Internationalization of Central and Eastern European companies – theory and its implications in the Slovak IT sector*

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The authors studied whether the existing internationalization theories are relevant to the companies from CEE that started the internationalization process differently from Western Europe and the USA. In order to do so, they first analyzed the major theories and explain their implications for CEE companies. Secondly, the authors chose a sample of four Slovak start-ups in the IT sector and tested the existing theories on them. They concluded that these theories explain the internationalization patterns rather satisfactorily. The Uppsala model of an incremental commitment was found in the sample. However, the researchers claim that the combination of a resource-based view with the International New Venture theory seems to be the most promising theoretical approach that can be further developed and enriched in the conditions of small, former transitional, resource-scarce and extremely open economies.

Die Autoren untersuchten, ob die bestehenden Internationalisierungstheorien relevant für die Unternehmen aus Mittel- und Osteuropa sind, die einen Internationalisierungsprozess verfolgen, der sich von jenem westeuropäischer und US-amerikanischer Firmen unterscheidet. Deshalb wurden zunächst die wichtigsten Theorien und deren Auswirkungen für mittel- und osteuropäische Unternehmen untersucht. Als Zweites wurden vier slowakische Start-Ups im IT-Sektor ausgewählt, anhand dieser die bestehenden Theorien getestet wurden. Die Autoren kommen zu dem Ergebnis, dass diese Theorien die Internationalisierungsmuster zufriedenstellend erklären. Das Uppsala-Modell eines inkrementellen Engagements konnte identifiziert werden. Allerdings behaupten die Forscher, dass die Kombination der Ressourcenperspektive mit der International New Venture Theorie der vielversprechendste theoretischen Ansatz sei, der im Kontext von kleinen, transformationalen, ressourcenarmen und sehr offenen Volkswirtschaften weiter entwickelt und bereichert werden kann.

Key words: Internationalization, Central and Eastern Europe, Slovak IT sector, small and medium-sized enterprises, start-ups (JEL: F23; M13)

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1. Introduction

After the fall of the Iron Curtain, the internationalization process of Slovak companies started at an incredible pace. Before the Velvet Revolution, there was a monopoly imposed on export and import operations, and only those few companies that were granted permission from the socialist state could perform foreign-trade operations. After the revolution, any start-up and any state-owned or freshly privatized company could enter foreign markets, and export and import their products and services.

The research front in the international business area now faces the following questions: are existing internationalization theories relevant to the companies from CEE that have started the internationalization process differently from Western companies, with different experience, resources, in different time and under different conditions? Or, is the CEE situation so unique that we can form some new theoretical perspective? Therefore, the authors first analyze major internationalization theories and explain their implication for CEE companies. Secondly, they chose a sample of four Slovak start-ups in the IT sector and tested existing theories on them. The authors assume that the specific feature of the newly-born market economies are newly-born companies, and if some novelty should be brought to the existing internationalization theories, this sample is the most appropriate one since the IT companies are the most successful ones in the internationalization processes among the Slovak start-ups. They all were built from scratch, and have a relative short and transparent history. Furthermore, these companies have not been influenced by the past, neither in the positive (know-how from foreign markets, existing networks, and so on) nor in the negative sense (heritage of the socialist system, murky privatization and so on), therefore create the clear and transparent platform for a similar study. This research is the first step in the study of the internationalization of Slovak companies and will be enlarged and deepened in the future by a broader range of companies (different industries, different ownership structure, different history and so on).

2. Internationalization of the companies: literature review and conceptual framework

2.1 The Uppsala model

According to the Uppsala model (Johanson/Vahlne 1977) internationalization is usually a long and incremental process (from exporting to neighbouring markets to investing in farther countries) that is driven by (gradual and relatively slow) experiential market-knowledge acquisition. The four main stages recognized are: 1. no regular export activities, 2. export via independent representatives (agent), 3. sales subsidiary and, 4. production/manufacturing. Furthermore, Johanson and Vahlne introduce the concept of "psychic distance" to explain

how the firms decide where their expansion will take place According to the theory, companies initially move to countries that are close to their home base in terms of geographical and cultural distance. The basic mechanism of internationalization is based on state aspects (market knowledge and market commitment) and change aspects (commitment decisions and current activities). *Market knowledge* is the amount of knowledge about foreign markets possessed by the firm; it can be divided into general knowledge and market-specific knowledge. *Market commitment* is composed of the amount of resources and the degree of commitment. The amount of resources refers to the factors allocated to a specific market; the degree of commitment defines the difficulty of finding alternative uses for these resources (Johanson/Vahlne 1990). *Commitment decisions* are decisions to commit resources to a foreign market. *Current activities* are the business activities of the firm at a given time; they are the prime source of experience.

