Dismantling complexity of institutional foundations of international competitiveness of emerging market firms: Explorative study of Russian software firms

Abstract

The international competitiveness of Emerging Market (EM) firms has become an important and topical area of international business research, but there is yet little understanding about the complex nature of institutional influence on attributes of competitive advantages of EM firms. The objective of the paper is to extend existing knowledge about attributes of international competitiveness of EM firms that are successfully operating in developed and other emerging markets and examine their institutional foundations. Through conducting explorative research of Russian software firms we discovered an inconsistency between our findings and conventional wisdom on foundations of competitive advantages. We found that Russian firms possess traditional FSA rooted in advanced technological and managerial capabilities and exploit these advantages in international expansion. Most importantly, we explored institutional specific factors (ISA) that support the creation of FSA. We develop a framework illustrating that complexity of ISA can be decreased to support, push and motivation mechanisms. Thus, this study extends the knowledge about types of FSA of EM and contributes to the better understanding of a link between ISA and FSA required for international competitiveness and ISA in EM.

Key words: Competitiveness, emerging market firms, institution-specific advantages, Russia

1. Introduction

The International business arena has been witnessing the increasing expansion of firms from Emerging Markets (EM) and their successful competition on a global scale (Bartlett & Ghoshal, 2000; Gammeltoft, Barnard, & Madhok, 2010). Reports and discussions about the success of Chinese, Indian and Brazilian firms are regularly appearing in the business media and practitioner oriented reports (e.g. BCG, 2011; Economist, 2008). However, the academic literature is lagging behind in addressing this phenomenon and existing research is scattered across a relatively small number of studies (Chittoor & Ray, 2007; Kalastin, Dussauge, & Rivera-Santos, 2014). The scholars seem to be in agreement that EM firms does not possess the traditional ownership advantages common to developed countries firms (Knoerich, 2010; Ramamurti, 2012; Cui, Meyer, & Hu, 2014). There is a prevalent view that EM firms need to catch up in terms of technological and innovative capabilities (Awate, Larsen, & Mudambi, 2012; Peng, 2012) and, as Kalastin et al. (2014) emphasize, studies continue to refer to them as late-comer and inferior challengers (e.g. Barnard, 2010; Guillen & Garcia-Canal, 2009). With regards to international competitiveness, EM firms' strengths are argued to be different from those of developed market firms and based on such advantages as an ability to deal with weak institutional environment (Cuervo-Cazurra & Genc, 2011), innovate for developing countries (Ramamurti, 2012), build on low cost advantaged (Alon, 2010) and networking capabilities (Elango & Pattnaik, 2007).

In this study we argue that there is more diversity in competitive advantages of EM firms than those being commonly ascribed to EM firms in the current literature. These advantages can be rooted in advanced technological and managerial capabilities and it is their exploitation that allows EM firms to gain strong competitive positions in a global marketplace. More importantly, we argue that institutions play a significant role in the creation of these advantages and their influence is of a more complex nature than in

developed countries. Existing literature discusses at length that institutions in EM are underdeveloped and unstable with weak regulatory mechanisms, market imperfections and poor protection of intellectual property (Khanna & Palepu, 1997; Peng, Wang, & Jiang, 2008). Yet, we do not fully understand how weak and unstable EM institutions can result in the emergence firms that manage to be successful global competitors in developed countries.

Therefore, our objective is to extend existing theorizing about *how does the EM institutional environment affect the creation of EM firm-specific advantages and motivation for international expansion?* In order to shed light on this question we draw on the established theoretical premises of firm-specific advantages (FSA) and country-specific advantages (CSA) (Rugman, 1981) and incorporate them with the institutional perspective in the context of EM. Our theoretical development attempts to elaborate on the role of EM institutional environment in the creation of FSA required for international competitiveness of EM firms. In doing so, we aim to extend conceptualization of CSA in light of institutional forces in EM and offer the explanation of institution-based specific advantages in a EM context (ISA).

We have conducted an explorative study of Russian software firms. The study required an implementation of several stages in data collection and clarification of research findings that resulted in 28 interviews and extensive analysis of secondary sources. The main source of empirical evidence was multiple case study research of twelve software firms. The results of data analysis revealed that FSA of Russian software firms are rooted in the technologically advanced products and managerial expertise of owners which are successfully exploited in the international expansion to both developed and developing countries. Most importantly, this study revealed a link between specific attributes of FSA of Russian firms and co-existing positive and negative institutional forces. A thorough analysis of the data indicated that a broad range of institutional factors affects the creation of competitive advantages through

three main mechanisms: support, push and motivation. These mechanisms differ in their nature but it is their combined influence that results in emergence of strong competitors from EM. These findings were integrated into the framework and we argue that it makes several important contributions to the literature. First, it extends existing knowledge about the types of FSA of EM firms that represent foundations of their international competitiveness. Second, it offers a novel approach on how to analyze complex institutional influence on the creation of FSA and how to understand institution specific advantages (ISA) in EM. The framework provides analytical tools to decrease institutional complexity in EM and to better understand the rationales behind how the EM institutional environment affects outcomes of international expansion of local firms. In other words, this framework extends the institutional view on strategy in context of EM.

The paper is structured as follows: first we briefly outline theoretical foundations for the study with special emphasis on the inconsistencies in existing research and after that we set the research objectives. We then describe the methodology and empirical data. Next we present the results of an empirical analysis and outline the important themes in our findings. This will be followed by a critical discussion of the findings in light of existing research and the development of a empirically grounded framework. Finally, we conclude and outline major contributions of the study.

