Entrepreneurship without Borders: Do Borders Matter for International Entrepreneurship?

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The article focuses on geographic distance to foreign markets affecting firm internationalisation. The main objective of the article is to verify whether geographic distance to the border (localisation of the firm) has an impact or effect on the internationalisation process. The V4 research survey results and the sample of 190 internationalised Polish businesses were used in order to meet the objective and verify the assumed hypothesis. The results of the Mann-Whitney test, Student’s t test as well as ANOVA analysis prove that businesses operating in bordering regions are more internationalised than those operating in inner regions of Poland. Consequently, the research hypothesis was confirmed and all in all it is obvious from the foregoing evidence that the businesses localised in bordering regions are more internationalised than the firms localised in inner regions not having borders with neighbouring countries. The article is based on the survey results of the research project no. STG-21310034 entitled “Patterns of Business Internationalization in Visegrad Countries – In Search for Regional Specifics” conducted in the years 2013–2014 by five universities from Visegrad countries and coordinated by Cracow University of Economics.

Keywords: International Entrepreneurship, International Business, Geographical Distance.

Przedsiębiorczość bez granic – czy granice mają znaczenie w przedsiębiorczości międzynarodowej

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Artykuł ukazuje związek dystansu geograficznego do rynków zagranicznych oraz internauonalizacji przedsiębiorstw. Głównym celem artykułu jest sprawdzenie, czy odległość geograficzna do granicy (lokalizacja firmy) ma wpływ na proces internationalizacji. Wykorzystano badania ankietowe V4 przeprowadzone w Polsce na próbie 190 umiędzynarodowionych polskich przedsiębiorstw. Wyniki testu Manna-Whitneya, testu t-Studenta oraz analizy ANOVA potwierdzają, że przedsiębiorstwa działające w województwach przygranicznych są bardziej umiędzynarodowione niż te działające w województwach wewnątrznych Polski. Oznacza to, że zakładana hipoteza badawcza została potwierdzona, a przedsiębiorstwa zlokalizowane w regionach przygranicznych są bardziej umiędzynarodowione niż te zlokalizowane w regionach wewnętrznych, nieposiadających granic z krajami sąsiadującymi.

Słowa kluczowe: przedsiębiorczość międzynarodowa, biznes międzynarodowy, dystans geograficzny.

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1. Introduction

Literature presents two opposite attitudes towards the role of the territorial distance while doing business across borders. Its role in international business or international entrepreneurship is still being explored in many countries. Cairncross (2001) notices that nowadays geographical distance seems to be out of place in the age of global markets (“death of distance”), but Ellis (2007) highlights that the empirical evidence suggests otherwise (“distance still matters”). This issue has been researched recently by numerous economists, geographers and especially by international business researchers (Clark, Dollar & Micco, 2004; Ghemawat, 2001; Frankel & Rose, 2002).

It is worth following and supporting this academic dispute taking into account Polish realities, which can be considered the extension of scientific achievements to date. Thus, the main objective of the article is to verify whether geographic distance to the border (localisation of the firm) has an impact or effect on the internationalisation process by means of utilising the sample of 190 internationalised Polish businesses.

