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**THE INTERNATIONALISATION OF POLISH  
FIRMS UNDER COVID-19 CONDITIONS –  
RESULTS OF AN EXPLORATORY STUDY<sup>1</sup>**

**Summary**

*Goal* – The present paper addresses the research question as to how previous firm internationalisation leads to sustained commitment to further internationalisation under the conditions of the COVID-19 crisis.

*Research methodology* – The study uses descriptive statistics based on a quantitative survey of 120 Polish exporters from manufacturing sectors.

*Score* – The authors have found some evidence which partly contradicts previous expectations that firms with stronger previous involvement in internationalisation are more likely to sustain or increase their internationalisation commitment during the pandemic and in the postpandemic landscape.

*Originality/value/implications/recommendations* – The authors have explored the boundary conditions under which internationalised firms sustain or extend their internationalisation commitment under pandemic conditions.

**Keywords:** firm internationalisation, export, COVID-19 pandemic.

**JEL classification:** F23, L25, M16

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## 1. Introduction

The COVID-19 pandemic had visible effects on international trade. Only during Q2 2020, world merchandise trade dropped by about 18%, while trade in services dropped by about 25% in relation to the pre-pandemic averages. Starting in Q3 2020 the effect of the pandemic on international trade changed course, however only for manufacturing trade. Buoyed by the trade of COVID-19 related products (personal protective equipment, medical tests, home office equipment etc.), merchandise trade started to rebound and in Q4 2020 the value of global trade in goods was similar to the pre-pandemic levels of 2019. On the other hand, the trade in services continued to be significantly below the pre-pandemic averages, largely due to the fall in demand for tourism, travel and accommodation services. The trade rebound for merchandise trade continued into 2021 as global trade already surpassed pre-pandemic levels in Q1 2021 to then stabilize in the following quarters at levels higher by about 18% than the pre-pandemic averages for 2019. The recovery was more gradual for trade in services, which remained below pre-pandemic averages as of Q3 2020 [UNCTAD, 2022, p. 2].

Thus, not surprisingly, the current crisis and its adverse impact on international business have been compared to the financial crisis of 2008 in the current debate. The financial crisis of the end of the first decade of the 21st century attracted the attention of economists seeking to explain its influence on national economies [e.g. Meyn, Kennan, 2009; Yilmaz, 2013] and its long-term consequences [Allen, Carletti, 2010; Claessens, Kose, Terrones, 2010]. As one of the key questions in internationalisation research is whether its increase is beneficial to the performance of the firm [Verbeke, Li, Goerzen, 2009; Matysiak, Bausch, 2012], it is justified to consider the role of the external environment in that relationship, since the economic crisis has been found to affect firm performance [Antonioli et al., 2011; Berrill, Kearney, 2011; Teece, Pisano, Shuen, 1997; Wu, 2010].

The aim of this preliminary study is to explore how the level of internationalisation, both in its depth and breadth, moderates the extent to which the COVID-19 pandemic affects the firms' commitment to internationalisation under crisis conditions. We address these objectives by studying exporters from a post-transition economy of Poland. Post-transition exporters are firms of different sizes, sharing limited experience with internationalisation and expanding to markets at a different level of economic and institutional development because of their late moment of entering the international business environment due to

the pre-transition period. We argue that due to the critical relevance of internationalisation to the performance of such firms, they provide a useful context for exploring the relationships between internationalisation and the pandemic crisis.

## 2. Conceptual background

A number of studies have investigated the relationship between the economic crisis and firm internationalisation. Welch and Luostarinen [1988: 36] define firm internationalisation as 'the process of increasing involvement in international operations'. Since both organisational and environmental complexity rises with the widening of a firm's international operations [Verbeke, Li, Goerzen, 2009], Calof and Beamish [1995] argue that internationalisation is related to adapting the firms' operations to international environments, which pertains to their strategy, structure and resources. Nordic researchers conceptualised firm internationalisation as an evolutionary process driven by an interaction between the development of foreign market knowledge on the one hand, and an increasing commitment of resources on the other [Johanson, Vahlne, 2009]. The internationalisation mechanism includes state aspects and change aspects. The former embrace the resource commitment to foreign markets and the knowledge about foreign markets and operations. The latter are related to further decisions about resource commitments, as well as to the performance of extant business activities. Market knowledge and market commitment are expected to influence decisions which drive further commitment to foreign markets. Conversely, commitment decisions and current activities affect market knowledge and resource commitments [Johanson, Vahlne, 2009].