2. Theoretical underpinning

The underlying logic of the strategy and internationalization approaches is that in order to expand abroad and to gain a strong foothold in international markets firms have to possess superior advantages that will allow them to outperform their competitors. These advantages represent the foundation of a firms' competitiveness and affect the strategic choices with regards to the decisions on mode, destination, and timing of international expansion (Meyer

et al., 2009; Luo & Wang, 2012). Internationalization theories refer to these advantages as being either ownership advantages (Oa) (Dunning, 1988) or firm specific advantages (FSA) (Rugman, 1981). In this paper we build on the FSA that is a firm-level construct and is related to all advantages for both location bound and non-location bound operations (Rugman, 2010). The FSA construct covers a very broad set of unique company strengths, resources and capabilities and theoretically encompasses transaction costs and RBV rationales (Rugman, 2010). Rugman & Verbeke (2001) suggest that traditional FSA can be related to (1) functional, production-related proprietary assets such as technological, manufacturing or marketing know-how and (2) organizational capability to efficiently coordinate and control the MNE's asset base. FSAs are affected by the home country institutional environment and resource endowments (e.g. Vernon, 1966; Peng et al., 2008; Dunning and Lundan, 2008). These country-based factors have been denoted as country specific advantages (CSAs) (Rugman, 1981) and different types of CSAs result in variation of FSA across national contexts (Mudambi & Navarra, 2002; Meyer et al., 2011). Sethi and Elango (1999) propose that the origin of competitive advantages in a particular country is produced through a combination of factor endowments, cultural values, institutional norms, and national government economic and industrial policies. This supports the view that the typically stable and supporting institutional environment of developed economies enable the creation of advanced technological and managerial knowledge and capabilities of local firms that ensure their global competitiveness (Rangan & Drummond, 2004; Dunning and Lundan, 2010; Kalastin et al., 2014). Strong institutions reduce uncertainty by creating efficient mechanisms for business activities that reduces transaction costs and facilitates innovations in local firms (Peng & Meyer, 2011). Similarly in EM, where institutions are weak and characterized by market imperfections, local firms' capabilities development and competitiveness are not supported and this results in these firms having inferior capabilities

(Barnard, 2010; Cui et al., 2014). These rationales provide a sound ground for a well acknowledged view that the type and nature of FSA differ across firms from developed and emerging economies due to the differences in the level of their institutional development (Luo & Tung, 2007; Ramamurti, 2012).

The literature seems to be in agreement that the advantages of EM firms lack sophistication and is not based on advanced technological, innovative or managerial capabilities (Henisz, 2003; Kalastin et a., 2014). The specific FSA of EM firms were described as the ability to operate in an environment with weak institutions (e.g., Cuervo-Cazurra & Genc, 2008; Del Sol & Kogan, 2007), to beneficially use personal and business networks (e.g. Manolova, Manev, & Gyoshev, 2010; Musteen, Francis, & Datta, 2010), to tap into opportunities in developed markets (Luo & Tung, 2007), build on low cost advantages (Alon, 2010), and ethnic identity (Miller, Thomas, Eden, & Hitt, 2008). Also, entrepreneurial motivation and global ambition have also been found to be a very important resource often outbalancing the lack of education, internationalization experience, as well as technological and managerial knowledge (Liu, Xiao, & Huang, 2008; Knoerich, 2010). Singh & Gaur (2013) show that certain governance arrangements offer competitive advantages of EM firms such as family ownership or group affiliation. Peng, (2012: 97) describes how EM firms face "the challenge of going abroad in the *absence* of significantly superior technological and managerial resources". Similarly, Knoerich (2010) shows that EM firms have low international competitiveness, lack managerial capabilities and understanding of overseas markets. For these reasons the acquisition of strategic resources represents an important driver for expansion in order to acquire advanced technologies to strengthen competitiveness at both home and abroad (Cui et al., 2014; Klossek, Linke, & Nippa, 2012).

While acknowledging the merits of the previous discussion, in this paper we will argue that the literature overlooks the evidence of EM firms that are capable of developing

traditional types of FSA and that are expanding abroad through the exploitation of these FSA. Indeed, existing studies discuss that EM firms expand abroad either through exploitation of specific to EM advantages or with the objective of acquisition of advanced assets of developed countries firms (Child and Rodrigues, 2005; Cui et al., 2014). Yet, there is empirical evidence that some EM firms are successfully competing internationally by exploiting own competitive strengths similar to those of developed countries firms (e.g. BCG, 2011).

In this paper we aim to address this limitation in current literature and ask *how weak institutions in EM can results in the emergence of strong competitors from EM*? In order to achieve this objective we have undertaken an explorative study of Russian software firms that has gained top positions in the global competitive rankings (Russoft, 2013). For this reason they represent an excellent subject for the investigation of the question raised in this study and provide a fruitful ground for discovering novel features of EM firms and theoretical development. In the following sections we first explain methodology and empirical data and then present the results of our analysis. We then proceed with the discussion illustrating the theoretical and empirical implications of the findings and outline avenues for the further research.

3. Methodology

3.1. Research Design

In order to examine the attributes and institutional foundations of competitive advantages of EM firms, we selected Russian software firms as an empirical context. This setting was chosen for several reasons. First, several Russian software firms have expanded successfully abroad and occupied advanced niches in the global software industry. Second, while Chinese and Indian firms have received attention from IB scholars (Bruche, 2012; Niosi & Tschang,

2009; Pant & Ramachandran, 2012), there is little research on Russian firms competitiveness. IB scholars are continuously drawing attention to the fact that it is important to conduct studies in different contexts and account for the variety of their idiosyncratic features in order to enrich understanding of the applicability of theoretical assumptions (Ghemawat, 2007; Xu & Meyer, 2013).

In the choice of the methodology we were guided by our needs to examine a phenomenon that is not yet well understood and requires a thorough and detailed investigation. Indeed, as the literature review revealed, little is known about the different types of competitive advantages of EM firms and their institutional foundations and this creates a need to undertake exploratory research in order to shed light on this phenomenon. These considerations led us to conduct a qualitative study (Piekkari, Welch, & Paavilainen, 2009). This type of inquiry has been found to be suitable to this type of exploratory investigation by allowing a focus on analysis of a firm' competitive advantage. The multiple case study approach was chosen as a main method for data collection (Eisenhardt, 1989). This approach enabled us to have a look inside the "black box" of international competitiveness and to investigate processes and examine influence of external factors that enable the creation of competitive advantages for Russian companies. The case data has been supplemented with an interview with an industry expert as well as the collection and analysis of a large amount of secondary data such as industry reports, results of surveys implemented by consultant organizations, and media materials. The combination of these sources allowed for data triangulation that resulted in gaining a comprehensive understanding of the research phenomenon.