The central idea of the model is that firms initially gain experience from the domestic market and later, in order to maximize profits, gradually increase their international commitment. An important aspect is the fact that market knowledge and commitment are considered directly related. Internationalization is presented as a gradual process linked with learning; higher market knowledge and commitment will be reflected in commitment decisions and a higher degree of business activities in the foreign market. The main obstacle to internationalization is, therefore, the uncertainty derived from a lack of knowledge; the more a firm becomes familiar with a specific market, the lower the perceived market risk becomes, and the higher the actual investment will be. "Thus, the model expects that the internationalization process, once it has started, will tend to proceed regardless of whether strategic decisions in that direction are made or not." (Johanson/Vahlne 1990)

2.1.1 Implications of the model for CEE companies

Before transition, the typical model of the activity of the CEE companies in foreign markets was based on a so-called "foreign-trade monopoly", i.e. exporting was possible only through a few foreign-trade organizations. Local companies had very limited knowledge and access to the foreign markets, and if it existed in the case of the biggest local companies, it was typically focused on the COMECON markets. After the revolution, local companies faced many challenges including lack of know-how of operations in foreign markets, lack of personal capabilities, and lack of finance. The newly-born start-ups, though, were in the worst position, since the state-owned or newly-privatized companies had at least some knowledge of the partners abroad plus existing physical resources. The natural consequence was the concentration of foreign activities on the neighbouring countries (relatively known environment, easiness in contacting the partners) and the tendency to start with low-commitment entry mode, typically exporting (Ferencikova/Ferencikova 2012). From that period, many things

have changed, but it may be assumed that this model is prevalent in the classical industries: local CEE companies enter the agricultural sector in neighbouring countries, place manufacturing there, provide services (e.g. construction, retail) in the neighbourhood, and so on. As for the territorial structure of the export of the CEE countries and the share of intra-company trade of big multinationals, it could be assumed that the majority of the exports are placed in neighbouring or nearby countries. This is also supported by the political history of CEE – many countries are the result of the splits of former socialist states (the Soviet Union, Yugoslavia, Czechoslovakia). The best example of a peaceful division can be Czechoslovakia: the break-up initiated an unusually big trade concentration among the two succession countries – the Czech and Slovak Republics –due to the historical ties, similar economic development, geographical location, language similarity, knowledge or contacts in the markets,. The same is true in the case of the Soviet Union and Yugoslavia (except for the cases of strong political tensions). An interesting question is, why do the local CEE countries not penetrate the neighbouring "developed" countries such as Austria, Germany, or Italy on such a scale as the nearby "similar-level" states? In this respect the Uppsala model fails to explain this tendency. "Psychic distance" is therefore applicable only to the former socialist states.

2.2 Resource-based approach

This is a new and promising theoretical framework being applied to the internalization of companies. The prevailing theories and models neglect the strategic view of decision-makers to some extent. Therefore, the resource-based view could be a useful theoretical framework for expansion to encompass the internationalization, especially of small and medium-sized enterprises (SMEs) and their specific resources representing competitive advantages, allowing them to develop as well as successfully enter and operate in international markets (Antoncic/Konecnik/Ruzzier 2006).

The resource-based view posits that firms can achieve and sustain their competitive advantage if they possess tangible or intangible resources that are valuable, rare, inimitable and non-substitutable. These characteristics of resources describe what are considered strategic assets that, if properly mobilized, build and sustain a firm's competitive advantage and improve its performance. Among its various resource types, a firm's intangible resources are most likely to become strategic assets for developing competitive advantage because these resources are likely to be rare, valuable, imperfectly imitable and difficult for other firms to substitute (Chadee/Roxas 2011). Resource-based models recognize the importance of intangible knowledge-based resources in providing a competitive advantage.

Resources can be classified into three categories: physical, intangible and financial resources. Generally, there is no dispute over what physical and financial

resources are incorporated while many disagreements arise over intangible resources. Grant (1991) put intangible resources into four groups: human resources, technological resources, reputation and organizational assets. Other categorization of intangibles classifies them as assets competencies. Intangible assets include having capabilities, which typically are regulatory (patents) or positional (reputation) while intangible skills or competencies are related to capabilities, which include functional capability (know-how) and cultural or organizational capability (routines). Moreover, intangible skills are typically people-dependent, while intangible assets are considered as people-independent (Andersen/Kheam 1998).