The internationalisation patterns can be traced back along two dimensions. The first one, called the establishment chain, refers to the operating modes within one host country. Accordingly, firms pass from no regular export activities, through exports via agents, sales subsidiaries and manufacturing subsidiaries [Johanson, Wiedersheim-Paul, 1975]. The sequence of a firm's engagement in the foreign market corresponds to a rising degree of resource commitment and exposure to local market conditions. This dimension of the development of a firm's international involvement has often been referred to as internationalisation depth [Stray, Bridgewater, Murray, 2001; Cerrato, Fernhaber, 2018; Laurens et al., 2022]. It reflects the degree to which firms depend on foreign markets for their revenues [Wiersema, Bowen, 2008], and has therefore been operationalised as the the ratio

of foreign sales to total sales [Cerrato, Fernhaber, 2018]. Increasing international sales is a way for a new venture to grow and tap into a larger customer base [Stray, Bridgewater, Murray, 2001].

Secondly, firms enter foreign markets according to the psychic distance chain, whereby host countries with successively higher differences in language, culture, political systems, etc. are selected [Johanson, Vahlne, 2009]. The notion of psychic distance is inherently related to that of the liability of foreignness, i.e. the costs of doing business abroad that result in a competitive disadvantage for a foreign firm [Zaheer, 1995]. It refers to all factors which might affect cross-border operations by disturbing the flow of information between the firm and the market. Accordingly, the breadth of internationalisation involves the degree to which a firm's internationalisation activities are diversified across markets [Laurens et al., 2022]. As the breadth of internationalisation increases, so does the variety of customers, institutional environments and competitors with which the firm has to deal, which in turn exposes the firm to diverse relationships and sources of knowledge [Zahra et al., 2000].

While based on the macro-level evidence one may expect that the effect of the pandemic crisis on the international business operations of firms should be predominantly negative [UNCTAD, 2022], this relationship may obviously be dependent on a number of factors. As far as the micro-level effect of the pandemic crisis on the commitment to internationalisation is concerned, one must consider the existing context of a firm's international commitments, particularly its internationalisation depth and breadth [Vissak, 2011].

The role of internationalisation for the success of the firm is co-determined by a number of organizational variables, thus it cannot be regarded in isolation, since firms must be capable of tackling internationalisation [Verbeke, Brugman, 2009; Verbeke, Li, Goerzen, 2009]. There is some evidence that more internationalised and more internationally experienced firms may improve their performance during the economic crisis due to the learning effect during their foreign expansion, as well as the leverage of different business contacts [Figueira de Lemos, Hadjikhani, 2011]. In fact, the pre-crisis strategic position of foreign ventures can be an important factor supporting the continuation of expansion, also under crisis conditions [Filippov, Kalotay, 2011; Filippov, 2011]. Likewise, diversified cross-border operations may enhance the operating flexibility of the parent firm under crisis conditions [Lee, Makhija, 2009].

Similarly, Amendola et al. [2012] found that Italian exporters from different sectors had higher survival chances during the economic crisis, although this relationship was also affected by their liquidity and level of debt. In a similar vein,

exporters knowing a variety of host countries and having a network of foreign contacts, were more able to cope with uncertainty related to economic risk, thus delivering superior performance [Jansson, Hilmersson, Sandberg, 2010]

Conversely, there is also evidence that economic crises can lead to withdrawals from international operations [Benito, Welch, 1997; Filippov, 2011]. Indeed, under crisis conditions firms seek to limit their risk in locations with higher uncertainty, thus preferring more stable markets and diversifying their international risks [Hryckiewicz, Kowalewski, 2010]. Yet, the propensity to limit international exposure has been found to depend on the level of prior commitment to foreign ventures [Chung, Beamish, 2005; Williams, Martinez, 2012]. Moreover, the sustained success of international operations under crisis conditions is affected by several factors, such as cooperation with international partners [Vissak, 2011], or international experience [Figueira de Lemos, Hadjikhani, 2011], which come with a higher exposure to international operations.