3.2. Data collection and analysis

3.2.1. Data collection phases

The process of data collection was explorative in nature and proceeded through a number of phases which resulted in gradually improved understanding of the researched phenomenon. We started with an investigation of available secondary data about the software sector in Russia that included industry reports, public surveys, and general media articles. The data was structured and analyzed with the objective of gaining a detailed understanding of the Russian software sector. Aspects such as main players, growth dynamics, segmentation, positions of companies in world rankings, obstacles to development, and important industry regulations were systematically studied. In the second phase of empirical research we conducted a pilot interview with a software firm that has both domestic and international operations in order to acquire knowledge about its activities and foundations of the competitive advantages. After obtaining this preliminary data, we focused on the selection of case firms by searching through reports and media sources. We aimed to include firms that have international operations. These three phases allowed us to find case companies suitable for investigation of international competitiveness and to develop an interview guide to collect data from these firms. The fourth and main phase of the research was interviewing respondents in selected case companies and analysis of the collected evidence. The respondents were chosen using the criteria of their participation in the strategic and operational decision-making process, which is an inherent part of any internationalization related activities in these firms. We interviewed top managers and owners due to the fact that they are the most informed about the strategic decisions regarding international operations.

We used an interview guide for these interviews that included the following sections: (1) Background information. It included questions about the company's background and its owners. This section was devoted to gathering preliminary information about the company, industry, and the respondent's position in order to gain insight into the company's environment and to fully understand its strategic and operational priorities. (2) Competitive

advantages of case firms in Russia. The main goal of these questions was to define the key resources that provide the company with sustainable competitive advantages in the Russian market, and to analyze the competitive position in Russia vis-à-vis its competitors. (3) Motives for expansion abroad and the reasons for international activities. We also included questions about strategies for penetration in foreign markets, determining the factors influencing the choice of country and entry mode; the ability to adapt the product for local needs and expectations; the extent of primary market research and data collection prior to entry; the extent of relying on partners and intermediaries; and, finally, the ability to take risks and mobilize investments. (4) Competitive advantages in foreign markets and the sources of their creation. We asked about resources available in foreign markets that could be converted into sustainable competitive advantages abroad and in the Russian market, the extent of international presence, the practices of cooperation with partners and the reasons for choosing specific types of collaboration strategies. We also included questions with regard to the role of foreign markets for a company's strategic development. We wanted to ask respondents about the extent to which the company considers foreign markets to be important for future strategic development, the vision and future plans for international expansion, the aspiration for improving competitive positions worldwide and concrete steps for how to reach them. Finally we included questions regarding the weak points and opportunities within the current Russian industry. We assumed that all companies' representatives should be considered experts in the peculiarities of the software sector in Russia, so the respondents were asked about current legislation and government support and regulations in the industry and their thoughts on what possible improvements that could stimulate growth and internationalization of Russian software companies. We primarily used open-ended questions that were complemented with multiple choice and ranking type questions. The open-ended

questions provided us with valuable information about respondents' opinions without being constrained by a fixed set of possible responses.

The final step in data collection was to conduct an additional interview with an industry expert to get an informed view on the results of findings and clarification of inconsistencies that were revealed during the data analysis. Thus, during this five-phase research process we collected and evaluated various types of empirical evidence from multiple sources that enabled data triangulation to ensure the reliability of the final conclusions (Patton, 2002). In total, we conducted 28 interviews during the data collection phase.

3.2.2. Case selection

In the case selection process we used a purposeful sample technique (Patton, 2002). Given the fact that the objective of our study was to examine the nature and sources of existing competitive advantages of Russian firms overseas, we attempted to include into our study those firms that *have already showed significant internationalization results* and were considered successful in international markets. It is important to stress that this objective was set due to the focus of this research to explain the institutional foundations of competitive advantages of firms that are competing in the foreign markets. We evaluated criteria such as the number and location of the countries of international operations, the share of international operations in total revenues, products and services offered overseas, the location of R&D centers, and basic financial data providing evidence of international success. The companies included in the study have different degrees of internationalization, which is understood here as the extent of the companies international operations. This variety of criteria allowed us to better understand the factors that support and inhibit internationalization. In the beginning, we selected 18 companies that complied with objectives of our research. During the process of more careful investigation of the firms' background, international results and the extent of

their exports we limited our selection to 14 software companies for the purposes of further investigation.

We also followed some practical considerations in the selection of companies, such as the level of access to top-management and time constraints for conducting the research. Russian companies are often 'closed' to any type of academic research and it takes a long time to find the right person to negotiate access.

3.2.3. Case data analysis

Data analysis from the case interviews was conducted in several phases. First, we implemented content analysis with an objective to categorize and organize data under the headings of various topics, such as types of competitive advantages, important sources for creation of these advantages and incentives for building competitive advantages internationally. Second, we analyzed the case data within each category to understand common features and patterns. Finally, we examined the findings across categories to reveal the causal relationships and compared them with existing literature to draw final conclusions.

As a result of the analysis, we excluded two cases from the main set after we discovered that despite the seemingly existent international operations their primary focus is on the Russian market. However, we used the data from these cases for drawing implications about the differences between attributes and foundations of competitiveness of domestically oriented and foreign market oriented Russian software companies. Thus, our final case analysis with regards to attributes and foundations of international competitiveness was based on 12 firms.

3.3. Data description

We focused on the software sector where firms undertake development and integration of software products. However, it is worth noting that not all of our case companies were operating solely in the software sector but some also had operations in other segments of the IT industry, including hardware production and distribution, Internet services, and system integration. This great variety gives us better understanding about the whole industry, not only the separate segments. We present a description of the case companies in Table 1.

Insert Table 1 about here

For research purposes, we numbered the companies from 1 to 12 to allow for anonymity due to considerations of confidentiality. The pilot case is described in the first column of the Table 1. Furthermore, Table 1 illustrates the major descriptive facts of the case companies' operations and indicators of their international presence and competitiveness. It is important to emphasize that indicators such as revenue growth and share of international operations were provided by the respondents and represents their own estimations. While acknowledging the subjective nature of data based on managerial perceptions, we believe that the indicators in Table 1 nevertheless represent important indicators of international success.

4. Results of data analysis

In this section we present the results of our data analysis illustrating the attributes and institutional foundations of international competitiveness of Russian software firms.

4.1. The attributes of competitive advantages of Russian firms

The first objective in our empirical research was to understand the attributes of the competitive advantages of Russian software firms that enable international success. There

were several important themes that came out as a result of the analysis.

