

## Patterns of Business Internationalisation in Slovakia: Empirical Results from the V4 Survey

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### 6.1. INTRODUCTORY REMARKS

The chapter deals with patterns of business internationalisation in Slovakia emphasizing the V4 features in international activities. The main objective of this chapter is to present the results of the research about various aspects of internationalisation of Slovak enterprises as a part of a research project among V4 countries. The research was conducted through a questionnaire survey available in electronic document and online specifically designed password protected form. The purpose was to distribute the questionnaire among internationally involved businesses in Slovakia between October 2013 and February 2014 (Wach, 2014a; 2014b; Wach & Wojciechowski, 2014; Knežević & Wach, 2014; Kindl-Wendner & Wach, 2014; Daszkiewicz & Wach, 2014; Daszkiewicz, 2014; Gubik & Wach, 2014; Bartha & Gubik, 2014; Gubik & Karajz, 2014). The research sample consisted of 143 businesses altogether. For data analysis the software MATLAB® R2010b was used. To verify the scientific hypotheses we applied procedures such as descriptive statistics and inductive statistics (to obtain critical values) for calculations of frequencies and analysis of contingency tables, and Pearson's chi-square test of independence. The significance level was set at 5% (Berenson, Levine, 1993) to reject or confirm the hypothesis (the calculated G characteristic was compared with the appropriate chi2 value).

### 6.2. RESEARCH SAMPLE CHARACTERISTICS

The division of surveyed firms according to the year of their establishment and first international activity is shown in Tables 6.1 and 6.2. The year 1993 indicates the formation of the independent Slovak Republic, in the year 2004 Slovakia joined NATO and the EU and in 2009 became part of the Eurozone.

Considering the year of establishment, the majority of the firms were established after 1993, there is very similar distribution until the accession of the EU in 2004 and in the period after it (44.1%, respectively 39.2%).

**Table 6.1.** Firms with international activities according to the year of establishment

Establishment Year	Frequency	Share %	Cumulative Frequency	Cumulative Share %	
Before 1993	24	16.8	24	16.8	
1993-2003	63	44.1	87	60.8	
2004-2013	56	39.2	143	100.0	
from which	2004-2008	36	25.2	123	86.0
	2009-2013	20	14.0	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	<b>143</b>	<b>.</b>	

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

Taking into consideration the year of the first international activity, the situation is a bit different; nearly half of the firms (49.0%) stated that they began their international operations after the entry of the Slovak Republic to the EU. In many cases it was a matter of classical business development, following Uppsala model of internationalisation when firms first gain experience from the domestic market before they move to foreign markets.

**Table 6.2.** Firms with international activities according to the year of the first international activity in Slovakia

Establishment Year	Frequency	Share %	Cumulative Frequency	Cumulative Share %	
Before 1993	15	10.5	15	10.5	
1993-2003	58	40.6	73	51.0	
2004-2013	70	49.0	143	100.0	
from which	2004-2008	35	24.5	108	75.5
	2009-2013	35	24.5	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	<b>.</b>	<b>.</b>	

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

When we compared the year of establishment and the start of the international activity, first, we came to the conclusion that three firms must have been left out from the analysis because they stated incorrect information (the international activity was sooner than the establishment). 61 surveyed firms went international immediately after their incorporation and 56 within five years (together comprise 81.8 % of all firms). Detailed distribution of the sample is presented in Table 6.3.

Considering the size of the firms participating in the research, all categories of firms were involved, from small firms with few employees to huge ones with

thousands of workers. Table 6.4 presents the characteristics of 140 firms according to the number of employees.

**Table 6.3.** Number of years of the company's life before starting international activities

Establishment Year	Frequency	Share %	Cumulative Frequency	Cumulative Share %
The same year	61	42.7	61	42.7
1–5 years	56	39.2	117	81.8
6–10 years	12	8.4	129	90.2
11–15 years	6	4.2	135	94.4
16–20 years	2	1.4	137	95.8
More than 20 years	3	2.1	140	97.9
Subtotal	140	97.9	.	.
Missing	3	2.1	143	100
<b>Total</b>	<b>143</b>	<b>100</b>	.	.

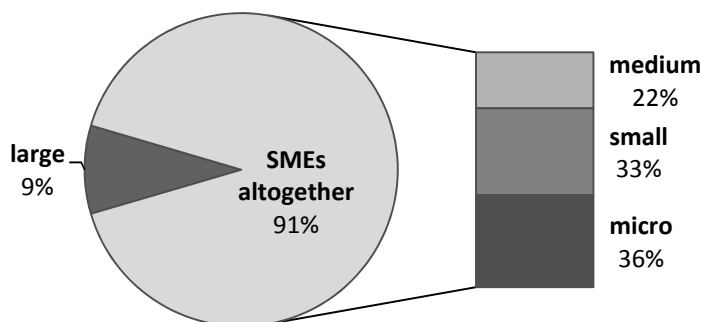
Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

**Table 6.4.** Number of employees among studied firms in Slovakia

Valid answers	Min	Max	Mean	Median	Standard Deviation	Lower Quartile	Upper Quartile
143	1	15134	259.1	20	1492.7	4.5	80

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

We further analysed the surveyed firms based on the criteria of employment and categorized them according to the Centre for Strategy and Evaluation Services (2012), results can be found in Table 6.5 and Figure 6.1. The categorization showed the highest share of micro firms nearly equal to small firms (together accounting for 69.2%), followed by medium size firms (21.7%) and large ones (reaching 9.1%).