Therefore, considering both the theory of firm internationalisation and the relationship between past internationalisation patterns and further commitment to internationalisation, as well as the extant literature on firm internationalisation under economic crisis conditions, the authors set out to explore the extent to which the current level of internationalisation in terms of the key manifestations, i.e. depth and breadth, drive the commitment to further internationalisation under COVID-19. The authors tentatively expect that prior internationalisation depth and breadth should be positively related to the commitment to internationalisation under COVID-19 conditions.

### **3. Research methods**

#### **3.1. Data collection and sample**

The sampling for the study was based on the data on Polish exporters from the BISNODE database and embraced firms meeting, inter alia, the following criteria:

- majority-owned by Polish shareholders;
- active in manufacturing sectors;
- exporting to at least 2 countries and showing at least 10% of foreign sales to total sales (FSTS);
- employing at least 10 people.

TABLE 1

**Sample characteristics (N=120)**

Employment (as of 2021)	# firms	Manufacturing sectors	# firms
10–49 employees	41	Low-tech	40
50–249 employees	39	Mid-tech	40
50–249 employees	40	High-tech	40

Source: author's own elaboration.

Based on the criteria, 358 randomly selected firms with an equal split of small, medium and large enterprises and low, mid and high-tech manufacturing were contacted by a professional market research agency. Primary data were gathered from computer assisted telephone interviews (CATI) with owners, top managers or sales or export-related managers of 120 firms, conducted between June and July 2022. This resulted in a response rate of 34%. The sample characteristics are presented in Table 1.

### 3.2. Data measurement

The commitment to internationalisation under pandemic conditions was understood not only as the number of served international markets, and number of new products and services for international markets, but included also qualitative aspects, such as investment in tools and processes for serving international markets, intensity of international marketing activities, as well as personnel dedicated to serving international markets. Hereby, respondents were asked to evaluate the related statements on a 7-point Likert scale, where 1 – significant decrease; 4 – no change (or no action taken); 7 – significant increase in the period 2020–2021 as opposed to 2018–2019.

Finally, internationalisation depth was measured by using foreign sales to total sales (FSTS) [e.g. Velez-Calle, Sanchez-Henríquez, Contractor, 2018], while internationalisation breadth was operationalised as the number of export markets served by the firm [e.g. Casillas, Acedo, 2013]. For the purposes of statistical testing, in order to obtain an even distribution of internationalisation depth for comparative tests, firms were divided into three levels of this variable:

- low – FSTS = 10–15%
- medium – FSTS = 16–25%
- high – FSTS > 25%

Likewise, for internationalisation breadth, firms were divided into the following groups:

- low – 2 export markets
- medium – 3–7 export markets
- high – > 8 export markets

#### 4. Findings

First of all, the distributions of variables concerning the commitment to internationalisation in the conditions of the COVID-19 pandemic were verified. Descriptive statistics were calculated and Kolmogorov-Smirnov tests were performed. Table 2 presents the results of these analyses. Normality tests indicate that the assumptions of a normal distribution are not met ( $p < 0.05$ ). In addition, the values of skewness and kurtosis are not in the range from -2 to 2, which indicates a significant asymmetry of the distributions of the analysed variables. For this reason, the analyses were performed on the basis of non-parametric tests.

In order to provide the first understanding of the development of the sample firms' commitment to international operations, a scrutiny of average values indicates that in most areas which were part of the study, the exporters increased their commitment, most notably investments in the development of distribution channels on foreign markets ( $M = 4.73$ ) and in the tools and processes to serve foreign markets ( $M = 4.61$ ), as well as the number of staff serving foreign markets ( $M = 4.61$ ). Aspects in which there was no change or which decreased in comparison to the pre-pandemic period were the number of new products and services for foreign markets ( $M = 3.99$ ) and the budget for export development ( $M = 3.28$ ). In some cases, although the mean values may suggest an increase of commitment, the median values indicate no visible change in the commitment, namely for the number of export markets served ( $Me = 4.00$ ) and the marketing intensity level ( $Me = 4.00$ ).

In order to explore the differences in the commitment to internationalisation in the COVID-19 environment depending on the prior commitment to export activities, a series of Kruskal-Wallis tests was carried out to verify whether the depth and breadth of each firm's export differentiates the level of commitment to internationalisation in the context of the COVID-19 pandemic.