2.2.1 Implications of the model for CEE companies

As for resource-based theories, they can be applied to CEE in all three areas: private equity companies which use their own financial resources for internationalization, big emerging MNCs from CEE which use physical resources (utilities, infrastructure, and in the Russian and Ukrainian case even natural resources), but a majority of these companies can use only intangible resources while going international. Due to the lack of financial and physical resources, this is typical for start-ups. State-owned companies usually bank on physical resources; privatized companies tend to bank on physical resources, but may use intangible ones as well. Many start-ups from CEE, especially from the IT sector, also have the features of "born-globals". Their internationalization is very rapid, they may start from far away markets, their firm can be small, and they have a lack of experience. In their case, a narrow but critical set of skills may be more important than a broad resource base. Foreign market knowledge can be obtained through employing internationally experienced managers and internationalization can be triggered by a critical incident.

2.3 International New Venture theory

The concept of International New Venture (INV) explains how companies with limited resources can achieve success at the international level. Oviatt and McDougall (1994) define international new ventures as, "a business organization that, from the inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in the multiple countries". In short, an INV can be described as an organization that is international from its inception. The elements of an INV are: organizational formation through internalization of some transactions, strong reliance on alternative governance structures to access resources, establishment of foreign location advantages and control over unique resources.

The Oviatt and McDougal article opened the debate about the validity of other internationalization theories, most notably the Uppsala model or the stage theory of Johanson and Vahlne. In contrast to the stage theory, INVs bypass earlier stages of internationalization and use higher entry modes when going abroad. By

entering new markets, INVs can amass various knowledge and competencies, which in turn could lead to their higher profitability and growth in the future (Zahra 2005).

According to Meckl/Schramm (2005), who examined twenty empirical studies concerning INVs, traditional internationalization theories do not explain INVs sufficiently. The authors developed an eclectic new „4-pillar model" and identified four traditional theories, whose selected characteristics are in sync with INVs' internationalization processes: stages model, monopolistic advantage theory, internalization theory, and network theory.

INVs can be divided into three groups according to the number of value chain activities and number of countries entered (Oviatt/McDougall 1994):

1. *New International Market Makers***:** these INVs are in fact typical export and import firms that can be further divided into Export/Import Start-ups (serving a few countries familiar with the entrepreneur) and Multinational Traders (serving many countries and constantly looking for new business opportunities).
2. *Geographically-Focused Start-ups***:** they serve a specialized need in a certain region, using foreign resources. As for the value chain, they coordinate several activities which may be the source of their competitive advantage.
3. *Global Start-ups***:** it is the most complex type of INV, as it coordinates various value chain activities in many countries. Nevertheless, if successfully established, they appear to have the most sustainable competitive advantage of all the INV types. They respond to globalization as well as make use of the opportunities it provides.

Nevertheless, dimensions of foreign countries and value chain activities were not widely used in later studies. Numerous studies have adopted the definition of „born-globals" suggested by G. Knight: companies established after 1976, with foreign sales accounting for at least 25 % of overall sales and having foreign operations within three years of inception. However, this definition is not very suitable for European firms, as they can expand to neighbouring countries very quickly, given their geographical proximity, and in many cases also their EU membership, which makes foreign expansion much less difficult (compared to North American companies, for example) (Madsen/Knudsen 2003). Three usual characteristics of INVs – newness, smallness and foreignness – could contribute to INV failure (Turcan 2013). Sustainable INVs control assets (especially unique knowledge) that create value in two or more countries (Oviatt/McDougall 1994).

2.3.1 Implications of the model for CEE companies

As seen from the definition of INV, this theory applies to newly-born companies in CEE that start internationalization as SMEs.

One factor which could promote early internationalization is EU membership. The existence of a single market could potentially lower various (e.g., administrative) barriers of foreign market entry. Dismantling of tariffs contributes to reduction of internationalization costs, which could be especially important for small and medium sized enterprises (as they often have to cope with resource scarcity). Examples of successful INVs from CEE countries point to the importance of technologies and know-how as the cornerstones of foreign market success. Nowiński/Rialp (2013) state that domestic market entry barriers and higher purchasing power of foreign consumers as being other catalysts of early internationalization of CEE companies.

As for the studies concerning INVs from transition economies – let alone CEE countries – there are only a few, as the interest of researchers is focused mainly on highly developed economies (e.g. USA, Canada or Western European countries). Nevertheless, findings about the internationalization of firms from advanced economies may not be fully applicable to emerging or transition economies. The reasons could be institutional differences or resources (both tangible and intangible, such as international business experience) constraints observable in these two types of economies (Nowiński/Rialp 2013).

Therefore the authors find it important to study these kinds of companies in the CEE region (a Slovakian case study) in order to create a contribution to the existing theory, to enlarge their scope and to rethink some existing concepts.

