sector accounts for only 2.3%.

Finally, as our contribution focuses on supply and manufacturing issues, it is also useful to characterize the two subsamples in terms of production plants. In this respect, the two meta-sectors are quite homogeneous since more than 90% of the sampled companies have only one factory.

Table 1. Characterisation of meta-sector samples (N= 602)

<i>Number of employees</i>	<i>Fashion</i>	<i>Electromechanical</i>	<i>Total sales (M €)</i>	<i>Fashion</i>	<i>Electromechanical</i>
<i>10-49</i>	81.4	55.2	less than 2	71.1	31.9
<i>50-249</i>	15.6	35.9	2-9	24.3	47.8
<i>more than 250</i>	3.0	9.0	10-250	4.3	19.9
			more than 250	0.3	0.3
Total	100.0	100.0	Total	100.0	100.0
<i>Percentage of foreign sales</i>	<i>Fashion</i>	<i>Electromechanical</i>	Number of plants in Poland	<i>Fashion</i>	<i>Electromechanical</i>
<i>no export</i>	15.0	15.9	1	95.0	92.0
<i>0-9%</i>	42.2	26.9	2	2.7	5.6
<i>10-24%</i>	17.6	17.3	3	1.7	1.7
<i>25-49%</i>	7.3	15.9	4	0.0	0.3
<i>50% and more</i>	17.9	23.9	5	0.0	0.3
			more than 5	0.3	0.0
Total	100.0	100.0	Total	100.0	100.0

Source: Survey data

Findings

Offshoring strategies

The first research aim of our contribution was to verify if Polish companies belonging to the two meta-sectors offshored their production and/or supply activities. Below, the implementation of the two internationalization strategies will be discussed by comparing evidence from the two meta-sectors.

Manufacturing offshoring

Our data clearly shows that the sampled companies rarely offshored production activities. In total, only 7 companies out of 301 in the fashion sector (2.3%) decided to offshore production abroad, either through in-sourcing or outsourcing. In the electromechanical sector, the corresponding data is 10 (3.3% out of 301). However, the total number of offshoring decisions is larger (29), since the 7 fashion companies implemented 17 different relocation decisions (with an average of 2.4 decisions per company) while the 10 electromechanical firms offshored 12 times (1.2 decisions on average).

In order to understand this reluctance to internationalise manufacturing, the survey also allowed us to investigate drivers motivating a firm's decision not to produce or supply abroad (Table 2). When analysing the weighted arithmetic means, one can perceive that only one variable (loyalty/patriotism), has a value higher than 3, but only for the fashion meta-sector. The importance of loyalty/patriotism is consistent with previous research carried out by Stępień and Młody (2017), who indicated that the majority of Polish companies in the clothing sector believe that their activity in Poland shows a kind of patriotism, and that they are forced to use overseas subcontractors only because they operate in a very competitive market. What is more, the local manufacturing and purchases of products "made in Poland" are also regarded by consumers as a patriotic act. This suggests the significant importance of consumer ethnocentrism (Shimp and Sharma 1987), also regarding strategic decisions on manufacturing locations.

At the same time, around half of the drivers had a value higher than 2.5 but lower than 3 for both meta-sectors. Among them, the proximity to customers is one of the most relevant; in this respect, it is interesting to note that Moradlou et al. (2017) found that this was the most important driver for backshoring decisions by UK companies.

Table 2. Motivations not to offshore, weighted arithmetic mean (N=585)

<i>Motivation</i>	<i>Fashion (N=294)</i>	<i>Electromechanical (N=291)</i>
<i>Loyalty/Patriotism</i>	3.14	2.61
<i>Staying close to customers</i>	2.98	2.59
<i>Costs of product quality appraisal in the foreign country</i>	2.87	2.64
<i>Economic and financial risk</i>	2.80	2.67
<i>Extension of delivery time</i>	2.77	2.52
<i>Costs for coordination/communication with foreign units (firm's plant/contractors)</i>	2.73	2.68
<i>Intellectual property (brand, patent) risk - Counterfeiting risk</i>	2.63	2.48
<i>Small production runs</i>	2.62	2.43
<i>Negative effect on the firm's/product's brand (e.g. made-in effect)</i>	2.60	2.20
<i>Poor expected product quality offshore</i>	2.49	2.12
<i>Low skills of foreign human resources/Need to invest in training for them</i>	2.42	2.09
<i>Host country social and political risks</i>	2.24	2.17
<i>Lack of skilled contractors abroad/Availability of skilled contractors at home</i>	2.22	2.15
<i>Cultural and linguistic differences</i>	2.05	1.95

Source: Survey data

The costs of product quality appraisal are another important motivation for domestic production. This evidence may be at least partially explained by the small size of the sample companies. In effect, while large companies can afford to maintain an organizational unit abroad devoted to outsourced production control, for smaller entities this approach may be too expensive. It is also worth noting that cultural and linguistic differences are of no relevance. These may be more important in the case of captive offshoring, as it is associated with a greater commitment to financial and human resources. When comparing the two meta-sectors, notable differences can be seen in the case of expected product quality offshore, the effect of offshoring on the firm's/product's brand, and the skills of foreign human resources; however, each of these drivers is of greater importance for the fashion meta-sector.