TABLE 2

## Basic descriptive statistics with the Kolmogorov-Smirnov test result

	<i>M</i>	<i>Me</i>	<i>SD</i>	<i>Sk.</i>	<i>Kurt.</i>	<i>Min</i>	<i>Max</i>	<i>D</i>	<i>p</i>
Budget for export development	3.28	3.00	1.01	0.19	-1.09	2.00	5.00	0.19	< 0.001
Number of export markets served	4.20	4.00	0.69	-2.14	9.57	1.00	5.00	0.35	< 0.001
Investments in tools and processes to serve foreign markets	4.61	5.00	0.76	-0.96	4.05	1.00	6.00	0.27	< 0.001
Investments in the competitiveness and innovation of products for foreign markets	4.48	5.00	0.96	-0.30	1.53	1.00	7.00	0.22	< 0.001
Number of new products and services for foreign markets	3.99	4.00	0.99	-0.25	-0.15	1.00	6.00	0.20	< 0.001
Marketing intensity level	4.32	4.00	0.86	-0.74	0.93	1.00	6.00	0.26	< 0.001
Intensity level of sales activity	4.55	5.00	1.05	-0.20	-0.64	2.00	7.00	0.22	< 0.001
Investments in the development of distribution channels on foreign markets	4.73	5.00	0.83	0.26	0.34	3.00	7.00	0.24	< 0.001
Number of staff serving foreign markets	4.61	5.00	0.61	0.47	0.88	3.00	7.00	0.31	< 0.001

Source: author's own elaboration.

The statistical test results taking into account the depth of internationalisation are presented in Table 3. Based on the conducted tests, statistically significant results were recorded for investments in tools and processes for servicing foreign markets and the number of staff serving foreign markets. As for the budget for export development and the intensity level of sales activity the results differ only at  $p < 0.1$ . Moreover, pairwise comparisons indicated that in both cases, companies with an average depth of internationalisation put significantly more emphasis on the aforementioned aspects of involvement in internationalisation than companies with a high depth of internationalisation. Post-hoc tests also indicate significant differences in a medium and high internationalisation depth in terms of activities



related to the export development budget, whereby the most internationalised firms were also the most able to keep or increase their export budget under COVID-19 conditions.

**TABLE 3**

**Kruskal-Wallis tests for the differences in export commitment depending on internationalisation depth**

	Internationalisation depth						<i>H</i> (2)	<i>p</i>	$\eta^2$
	low ( <i>n</i> = 42)		medium ( <i>n</i> = 46)		high ( <i>n</i> = 32)				
	avg. rank	<i>Me</i>	avg. rank	<i>Me</i>	avg. rank	<i>Me</i>			
Budget for export development	56.27	3.00	56.50	3.00	71.80	4.00	4.98	0.083	0.03
Number of export markets served	63.80	4.00	62.25	4.00	53.66	4.00	2.63	0.268	< 0.01
Investments in tools and processes to serve foreign markets	61.20 <sup>ab</sup>	5.00	68.05 <sup>a</sup>	5.00	48.72 <sup>b</sup>	4.00	7.17	<b>0.028</b>	0.04
Investments in the competitiveness and innovation of products for foreign markets	66.26	5.00	62.09	5.00	50.66	4.00	4.37	0.113	0.02
Number of new products and services for foreign markets	60.33	4.00	62.36	4.00	58.05	4.00	0.32	0.852	< 0.01
Marketing intensity level	62.95	5.00	64.26	5.00	51.88	4.00	3.14	0.208	< 0.01
Intensity level of sales activity	65.29	5.00	63.77	5.00	49.52	4.00	4.75	0.093	0.02
Investments in the development of distribution channels on foreign markets	60.31	5.00	65.14	5.00	54.08	4.50	2.24	0.327	< 0.01
Number of staff serving foreign markets	64.74 <sup>ab</sup>	5.00	65.63 <sup>a</sup>	5.00	47.56 <sup>b</sup>	4.00	7.77	<b>0.021</b>	0.05

*Annotation.* Mean ranks with a different letter index differ from each other at *p* < 0.05 with the Bonferroni correction.

Source: author's own elaboration.

In the last step of analysis, it was verified whether the breadth of internationalisation differentiates the commitment to internationalisation, taking into account the COVID-19 pandemic (Table 4).