**Figure 6.1.** Size of the firms in the sample in Slovakia

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

**Table 6.5.** Size of the studied firm in Slovakia

Category	Number of employees	Frequency	Share %	Cumulative Frequency	Cumulative Share %
Micro firm	<10	51	35.7	51	35.7
Small firm	<50	48	33.6	99	69.2
Medium firm	<250	31	21.7	130	90.9
Large firm	250≤	13	9.1	143	100.0
<b>Total</b>		<b>143</b>	<b>100.0</b>	.	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

The answers to the question about foreign ownership of the total firm's assets comprised various values from only domestic capital (with zero foreign capital) to full foreign ownership of a firm (see Table 6.6). Detailed description of the distribution of firms according to foreign ownership of the total firm's assets is in Table 6.7 which shows that firms with only and mostly domestic capital prevailed (nearly three-quarters of the sample).

**Table 6.6.** Foreign ownership of the total firm's assets

Valid answers	Min	Max	Mean	Median	Standard Deviation	Lower Quartile	Upper Quartile
143	0 %	100 %	21.9 %	0 %	37.44 %	0	24

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

**Table 6.7.** Distribution of firms according to foreign ownership of the total firm's assets

Foreign ownership	Frequency	Share	Cumulative Frequency	Cumulative Share
0%	91	63.6	91	63.6
1-25%	16	11.2	107	74.8
26-50%	7	4.9	114	79.7
51-75%	3	2.1	117	81.8
76-99%	6	4.2	123	86.0
100%	20	14.0	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	.	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

The distribution of firms into family and non-family business was the topic of the next survey question. In this research, family businesses were widely understood as firms solely (or dominantly) owned by the same family and in which they are employed or at least actively supporting the business processes of the family members. Here, we can conclude that the distribution was quite similar, with the number of non-family businesses slightly prevailing by 10% as it is presented in Table 6.8.

**Table 6.8.** The distribution of firms into family business and non-family business

<b>Familiness</b>	<b>Frequency</b>	<b>Share %</b>
Family business	65	45.5
Non-family business	78	54.5
<b>Total</b>	<b>143</b>	<b>100.0</b>

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

Primary economic activity based on NACE classification ensured dividing firms according to the groups of business sectors. As Table 6.9 describes, one-third of all firms are involved in manufacturing; followed by wholesale and retail trade, repair of motor vehicles and motorcycles (nearly 21%); other service activities (17.4%) and transporting and storage (12.5%). Other NACE categories have not reached 10%.

However, it must be noted that enterprises had the possibility to choose not only one NACE category, therefore 15 businesses chose two categories, 4 enterprises selected three categories and 1 company is involved in six NACE activities.

**Table 6.9.** Primary economic activity according to NACE classification in Slovakia

<b>NACE activities</b>	<b>Frequency</b>	<b>Share %</b>
<b>AGRICULTURE, including:</b>	<b>13</b>	<b>9.1</b>
Agriculture, forestry and fishing	13	9.1
<b>INDUSTRY, including:</b>	<b>67</b>	<b>48.25</b>
Mining and quarrying	4	2.8
Manufacturing	48	33.3
Electricity, gas, steam and air conditioning supply	3	2.1
Water supply, sewerage; waste management and remediation activities	2	1.4
Construction	12	8.3
<b>SERVICES, including:</b>	<b>75</b>	<b>52.45</b>
Wholesale and retail trade; repair of motor vehicles and motorcycles	30	20.8
Transporting and storage	18	12.5
Accommodation and food service activities	2	1.4
Information and communication	4	2.8
Financial and insurance activities	3	2.8
Real estate activities	1	0.7
Administrative and support service activities	2	1.4
Education	1	0.7
Human health and social work activities	2	1.4
Arts, entertainment and recreation	3	2.1
Other services activities	25	17.4
Total number of responses	143	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

Table 6.10 deals with the topic of territorial scope of activities in surveyed firms. Within and beyond the EU markets was the most frequent answer (in 30.1% of cases) followed closely by activities within the EU market (26.6%). Approximately similar number of firms operates only within the national market either on national, regional or local level (accounting for 31.5% in total). Only neighbouring countries are target for nearly 12% of firms. No company stated its activities only beyond the EU markets. Answers related to the question about territorial scope are very important from viewpoint of further research on directions of further territorial expansion, not only within the neighbouring V4 countries, EU, but also beyond the EU borders (Gálová, Horská, 2013; Gálová, 2013).

**Table 6.10.** Territorial scope of activities among studied firms in Slovakia

Market Scope	Frequency	Share %	Cumulative Frequency	Cumulative Share %
Mainly domestic market (local, regional, national market)	45	31.5	45	31.5
Only neighbouring countries/ cross border countries	17	11.9	62	43.4
Within the EU markets	38	26.6	100	69.9
Within and beyond the EU markets	43	30.1	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	.	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

### 6.3. RESULTS AND DISCUSSION

#### Internal Resources for Internationalisation

The last two questions of the first part of the research questionnaire were related to internal resources of the company for the internationalisation process and types and scope of innovations. Internal resources for internationalisation were our next area of interest, namely financial, human, physical, and information resources. There was the possibility to choose among five options: resources on extremely low, rather low, moderate, rather high or extremely high level.