3. Methodology

The authors compare the existing theories of internationalization with the selected cases of Slovak companies from the IT sector. The case study design has been chosen in order to obtain the necessary information for answering the research questions. This design allows a large amount of data and additional details to be collected: the depth of case study analysis should compensate for the limited representative sample of the interviewed firms. Focused interviews and the rich local economic press coverage aim to offer in depth analysis and enhance the understanding of the internationalization processes of the chosen Slovak firms in a qualitative way.

In order to become part of the research sample, firms had to fulfil multiple criteria. Firstly, privately owned entrepreneurial firms founded by Slovak entrepreneurs after the fall of communism in 1990 were chosen. Secondly, each firm had to be a successfully internationalized firm, according to either market or financial related indicators. Thirdly, the international presence of selected firms had to be sufficient enough to provide the materials and answers for the research

questions. Lastly, a top management representative with knowledge about the firm's long-term internationalization process had to be selected and willing to meet in person to discuss internationalization matters. Furthermore, the local press coverage should be sufficient in providing enough information for the study.

The authors decided to choose the companies aSc, ESET, Sygic and WebSupport because in Slovakia, they are widely known as examples of successful foreign expansion. The sources include company websites and reports, interviews with company representatives, as well as newspaper and magazine articles. The secondary research was conducted from July 2013 to June 2014 with the primary research − interviews taking place from September 2013 to February 2014.

The research of internationalization, both at home and abroad, seems to overlook companies from Slovakia. The discussion about them mostly focused on their competitiveness within the EU (e.g. Majtan/Srsnova 2004). Even though there are not many known firms of Slovak origin which are successful on the foreign markets, some of them can be listed among the worldwide leaders in their respective segments. These are mostly technology companies that provide high-quality, knowledge-intensive products. Their success is even more intriguing given the rapidly shifting needs and preferences of customers and turbulent environmental changes in the IT industry. Therefore, the main research question was whether their achievements could be explained on the basis of a single or multiple internationalization theories. The validity of these theories has not been tested on Slovakia and its companies yet. The qualitative research and the case study method seem to be the most appropriate, as the limited number of successfully internationalized Slovak companies do not provide a sample large enough for quantitative research.

As the financing via stock market or venture capital is on a rather low level of development, Slovak companies often encounter financial constraints at the beginning of their foreign expansion. All the firms selected for the case studies provide a product in the form of service or software, hence, they could enter the markets faster, without the need to build separate distribution channels in each country. In the time of their early internationalization, all of them could be listed as SMEs, which often have to cope with the lack of (both tangible and intangible) resources. Another obstacle to their expansion might be the negative country-of-origin effect, which the companies from CEE often encounter while competing in foreign markets.

Despite all the possible barriers of their internationalization, the companies selected for the case studies are the best examples of successful foreign expansion in the Slovak IT industry. Previous studies from CEE related to this industry focused more on the entry into this sector (e.g. Mroczkowski 2013). The authors

believe that this is the first depth-in study of the internationalization of the Slovak IT sector.

4. Case studies of Slovak companies

4.1 aSc

The company aSc (Applied Software Consultants) is a Slovak company providing scheduling software for primary and secondary schools, which is used by more than 100,000 schools in 150 countries. aSc Timetables was also translated into more than 30 languages (aScTimetables.com 2013). The company was established in 1993 by J. Gottweis and his wife, a teacher and deputy school director who was responsible for the creation of timetables. As it was a very time-consuming activity and the timetables often had to be adjusted, she, along with her two sons (IT students at the time) created scheduling software. The competitive advantage of aSc software stems from a user-friendly interface which imitates the real timetable-making process. It is the result of pre-testing; A. Gottweiss acted as a sample user and her remarks helped to make the software as user-friendly as possible. The combination of skilled programmers and a person familiar with the issue proved to play a key role in the company's success (Porubský 2012). Nevertheless, Slovak schools did not trust the software in the beginning, even though it had won several prizes at international exhibitions.

The internationalization of aSc started on the Czech market, with virtually no success. In the Czech Republic, timetable software was already in use, but it did not take into account the various additional requirements of the teachers. This created a distrust of all scheduling software among Czech teachers. The next market aSc entered was Hungary, which happened unintentionally, as aSc noted a demand from teachers who learned about the software on their own. Following the Czech and Hungarian translations was an English version. According to J. Gottweis, expansion to the third country, Hong Kong, was the turning point in the company's existence. aSc entered the market via cooperation with a Hong Kong entrepreneur who had won contracts with numerous local schools. In fact, the entrepreneur downloaded the basic version from the internet and started to sell timetables created by using the software without permission from aSc. The company did not sue him, but instead started to cooperate with him; the sons of Mr. and Mrs. Gottweis provided on-site training for Hong Kong schools (Kuciak 2013).