4.1.1. Innovative product and capabilities

One of the most pronounced themes that we were able to reveal is that managers in studied cases perceive the ability of their firm to develop advanced innovative products of world-class standards as the strongest competitive advantage for international expansion. The interviewees were in agreement that their firms' major strength is based on strong technological knowledge and capabilities of their employees enabling the firms' to continuously offer innovative software products similar to those of developed market firms. These capabilities represent the core of the firm specific advantages allowing the firms to gain a strong competitive foothold in developed markets. Moreover, the products have complex features and their creation requires a combination of a large number of various technologies and specific skills. The development of the products is highly multifaceted due to the rapid technological change in the sector and specificity of the requirement in different niches. Yet, as empirical evidence shows, Russian firms have an important capability of dealing with non-standard issues that are needed for successful product development. As one of the managers explained:

> "Our products are very complex and they have no analogues to any existing ones in the international market. They are created for a specific niche and were developed by our engineers from scratch. These products attract customers and allow us to find our own space in the international market."

Many of the case companies focus on specific niches in various sectors. For example case company 2 operates in the financial and trading sector. In order to be able to account for niche-specific factors in product development it has organized internal training programs and an information system with the objective of providing basic and advanced knowledge concerning the financial markets to their programmers, engineers and developers. This niche-

specific information is vital to the ability of the firm to offer a customized product according to the specific needs of clients.

Second, our study finds that Russian firms have an additional product-related advantage, which is the ability to carefully match the characteristics of the product with the time of entry to the international marketplace. This is also associated with the fact that Russian firms have a good understanding of demand and the capabilities to develop the required products in a timely manner. As the owner of the company that delivers hardware and software package to Brazil said:

> "When we entered the country for the first time, we had a clear understanding of what they need, and how we will meet government and big customers' requirements".

This ability considerably strengthens the competitiveness of Russian software firms when entering new markets. The representative of another company mentioned:

> "We know exactly when to enter – no earlier and no later than it's absolutely needed"

Continuing with the assessment of the empirical data, we were able to further delineate the types of assets possessed by Russian firms. We find that the ability to differentiate the products' characteristics targeted for developed and developing markets according to local needs and level of economic development represents another competitive advantage of Russian software firms. The director of the software and integration services firm pointed out:

> `"Our programs are unique – this is what all clientele worldwide use, except that our product is highly focused on particular customer needs and wishes".

The owner of a company that delivers hardware and software to Brazil said:

> *"*We know how to adjust the product we have developed for our home market, to the local conditions".

This capability enables for a broad scope of expansion and to address the challenges associated with continuous changes in the competitive landscape of international business arena.

4.1.2. Supporting services

Another important attribute of the Russian software firms' competitive advantage that we were able to reveal originates from their ability to provide customers with a full range of supporting services at a lower price compared to other international players. The software and integration service firm's director said:

> "Our product offering is sometimes similar to that of our global competitors, but it looks more attractive for the customers as it represents a package where post-sale service is included".

This is a very important finding as it sheds light on the combination of product and service types of advantages and enriches the understanding of FSA. Moreover, it emphasizes the importance of a relationship and trust between the companies and clients, as the supporting services play an important role in the attractiveness of not only the product, but also the companies overall reputation. It illustrates that Russian software companies have sustainable capabilities that add to clients' confidence about the quality of the product and the reputation of the company.

4.1.3. Managerial capabilities

Furthermore, the case evidence has shown that Russian firms specific advantages are not only embodied in the innovative capabilities and cutting-edge products and supporting services, but also in advanced managerial capabilities and practices. Indeed, the respondents pointed out that one of the important reasons for their ability to operate successfully in the foreign markets has its roots in the personal characteristics of the firms' owners and top managers. They are highly ambitious, proactive and risk-accepting individuals who have succeeded in establishing an efficiently operating management team that has a similar strategic orientation and vision. The Internet automation company's CEO said:

"We are not afraid to go abroad with our projects – we know they will be welcomed

there!"

The owner of another software vending company mentioned that:

"When they (management team) are challenged by the new goal, especially if this is a new project with participation of foreigners, they act as if they were the best salesmen and simultaneously innovators in the world".

Owners of Russian software firms can differ in terms of their educational background and entrepreneurial orientation. For example, one of the case companies generated a totally new product on the basis of the owner's own vision, while in another company the experience of the owner and managerial team enabled it to react quickly to market demand which resulted in increased international operations. The global nature of the industry implies that entrepreneurial orientation plays an important role in the building of a strong international competitive basis. The other important aspect that was revealed in the interviews is that Russian firms have an empowering organizational culture that encourages knowledge creation and sharing between employees and different units. This also improves employee motivation and enhances efficiency in communication between geographically remote units of the firms. To conclude, we find that organizational competences and managerial capabilities to manage innovation and international expansion are very important assets of Russian software firms.

4.2. Institutional foundations of competitive advantages

The most important part of our empirical analysis focuses on understanding the influence of institutional factors (ISA) on creation of FSA of Russian software firms that enable them to complete globally.

4.2.1. Education of employees

One of the most important factors originating from institutional environment is the high

level of education of Russian software engineers and managers. The strong educational sector was developed in Soviet times and Russian firms still have access to well-trained technical personnel (Jormanainen, 2010). The availability of skilled engineers and programmers can be explained by the fact that Soviet science and technology system was heavily technically oriented and produced a large number of graduates in basic sciences. In the early 1990s, Russian software firms, and the IT industry as a whole, experienced incipient growth when newly established start-ups were hiring 'refugee's from Soviet-style science, and this led to the first steps towards successful business development (Narula & Jormanainen, 2008). As the director of a software department said:

> "Many Russian programmers have the best education in the world, which is why they are in such demand globally".

Interestingly, our research also indicates that most of the owners and managers also have technical education and acquired 'managerial training' over time of transition through various means.

4.2.2. Demand from local state-owned organizations

Another institutional support factor is the existence of orders by Russian state-owned organizations that provide a threshold level of financial resources for investment in innovation and development. The software industry is tightly linked with the functioning of other industrial sectors. Government services and the majority of Russian state-owned organizations and companies almost exclusively use domestic software products and services. These domestic orders are often not highly technologically sophisticated and do not require extensive development work. Yet, they provide Russian software firms with the financial support needed for development of advanced products for international market. Thus, the domestic orders represent valuable channels through which Russian software firms receive some additional resources the creation of competitive advantages for overseas operations.