The internal resources of the firm for the internationalisation process were evaluated based on four criteria within a five-level scale ranging from extremely and rather low through moderate to rather and extremely high level of resources. The four criteria comprised the financial resources (including e.g. own capital, credits, venture capital), human resources (such as staff members fluent in foreign languages, experienced with foreign markets and different cultures), physical resources (with equipment, know-how, innovation) and information resources (e.g. sources of information on international markets).

In the process of internationalisation nearly one quarter of surveyed firms are limited by their financial resources when they presented them as rather or extremely low (18.2%, respectively 5.6%). On the other hand, a slightly higher number of firms evaluate their financial resources as rather or extremely high (21.7%, respectively 4.9%). At the same time for almost half of all firms these resources mean no limitation as they consider them moderate (for details see Table 6.11).

**Table 6.11.** Financial resources for internationalisation among studied firms in Slovakia

Evaluation Level	Frequency	Share %	Cumulative Frequency	Cumulative Share %
Extremely low	8	5.6	8	5.6
Rather low	26	18.2	34	23.8
Moderate	71	49.7	105	73.4
Rather high	31	21.7	136	95.1
Extremely high	7	4.9	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	.	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

Human resources represent the biggest obstacle for the internationalisation process. 31.5% from the sample stated they have rather or extremely low human resources (23.8%, respectively 7.7%) but again a slightly higher number of firms (precisely 32.2%) have rather or extremely high level of human resources (26.6%, respectively 5.6%). However, the majority of the sample presents moderate level of these resources (Table 6.12).

**Table 6.12.** Human resources for internationalisation among studied firms in Slovakia

Evaluation Level	Frequency	Share %	Cumulative Frequency	Cumulative Share %
Extremely low	11	7.7	11	7.7
Rather low	34	23.8	45	31.5
Moderate	52	36.4	97	67.8
Rather high	38	26.6	135	94.4
Extremely high	8	5.6	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	.	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

The analysis also showed that physical resources represent for the sample the least important obstacle for internationalisation when 22.4% evaluated them as low. Nevertheless, it is just slightly less than in case of financial (23.8%) or even information resources (24.5%). On the contrary, 36.4% of respondents consider their firm's physical resources high while 41.3% of the sample evaluated them as moderate (detailed result in Table 6.13).

**Table 6.13.** Physical resources for internationalisation among studied firms in Slovakia

Evaluation Level	Frequency	Share %	Cumulative Frequency	Cumulative Share %
Extremely low	6	4.2	6	4.2
Rather low	26	18.2	32	22.4
Moderate	59	41.3	91	63.6
Rather high	47	32.9	138	96.5
Extremely high	5	3.5	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	.	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

Similarly to the level of human resources 37.5% of the surveyed firms evaluated their level of information resources as moderate and therefore sufficient. Nearly one quarter of the sample states rather or extremely low level of these resources (20.1%, respectively 4.9%) and therefore an obstacle while the remaining 37.5% evaluates them as high. Detailed result of the evaluation can be found in Table 6.14.

**Table 6.14.** Information resources for internationalisation among studied firms in Slovakia

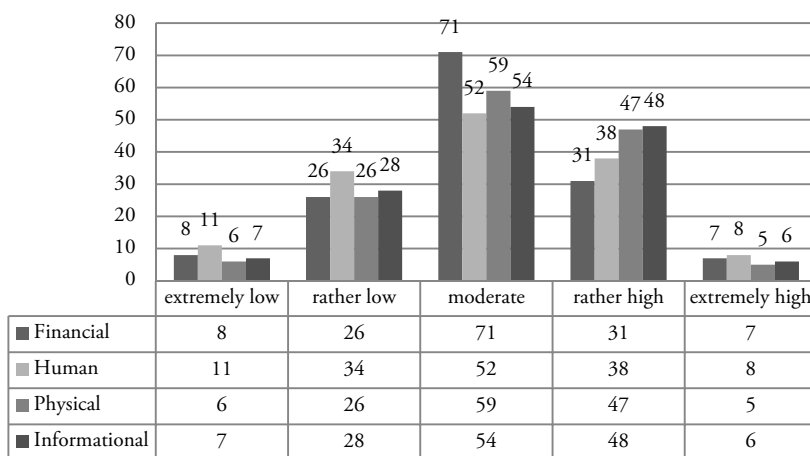
Evaluation Level	Frequency	Share %	Cumulative Frequency	Cumulative Share %
Extremely low	7	4.9	7	4.9
Rather low	28	20.1	35	24.5
Moderate	54	37.5	89	62.2
Rather high	48	33.3	137	95.8
Extremely high	6	4.2	143	100.0
<b>Total</b>	<b>143</b>	<b>100.0</b>	.	.

