

The Degree of Czech Companies' Internationalization

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Abstract: The issue of the degree of company internationalization has become in recent decades the focus of much research. As there is no universally applicable measurement concept, most researchers face the difficult task of bringing research questions, measurement concepts and data availability into line. This paper includes theoretical as well as methodological considerations concerning the measurement of the internationalization degree of Czech companies. The companies included in the study are those that have undertaken internationalization activities and are incorporated in the Czech Republic. The research has been carried out with the help of a corpus of 297 enterprises. The research method was an oral questioning and the main instrument was a questionnaire. The measuring the degree of internationalization of Czech companies was based on available data which are, in the case of Czech companies, very limited. This study reveals the fact that the degree of internationalization of Czech companies is generally relatively low, but slightly higher for large companies than for small and medium-sized enterprises.

Keywords: Internationalization Degree, Individual Indicators, Composite Indicators, Regional Diversification, Cultural Cluster, Cultural Distance, Geographical Distance, Internationalization

1. Introduction

Internationalization of company activities is the necessity for majority of entrepreneurial subjects. The decision on internationalization of company activities counts among key long-term strategic decision. Measures of company internationalization have gained importance in the debate on globalization, since many scholars link globalization to a quantitative increase in the international activities of companies. Measuring the degree of internationalization of companies has been a subject of interest for many reasons. Within different theoretical approaches, much attention is paid to the investigation of the relationships between the companies' internationalization degree and possible effects of their international activities such as innovativeness of efficiency. There is no universally applicable measurement concept.

The historical context of centrally planned economy in the Czech Republic until 1989 suggests that internationalization has been an innovation for almost all Czech companies after 1989. Until that time foreign trade was a monopoly of the state and only a limited number and type of state companies referred to as 'foreign trade enterprises' were privileged to operate directly abroad. Expectedly, some Czech companies have served in international markets before that time, but it was mainly exports to other socialist or ideologically similarly countries, which was not such a challenge as it would have

been when exporting to developed market economies. Moreover, the companies that wanted to operate in foreign markets before 1989 had to use official Czech Foreign Trade Enterprises as intermediary.

The objective of this paper is to present the internationalization degree of Czech Companies. The paper is organized into three parts. The first part of the paper outlines relevant theories that deal with the degree of internationalization as well as the methodological framework for the measurement of the internationalization degree. The second part of the paper subsumes the results of the measurement of the internationalization degree of the Czech companies. The last section provides the conclusion and discusses most significant implications.

2. Theoretical Framework

Internationalization is a phenomenon researched intensively over the last few decades from a variety of viewpoints. Issues such as the development of international activities, and factors favoring or disfavoring internationalization have been studied for both large as well as small and medium enterprises. The internationalization of entrepreneurial activities is represented by their geographic expansion across national borders [15]. According Procházková and Kubičková [20] is the involvement of

companies in the international environment generally referred as globalization. Internationalization of company activities is the necessity for majority of entrepreneurial subjects. The decision on internationalization of company activities counts among key long-term strategic decision. The entrance and activities of entrepreneurial subjects on the markets can be complicated owing to a number of factors that are given by the environment on one hand and the position and situation of the entrepreneurial subject itself on the other hand.

The entrance of a company on the market itself allows for a significant opportunity, so long as said company possesses the proper readiness which grants it the chance to develop entrepreneurial activities (business) in the international markets. Internationalization of entrepreneurial activities is the necessity for majority of entrepreneurial subjects. To take advantage of the opportunities requires sufficient preparation and information about the specifics and particularities of the market.

2.1. Internationalization Theory

Internationalization theory subsumes to two diverse approaches – stage approach (gradually globalizing company) and global approach (born global company). According to the stage approach, companies start selling products in their home markets and then they gradually search for new countries [2]. Within the stage approach, there are three main models that can be identified: the Product Life Cycle Theory by Raymond Vernon, the Uppsala Internationalization Model (U-model) and the Innovation-Related Internationalization Models (I-models).

According to Vernon [26] the internationalization process of the firm follows the development of the product Life Cycle: companies usually introduce new products only in their home market and then they eventually go abroad in the product maturity phase.