Respondents from several of the case companies mentioned this kind of resource as very important and the manager of the speech technology firm explained:

> "The government orders are large and provide the guaranteed source of revenues. Having this in mind, we can spend more money on our R&D activities for development of new products for private clients in foreign markets".

In addition, Russian software firms benefit from the international network of domestic clients that might result in orders from overseas. The large state-owned industrial enterprises often rely on supply from overseas firms and markets and have existing network of partners that might require the alignment in software systems in order to collaborate.

4.2.3. Underdeveloped industrial and market infrastructure

Despite the positive supporting factors discussed above originating from the institutional environment, there are also negative forces that influence development of FSA of Russian software firms. One of these is associated with underdeveloped market infrastructure for highly innovative software products. The respondents have clearly indicated that the Russian consumer market is often not ready for the consumption of advanced software products due to a lack of supporting infrastructure and services. As owner of one of the case companies explained:

> "The only way of how we could start selling one of our latest product is to enter the European market and it was easy because we are the pioneers in the application of this type of technology.

This situation exists due to the fact that the overall level of IT sophistication in other sectors of the economy is lower in Russia than in Western countries. The general director of the software and integration systems company argued that they were ready to expand to east Russia (which is still home market) but there are simply not enough reliable high quality electricity and Internet infrastructure to support their products and services in this part of the

country and for that reason expanding abroad is an easier option. The representative of the telecom service firm said:

> "Russians use no more than one third of all those services that are available from telecom and Internet operators, which makes these firms capacities senseless".

Although some sectors, such as banking and finance, telecommunication, and the state (e-government), have begun to invest in improvements of their IT systems, other industries lag behind. These forerunner sectors provide a threshold level of demand for software products that has made it possible for the Russian software industry to grow and advance. Currently the software market in Russia has become substantial, but by no means saturated (Russoft, 2013).

However, secondary sources illustrate that during the last several years, Russia upgraded its positions on the various global IT-related ratings and this reflects that the level of IT development and usage has been improved. For example, in just one year Russia climbed 32 positions in the world ranking of Electronic government development, improving its position from 59th to 27th place (Russoft, 2013; United Nations E-Government Survey, 2012), which reflects the readiness and feasibility of the Russian government to enhance the use of IT services in public services.

4.2.4. Lack of sophistication in customer preferences

The second negative institutional influence is a lack of sophistication in customer preferences and demand. The majority of local consumers are not aware of many recent technological advances and are often not capable to understand the value of the recently developed software product and services:

> "We are capable of development of cutting-edge product, but we can not find sufficient amount of customers willing to buy it. People in Russia do not yet understand and appreciate such advance technologies. They simply never heard of anything of a similar type. These are serious obstacles for expansion at home if we aim to create top innovative products"

Although there is a small niche of 'advanced' consumers, their demand does not satisfy the ambitions of successful Russian software companies. Hence, they are forced to look globally for customers that appreciate innovative products and ready to pay for them. Indeed, domestic customers are not prepared to pay the relatively high costs for advanced software product and services due to lack of the understanding of the benefits of electronic systems. Many of the sectors in Russian industry still retain manual or semi-manual procedures and are reluctant to move towards new approaches.

4.2.5. Cultural features

The next group of factors relate relates to the motivational foundations of Russian firms. We discovered that motivation and beliefs play particularly important part in aspirations to expand and attempts to build strong competitive advantages. These are deeply rooted in the national culture and features as well as in historical development of the country. We find that one of the important characteristics of Russian national culture is a distinct way to perceive and respond to challenge. When being in situation under pressure firms' owners and employees are more driven to excel and to overcome various obstacles coming from external negative forces. As one of the respondents explained:

> "We work extremely efficiently under pressure. When we feel a challenge, we want to win and this is the best driver in business. We know that there is tough competition out there and that we will survive only in we will be the best."

We argue that this is an interesting observation that, perhaps, has to do with history of Russia when one crisis was coming after another and people had to cope with numerous challenges.

The other distinctive characteristic is a relatively high degree of risk acceptance. Russian managers are seem to be willing to accept the uncertainty of outcomes of expansion to new

markets and prepared for making continuous adjustments to the initial plan. Moreover, risk-taking is perceived as a sign of strength in social circles. Thus, the ambiguity in outcomes of expansion can become rather a motivation to 'solve the puzzle' than be perceived as an obstacle. Moreover, we discovered that owners have great aspirations to succeed and to prove to be successful in front of others. Opinions of colleagues, relatives and friends matter a great deal.

4.2.6. Liability of origin

While trying to understand the influence of culture and informal institutions on the competitiveness of Russian firms we have observed that respondents perceive the image of being Russian as an important factor influencing their motivation for international expansion. There is common view that the label 'Made in Russia' has negative connotation internationally and this is particularly strongly shown in technology intensive industries. Our respondents stated that they often face considerable mistrust towards their products and the company in general. They explain that it is very difficult and time consuming to overcome these attitudes and it create additional challenges for building presence in developed countries. However, while this creates an obstacle for expansion, it also creates a strong motivation among the owners and managers to overcome such prejudice and 'prove it wrong'. For example:

> We often face the attitude "made in Russia" which puts us in the difficult position, especially in Western markets. However, this also motivates us to work harder.

The literature describes this as "liability of origin" (Pant & Ramachndran, 2012) and our research finds that it is particularly strong in technology-intensive industries such as software development. This 'liability' has roots in the widespread opinion that EM firms cannot develop sophisticated technological products that correspond to the level created by developed market firms.

Yet, despite the negative nature of attitudes and image influence on the international expansion, we have observed that they also create strong motivation to excel and to develop product and services that will break biased views about Russian companies and products. This motivation represents a strong driver for creation of highly advanced FSA that allows for gaining competitive edge in developed countries where negative "Made in Russia" image is particularly strong.

5. Discussion and framework development

The analysis of the empirical evidence revealed several themes with regards to attributes of competitive advantages of Russian software firms and their institutional foundations.

