Uncovering the Social Development Role of the Venture Capital process:

Economies in transition in Central and Eastern Europe.

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Abstract

Central and Eastern European countries have either completed or are still going through a profound process of structural transformation. One of the stated goals of these metamorphosing governments is to create dynamic, market-based economies in which Enterprise features as a key element. Venture capital finance may serve as one of the tools to assist in realising this goal. This article proposes a theoretical framework for analysing the emergence of a venture capital industry in a national economy undergoing major structural transition. Utilizing resource dependence theory and institutional theory, the paper describes the wide range of factors influencing the development of a national venture capital industry. Due to its multilevel construction, the model allows interdependencies between stakeholders involved in venture capital financing to be identified and appraised, as well as highlighting areas of good and weak performance of the emergent venture capital industry.

Introduction

After 1989, most of the countries in Central and Eastern Europe (CEE) constituting the former 'Soviet bloc' attempted to transform their economies from the centrally planned model to systems that could be identified with, and integrated into, Western market-based economies. In order to realise this transition, creating a strong small and medium enterprise (SME) sector, rich in innovative firms, became a priority for all such governments. The experience of leading Western nations indicated venture capital's (VC) relevance for financing Young Innovative Companies (YICs), and its ability to identify and support potentially disruptive technologies of future strategic value [1]. Thus a robust and successful VC industry was widely perceived as a key element in building the infrastructure of any modern, 'new enterprise' friendly, economy [2, 3]. However, in the case of transition economies, the development of SMEs requires the consideration of additional factors peculiar to the CEE countries and which extend beyond the normal economic processes. In these former Soviet economic satellites, the pace and nature of development is strongly influenced by an external ideological environment which is often hostile in social, economical and political terms to the necessary market changes [4].

There remain significant shortcomings in the current academic literature on Enterprise/Entrepreneurship. The historic and dominant focus of Entrepreneurship scholars is on developed economies, i.e. the process of emergence, growth and development of the VC industry – primarily in the US [5, 6] or Western Europe [7, 8]. In these regions, the implications and experience of enterprise policy is increasingly well understood. In stark contrast, the literature discussing the emergence and functioning of the VC industry in

transition economies, by its paucity, shows the still relatively weak coverage of the subject [9].

The paper seeks to help address this asymmetry. It provides a conceptual framework which will allow evaluation of the emergence and development of a national venture capital industry in economies that either went through, or are still in the process of, structural transformation. Application of the framework will help identify factors having the greatest influence on the mode and pace of development of the VC industry, as well as indicating elements which are unique for transition economies (compared with developed markets). The framework may also help the formulation of appropriate policy advice.

Theoretical assumptions

The conceptual framework aims to capture the complex character of the researched phenomena. Pioneers in newly established industries face multiple threats and high levels of uncertainty, which arise from economic trade-offs as well as from the lack of both cognitive and socio-political legitimacy for the new enterprises [10]. In the West, especially in the US market, VC was created by practitioners from science and engineering to meet the resource needs of nascent firms. The theoretical understanding of VC behaviour arose *ex post*. In contrast, in Central and Eastern European countries VC development can be described using an existing theoretical framework. We can employ two axes: conceptual and contextual with the latter axis being the less developed. On the conceptual axis VC is already fully recognised, although further development may be needed to accommodate the new conditions arising from the context that the research is addressing. On the contextual axis, the economic and social conditions of transitioning economies in central Europe are very different from what was observed in Western Countries. This may create both new threats as well as new opportunities for start ups.

The emergence of the industry is perceived as a 'process', i.e. defined as 'a sequence of individual and collective events, actions and activities unfolding over time in context.' [11:338]. The reality is perceived as a dynamic system. Within this understanding, actions drive processes. However, processes cannot be explained simply by combining individual or collective actions. Actions are embedded in context, 'which limits their information insight and influence'.[11] The mutual interdependence between agents performing the actions and the context in which the actions take place has to be acknowledged and understood [11]. Context is defined here as the surroundings associated with phenomena, which help to illuminate those phenomena [12:31]. These are circumstances, conditions, situations or environments that are external to the research phenomena and enable, or constrain, it [13]. They frame organizational behaviours as well as attitudes [12]. The effects of context on the research results can be both subtle and powerful. Following Granovetter [14], although economic conditions may restrict the number of possible choices available, the individual and collective actions channelled through existing networks determine which possibility is chosen. Therefore, the specifics of a particular social structure may determine different outcomes even if the economic and technological conditions are similar across various social contexts [14].