The success in Hong Kong drew media attention at home and the software finally achieved a breakthrough in the Slovak market. Other new markets were entered on a random basis. As for distribution, approximately half of the contracts started with the initiative of foreign distributors interested in the software. The rest was the result of the initiative of aSc itself seeking new opportunities abroad. According to J. Gottweis, *"nowadays, aSc TimeTables is probably the*

most widespread scheduling software among primary and secondary schools in the world" (Gottweis 2014).

4.2 ESET

ESET is a Slovak company which specializes in security software for households, small and medium enterprises, and large institutional and corporate clients. It was established in 1992 by R. Hrubý, P. Paško and M. Trnka. As of today, these individuals are no longer active in the company management, but they are still among the owners. ESET employs more than 800 people globally (roughly 400 in Slovakia) and has set up regional distribution centres in San Diego, Buenos Aires and Singapore, as well as offices in São Paulo and Prague. Nevertheless, the company HQ is still located in Bratislava. ESET has also established several malware research centres in Bratislava, San Diego, Buenos Aires, Singapore, Prague, Košice, Kraków, Montreal, and Moscow (ESET.com 2013).

P. Paško and M. Trnka created their first version of the security software NOD in 1987. It was the first security software with a graphical user interface and an integrated detection, fixing, and prevention function. In 1990, the first version of the software, under name STOPVIR, was introduced on the Austrian market via a local seller. After the creation of ESET in 1992, the company immediately began selling its software at home and abroad. The first foreign affiliate was established in 1999, in San Diego, followed by the Prague office, ESET Software, in 2001. The expansion continued in 2004 by opening the regional centre in Buenos Aires, followed by the research centre in Kraków (2008) and the affiliate in Singapore (2010), responsible for Asia and Pacific activities. The latest addition to its foreign activities is the research center in Montreal, established in 2012. As for the worldwide antivirus vendor market share, ESET stood in fifth place as of October 2013, with a 7,2% market share. Their most successful product, ESET Smart Security, holds 4 % of the world market and is the sixth most used software in the world (OPSWAT.com 2013).

Besides the first attempt by the founders to expand to Austria, the company was pushed to internationalize by the split of the former Czechoslovakia in 1993, which meant a loss of a significant portion of the home market. ESET achieved a milestone in its development by winning its first Virus Bulletin award in 1998. Through 2010, it gained another 59 awards from a renowned British magazine, the most among all other software companies. However, the country-of-origin effect proved to be a major obstacle in the company's foreign expansion. To overcome it, ESET established its affiliate in the USA in 1999, which acted as an international business centre responsible for all the foreign markets (Schuh 2013). As for internationalization, M. Trnka, founder and former CEO of the company said that, *"in the majority of the markets, we found a local partner*

who took care of our business in the territory – this strategy helped us particularly in the beginning of our foreign expansion" (Trnka 2014).

Over the years, ESET hasexperienced rapid revenue growth − 303 %, during the period of 2008-2012, which earned it 33rd place in the Deloitte Technology Fast 50 Central Europe 2013 ranking (Deloitte 2013). The success on foreign markets can be observed in the growth of the foreign sales share – from 30 % in 2003 to 90 % of overall sales in 2010. Well established foreign activities resulted in the merger of the Slovak parent firm with the US affiliate in 2008.

The growth of the company was strictly organic until 2008, when ESET acquired Czech company Šetrnet, followed by another acquisition of Slovak company, Comdom, which specialized in anti-spam solutions. Despite this shift, the overall strategy of ESET is still based on the same pillars as when the company was established: technological competence resulting in continuous improvement of the products and their high quality, as well as a focus on research. People are still the key resource for the company, as they create the products which need to be improved nearly on a just-in-time basis. The talent pool is spread all over the world with research centres located on four continents, which enables the company to engage skilled programmers in Europe, Asia, North and South America. The worldwide presence of the company helps it to identify threats as early as possible and to respond quickly to market trends.

4.3 Sygic

The Slovak company Sygic, which specializes in navigation software, was established in 2004. It provides applications for individual users, as well as corporate clients: more than 1,000 businesses all over the world use the company's navigation software including T-Mobile, Vodafone, Hyundai, Motorola and HP. The idea behind the product is that it should run on any operating system or device. In 2009, Sygic's navigation for iPhone was the first one available in the App Store and the company was also the second in the world with navigation software for Android. A year later, Sygic introduced Aura, the world's first real 3D navigation. Sygic products were also used by the organizers of London 2012 Olympic Games and the police in Sao Paulo, Brazil.