5.1. Attributes of Russian firms competitiveness

The results of empirical data analysis point to the conclusion that Russian software firms have succeeded in the gaining a solid recognition in the global market through the exploitation of their FSA. These findings allow us to expand the existing knowledge about the international competitiveness of EM firms in a number of ways. First, we show that their advantages can stem from the ability to develop technologically advanced and complex products, capabilities to provide competent services, to tailor the products to the needs of developed and EM markets as well as from managerial capabilities to innovate and expand internationally. These FSA fall into the category of traditional advantages of developed countries firm and allow the studied Russian software firms to follow the target foreign markets in a similar manner to software firms from developed courtiers (Bell, 1995). The existence of these FSA contradicts the widely accepted view in EM literature that most of EM firms possess inferior technologies, lack managerial and innovative capabilities (Barnard, 2010; Cuervo-Cazurra and Genc, 2008; Peng, 2012; Knoerich, 2010) and that their FSA are

mostly associated with an ability to deal with weak institutional environment (Cuervo-Cazurra & Genc, 2011), to innovate for developing countries (Ramamurti, 2012), and to rely on networking capabilities (Elango & Pattnaik, 2007). Also our findings provide a fresh evidence against the dominant view that EM firms expand abroad with the objective to gain access to advanced knowledge-based resources (e.g. Luo & Tung, 2007; Meyer, Wright, & Pruthi, 2009; Cui et al., 2014).

Second, the FSA of Russian firms are not related to low cost advantage which is assumed to be common for EM firms. On the contrary, empirical evidence shows that the costs of product development in Russian firms are relatively high, and only slightly lower than that of Western competitors. This is due to the fact that human capital is the main element in the cost structure of a software company and an average salary in Russia for an experienced programmer is at the similar level to that in developed countries. As one of the respondents explained:

> "Our products are not cheap and have a similar price level with our western competitors. We have to pay our engineers high enough salaries so they stay motivated to work for us and to deliver their best output"

In other words, Russian companies do not have the "traditional" low cost FSA advantage of EM firms that has been extensively pointed out in the literature (e.g. Alon, 2010; Ramamurti, 2012). Additionally, our study reveals that Russian firms are capable to acquire a good understanding of the demands of developed and emerging markets' clients and to become flexible in the creation of new products to satisfy all types of markets. These results are only partly in line with existing literature which states that EM firms have an advantage in operating in other emerging markets due to them having a better understanding of the customers' needs (e.g. Cuervo-Cazurra & Genc, 2008; Ramamurti, 2012). These findings represent an important contribution to the EM literature because they enrich our knowledge about different types of EM FSAs.

Third, we emphasize that the existence of strong managerial capabilities of Russian firms is in contrast with studies that argue that managers in EM have a poor understanding of managerial practices (Fabry & Zeghni, 2003; Evangelista & Hau, 2009) and lack capabilities for global expansion (Cui et al., 2014; Knoerich, 2010). Our results indicate that Russian software firms can operate similarly to firms from developed countries which benefits their international expansion thanks to the global orientation and pro-active attitudes of owners (Andersson, 2000; Preece, Miles, & Baetz, 1998; Westhead, Wright, & Ucbasaran, 2001). This is another very valuable finding as many studies have criticized Russian management style and organization structures as being rigid, hierarchical and not transparent (e.g. Mihailova, 2015). Furthermore, it is the pro-active orientation of managerial teams and organizational climate that differentiate internationally focused companies from purely domestic ones. The locally operating companies (for example the two cases excluded from the final sample) have advanced products similarly to those that operate internationally, but managers did not have objective to expand abroad and instead concentrate on domestic market due to the better understanding of competitive dynamics. As representative of one of these firms mentioned,

> "We could have international clients if would decide to expand abroad, but we are fully busy with or local commitments and have no time and no willingness to spend more resources for activities that may bring us even lesser outcome than what we have at the moment in our region".

5.2. Institutional-based foundations of the competitiveness of Russian firms

The most important part of the findings of this study relates to the influence of institutional environment on the development of competitive advantages of Russian software firms. We have revealed a number of important institutional factors that differ in the nature of their impact on the international competitiveness of Russian firms, namely education, indirect state support, underdeveloped industrial and market infrastructure, lack of sophistication in

customer preferences, cultural features and liability of origin. These factors can be referred to as the institutional specific advantages or ISA of Russian firms. Furthermore, we argue that they influence the creation of FSA through three major mechanisms: (1) *support* by provision of resources for expansion such as education and indirect state support, (2) *push* by forcing the expansion due to underdeveloped infrastructure and customer awareness, and (3) *motivation* by incentivizing the expansion such as national cultural features and overcoming liability of origin. This classification represents a valuable tool for the understanding of the complex impact of multiple institutional forces on FSA of software companies. In the following, we explain the building blocks of the framework in greater detail.

5.2.1.Support

The support mechanisms imply the provision of institutionally based resources that help Russian firms to build capabilities to expand abroad. One of them is the availability of highly skilled technical employees and well-educated managers. This capability is rooted in the excellence of the Soviet era educational system and results in engineers and managers with the ability and vision to develop advanced and innovative products and services. The other is the existence of demand from state-owned organizations that provides Russian software firms with financial resources for internal development and creation of FSA for international expansion. Most importantly, we emphasize that although these specific institution-based resources are attributable to Russian context the rationale can be extended to and applied on other EM, as well as other industries. The concept of "institution-based resources" is applicable to evidence presented in earlier studies illustrating that e.g. in Chinese context government provides local firms with regulatory incentives and access to home-market based advantages, tax benefits, or preferential access to strategic resources (Deng, 2012). Chinese government can also be directly or indirectly involved in promotion of the international

operations of OFDI and provide them with financial, political and operational support (Cui & Jiang, 2010; Wang et al. 2012). Peng (2012) proposes that the Chinese government plays an important role in international competitiveness of Chinese firms, and Voss et al. (2010) illustrate how some specific regulatory policies introduced by home country governments encourage state-owned firms to engage in overseas expansion. Further, applying our findings to a Latin American context, the pro-market reforms can that be considered as an institution-based resource that has had a supportive impact on firms' international expansion (e.g. Dau, 2012).

Overall, the nature of institution-based resources can in some cases be associated with the country specialization or country-of-origin effect. For example, Fleury et al (2013) discusses that the difference in innovation patterns across EM are attributable to country specific characteristics. Furthermore, there could be differences in support mechanisms among industrial sectors where some can be in greater favour for institutional support than others. Thus, it is important to understand the differences across contexts in order to grasp the idea behind the concrete examples of institution-based support.