The stage approach of internationalization process of the individual firms is mostly associated with the research of Johanson and Wiedersheim-Paul and Johanson and Vahlne. Johanson and Wiedersheim-Paul distinguish between four different modes of entering an international market, where the successive stages represent higher degrees of international involvement [6], [7], [8]:

- No regular export activities
- Export via independent representatives
- Establishment of an overseas sales subsidiary
- Overseas manufacturing units

Work of Johanson and Wiedersheim-Paul has probably also been the inspiration for the development of the Innovation-Related Internationalization Models. The Innovation-Related Internationalization Models explaining the internationalization process from an innovation-related perspective. The internationalization decision is considered as an innovation for the firms. The models are derived from Roger's stages of the adoption process [1].

Many enterprises do not follow an incremental stage approach but it is often reported that they start their international activities from their birth. Literature on

internationalization defines these companies as born global companies; they are specified as the companies that view the world as their marketplace from the outset and see the domestic market as a support for their international business [18]. Knight and Cavusgil [12] claim that born global companies are "small, technology-oriented companies that operate in international markets from the earliest days of their establishment." And finally, Oviatt and McDougall [19] approach a born global company as "a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sales of outputs in multiple countries."

Born global companies are typical by their early and strong global orientation; managers in such companies view the whole world as a potential market. Rapid changes in information technology, production, and communication strategies create various opportunities for the born global phenomenon to grow, as it is documented in previous research [21], [11].

The aforementioned definitions and interpretations of the phenomenon of internalization emphasize three criteria that enable us to distinguish between gradually globalizing companies (companies following stage models) and born global companies (companies with early internationalization models): the closeness between inception and the first international market entry (the speed of internationalization), geographic scope (global) of internationalization and the importance of international sales.

The speed of internationalization can be described by two different time spans [25], namely by: the time span between founding and the first foreign market entry and the time span between the first and the following market entries. Rennie [21], Knight and Cavusgil [12], and Kandasami and Huang [10] postulate a time span of two to three years from the time of founding. The time span between the first and the second foreign market entry is mentioned only by few authors (for example by Lindqvist, [14]). Generally, most researchers agree on that fact that this time span should be shorter than between founding and the first foreign market entry.

The geographic scope of internationalization of born global companies can be measured by the criteria such as the number of countries, the number of cultural clusters and the number of geographical regions in which the company currently operates. Kandasami [9] suggests that the born global company should plan its activities in least five countries. Some authors claim that a further distinction between cultural clusters and geographical regions is necessary so as to clarify the physical and geographical distance of foreign markets from the home market. Therefore, according to Lummaa [16], speaking of born global companies requires activities at least in two cultural clusters and geographical regions.

The importance and gravity of international sales can be measured by the proportion of foreign sales to the total sales of a company; Kandasami and Huang [10] suggest a minimum ratio of 10% of foreign sales compared to total sales. In contrast Madsen, Rasmussen and Servais [17] recommend that at least the ratio of 25% is necessary for a born global

company to be established. According to Rennie [21], a company is considered a born global if it internationalizes within two years from founding and generates more than 75% of its sales internationally. Knight [11], on the other hand, maintains that for a company to be defined as born global it is inevitable that it operates abroad within six years from its founding and gains over 25% of its sales from foreign markets. The differences between these approaches might be due to the nature of home markets on which the researchers base their research. Rennie's investigation [21] was carried out in Australia, which is a relatively small local market that is situated far from major, global markets. Such a small market and its rather isolated location does not allow companies to develop sales at home rapidly. Knight's research [11] focuses on the US market; consequently, however, it comes out that the US companies operating in large local markets face a lower need to operate abroad in early stages of their lives.

2.2. Measure the Degree of Internationalization

Some might think of internationalization as a process, others see it more as a certain level of international intertwining reached by a company [4]. There are strong differences of opinion as to what indicators are suitable for measuring company internationalization. Therefore there have been many indices that enable us to measure the degree of companies' internationalization. It is possible to distinguish between simple individual indicators and multidimensional composite indices of internationalization.