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

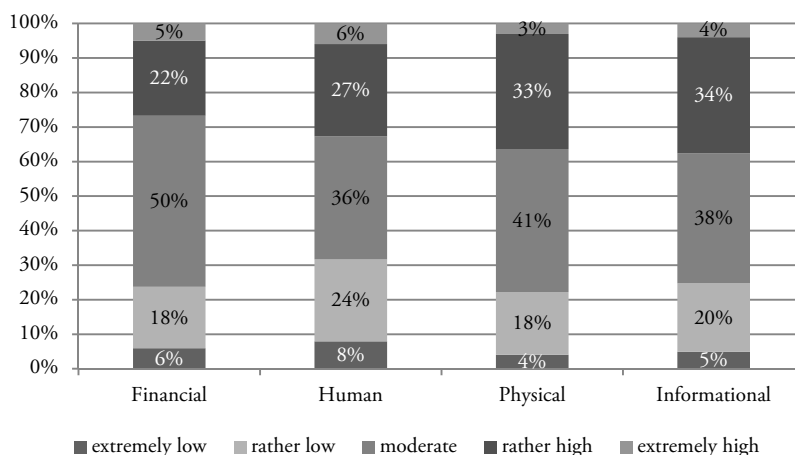
To sum up, detailed information about the distribution of answers about financial, human, physical and information resources can be found in Figure 6.2 and Figure 6.3.

The last question of the first part of the research was focused on innovations implemented in the company in the last 3 years, their type and scope where the results showed that two thirds of firms implemented some kind of innovation. Considering the type of innovations respondents could choose one or more possibilities (Table 6.15).





**Figure 6.2.** The importance of resources for internationalisation  
 Source: own study based on the V4 survey results of 2014 (*n* = 143).



**Figure 6.3.** Resources of the firms in the sample in Slovakia  
 Source: own study based on the V4 survey results of 2014 (*n* = 143).

As for the scope of innovations, those 96 firms were analysed further which stated they implemented innovations. Here, only one answer was possible. In slightly more than half of the surveyed firms there was firm-scale innovation implemented, one sixth of the sample stated regional-scale and worldwide scale of innovation and approximately 15 % presented national (country-wide) scale of innovation (detailed results in Table 6.16).

**Table 6.15.** Type of implemented innovations among studied firms in Slovakia

Types of innovation	Frequency	Share %
Product innovation	75	59.38
Process innovation	44	45.83
Organisation/management innovation	46	47.92
Marketing innovation	40	41.67

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

**Table 6.16.** Scope of implemented innovations among studied firms in Slovakia

Scale of innovation	Frequency	Share %
Firm-scale of innovation (i.e. new in the firm, but existing in other firms in your region)	49	51.04
Regional-scale of innovation (i.e. new solution in your region)	16	16.67
National (country-wide) scale of innovation (i.e. new solution in your country)	15	15.62
Worldwide scale of innovation (i.e. new solution in the global scale)	16	16.67
<b>Total</b>	<b>96*</b>	<b>100.00</b>

Note: 47 values missing

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

### Motives for Going International

In the fourth part of the questionnaire survey we researched the patterns of internationalisation of Slovak enterprises. We asked about the main motive and the main reason for going international in case of a particular company.

As the main motive, the enterprises could select either pull factors (lack of opportunities for further development of the firm in the domestic market), push factors (recognizing new opportunities for further development of the firm in international markets), chance factors (making use of unplanned international chances e.g. due to the response to international orders) or entrepreneurial factors (continuous efforts for the development of the firm through the introduction of new solutions). The main reason for going international could be market seeking, resources seeking, efficiency seeking or strategic assets (and/or strategic capabilities) seeking.

In case of Slovak businesses there is no dependency between motives and reasons for going international ( $\chi^2 = 16.92$ ,  $df = 9$ ,  $G = 14.43$ ), but the test was rejected with tight results. The division of responses is shown in Table 6.17.

**Table 6.17.** Cross tabulation concerning motives and reasons for going international

Motives/Reasons	Market seekers	Resources seekers	Efficiency seekers	Strategic assets seekers	Total
<b>Pull factors</b>	25	8	4	2	39
<b>Push factors</b>	15	10	9	4	38
<b>Chance factors</b>	7	3	7	3	20
<b>Entrepreneurial factors</b>	17	8	6	9	40
<b>Total</b>	<b>64</b>	<b>29</b>	<b>26</b>	<b>18</b>	<b>137</b>

\* Note: 6 values missing

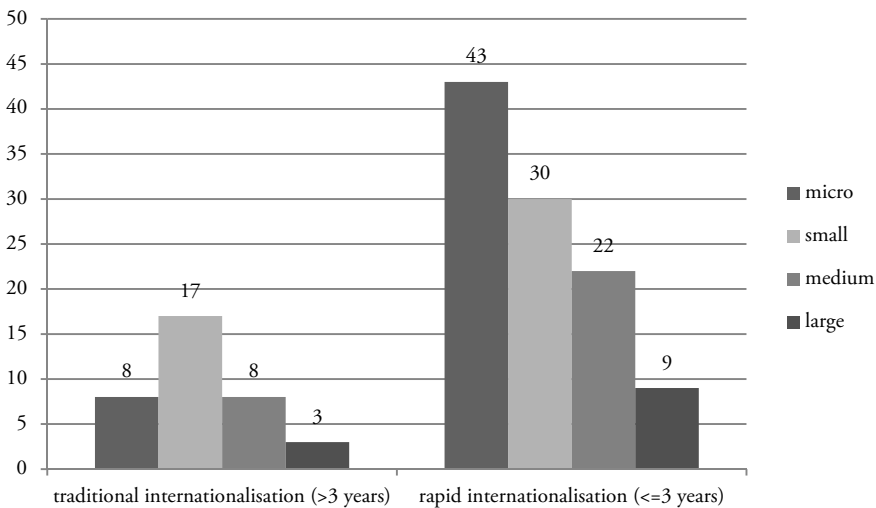
Source: own study based on the V4 survey results of 2014 (*n* = 143).