Sygic GPS Navigation is the world´s most downloaded offline navigation app, with more than 51 million unique users (as of June 21st, 2014) in 115 countries (Sygic.com 2014). According to the iTunes Store Top Ten Apps chart, Sygic's navigation ranked 8th in Austria and Belgium while being ranked 4th in Greece and Switzerland, as of January 6th, 2014 (Apple.com 2014).

Sygic has cooperated with other companies virtually from the beginning.In 2005 it created a partnership with the map provider Navteq, followed by a partnership with TeleAtlas (now TomTom) in 2007. Currently, the biggest corporate partner of Sygic is Multilaser, a Brazilian company (Hnonline.sk 2013 a). The two firms

cooperate on navigation software used in cars. Brazil is an important market for Sygic: in 2012, local sales reached about 1 mil. € with 500,000 new customers (overall sales of Sygic were roughly 10 mil. € in 2012) (Hnonline.sk 2013b). Sygic entered the Brazilian market in 2008. Now, it is the biggest personal navigation software market for the company.

According to M. Štencl, CEO of the company, *"we are developing our navigation software as a global product, but we also take into account the interests of the local customers"* (Štencl 2014). The ability of the software to update and adjust to the changing conditions is very important for the customer when making a buying decision. Updates are also a marketing tool, as it has a positive influence on customers' references (Porubský 2011).

The company has four business units, which are based on different distribution channels (Porubský 2011). The B2C mobile unit (its distribution channel is the AppStore) is the one which processes the customer remarks the fastest. After their incorporation into software, this updated version is made available for the three other units: PND InDash (car navigation), Fleet (integration of the software with other systems) and a unit responsible for communication with telecom companies. The very nature of the product software which can be downloaded and used by customers from virtually every country – provides incentive for internationalization. As for personal navigation, its distribution channels (namely AppStore) facilitate the process of sales, which is not resource (e.g., financial or human) intensive.

4.4 WebSupport

Established in 2002, WebSupport is the largest webhosting service provider in Slovakia with 84,287 domains and 58,116 customers as of January 6th, 2014 (WebSupport.com 2014). The company ranked 8th in the 2013 edition of Deloitte Technology Fast 50 in Central Europe, with 1,003 % revenue growth over the years 2008-2012 (Deloitte 2013). In February 2012, WebSupport became the biggest webhosting service provider in Slovakia in terms of customers and sales. Sales reached €979,124 in 2011, with a net profit of €27,107. The profit margin was 2.77 % (Glasa 2013). On its way to becoming the number one in Slovakia, WebSupport acquired several competitors, such as SZM.com or Kongo.sk (Hnonline.sk 2012). A new investor, Monogram Ventures, entered the company in 2013. The company also supports internet start-ups and provides free webhosting services for them.

As for foreign expansion, WebSupport publically announced its plans for internationalization in 2011. The company entered the Czech market in May 2011, with the Hungarian soon following. Regarding the Czech market, the company did not plan to succeed by offering lower prices, but instead access to services such as online lectures or seminars about various topics, such as marketing or business development. In 2013, the firm reached the 3,000 customer milestone.

Even though the company provides services on the Czech market, it did not establish an affiliate. According to the company, the best marketing tool is satisfied customer, which advise the service to other people.

2012, the firm's first year on Hungarian market, was a period of experience-gaining and mapping of customer behaviour. The company is content with development, because it created a customer base and gained positive references from its clients (WebSupport.sk 2013).

Before entering the Austrian market, the company acted as a partner of NIC.at and intermediated the registration of .at domains for Slovak customers. The partnership started in November of 2011 (WebSupport.sk 2012). WebSupport uses its brand in the Czech Republic and Austria, but it opted for the name Webonic for the Hungarian market. According to M. Truban, CEO of WebSupport, *"Slovakia makes up 90 % of our sales, but we are looking for possible acquisitions in the Czech Republic, Austria and Hungary in order to play more prominent role in these markets"* (Truban 2013).