The *individual indicators* can be structural, performance or attitudinal [4]. *Structural indicators* present a static picture of an aspect of company's activity. Structural indicators can be divided into the indicators relating to foreign activities and to the indicators relating to governance structures. Among the indicators relating to foreign activities we include: the number of countries a company is active in; the number or proportion of foreign affiliates; the number or proportion of cases of non-capital involvement abroad; the amount or proportion of foreign assets; the amount or proportion of value added abroad; the amount or proportion of sourcing abroad; the number or proportion of foreign employees. Among the indicators relating to foreign to governance structures we can include: the number of stock markets on which a company is listed; the amount or proportion of shares owned by foreigners; and the number or proportion of non-nationals in the board of directors.

Performance indicators measure the effects of company's internationalization in foreign sales and operating income abroad [4]. The foreign sales are associated with two issues: The first issue signals to what extent foreign sales are generated in foreign countries – indicator: the amount of foreign sales by customer location. The foreign sale by the customer location is calculated as exports from the home country plus revenues of the foreign affiliates (except those revenues that come from exports to the home country of the parent company). The second issue expresses to what extent a business activity is transacted by subsidiaries located in foreign countries – the indicator is the amount of sales of

foreign subsidiaries. The indicator is calculated as the sum of turnover of foreign subsidiaries as a proportion of the sum of turnover of the parent company and its national subsidiaries.

Attitudinal indicators represent the attitudes and behaviors of managers in the context of international activities. Different positions are reflected by the fact that there have been several attitudinal indicators which are differing in how statistically measurable they are. We can distinguish a "soft" indicator and a "hard" indicator. The soft indicator is of a qualitative character and was developed by Perlmutter [4]. It monitors the application of central management's orientation towards foreign subsidiaries: an ethnocentric, a polycentric, a regiocentric or a geocentric. The hard indicator has a quantitative character and was developed by Sullivan [23]. According to him [4], the international mindset of a company increases with the international experience of its top managers, which is measured as the cumulative duration of the year top managers spend working abroad weighted by the total years of their working experience.

Among the individual indicators we can include the indicators of *regional diversification*. The regional diversification is measured by the measurement of regional concentration, network extension or geographical, and cultural distance. The scope of geographic diversification of the international operations of firms is discussed in management, strategy, entrepreneurship and economics literature as a key dimension of the internationalization process [3]. To measure the regional concentration we can employ the Herfindahl-Index or Gini-Index [4]. Another way of measuring of the company's regional diversification is to focus on the number of countries a company is active in. One measure tool of network extension is the Network Spread Index developed by Ietto-Gillies [5].

Finally, based on the assumption that there are striking differences between countries, which influence the internationalization process of company, two basic measurement tools have been suggested. The first one was developed by Kutschker [13] and it proposes that foreign countries should be weighted according to their geographical and cultural distance to the home country of the company. The second measure tool was introduced by Sullivan [23] and it serves as an indicator which the author calls "psychic dispersion". According to this indicator, the world is divided according to management principles into ten zones which generate different cognitive maps. The more zones a company is active in, the larger the psychic dispersion of its internationalization.

International indices, which have the nature of composite indicators, are formed by combining individual indicators. The literature speaks of three different indicators: transnationality index, transnational activity spread index and the degree of internationalization scale.

The most common indicator of internationalization widely used by UNCTAD is the *transnationality index* TNI (UNCTAD, 1995). The index draws on three different ratios: foreign sales to total sales (FSTS), foreign assets to total assets (FATA) and foreign employment to total employment (FETE).

The index is calculated as the average of the three above mentioned ratios.

The *transnational activity spread index*, developed by Ietto-Gillies, is a combination of two indices: index TNI and index GSI (Geographical spread index). The structure of these indices (TNI and GSI) is based on individual structural indicators. The transnational activity spread index is calculated as follows: the average of the ratios FSTS, FATA and FETE is multiplied by the number of foreign countries a company is active in as a proportion of the number countries where foreign direct investment has occurred, minus one (the home country).