### The Pace and Scope of Internationalisation

The first from the 10 formulated scientific hypotheses was dealing with the relation between the year of establishment and the year of the first international activity on foreign markets, as follows:

**H1:** In general, firms from the Slovak Republic implement traditional process approach toward their internationalisation.

This hypothesis is rejected by descriptive statistics. The research question was answered by 140 firms from the total sample of 143. There are only 36 enterprises which implemented traditional process approach (25.71%) while the other 104 businesses (which is the majority 74.29%) implemented accelerated approach, that means three out of four investigated firms internationalised faster – within three years after establishment.



**Figure 6.4.** Resources of the firms in the sample in Slovakia  
Source: own study based on the V4 survey results of 2014 (*n* = 143).

After further research of this question we found out that mainly the majority of micro enterprises had rapid internationalisation process, in case of the other firms the rapid internationalisation was just slightly prevailing (Figure 6.4).

The second hypothesis was comparing the fact whether the technical demands in the industry are connected to the pace of internationalisation:

**H2:** Firms, from the Slovak Republic, operating in high-tech industries are more likely to accelerate their process of internationalisation.

The null statistical hypothesis for H2 is rejected ( $\chi^2 = 3.84$ ,  $df = 1$ ,  $G = 1.84$ ) – there is relation between the type of the industry and the pace of internationalisation. There is comparable number of high-tech and low-tech firms which accelerated their internationalisation process (52, respectively 46 firms) and on the other hand, the same situation is with traditional approach (13, respectively 20 firms used it). Table 6.18 presents details about responses to this question.

**Table 6.18.** Entry pace of internationalisation among studied firms in Slovakia

		Entry pace		Total
		traditional	accelerated	
High/low tech	high-tech industry	13	52	65
	other industries	20	46	66
	<b>Total</b>	<b>33</b>	<b>98</b>	<b>131</b>

Note: 12 values missing

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

However, when we researched the answers further, we came to the conclusion that the average time of internationalisation within high-tech industry sector is 2.18 years (in high-tech it is 2.06 years, in moderate high-tech it is 2.22 years) while in low-tech industry it took 4.41 years to go international (4.19 years in low-tech industry, 4.56 in moderate-low sector). The Mann-Whitney test supports the hypothesis that within high-tech industry the time of internationalisation is shorter.

The third and fourth hypothesis were aiming to relate the size of the enterprises and the scope of their activities:

**H3:** Micro and small firms, from the Slovak Republic, enter mainly other V4 and CEEC markets.

**H4:** Medium and large firms, from the Slovak Republic, enter mainly non-CEEC markets.

In case of micro and small firms the null statistical hypothesis was rejected, therefore there is relation between the size of the enterprise and its territorial scope, supported by Pearson's chi-square independence test ( $\chi^2 = 3.84$ ,  $df = 1$ ,  $G = 8.72$ ). As also the frequency distribution shows, micro and small firms enter rather non-CEE markets.

In case of medium and large firms the situation is opposite, there was no relation confirmed ( $\chi^2 = 2.71$ ,  $df = 1$ ,  $G = 0.02$ ).

The results also showed that 30% of businesses act on global markets within and outside the EU and nearly 27% on the EU markets. In only 12% of cases the target markets are the Central and Eastern European (CEE) markets including the V4 markets where the advantages of similar market conditions can be used (Horská, Nagyová, Felixová, 2010) (Table 6.19).

**Table 6.19.** Cross-tabulation for the size of the firm and its territorial scope in Slovakia

Observed Frequencies		Territorial Scope				Total	
		Within the country	CEE*	EU*	Globe*		
Size of the Firms	Micro	observations	23	6	14	8	51
		% of column	51.11	35.29	36.84	18.6	-
		% of line	45.10	11.76	27.45	15.69	-
		% of total	16.08	4.2	9.79	5.59	35.66
	Small	Observations	12	10	12	14	48
		% of column	26.67	58.82	31.58	32.56	-
		% of line	25.00	20.83	25.00	29.17	-
		% of total	8.39	6.99	8.39	9.79	33.57
	Medium	Observations	8	1	8	14	31
		% of column	17.78	5.88	21.05	32.56	-
		% of line	25.81	3.23	25.81	45.16	-
		% of total	5.59	0.7	5.59	9.79	21.68
Large	Observations	2	0	4	7	13	
	% of column	4.44	0.00	10.53	16.28	-	
	% of line	15.38	0.00	30.77	53.85	-	
	% of total	1.4	0	2.8	4.9	9.09	
Total	Observations	45	17	38	43	143	
	% of total	31.47	11.89	26.57	30.07	100.00	