5.2.2. Push

In addition to the support mechanism, there are also serious negative forces that act as a push mechanism for Russian firms to expand abroad. As discussed in the empirical results section the issue that creates necessity for Russian companies to expand abroad is a lack of readiness in the domestic market for highly innovative software products and poor IT infrastructure. The concept of push factors has been gaining increasing popularity in EM literature (Jormanainen & Koveshnikov, 2012) Yet, while previous studies have focused on institutional deficiencies such as ineffective and unreliable regulations, corruption, weak property rights protection, non-transparent judiciary and legal systems, and unexpected

changes to regulatory policies (Child & Rodrigues, 2005; Meyer Morck, Yeung, & Zhao, 2008), the forces examined in this study have not yet been accounted for to a sufficient extent. Our study shows that the decisions to expand abroad is often driven by domestic market limitations such as in case of some of top innovative products which can easily find a demand in the more developed European and North American markets.

5.2.3. Motivation

The motivation-based institutional factors are, from our point of view, the most interesting and least examined part of institutional influence on international expansion of EM firms. They are also extremely challenging for analysis as they are deeply embedded in the national culture and are of a tacit nature. These factors have been sporadically discussed in the existing literature, but not systematically integrated with other elements of institutional environment. For example there is some evidence that expansion of Chinese firms is strongly driven by global aspirations (Deng, 2009; Knoerich, 2010). Yet, in Russian context existing explanations of international expansion were limited to the search for markets and resources (Kalotay & Sulstarova, 2010; Panibratov & Kalotay, 2009). Thus, the results of this study take the first step towards a better understanding of the role of culturally-embedded institutional characteristics in the creation of FSA for Russian firms.

Furthermore, we find that the liability of origin is of a dual nature. On one hand it represents an obstacle for international competitiveness and on the other hand it motivates Russian firms "to try harder". To overcome this liability Russian firms have to come up with creative approaches of doing business particularly in developed countries, which is particularly important in the beginning of their operations in a new market. Later, once the trust is gained, the effect becomes marginal, if existent at all. The interpretation of the interviewee data lead us to the conclusion that in a Russian context these negative forces

actually act as an important motivation for enhancing competitiveness. This phenomenon is embedded into Russian national culture and historical development where people are used to overcoming various obstacles and perform well under conditions of uncertainty.

This finding is consistent with evidence from existing studies of EM firms in knowledge- and technology-intensive industries. It is often stated that they they face the additional difficulties of gaining legitimacy and overcoming a liability of origin (Pant & Ramachndran, 2012). These are more prominent to EM firms than to firms from developed economies. However, our study emphasizes that Russian software companies perceive it as an motivation to providing customers with strong assurances about the quality of their products and services to overcome these liabilities.

5.3. Framework development

The aim of the discussion of the findings in light of the existing literature was to highlight the value of this study and to outline how these findings allow us to extend existing knowledge about competitiveness of EM firms. Two parts of the study – attributes of the competitive advantages and their institutional foundations were linked together in order to examine in specific terms the nature of influence of complex institutional forces and their implications for competitiveness of Russian software firms. This examination has allowed us to distinguish three major groups of mechanisms and to reveal that it is their combined impact that results in the creation of solid FSA of Russian firms. We illustrate these relationships in our framework illustrated in the Figure 1.

Insert Figure 1 about here

To summarize, Figure 1 shows that there is an intricate combination of institutional forces

of supporting, push and motivational nature that represent ISA. This approach to the understanding of institutional environment is broader and more comprehensive than that of institutional voids (Khanna & Palepu, 1997) or formal vs. informal institutions (North, 1990). We argue that these different forces co-exist together and simultaneously affect the international competitiveness of firms at different levels. Indeed, their influence is important in creation of technological capabilities, organizational competence and attitudes of managers towards challenges in international expansion.

6. Conclusion

In this study we focused on the understanding of institutional foundations of international competitiveness of EM firms in the light of empirical evidence collected from our interviews with Russian software firms. We argue that our findings help to inform and extend existing research in EM field in a number of ways.

First, the study enrich our knowledge about attributes of competitive FSA of EM firms that are based on technological and managerial capabilities and can be successfully exploited in the international expansion to developed and emerging economies. These FSA are similar to those of developed countries firms and have not been acknowledge in previous studies on internationalization of EM firms. We offer evidence supporting a counter-view to prevalent assumption that EM firms' strengths are inferior to those of developed market firms and rooted in capabilities that are specific to EM include such as e.g. an ability to deal with weak institutional environment (Cuervo-Cazurra & Genc, 2011) or innovate for developing countries (Ramamurti, 2012).

Second, in this study we respond to the call voiced by Luo & Wang (2012) who drew attention to the fact that little is known about how exactly numerous and contradictory forces inside a home country's institutional environment shape an expansion of EM firms. We

dismantle the complexity behind the institutional forces in EM by distinguishing support, push and motivation mechanisms and examine the rationales of how they influence the competitive advantages of EM firms in a global business arena. One of the most interesting findings of this study is that in context of EM even negative institutional forces, such as underdeveloped infrastructure or liability of origin, can result in the in the strengthening of FSA required for succeeding in global competition. Moreover, the results of this study allow us to draw attention to the fact that the culturally-embedded attitudes of owners and managers play a vital role in internationalization strategies of EM firms. Thus, we extend the institutional view on strategy (Peng et al., 2008) as well as deepening the knowledge about the links between FSA and ISA in EM (Rugman, Verbeke, & Nguyen, 2011).

Third, we offer an example of how specific country-of-origin institutional effects shape the competitive advantages of local firms. Using evidence of Russian firms we extend the contextual diversity of studies on internationalization and competitiveness of EM firms. While evidence of Indian, Chinese and Brazilian firms has been discuss in scholarly work (e.g. Arora et al., 2001; Arora & Gambardella, 2005; Fleury et al., 2013; Narayanan & Bhat, 2009; Niosi & Tschang, 2009), Russian firms' competitiveness in the technology-intensive sectors has not yet been sufficiently understood. Moreover, we provide a discussion about the differences in international competitiveness of firms for these EM and draw conclusions regarding the underlying foundations for these differences.