Finally, the *degree of internationalization scale* DOI was proposed by Sullivan [23]. Sullivan's original framework included a nine indicators encompassing structural, performance and attitudinal items. Then five indicators have been identified based on the item-total analysis. The index is composed of the following indicators: foreign sales to total sales FSTS, foreign assets to total assets FATA, overseas subsidiaries to total subsidiaries OSTs, the top managers' international experience TMIE and psychic dispersion of international operations PDIO.

3. Materials and Methods

The present research is part of a larger research project focusing on the internationalization activities of Czech companies. The selected results presented here are partial findings of the empirical research and they are aimed at assessing the degree of internationalization of Czech companies. The companies included in the study are those that have undertaken internationalization activities and are incorporated in the Czech Republic. There were a total of 297 enterprises from a wide range of industries that participated in the research. The degree of internationalization has been researched with the method of oral questioning and the main instrument was a questionnaire. In order to ensure a representative sample, the questionnaire was submitted to the selected top managers or directors of enterprises. The total of 297 valid questionnaires was collected, which provided the response rate of 74%. The research was carried out in the Czech Republic between March 2013 and April 2013. The choice of companies to take part in the survey was based on the principle that they should belong to both sectors, i.e. manufacturing and services, and various other industries. In the research sample (N = 297), there were 50% of companies representing manufacturing and 50% of service companies, altogether from 10 industries. The companies differed as to their size assessed by the number of employees so that 53% of the sample consisted of small enterprises, 29% – medium ones and large ones – 18%. When it comes to the ownership of capital, the research sample constituted the companies of solely Czech capital.

4. Results and Discussions

To determine the degree of internationalization of Czech

companies individual indicators have been used. The main reason for using these individual indicators was impossibility to obtain some data. Therefore it was not possible to use the composite indices for the internationalization degree of Czech companies. The necessary data draw directly on the empirical research. The surveyed Czech companies will be kept intentionally secret due to some reasons: to be anonymous and the inability to uncover the company's identity was an essential condition for the participation of company in the research. Instead of the companies' names the numeric codes have been used to refer to research participants.

4.1. Structural Indicators

They were calculated from structural indicators: number of countries a company is active in, and the proportion of foreign employees. The average number of countries where the surveyed Czech company is currently active is ten. From the all monitored companies have foreign employees 56% respondents. The average proportion of currently foreign employees is 10%.

4.2. Performance Indicators

It was calculated from performance indicators common measure: Foreign Sales as a Percentage of Total Sales (FSTS). The average proportion of currently foreign sales is 43.74%.

Attitudinal Indicators were calculated from the following attitudinal indicators: Top Managers' International Experience (TMIE), Firm International Experience and Markets (FIEM). The indicator TMIE is measured as the cumulative duration of the number of years top managers spend working abroad weighted by the total years of their working experience. The average duration of the number of years top managers spend working abroad is ten years. The research found out that 18% managers of surveyed companies have no previous international experience. The indicator FIEM, developed by Szymura-Tyc [24], is measured by the number of years of presence in international markets. The average number of years of a Czech company presence in international markets is 14 years.

Regional Diversification of companies was calculated with respect to the weighted evaluation of geographical and cultural distance of foreign countries to the home country of the company. The regional diversification of the Czech company activities were monitored both in terms of geographic sub-regions and cultural clusters.

For the purpose of determining the degree of internationalization based on regional diversification the weighted evaluation has been applied. Weighted evaluation respects the differentiation of particular foreign cultural clusters/geographical sub-regions from the home country (the Czech Republic) of the company. Weights of weighting express psychic distance/geographic distance of a particular foreign cultural cluster/geographic sub-region from the cultural cluster/geographic sub-region of the home country of the company. The weights were performed based on various studies [13,24]. Table 1 shows specified weights for the

geographic sub-regions and for the cultural clusters.