2. Literature Review

During a few previous decades, the global economy has undergone a dramatic change, and the “new economic landscape requires a combination of entrepreneurship, innovation, and internationalization” (Hagen, Denicolai & Zucchella, 2014, p. 111). The concept of “international entrepreneurship” (IE) came into being in the late 1980s; however, the theory of IE was developed in mid-1990s, mainly by McDougall (1989), who together with Oviatt developed this theory in the following years (Oviatt & McDougall, 1994; McDougall, Shane & Oviatt, 1994). International entrepreneurship has been developing very intensively now (Al-Aali & Teece, 2014; Almor et al., 2014; Covin et al., 2014; Hennart, 2014; Wach & Wehrmann, 2014, pp. 9–22). International entrepreneurship, linking two research domains – entrepreneurship theory and international business theory (McDougall-Covin, Jones & Serapio, 2014; Zucchella & Scabini, 2007; Coviello, McDougall & Oviatt, 2011; Coviello, Jones & McDougall, 2014; Wach & Wehrmann, 2014), is gradually beginning to emerge as the dominating approach within the internationalisation theory (the leading approach towards business internationalisation process) (Jones & Coviello, 2011; Coviello, Jones & McDougall-Covin, 2014; Daszkiewicz & Wach, 2012; 2013). International entrepreneurship specifically examines and prioritises the role of the entrepreneur as a key factor in the internationalisation process of the firm, especially of SMEs, alongside the external environment and the entrepreneurial process constituting the triad of international entrepreneurship or entrepreneurial internationalisation (Jarosiński, 2012; Daszkiewicz, 2014; Wach, 2012; 2014a).
The above-mentioned globalisation processes and the increasing role of global players resulted in the reorientation from the business internationalisation processes (Johanson & Vahlne, 1977; Johanson & Vahlne, 2009) to the business globalisation process (Vahlne & Ivarsson, 2014, pp. 227–247), thus the international entrepreneurship concept is currently included even in the traditional Uppsala model (Schweizer, Vahlne & Johanson, 2010). This is clearly illustrated by Hurmerinta-Peltonäki (2004, pp. 72–73), who tries to put main international entrepreneurship concepts on the internationalisation–globalisation scale (Figure 1) starting from an instant exporter, or an international new venture, and ending with globalised business activities (born globals as the global start-ups).

Figure 1. The hypothetical placement of different international entrepreneurship concepts on the scale of the globalization process. Source: Hurmerinta-Peltonäki (2004, p. 73).

As it was mentioned, the distance is one of debated research themes, it is even a kind of a moot point. The distance to market can be considered a barrier to international trade – or more broadly – to internationalisation; however, the distance can be differently understood and operationalised. Ellis (2007) lists two separate streams of research – “geographic distance” (Heckscher, 1919; Ricardo, 1817) and “cultural/psychic distance” Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975; Babichenko, 2006) and this two-dimensional typology seems to be the most often used in empirical studies. Nevertheless, Ciszewska-Mlinarić and Wąsowska (2012, p. 7) try to make a bit more detailed conceptualisation of “distance” listing five types of it, namely geographic distance, economic distance, institutional distance, cultural distance and psychic distance.
Border effect as one of the dimensions of the geographic distance, as the selected problem for this article and the accompanied survey research, has been overexposed in both Americas, Western European countries and Asia, and the research results are very interesting, but it seems this topic is rare in Central and Eastern Europe, including Poland (Oblój & Ciszewska-Mlinarič, 2014; Pušlicki, Staszkow & Trapczyński, 2014). Linmão and Venables (2001) as well as Frankel and Rose (2002) and Hummels (2001) discovered that increasing transportation costs, due to geographic distance, reduce trade volumes. On the other hand, other researchers such as Czinkota and Ursic (1987) as well as Terpstra and Yu (1988) found no evidence in their empirical research results. Nevertheless, the so called “near-market effect” has been confirmed recently by many researchers (Ellis, 2007).

Studies into geographic distance include also the “border effect” problem, which means a limitation of the geographic or territorial dimension of distance to the problem of the border between countries (McCallum, 1995; Helliwell, 1996; Nitsch, 2000; Wolf, 2000; Anderson & van Wincoop, 2003; 2004; Chen, 2004; Horváth, Rátfai & Dőme, 2008; Holmes & Stevens, 2012), and this article is limited only to this dimension of the geographic distance.

3. Research Methodology

In order to gather the empirical material, a quantitative research method was applied. The main research method for non-experimental quantitative research which was applied in the research project was the research survey using a questionnaire for data collection with the intent of generalising from a sample to a population. The survey was conducted between October 2013 and February 2014 (for details see (Wach, 2014b) as well as (Wach & Wojciechowska, 2014; Daszkiewicz & Wach, 2014).