Notes: \*CEE – only neighbouring countries including cross border countries

\*EU – within the EU markets

\*Globe – within and beyond the EU markets

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

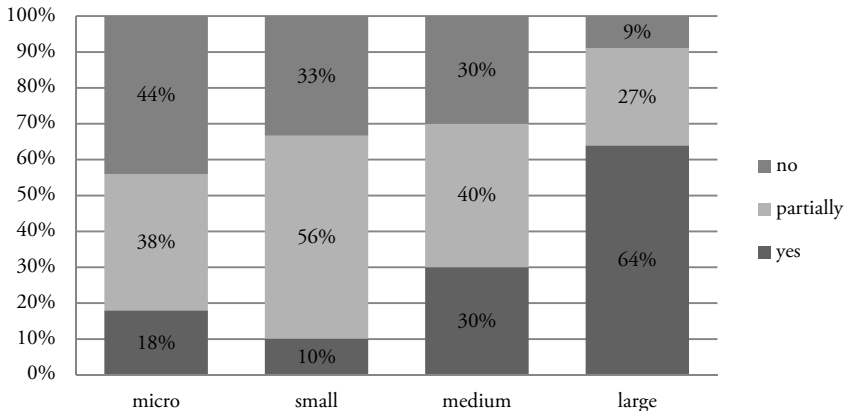
To sum up the research part dealing with the pace and scope of internationalisation, we present the evaluation of scientific hypotheses considering sample firms:

<b>H1:</b> In general, firms from the Slovak Republic implement traditional process approach toward their internationalisation	<i>supported by descriptive statistics</i>
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<b>H2:</b> Firms, from the Slovak Republic, operating in high-tech industries are more likely to accelerate their process of internationalisation.	<i>rejected by <math>\chi^2</math> test, supported by Mann-Whitney test</i>
<b>H3:</b> Micro and small firms, from the Slovak Republic, entry mainly other V4 and CEEC markets.	<i>supported</i>
<b>H4:</b> Medium and large firms, from the Slovak Republic, entry mainly non-CEEC markets.	<i>rejected</i>

### Internationalisation Strategies

First, we must note that 48 Slovak firms have no planned strategy for internationalisation (34.5% from the total number of firms answered), 61 have partially planned, but not formalised strategy (43.9%) and 30 have the international strategy (21.6%) while from four enterprises there was no answer (Figure 6.5).



**Figure 6.5.** International strategies by the size of the studied firms in Slovakia

Source: own study based on the research results of 2014 ( $n = 143$ ).

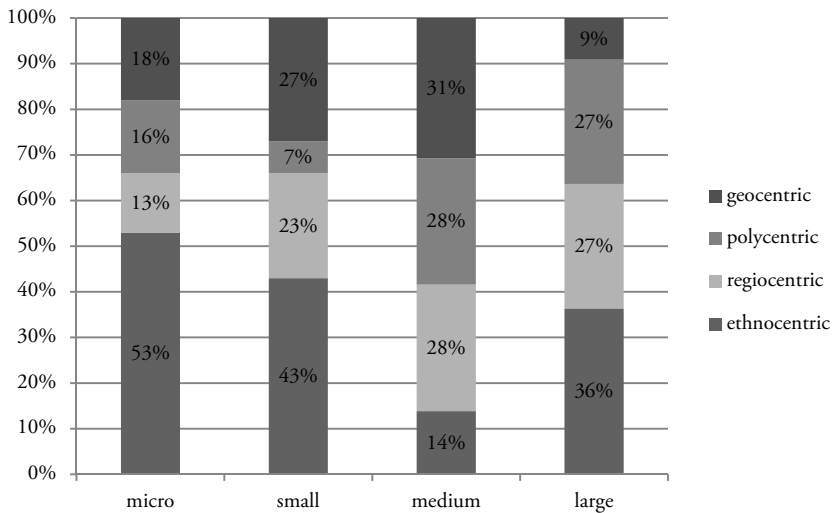
The following question in the questionnaire offered the possibility to describe the type of strategy used by choosing between four answers, that is from ethnocentric strategy (on international markets the use of the same marketing and management specifics as on domestic market, the international activity has secondary meaning), polycentric strategy (on particular international markets the specific conditions for marketing and management strategy are included), regiocentric strategy (the use of different strategies for a couple of blocked international markets, in which there are similar marketing and management conditions) and finally geocentric strategy (on all or at least most of international markets the use of standardized and single marketing and management strategy).

Here, we formulated the following scientific hypotheses:

**H5:** SMEs, from the Slovak Republic, apply mainly ethnocentric and regiocentric strategy of internationalisation.

**H6:** Large firms, from the Slovak Republic, apply mainly polycentric and global strategy of internationalisation.

The evaluation of the scientific hypotheses ( $\chi^2 = 3.84$ ,  $df = 1$ ,  $G = 0.05$ ) proves that there is a correlation between the type of the EPRG strategy and the size of the company (Figure 6.6). Small and medium sized firms (SMEs) use mainly ethnocentric and regiocentric strategies (which is 55% of all firms using any strategy and 91% of firms using ethnocentric and regiocentric strategy), as stated in hypothesis H5 (Table 6.20). The same strategies are preferred by large enterprises, however, only 11 of them answered the question related to their strategy, from which 7 firms prefer the mentioned ethnocentric and regiocentric strategies over polycentric and global ones.