Table 1. Weights for Weighting Evaluation of Cultural and Geographic Distance

Cultural Distance			Geographic Distance		
Cultural cluster	Weight	Group	Geographic region	Weight	Group
Eastern Europe	1	C ₁	Eastern Europe	1	R ₁
Anglo	3	C ₃	Western Europe	3	R ₃
German	3	C ₃	Northern Europe	3	R ₃
Latin-Europe	3	C ₃	Southern Europe	3	R ₃
Nordic	3	C ₃	Northern Africa	6	R ₆
Confucian	6	C ₆	Central Asia	6	R ₆
South-East Asia	6	C ₆	South-Eastern Asia	6	R ₆
Middle East	6	C ₆	Southern Asia	6	R ₆
African	6	C ₆	Eastern Asia	6	R ₆
Latin-America	6	C ₆	Western Asia	6	R ₆
			Northern America	6	R ₆
			Central America	6	R ₆
			Caribbean	6	R ₆
			Southern America	6	R ₆
			Oceania	6	R ₆
			Sub-Saharan Africa	6	R ₆

The average value of cultural distance was 2.34 and the most frequent value was 1. These values indicate that the Czech companies under survey conduct their entrepreneurial activities mostly in cultural clusters close to the Czech Republic, i.e. in Eastern Europe. Geographic diversification of entrepreneurial activities in terms of cultural distance grows gradually with an increasing weighted evaluation.

The average value of geographic distance was 2.47 and the most frequent value was 1. These values indicate that the surveyed Czech companies conduct their entrepreneurial

activities mostly in geographical sub-regions close to the Czech Republic, i.e. in Europe. Geographic diversification of entrepreneurial activities in terms of geographic distance grows with increasingly weighted evaluation.

Based on the results of the particular indicators it is possible to identify the companies with the highest degree of internationalization. Out of Ten Czech companies investigated five of them had the highest degree of frequency rate among the top companies with respect to monitored indicators. Table 2 shows the main characteristics of the five companies.

Table 2. Characteristics of the Czech Companies with the Highest Degree of Internationalization

	Companies				
	131	91	193	204	216
Company size	large	medium	large	small	large
Company branch	mechanical engineering	manufacturing industry	production of luminaries	automobile industry	inorganic chemical production
Company age	49 years	20 years	20 years	10 years	120 years
Geographic diversification	the whole world	the whole world	the whole world	the whole world	the whole world
Number of years in abroad	37 years	10 years	19 years	10 years	112 years
Percentage of foreign sales	97%	80%	98%	90%	90%

5. Conclusion

The transition process of the Czech economy, including its involvement in international exchange, and the developing globalization process mean that Czech companies have rapidly begun to internationalize their activities. One of the main reasons of the interest of Czech companies to expand to foreign markets nowadays is a limited market size of the Czech Republic and, consequently, the increasing competition in the domestic market. The growing interest in doing business in foreign markets gives rise to interests in internationalization in a broader context.

The opening of new markets such as in the Czech Republic has created the potential for company expansion and investment. The internationalization process of companies and

company's decision to sell its products in international markets has been the subject of intense academic research in the past 40 years. Several theories and conceptual frameworks have been developed outlining a company's decision to initiate the internationalization process. According to Lopez et al. [15] studying the phenomenon of internationalization in small, open economies (such as the Czech Republic) should be of growing interest because, given the limited potential of the local market, incentives to internationalize should be strong. The findings show that Czech companies entered international markets faster than it had been envisaged in the models. But the analysis of the internationalization process of selected Czech companies indicates that the degree and level of the companies' internationalization is still significantly low.

The Czech entrepreneurial subjects have been increasingly

taking part in international markets since the beginning of the 21st century and this trend seems to be growing. Most companies are aware of the necessity to develop their business and entrepreneurship activities internationally. The promotion of developmental trends in trade represent a high level of competition for the Czech trade from abroad, as well as not a simple position of domestic entrepreneurs, and also very difficult customer relationship-building [22]. The necessity of active participation of Czech entrepreneurial subjects at international market is conditioned primarily by the character of Czech economics and its foreign political orientation.

The major objective of the paper was to reveal and outline the degree of internationalization of Czech entrepreneurial subjects. This study shows that the majority of companies with the highest degree of internationalization are large companies founded many years ago. The small and medium Czech companies have a relatively low degree of internationalization which is manifested primarily in the limited geographic diversification of entrepreneurial activities of Czech companies.

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