Even though very few Polish companies belonging to the two selected meta-sectors decided to offshore their manufacturing activities, it would be useful to better understand the main characteristics of the ones that decided to offshore production. In this respect, a first interesting insight emerges when considering the drivers of manufacturing offshoring (Table 3). This element is quite homogeneous between the two meta-sectors; moreover, seven out of 11 offshoring drivers reached a weighted value higher than 3 for both sectors. In this respect, the unavailability of further production capacity emerges as the most relevant, even more than ones traditionally related to efficiency goals (labour costs reduction) and market-seeking aims (access to the local market). Finally, the availability of skilled contractors and/or employees abroad is a relevant offshoring driver, while trade barriers are negligible.

Table 3. Motivations for offshoring decisions (Weighted arithmetic mean on a Likert scale)

<i>Motivations for offshoring decisions</i>	<i>Fashion (N=7)</i>	<i>Electromechanical (N=10)</i>
<i>Unavailability of further production capacity at home</i>	4.7	3.7
<i>Reduction of labour costs</i>	4.0	3.5
<i>Access to the local market</i>	3.5	3.0
<i>Availability of skilled employees in the host country</i>	3.4	3.3
<i>Availability of skilled contractors in the host country</i>	3.4	3.2
<i>Access to product/production technology in the host country</i>	3.4	3.1
<i>Reduction of other production costs (e.g. power)</i>	3.15	3.6
<i>By request of your main customer(s)</i>	2.7	3.3
<i>Availability of raw materials in the host country</i>	2.4	2.8
<i>Host country government incentives</i>	1.7	2.3
<i>Trade barriers (e.g. duties)</i>	1.7	2.2

Source: Survey data

Other interesting evidence emerges when considering the geographical locations and governance modes adopted by the sampled companies (Table 4). In this respect, the two meta-sectors are somewhat more heterogeneous, especially in terms of the foreign countries targeted. More specifically, while electro-mechanical companies mainly offshored in the European Union (including very high-cost countries such as Germany, Italy, France and Sweden), fashion companies preferred low-cost destinations like China and other Asian countries, but also in the European region, e.g. Portugal and the Czech Republic. Therefore, it may be speculated that while fashion companies mainly offshored production due to efficiency-seeking aims, electro-mechanical firms were prompted by market-seeking goals.

Table 4. Geographical locations and governance modes

	<i>Fashion</i>	<i>Electromechanical</i>
<i>Governance mode (N=17)</i>	7/7 outsourcing	6/10 outsourcing 3/10 insourcing 1/10 mixed approach
<i>Number of foreign countries (N=17)</i>	4/7 only one country 3/7 more than one country	8/10 only one country 2/10 more than one country
<i>Targeted host country (N=17)</i>	<u>Asia</u> : China - 4, Bangladesh - 1, India - 1, Myanmar - 1 <u>European Union</u> : Portugal - 1, Czech Republic - 1 <u>Other European countries (outside the EU)</u> : Ukraine - 3, Belarus 1 <u>Africa and the Middle East</u> : Turkey - 2, Morocco - 1	<u>Asia</u> : China - 3 <u>European Union</u> : Italy - 2, Finland - 1, Sweden - 1, Czech Republic - 1, Germany - 1, France - 1 <u>Other European countries (outside the EU)</u> : Ukraine 2

Source: Survey data

A final insight regarding the manufacturing offshoring strategy emerges when considering the problems experienced by the sampled companies (Table 5.). More specifically, the only critical issue that emerged with a weighted value higher than 3 is related to “Effective delivery time”, and this only for the fashion meta-sector. This evidence would induce us to assume that offshored companies did not implement a strategy of relocations of the second degree as their offshoring experience was not so negative.

Table 5. Problems after offshoring implementation (weighted arithmetic mean on a Likert scale 1-5) (N=17)

<i>Problems during offshoring</i>	<i>Fashion</i>	<i>Electromechanical</i>
<i>Effective delivery time</i>	3.1	2.6
<i>Actual logistic costs higher than planned</i>	2.7	2.0
<i>Human resources skills</i>	2.3	2.5
<i>Minimum quantity/batch to be bought/produced</i>	2.1	2.4
<i>Coordination of local employees/contractors</i>	1.9	1.6
<i>Actual production costs higher than planned</i>	1.9	2.5
<i>Infringement of patents and trademarks</i>	1.9	2.2
<i>Loss of manufacturing competence since the off-shoring decision</i>	1.4	1.7

Source: Survey data

Supply offshoring

When considering supply offshoring, it emerges that the sampled Polish companies initiated commercial relationships with foreign suppliers quite intensively, since a large majority of the companies are supplied, at least in part, by foreign partners (Table 6). Comparing the two meta-sectors, the results show that the fashion industry is more open to global sourcing since more than 44% of firms offshored at least 50% of their purchasing, compared to 22.6% of electromechanical companies.