**Figure 6.6.** The EPRG strategy type by the size of the surveyed firms

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

**Table 6.20.** The EPRG strategy type of internationalisation in Slovakia

		Strategy type		Total
		ethnocentric (E) and regiocentric (R)	polycentric (P) and global (G)	
Size of firms	small and medium firms	71	47	118
	large firms	7	4	11
	<b>Total</b>	78	51	129

Note: 14 values missing

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

To sum up the research part dealing with the pace and scope of internationalisation, we present the evaluation of scientific hypotheses considering sample firms:

<b>H5:</b> SMEs, from the Slovak Republic, apply mainly ethnocentric and regiocentric strategy of internationalisation.	<i>supported</i>
<b>H6:</b> Large firms, from the Slovak Republic, apply mainly polycentric and geocentric strategy of internationalisation.	<i>rejected</i>

### The Choice and Use of Entry Modes

Concerning the entry modes of the surveyed firms (Table 6.21), most Slovak firms use contractual modes (especially subcontracting) and direct exporting (mainly foreign distributors).

**Table 6.21.** Cross tabulation concerning entry modes of the studied firms in Slovakia

Entry modes	Frequency	Share %
<b>Indirect Exporting</b>	<b>59</b>	<b>41.26</b>
Export commission house	12	8.39
Export/import broker	24	16.78
Export management company	4	2.8
Trading company	29	20.28
<b>Direct Exporting</b>	<b>74</b>	<b>51.75</b>
Foreign agent	11	7.69
Foreign distributor	42	29.37
Representative office	29	20.28
<b>Cooperative exporting</b>	<b>40</b>	<b>27.97</b>
Export grouping	30	20.98
Piggybacking	10	6.99
<b>Contractual modes</b>	<b>76</b>	<b>53.15</b>
Management contracts	25	17.48
Assembly operations	23	16.08
Subcontracting	36	25.17
Turnkey operations	6	4.2
Int'l licensing	14	9.79
Int'l franchising	4	2.8
<b>Investment modes</b>	<b>34</b>	<b>23.78</b>
Foreign branch	16	11.9
Joint venture subsidiary	4	2.8
Wholly-owned subsidiary	17	11.89

\* the responses cannot be summed up as each respondent could indicate more than one option

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).



Within this part of the research about the choice and use of entry modes, further hypothesis was formulated and statistically evaluated:

H7: Firms, from the Slovak Republic, operating in industries where there is high competitiveness, are more likely to use more advanced entry modes (i.e. contractual and investment modes).

In the evaluation of this hypothesis Pearson's chi-square independent test at the significance level 5% did not prove correlation ( $\chi^2 = 5.99$ ,  $df = 2$ ,  $G = 5.52$ ), but at the 10% significance level it confirmed correlation ( $\chi^2 = 4.61$ ,  $df = 2$ ,  $G = 5.52$ ) between the level of competitiveness and the use of advanced entry modes (Table 6.22).

**Table 6.22.** Cross-tabulation for the advancement of entry modes and the competitiveness level in the industry among studied firms in Slovakia

Competitiveness Level in the Industry		Advancement of Entry Modes							Total
		1st*		2nd		3rd			
		exporting	contractual	exporting and contractual	investment	exporting and investment	contractual and investment	exporting, contractual and investment	
Low	observations	17	8	23	1	2	3	15	69
	% of column	70.83	66.67	63.89	50.00	50.00	100.00	60.00	.
	% of line	24.64	11.59	33.33	1.45	2.90	4.35	21.74	.
	% of total	16.04	7.55	21.70	0.94	1.89	2.83	14.15	65.09
Moderate	Observations	7	2	11	1	1	0	4	26
	% of column	29.17	16.67	30.56	50.00	25.00	0,00	16.00	.
	% of line	26.92	7.69	42.31	3.85	3.85	0,00	15.38	.
	% of total	6.60	1.89	10.38	0.94	0.94	0,00	3.77	24.53
High	Observations	0	2	2	0	1	0	6	11
	% of column	0.00	16.67	5.56	0.00	25.00	0,00	24.00	.
	% of line	0.00	18.18	18.18	0.00	9.09	0,00	54.55	.
	% of total	0.00	1.89	1.89	0.00	0.94	0,00	5.66	10.38
Total	<b>Observations</b>	<b>24</b>	<b>12</b>	<b>36</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>25</b>	<b>106</b>
	<b>% of total</b>	<b>22.64</b>	<b>11.32</b>	<b>33.96</b>	<b>1.89</b>	<b>3.77</b>	<b>2.83</b>	<b>23.58</b>	<b>100.00</b>

\* Note: 37 values missing

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

Within this part of the survey we introduced hypothesis H8:

H8: Firms, from the Slovak Republic, operating in hi-tech industries, are more likely to use more advanced entry modes (i.e. contractual and investment modes).

When evaluating the eighth hypothesis ( $\chi^2 = 3.84$ ,  $df = 2$ ,  $G = 9.09$ ), we supported the fact there is dependence between the industry type and the use of advanced entry modes. From table 6.23 we can see that within firms from high-tech industry there is higher number of firms using advanced entry modes, while when looking at the low-tech sector there is uniform distribution.