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Figure 1. ISA-FSA Framework

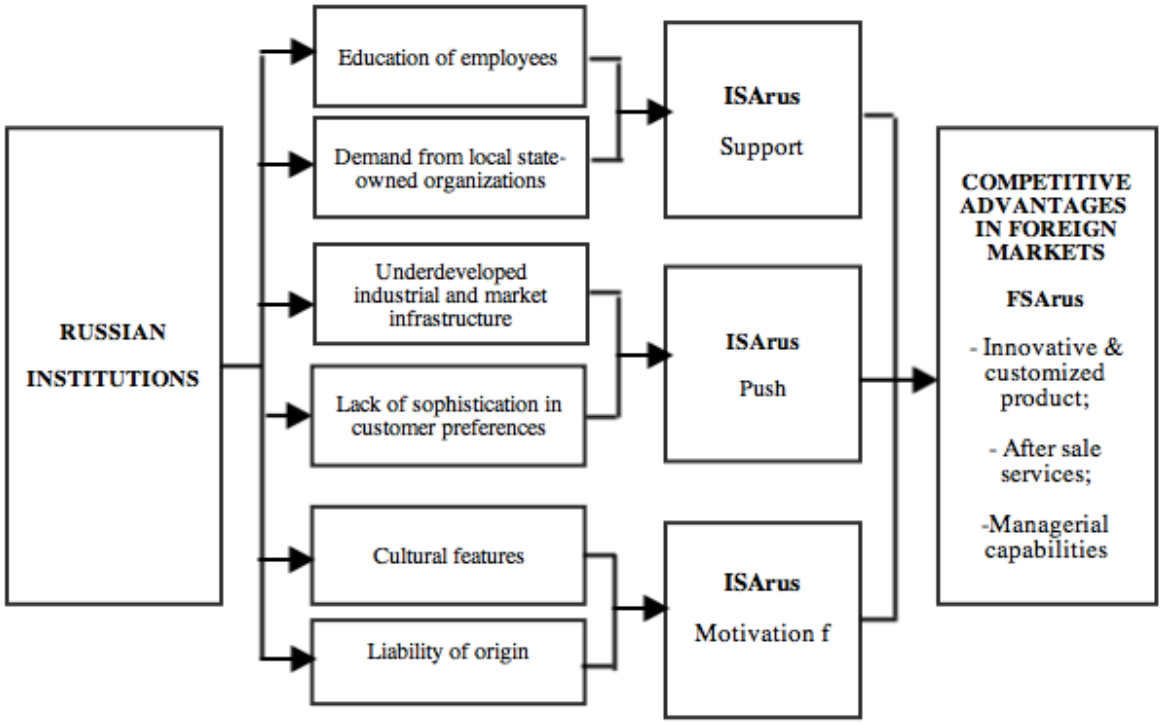

Table 1. Case description

Features/ Case numbers	**Pilot company**	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
Sector	Software, services	Software, services	Software, hardware, services	Software and IT services	Software and IT service	Automation	Software, hardware
Leading products	Software solutions for mobile systems	Software solutions for banking and trading companies	Science intensive solutions, prototypes (on demand)	Mobile technology, electronic finance, e-payment, applications for smartphones and new network devices	GPS systems and car tracking service	Management and control systems for hydroelectric stations	Speech recognition and identification software, recording devices
Headquarters	Russia	De jure – New York, the USA; de facto – Russia	Russia	Russia	Russia	Russia	Russia
Founded (year)	2007	2002	1991	2001	2006	1991	1990
Revenue, 2011 (mln.rub)	n/a	150	300+	$200 + mln		n/a	600
Revenue growth 2011/2010(%)	10%	15%	n/a	n/a		n/a	12%
Employees	30	100	300	800	30	n/a	350
Founder's background	Technical	Technical	Technical		Technical	Technical	Technical
Important geographical markets	Russia Finland	Russia, the USA, Great Britain, Germany, Australia, Czech	Russia, Finland, Sweden, Denmark, the USA, Germany	80 countries	Russia, Ukraine, Brazil	Russia, CIS, Hungary, Slovakia, China, India	CIS, Europe, Scandinavian countries (total – 74)
Offices and subsidiaries locations	Russia, Finland	Russia, the USA, Vietnam	Russia	Russia, Ukraine. Kazakhstan, India Mexico (at the moment closed), Brazil, China	Russia, Brazil	Russia	Russia, Belarus, Finland, Germany, the USA
R&D centers locations	Russia	Russia	Russia	Russia	Russia	Russia	Russia
Share of international operations in total revenue (%)	20%	More than 90%	30-40%	More than 60%	Over 50%	More than 20%	n/a
Clients profiles	Individual consumers	Mostly private organizations	Mostly private organizations	Mostly private organizations	Governmental and private organizations	Mostly governmental organizations	Private and governmental organizations

Table 1. Case description (cont.)

Features/ Case numbers	**(7)**	**(8)**	**(9)**	**(10)**	**(11)**	**(12)**
Sector	Internet-service	Software and IT services	Software	Software and IT service	Software	Software
Leading products	Internet search engine	IT solutions for educational institutions	Professional software for other developers	Machine translation	High-end software and application development, implementation and maintenance	Anti-virus programs and systems
Headquarters	Russia	Russia	Russia	Russia	Russia	Russia, Germany, USA, Hong-Kong, Japan
Founded (year)	1997	2007	2000	1991	2001	1998
Revenue, 2011 (mln.rub)	20 033	More than $1 mln according estimated	n/a	Around $150 mln according estimated	$20 mln	$500 mln +
Revenue growth 2011/2010 (%)	60%	100%	n/a	18%	24%	16%-111% depending headquarter
Employees	2500	200	250 +	100	100	2400
Founder's background	Technical	Managerial	Technical	Technical	Technical	Technical
Important geographical markets	CIS, Turkey	Ukraine, Poland, Hungary, Israel, USA, China, Germany	USA and Europe	Western Europe and USA	30 countries	UK, Germany, China, USA (overall 200 countries)
Offices and subsidiaries locations	Russia, Ukraine, Kazakhstan, Belarus, Turkey	Russia, Ukraine	Russia, Czech Republic, USA, Germany	Russia, Germany, USA	Russia, USA, Germany	30 regional offices over the world
R&D centers locations	Russia, Ukraine, the USA	Russia	Russia	Russia	Russia	Russia, USA, China
Share of international operations in total revenue (%)	More than 20%	n/a	80%	15%	70%	84%
Clients profiles	B2C and mostly private organizations	Governmental organizations	Private organizations	B2B and private individuals	B2B and private individuals	B2B and B2C