Computer-assisted web interviewing (CAWI) was applied as the main survey method. This means that respondents (usually members of top management teams) answered the questions on their own using an online questionnaire (the online questionnaire was available at http://www.visegrad.uek.krakow.pl/survey; the questionnaire is attached in Duréndez & Wach, 2014, pp. 239–244), which was password protected. The request to fill in the online questionnaire was sent to approximately 7,000 Polish firms (database of “Polish Exporters”) via a special dedicated e-mail, followed by a telephone conversation request, and 274 questionnaires were submitted, which means that the response rate was around 4%. Of these, 190 completely filled in questionnaires representing all 16 regions of Poland were selected for further statistical processing (the rest of 84 questionnaires included too many missing answers or the answers within a single questionnaire were incoherent).

Management perceptions of firm-level variables are often used in entrepreneurship research (Naman & Slevin, 1993), and these perceptions
can be obtained from interviews or from surveys using questionnaires. “One potential advantage of perceptual approaches is a relatively high level of validity because researchers can pose questions that address directly the underlying nature of a construct” (Lyon et al., 2000, p. 1058).

The questionnaire was divided into four parts dedicated to different aspects under investigation, such as the characteristics of the firm; the characteristics of the top management team; the characteristics of the industry; and the patterns of internationalisation. Some variables were measured as a continuous score (e.g. age, number of employees) or discrete scores, while the majority of the questions were measured in a categorical ways (e.g. type of the applied strategy) which are connected to nominal variables, including also the interval scale from 1 to 5 of the Likert scale. Dichotomous variables were used very often to divide the population; however, in other cases dummy variables were used (e.g. traditional vs. rapid internationalisation). Two basic types of variables were applied – single indicators as well as overall assessment indexes. The single indicators were based directly on the questionnaire answers without any changes. On that basis, standardised indicators consisting of a couple of the single indicators, i.e. the overall assessment indexes, were applied. Each of the overall assessment indexes was constructed through the sum of values indicated by the respondents for each question, and then it was divided by the sum of maximum values possible to be obtained. Finally, the averaged assessment was obtained, standardised in the interval from 0 to 1 (given in percentage in the interval from 0 to 100).

The research hypothesis to be tested in this research study is as follows: There is a positive “border effect”, which means that the businesses localised in bordering regions are more internationalised than the firms localised in inner regions not having borders with neighbouring countries.

The statistical calculations were made by the use of the statistical software Statistica® PL v. 10 as well as Stata SE v. 12. In the empirical study, the level of the statistical significance (alpha or \( \alpha \)) for statistical hypotheses testing was considered as 0.05. Apart from the well-known basic descriptive statistics, in order to verify the assumed hypothesis the following inferential statistical tests were applied: the Mann-Whitney \( U \) test; Student’s \( t \) test and one-way ANOVA analysis, as well as the Brown-Forsyth test and the post-doc RIR Tukey test.

4. Results and Discussion

As mentioned above, the sample consists of 190 internationalised businesses from Poland representing all 16 administrative regions; however, 2 regions were overrepresented (Figure 2). The sample – using a control variable – was divided into groups, which are these having a border with foreign countries (11 regions) and internal regions (5 regions).
The transnationality index (TNI) was used as the dependent variable. It is one of the better and universal measures applicable for both SMEs and large companies (Dunning & Lundan, 2008, p. 61; Johnson & Turner, 2010, p. 221; Wach, 2012, pp. 131–132; Daszkiewicz & Wach, 2013, pp. 48–49).

The TNI index can reach values between 0 and 100 (usually expressed in %), where 100 means the most internationalised business. The values among the investigated businesses varied from 1 to 77.33 (Figure 3). The average value was almost 18. Only one fourth of all investigated businesses reached at least 30. Only one out of ten firms noted more than 50 (the ninth percentile was 49.83333).

![Figure 2. Distribution of investigated firms in Poland by their geographical localisation. Source: own study based on the V4 survey results of 2014 (n = 190).](image)

![Figure 3. Distribution and descriptive statistics for the TNI values of the investigated businesses. Source: own study based on the V4 survey results of 2014 (n = 190).](image)
Using the test based on the $U$ statistics and on the probability value $p = 0.0018$ calculated by the software, we are right to reject the null hypothesis being tested, which means that the variation of the average TNI index levels in businesses located in the bordering regions and interior regions differ significantly statistically. The results are also confirmed using Student's $t$ test based on the probability value $p = 0.0024$ (Table 1).