**Table 6.23.** Division of enterprises according to the technical demand of the industry and the advancement of entry modes among studied firms in Slovakia

Type of the industry	Importing	Indirect exporting modes	Direct exporting modes	Cooperative exporting modes	Contractual modes	Investment modes
High tech	13	7	8	4	11	4
Moderate-high	38	25	32	20	33	17
Moderate-low	26	13	18	8	18	8
Low tech	18	9	11	6	12	4

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

To sum up the research part dealing with the choice and use of entry forms, we present the evaluation of scientific hypotheses considering sample firms:

<b>H7:</b> Firms, from the Slovak Republic, operating in industries where there is high competitiveness, are more likely to use more advanced entry modes (i.e. contractual and investment modes).	<i>rejected at 5% sig. level, supported at 10 % sig. level</i>
<b>H8:</b> Firms, from the Slovak Republic, operating in hi-tech industries, are more likely to use more advanced entry modes (i.e. contractual and investment modes).	<i>confirmed</i>

### The Role of the Entrepreneur in the Internationalisation Process

In the final part of the research we were focusing attention on the relation between the person in charge of managing the company, his attitude, motivation, openness, knowledge and experience and on the other hand the advancement of entry modes of the firm.

**H9:** The higher the international motivation and openness of the entrepreneur of the firms from the Slovak Republic, the more advanced entry modes (i.e. contractual and investment modes) are used.

**H10:** The higher the knowledge and experience on international markets of the entrepreneur of the firms from the Slovak Republic, the more advanced entry modes (i.e. contractual and investment modes) are used.

As our statistical evaluation of the ninth hypothesis showed ( $\chi^2 = 5.99$ ,  $df = 2$ ,  $G = 10.83$ ), there is dependence between the use of advanced entry modes and the motivation and openness of the entrepreneur (Table 6.24).

**Table 6.24.** Division of enterprises according to the motivation and openness of the entrepreneur and the advancement of entry modes in Slovakia

Evaluation	Importing	Indirect exporting modes	Direct exporting modes	Cooperative exporting modes	Contractual modes	Investment modes
Extremely high	30	21	31	16	26	14
Rather high	45	26	29	18	36	18
Moderate	11	7	7	2	7	1
Rather low	10	1	3	2	4	1
Extremely low	2	2	1	1	2	0

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

Within the statistical evaluation of the tenth hypothesis ( $\chi^2 = 5.99$ ,  $df = 2$ ,  $G = 8.23$ ) we can conclude that there is dependence between the knowledge and experience of the entrepreneur and the use of advanced entry modes. Firms where the entrepreneur had higher knowledge on international markets did not demonstrate higher preference for advanced entry modes (Table 6.25).

**Table 6.25.** Division of enterprises according to the knowledge and experience of the entrepreneur and the advancement of entry modes in Slovakia

Evaluation	Importing	Indirect exporting modes	Direct exporting modes	Cooperative exporting modes	Contractual modes	Investment modes
Extremely high	20	14	22	11	19	13
Rather high	30	23	28	19	30	16
Moderate	29	13	17	5	16	4
Rather low	15	5	3	3	7	1
Extremely low	2	2	2	1	3	0

Source: own study based on the V4 survey results of 2014 ( $n = 143$ ).

To sum up the research part dealing with the role of entrepreneur in the internationalisation process, we present the evaluation of scientific hypotheses considering sample firms:

**H9:** The higher the international motivation and openness of the entrepreneur of the firms from the Slovak Republic, the more advanced *confirmed* entry modes (i.e. contractual and investment modes) are used.

**H10:** The higher the knowledge and experience on international markets of the entrepreneur of the firms from the Slovak Republic, the more advanced *confirmed* entry modes (i.e. contractual and investment modes) are used.

## 6.4. CONCLUSIONS

Based on the empirical results and the statistical calculations the following conclusions were supported:

- Taking into consideration the year of the first international activity, observed firms started their international operations after the entry of the Slovak Republic to the EU. In most cases it is a matter of classical business development, following Uppsala model of internationalisation.
- Within and beyond the EU markets was the most frequent answer followed closely by activities within the EU market. Only neighbouring countries are target for nearly 12 % of firms and no company stated its activities only beyond the EU markets.
- The results also showed that 30 % of businesses act on global markets within and outside the EU and nearly 27 % on the EU markets. In only 12 % of cases the target markets are the Central and Eastern European (CEE) markets including the V4 markets. Some business relations to e.g. Ukraine and Russia follow the European Neighbourhood Policy (ENP) as a foreign relations instrument of the European Union which seeks to tie those countries to the east and south of the European territory of the EU to the Union.
- Micro and small firms, from the Slovak Republic, entry mainly other V4 and CEEC markets. SMEs, from the Slovak Republic, apply mainly ethnocentric and regiocentric strategy of internationalisation.
- Concerning the entry modes of the surveyed firms, most Slovak firms use contractual modes (especially subcontracting) and direct exporting (mainly foreign distributors).
- The higher the international motivation and openness of the entrepreneur of the firms from the Slovak Republic, the more advanced entry modes (i.e. contractual and investment modes) are used.
- The higher the knowledge and experience on international markets of the entrepreneur of the firms from the Slovak Republic, the more advanced entry modes (i.e. contractual and investment modes) are used.

Using similarities of neighbouring markets accounts the advantage for smaller and less experienced businesses. Entering the Eastern European markets means implementation of the Eastern policy rhetoric into real practice. This issue can be in the centre of further research.

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