5. Discussion

Several internationalization theories might explain the process of aSc's foreign expansion. According to the Uppsala model, the company started its expansion by entering the neighbouring markets, though, only the decision about the Czech market was made beforehand; the Hungarian market entry was realized at the request of potential customers. As for aSc in Hong Kong, they seized the opportunity when it showed itself, and entered the market without any prior specific knowledge.In this case, the lack of knowledge was not an obstacle to internationalization. The home market success came only after foreign success, which is also a contradiction to the Uppsala model. As for the resource-based theory, aSc entered the Hong Kong market in the period of their school reform which meant that the scheduling software (the resource in possession of the company) was the resource needed in Hong Kong schools. Nevertheless, it is necessary to remember that the Hong Kong market entry was a matter of coincidence. As J. Gottweis said, *"the Hong Kong success was a breakthrough for the company. We enter the foreign markets only when we are sure that our software was operating well"* (Gottweis 2014). The most valuable resource of aSc and its competitive advantage is the combination of skilled programmers with the in-depth knowledge of their customers' needs. The company can also be described as an International New Venture, because it started to internationalize shortly after its inception. It could be classified as a New International Market Maker, more specifically Multinational Trader – it serves many countries and is constantly looking for new opportunities. It can be concluded that the INV theory in combination with resource-based theory explains the internationalization process of aSc in the most appropriate way.

The internationalization of the second company in the sample - ESET can be explained by several theories as well. Based on their early foreign expansion, ESET is an International New Venture, first Multinational Trader that quickly evolved into a Global Start-up, as it gained various resources (human, technological, knowledge) in many countries. The expansion – more specifically the setup of the US affiliate – was achieved with the help of a person with international business experience, A. Zajac. The presence of a manager with foreign market experience is also one of the factors which gave rise to INVs in general. According to A. Zajac, *"we had three priorities: establishment of ESET LLC, product localization and launch of our own e-store"* (Zajac 2013). ESET was the first Slovak company with its own e-store. The liability of foreignness – the usual problem of INVs – can be observed also in the case of ESET. To overcome it, the company established the US affiliate, which helped to create the image of an American product instead of one from a former socialist country. As for the resource-based approach, the most valuable asset for the company is its employees, who are the bearers of the technological competence, which is the core of the product. The product has to be continually improved and adjusted to changing conditions and new security threats. Therefore, the software is made virtually on a real time basis and is intangible, and resource-intensive. Considering the Uppsala model, gradual internationalization can be observed starting with export, through the establishment of the distribution centres to the research centres setup. In conflict with the Uppsala model is the fact that ESET did not concentrate on the domestic market to gain experience, but it entered foreign markets soon after or, in the case of Austria, even before the legal inception of the company. To conclude, both the INV and resource-based theories clarify the international path of this company.

The third company − Sygic − is an example of INV, specifically the Global Start-up, because it coordinates several value chain activities in many countries (often on the basis of partnerships with other companies). The product itself implies the need of sourcing in multiple countries, as the navigation and the maps from which it is based on are a subject of frequent change. The software has to be constantly adjusted, not only to the changes in environment, but also to the customers' preferences (which may vary from country to country). The competitive advantage of Sygic, therefore, stems from its human resources and their knowledge, which gives rise to high quality technology competence in the form of navigation software. According to M. Mancel, then-product manager of Sygic, *"we had no problems concerning internationalization – we were always prepared for possible complications and we were also trying to find the best partners in the foreign markets"* (Mancel 2014). Foreign market success is based on intangible, knowledge-based resources, as claims the resource-based approach to internationalization. Again, the combination of the INV theory and resource-based approach suit the best in this case.

The fourth company in the sample – WebSupport – underwent internationalization 9 years after its inception. It targeted only the neighbouring countries: the Czech Republic, Hungary, and Austria. It is in line with the Uppsala internationalization model, which states that the companies initially expand to countries that are close to their home market in terms of geographical and cultural distance, and therefore have a certain amount of knowledge about these markets. A gradual increase of international involvement can be observed in the case of Austria, where the cooperation with a local firm preceded the actual market entry. The future plans of the company aim at the markets in Ukraine, Romania and Poland, which are geographically rather close. With the exception of Austria, WebSupport focuses primarily on formerly socialist countries. This means that the company makes use of similar economic or legal environments in its current or potential foreign markets. The resources crucial for WebSupport success are, as is the case of other technology firms, people and their ability to create a high-quality product. However, a webhosting service is a rather standardized product, which does not require major adjustments to the local conditions of various foreign markets. It also does not use any significant amount of foreign resources. In fact, the nature of the product (service) does not necessarily demand any sourcing abroad. WebSupport cannot be purely considered as an International New Venture, as it entered its first foreign market quite late. According to the CEO of WebSupport, M. Truban, late internationalization was their biggest mistake: *"if we had operated in the English language 12 years ago, we would be ten times bigger a company by now, without the need to do anything else in a different manner"* (Truban 2013). Therefore, the company shows some features of a geographically focused INV (in the region of CEE). But, it can be concluded that Uppsala model suits the best in this case.