Table 6. Decisions regarding supply offshoring

<i>Supply strategy</i>	<i>Fashion (N=301)</i>		<i>Electromechanical (N=301)</i>	
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>
<i>All materials are bought from Polish suppliers</i>	48	16	75	24.9
<i>All materials are bought from foreign suppliers</i>	6	2	3	1
<i>Less than 50% of total supplied materials come from foreign suppliers</i>	114	37.9	155	51.5
<i>More than 50% of total supplied materials come from foreign suppliers</i>	133	44.1	68	22.6
<i>Total</i>	301	100	301	100

Source: Survey data

To sum up, Polish manufacturing companies from the two sampled meta-sectors implemented very different approaches in terms of manufacturing and supply offshoring. More specifically, while they rarely offshored production activities, they largely made imports of materials. Such evidence seems to confirm the growing integration of Poland in so-called Global Value Chains, as shown by the country's top-ranking position among those exporting automobiles (Fernandes et al., 2020). At the same time, it confirms Poland's classification as a "forward GVC integration group" (Comotti et al., 2020). In this respect, Gradzewicz and Mućk (2020) showed "a fall in markups for Poland which can be explained by rising dependence on imported intermediates in export-oriented production and fiercer competition of domestic firms on export markets" (2020).

Relocations of the second degree

Manufacturing relocations of the second degree

Among the 17 enterprises that offshored some manufacturing activities, five (accounting for 29.4% of the total) made subsequent decisions to relocate, with notable differences between the two meta-sectors. In the fashion sector, 2 companies out of the 7 (28.5%) decided, at least partially, to backshore

their production activities to Poland. However, the number of back-shoring decisions is a little higher, since one of the fashion companies back-shored from both China and Myanmar. The relocations to the home country implemented in the clothing and footwear industries are related to high-value business segments, such as premium clothing and special-purpose clothing (protective clothing). In terms of governance mode, while both companies outsourced to foreign contractors when offshoring, one of them (producing protective clothing) decided to re-insource production to its plant. When considering the host country, it emerges that one company (premium clothing) relocated in 2017 from Asian countries, while the second did so in 2020 from Ukraine. In this respect, it is worth noting that while the two back-reshoring decisions from Asia were boosted primarily by logistics costs, the one from Ukraine was also driven by difficulties in the coordination of outsourced and offshored activities and operative flexibility. Moreover, decisions regarding repatriation from Myanmar and Ukraine were also motivated by political instability in the two foreign countries. Finally, both companies expressed quite a low level of satisfaction with the backshoring decisions. With specific respect to the company backshoring in 2020, further criticalities emerged while implementing the relocation.

In contrast, 3 out of the 10 companies belonging to the electromechanical sector (30% of total offshoring ones) relocated to a new host country, that is they implemented a relocation to a third country (Barbieri et al., 2019). More specifically, they had previously offshored both in EU countries (Italy, Sweden, Czech Republic) and in China.

Supply relocations of the second degree

When considering relocations of the second degree regarding supply activities, our findings show that a total of 63 companies out of the 479 that conducted offshoring relocated them at least partially (13.1%). However, the data is somewhat different when considering the two meta-sectors (Table 7). More specifically, supply reshoring was mainly implemented by fashion companies (15.41% of total offshoring companies) rather than the electromechanical firms (10.61%). This finding is quite relevant since fashion companies were the ones that offshored more of their purchasing activities. Therefore, it seems they were proportionally more disappointed by their earlier location decision.

Table 7. Decision to relocate supply of materials from foreign to Polish suppliers (last 5 years)

<i>Supply relocation</i>	<i>Fashion</i> <i>N=253</i>		<i>Electromechanical</i> <i>N=226</i>	
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>
<i>Decision to relocate</i>	39	15.41	24	10.61

Source: Survey data

When considering motivations that prompted the relocation of supply activities, it clearly emerges that several drivers obtained a weighted arithmetic mean higher than 3 (Table 8). More specifically, longer than expected delivery times were the main problem companies experienced. Following this, while higher logistics costs were relevant for both subsets of companies, fashion firms pointed to the problem of minimum quantity orders while electromechanical companies indicated the increased costs of materials. Other main differences between the two meta-sectors regard the quality of suppliers' materials and environmental sustainability. The latter only assumed a certain relevance (3.2 out of 5) for electromechanical companies, while the corresponding value for the fashion industry was 2.2. This finding is somewhat unexpected given the growing attention of fashion customers and brands to sustainability issues (Thomas, 2020; Choi and Yongjian, 2015). Finally, it is worth noting that the made-in effect was not a relevant issue for both subsets. This is consistent with Poland's lack of comparative advantage in the investigated meta-sectors.