TABLE 4

**Kruskal-Wallis tests for the differences in export commitment depending on internationalisation breadth**

	Internationalisation breadth						$H(2)$	$p$	$\eta^2$
	low ( $n = 58$ )		medium ( $n = 24$ )		high ( $n = 38$ )				
	avg. rank	$Me$	avg. rank	$Me$	avg. rank	$Me$			
Budget for export development	56.55 <sup>ab</sup>	3.00	49.98 <sup>a</sup>	3.00	73.17 <sup>b</sup>	4.00	8.63	<b>0.013</b>	0.06
Number of export markets served	63.50	4.00	58.79	4.00	57.00	4.00	1.33	0.515	< 0.01
Investments in tools and processes to serve foreign markets	67.04 <sup>a</sup>	5.00	64.15 <sup>ab</sup>	5.00	48.21 <sup>b</sup>	4.00	8.64	<b>0.013</b>	0.06
Investments in the competitiveness and innovation of products for foreign markets	67.15	5.00	56.77	4.00	52.71	4.00	4.92	0.085	0.02
Number of new products and services for foreign markets	61.88	4.00	64.79	4.00	55.68	4.00	1.30	0.522	< 0.01
Marketing intensity level	63.38	5.00	63.38	4.50	54.29	4.00	2.05	0.359	< 0.01
Intensity level of sales activity	69.32 <sup>a</sup>	5.00	55.63 <sup>ab</sup>	4.50	50.12 <sup>b</sup>	4.00	8.21	<b>0.017</b>	0.05
Investments in the development of distribution channels on foreign markets	65.85	5.00	55.85	5.00	55.26	4.50	3.12	0.210	< 0.01
Number of staff serving foreign markets	65.67	5.00	62.63	5.00	51.26	4.00	5.20	0.074	0.03

*Annotation.* Mean ranks with a different letter index differ from each other at  $p < 0.05$  with the Bonferroni correction.

Source: author's own elaboration.

Based on the conducted tests, it can be concluded that the breadth of internationalisation differentiates activities in the field of the export development budget, investments in tools and processes to serve foreign markets, as well as the level of intensity of sales activity. Thereby, post-hoc tests indicate that firms with a high internationalisation breadth took more pronounced measures in terms of the budget for the development of exports than companies with a medium internationalisation breadth. At the same time, companies with a high internationalisation breadth focused to a lesser extent on investments in tools and processes to serve foreign markets and the intensity of sales activities than companies with a low internationalisation breadth. As for the investments in the competitiveness and innovation of products for foreign markets, as well as the number of staff serving foreign markets, firms with different levels of internationalisation breadth differed only at the level of  $p < 0.1$ .

## 5. Conclusions

In this preliminary, exploratory study the authors have provided some initial statistical tests in different subgroups to shed light on the relationships between the COVID-19 pandemic and internationalisation. In doing so, the authors have explored the boundary conditions under which internationalised firms sustain or extend their internationalisation commitment under pandemic conditions.

Drawing from the internationalisation theory, the authors have found some surprising evidence which contradicts previous expectations that firms with stronger current involvement in internationalisation, are more likely to sustain or increase their internationalisation commitment during the pandemic and in the post-pandemic landscape. In fact, the authors were only able to provide some support that the hitherto more internationalised firms were more committed to further operations with regard to export budget, which can be explained by a possible larger scale of operations and fewer financial constraints. For other aspects of commitment to internationalisation, especially those related to export-related capabilities (such as investments in tools and processes to serve foreign markets, or number of staff serving foreign markets) or actions (such as the level of foreign sales activity), the firms with the lowest depth and breadth of internationalisation proved to be the most active during the crisis, i.e. sustaining or even increasing their commitment, in both quantitative and qualitative terms.

The current study has a preliminary nature due to its limited sample size and predominantly descriptive character. Moreover, the use of subjective measures

based on survey questions can also potentially bias the answers regarding changes in the commitment of firms to international operations. Notwithstanding, the study is topical and provides a current empirical contribution to research on the international expansion of firms under the conditions of the COVID-19 crisis. Still, further research using more sophisticated statistical techniques would need to look into the geographic patterns of the export expansion of those firms, as the type of markets and the related economic situation may have an impact on why in many cases the expected diversification effect of selling more to foreign markets and maintaining a broader portfolio of export markets may not materialise. Also, it would be worth exploring the array of motivations that make earlier-stage SME exporters inclined to explore opportunities in foreign markets during the times of international turbulence, which may be related inter alia to personal characteristics and experiences of owners or managers, or, on the other hand, the specific sectors and business models.

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