6. Conclusions

After the fall of the Iron Curtain the existing CEE firms were primarily occupied with privatization, modernization and survival, while new start-ups focused on the domestic market which offered plenty of opportunities for growth. The firms that tried to penetrate foreign markets faced the scarcity of resources, know-how, networks, state support, and an established foreign competition from developed or other emerging markets that started their internationalization many years before the political changes in CEE.

As the literature review (Ferencikova/Schuh 2012) shows, the central element in the discussion is finding a comparative advantage on which the internationalization initiative can be built. Without comparative advantage it is difficult to overcome the scarcity of resources and the additional disadvantage of the negative country-of-origin effect. In order to be successful in international business, the firms need to be cheaper than competitors or have to offer unique products or service features that are appreciated and sought after by customers. The authors

assume that CEE firms found their competitive arenas by focusing on neighbouring markets and by basing their competitive strategies on good value-for-money (price advantages vis-à-vis developed-country firms) and specialization advantages – often combining both aspects. Due to the lack of financial and physical resources SMEs in CEE are using intangible resources as the many start-ups in the ICT underline. In the case of the software industry, entry barriers are lower than in many other markets, which makes it attractive to newcomers. Also, many CEE countries are small, have relatively high-quality education and superior talents that can compete in the international ICT arena because physical resources are relatively less important at the beginning, and even small and resource-scarce companies can successfully develop their business. All four cases studied represent these types of the SMEs.

A major barrier for CEE firms is getting access to high-income markets. As shown in the cases, EU membership does not necessarily help as much as expected because, with the exception of the Western European markets; the US market, Asia and Latin America are the playgrounds where the ICT companies need to be active. Developing partnerships proved to be a very efficient way to combine know-how and intangible resources with physical resources abroad in order to be successful. The differences in the starting position of the firms can lead to different patterns in internationalization. However, in this case, the choice of foreign countries, market segments, market entry methods and competitive strategies were rather similar given the nature of the companies studied.

The case studies have shown that existing theories explain the internationalization patterns well. The Uppsala model of an incremental commitment and its features were found in the sample. However, in the case studies of the Slovak IT start-ups, combining the resource-based view with the International New Venture theory seems to be a promising theoretical approach that can be further developed and used in the conditions of small, former transitional economies.

The analysis and discussion shows that CEE firms are an interesting subject for internationalization research. The combination of different perspectives such as the resource-based view, entrepreneurship and institutional perspective may contribute to a better understanding of this process.

Slovakia is an extremely open economy, heavily dependent on its exports. However, Slovak export success is based mainly on large companies, namely in the automotive and consumer electronics sectors. The biggest exporters are the foreign-owned subsidiaries such as Volkswagen, Kia, PSA Peugeot Citroën, Samsung and Slovnaft-MOL. Nevertheless, SMEs are lagging behind large companies in terms of export performance: in 2012, the number of exporting SMEs reached 27, 474 which accounts for 97,1% of all Slovak exporters. However, the value of SME exports was only 17,486 bil. €, which represents 27,8% of the overall value of Slovak exports. This disproportion and increase of SME com-

petitiveness needs to be addressed, according to state institutions (Ministry of Economy of the Slovak Republic 2013).

The research may have therefore, a broader relevance: Slovak companies in the sample had to rely on their most valuable assets – human resources, if they wanted to enter foreign markets. This is particularly important, as the companies had to counterweight their lack of finance and foreign market knowledge with unique and high-quality products, which served as their competitive advantage. Another important factor might be their narrow specialization, as they do not diversify their product portfolio into new categories, but rather focus on improving the quality of their existing product or creating new variations. The examples of aSc, ESET and Sygic hint at the possibility that the more unique the product is, combined with its high-quality, the sooner the company seeks expansion abroad. Despite their worldwide success, all of these companies are still headquartered in Slovakia, as is a significant part of their research base. What is more important, Slovakia has a large pool of highly-qualified IT talent.

It seems that one of the ways to support the competitiveness of the local SMEs is investment in education (Hvorecky 2012; Busikova 2013). The entrepreneurial companies from small, opened economies that started their internationalization rather late (the fall of the Iron Curtain was the precondition) can compete on the regional and global basis only in the case that they have very special resources. The low costs typically assigned to the region of CEE and FDI-invested companies as a competitive advantage are definitely not sufficient and non-sustainable in the future.

In the future research the authors plan to study the relevance of all the theories of internationalization on a more representative sample of the Slovak companies including companies from different industries, companies of different size, ownership structure and history, includingthe companies that have existed longer (not exclusively start-ups).

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