<table>
<thead>
<tr>
<th>Regions</th>
<th>Observations</th>
<th>Mean</th>
<th>Std. Err.</th>
<th>Std. Dev.</th>
<th>95% Conf.</th>
<th>Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal (0)</td>
<td>49</td>
<td>11.00</td>
<td>2.196</td>
<td>15.3769</td>
<td>6.5832</td>
<td>15.4167</td>
</tr>
<tr>
<td>Bordering (1)</td>
<td>141</td>
<td>20.27</td>
<td>1.754</td>
<td>20.8282</td>
<td>16.8111</td>
<td>23.7468</td>
</tr>
<tr>
<td>Combined</td>
<td>190</td>
<td>17.88</td>
<td>1.447</td>
<td>19.9489</td>
<td>15.0311</td>
<td>20.7408</td>
</tr>
</tbody>
</table>

$t = -2.8575$

$\text{Ho: } \text{diff} = 0, \ df = 188$

$\text{Ha: } \text{diff} < 0$

$\text{Pr}(T < t) = 0.0024$

$\text{Pr}(|T| > |t|) = 0.0048$

$\text{Ha: } \text{diff} \neq 0$

$\text{Ha: } \text{diff} > 0$

$\text{Pr}(T > t) = 0.9976$

*Table 1. Results of two-sample $t$ test with equal variances. Source: own study based on the V4 survey results of 2014 ($n = 190$).*

![Graph](image)

*Figure 4. Results of one-way ANOVA analysis for geographical distance to the national border. Source: own study based on the survey results of 2014 ($n = 190$).*

Using one-way ANOVA analysis allows to state that the average difference in the TNI indicator level between inland and bordering regions is about 9% in favour of the latter. In addition, as many as 75% of businesses located in the inner regions do not reach more than 15% of the value for the TNI indicator (Figure 4). The Brown-Forsyth test ($F = 6.39, p = 0.01$) confirms that there is a variation in TNI values as for the control variable.
The variation of the average values of TNI between the two control region types is confirmed by the variation analysis (\(F = 8.16, p = 0.004\)). Using the post-doc RIR Tukey test (as the null hypothesis, assuming no variation between these control regions, was rejected), the statistical significance between these groups is found (Figure 4). Descriptive statistics reveal even more. The median for TNI in the case of businesses operating in bordering regions is 12.67, while the value for inner regions is only 4.67. What is more, upper quartile is 31.67 versus 15.00 respectively.

5. Conclusions

Initially, territorial or geographic distance was investigated at the macro level in economics, only subsequently, this variable was included at the micro level studies in economics, and finally in business studies and management science. A majority of researchers believe that geographic distance has a negative effect on exporting and international trade in general, mainly due to transportation costs. What is more, cultural-and-psi
distance reduces business internationalisation. Some sceptics advocate the opposite view. Nonetheless, it is widely claimed and empirically examined that there is a negative correlation between the geographic distance and the business internationalisation and, simultaneously, there is either a positive or negative correlation between the existing national borders between neighbouring countries and firm-level internationalisation, depending on particular research results. The ongoing dispute seems to be unsolved.

The presented and discussed results of the Mann-Whitney test, Student’s \(t\) test as well as ANOVA analysis prove that businesses operating in bordering regions are more internationalised than these operating in inner regions of Poland. Consequently, the research hypothesis was confirmed and all in all it is obvious from the foregoing evidence that the businesses localised in bordering regions are more internationalised than the firms localised in inner regions not having borders with neighbouring countries.

No research study is free of its drawbacks and limitations. First of all, the research sample is not representative, thus it is not possible to absolutise the result over the whole population of Polish businesses. Secondly, some of the bordering regions should be discussed more deeply. It is obvious that the presented and discussed survey results are of initial character, the problem needs to be tested widely. It is promising to check if the EU external border of Poland (Ukraine, Belarus, Russian Federation) has the same role as the internal borders of the EU (the national borders of Poland with Germany, Slovakia, the Czech Republic, Lithuania) or what is the relative role of the maritime border across the Baltic Sea. It is also inspiring to verify what other factors are correlated with the bordering location, for instance if it has the same role for SMEs as for large companies, for services as for production.
References