Table 8. Motivations for supply back-shoring (weighted arithmetic mean on a Likert scale 1-5) (N=17)

<i>Motivations</i>	<i>Fashion (N=39)</i>	<i>Electromechanical (N=24)</i>
<i>Effective delivery time higher than expected</i>	4.3	4.0
<i>Minimum quantity/batch to be bought</i>	4.1	3.3
<i>Effective logistic costs higher than planned</i>	3.7	3.8
<i>Difficulties in coordinating foreign suppliers</i>	3.7	3.4
<i>Increased costs of materials from host country suppliers</i>	3.5	3.6
<i>Availability of skilled suppliers in the home country</i>	3.4	3.3
<i>Supplier materials of poor quality</i>	3.0	2.5
<i>Duties and commercial rules</i>	2.4	2.6
<i>Environmental sustainability issues (e.g., reduction of CO2 emissions)</i>	2.2	3.2
<i>Impossibility to use “Made-in” labels since materials were imported</i>	2.1	1.9

Source: Survey data

Concluding remarks

Our paper aimed to shed new light on the internationalization processes of Polish companies operating in the fashion and electromechanical meta-sectors. More specifically, attention was focused on production and supply internationalisation strategies, since the study of these is still in its infancy and previous research does not offer definitive insights. In order to offer a more complete overview of the two internationalisation phenomena, we analysed the strategies of both offshoring and relocation of the second degree.

Our findings offer several contributions to the academic debate. First of all, they clearly show that Polish companies, at least in the two analysed meta-sectors, do not have a high propensity to internationalise their manufacturing activities. This finding confirms the classification of Poland as a “forward GVC integration country” and as a “net sender” within GVCs (Comotti et al., 2020). Moreover, our findings clearly show very few motivations that contribute to explaining the tendency to retain production in the home country. Among them, sociological (patriotism) and marketing (proximity to customers and quality issues) emerged as somewhat relevant, coupled with the perceived high economic and financial risk. The latter issue may be explained, at least in part, by the small size of the companies investigated, especially those in the fashion industry.

However, when considering supply activities, a completely different scenario emerges, with very few companies buying only from national suppliers (16% of fashion companies and 24.9% of electromechanical firms). Moreover, 44.1% of the former and 22.6% of the latter import more than 50% of the required materials from foreign countries.

A third relevant finding regards relocation strategies implemented after the initial offshoring decision. Notwithstanding the limited number of offshoring companies, evidence of relocations of the second degree regarding manufacturing activities account for a notable amount in terms of both total offshoring companies (namely, 2 out of 7 in the fashion meta-sector and 3 out of 10 in the electromechanical sector) and implemented offshoring decisions (respectively, 3 out of 16 and 3 out of 12). However, while companies in the fashion industry revised their offshoring decisions in order to reduce the degree of their manufacturing internationalization– since they back-shored in Poland, those belonging to the electromechanical industry either maintained such internationalization (implementing near-shoring decisions), or even increased it (further off-shoring ones).

However, the most innovative contribution of our findings regards the back-shoring of supply activities. These were implemented by a significant percentage of companies (13.1%), even if the data is somewhat different when considering the two meta-sectors (15.41% of total offshoring

companies in the fashion industry and 10.61% in the electromechanical industry). Considering that the former were more inclined to offshore supply activities, it seems they were proportionally more disappointed by the earlier offshoring decision. In this respect, several criticalities mainly related to logistics issues reinforced the relocation decision (delivery time, minimum quantity order, transportation costs). Moreover, it is worth noting that the availability of skilled suppliers in the home country was a somewhat relevant motivation for relocating supplies to the home country for both the sampled meta-sectors. On the contrary, environmental issues were, quite unexpectedly, relevant only in the electromechanical industry. Finally, the data collected shows several differences between the industries studied, confirming the need for multi-industry studies as suggested by Barbieri et al. (2018).

The current study has some limitations, mainly due to its explorative nature due to the infancy of studies on the production and supply internationalization process in CEE countries. First of all, the sampled data refers to only one country in the region, even if it is the most investigated and has a relevant position in GVCs. Secondly, it is focused on only two meta-sectors, even though one accounts for almost half of total production in the Polish manufacturing sector. Consequently, future research should broaden the analysis to include other CEE countries, and also consider other meta-sectors. Moreover, a comparison with other European countries, especially Western ones, would be valuable.

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