The two leading theories used in the conceptual framework are the 'resource dependence theory' proposed by Pfeffer and Salancik [15], and 'institutional theory' proposed by North [16]. The resource dependence theory claims that an organization's survival depends on its ability to acquire and maintain sufficient resources from the environment. Accordingly, it is important to document the flow of resources between an organization and its environment

with respect to the criticality and scarcity of analysed resources. Organizations are able to purposely model their multiple relationships with the environment by employing a variety of strategies. However, the way organizations perceive their environment and interact with it remains socially constructed and embedded [15]. Although the resource dependence theory was originally formulated for use at the level of the individual organization, it is believed that its use at the population level may bring valuable insight into the relationships within the VC industry. Because the theory focuses on the process of *acquiring* resources (which is an innovation compared to earlier theories which concentrated mainly on the *allocation* of resources, and thereby neglect the acquisition processes) it allows the inclusion of both internal and external stakeholders in the analysis. The inclusion of power distribution across all actors within the industry should make it possible to expand the analysis up to the population level.

Institutional theory is believed to provide a valuable insight into the processes of establishing and developing strategies that ameliorate the 'constraints' influencing human behaviour [16]. North [16] draws attention to two sources of economic incentives: formal and informal. He defines the institutional framework as a 'political structure that specifies the way we develop and aggregate political choice, the property rights that define the formal economic incentives and the social structure – the norms and conventions that define the informal incentives in the economy.' [16:49]. He argues that learning is transmitted between past and present generations via culture. Culture shapes the way societies perceive 'their' world. Thus interpretations of the world vary across cultures and result in examples of diverse institutions (norms and conventions) leading to the same particular desired behaviour. Thus the learning processes of individuals and organizations are crucial for the formulation and evolution of institutions, which are in turn incremental and path dependent [16]. Summing up, the way organizations act is determined by the way they perceive their environment. The organization's understanding of an environment is usually represented by the behaviour and interactions of their key stakeholders. The stakeholders' perspective is shaped by their cultures and learning processes, which are both individual and path dependent. Therefore, in order to better understand the processes of a specific industry's emergence and development, it is necessary to acknowledge the role of context at the level of the stakeholders' perceptions.

Organizations, in this case VC firms, might be analysed at different levels of observation, i.e. the community level, population level and firm level. Each of those levels of analysis can, and is likely to, deliver different outcomes [17]. The community level refers to the relationships between the individual VC firm and its close stakeholders such as investors and entrepreneurs. However, such a community can and likely includes other important industry actors including research centres or professional associations. At the population level, the cohorts of VC firms are under investigation and at the firm level the single VC firm. At each of the levels of observation we will apply both theories.

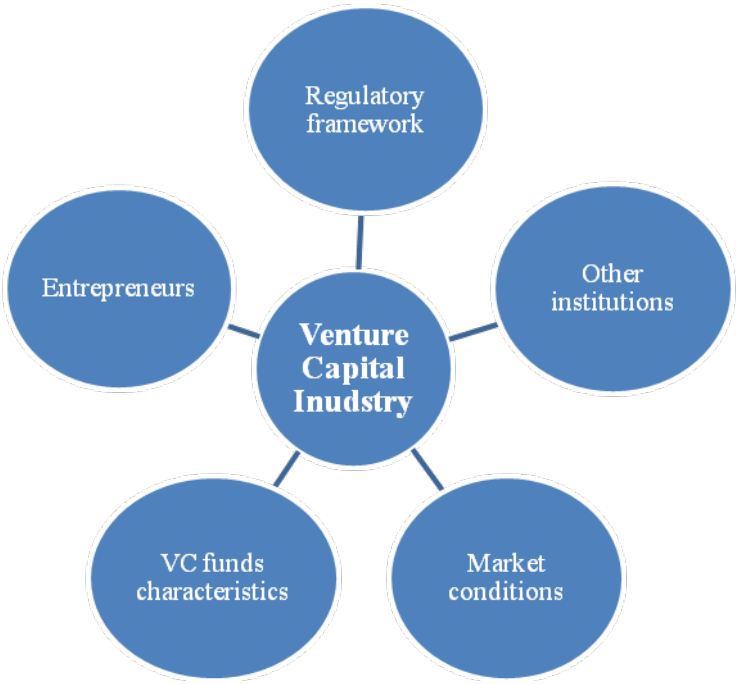
The template

In order to apply theory consistently, a template is constructed. The presented template acknowledges existing models present in the organizational literature, especially those referring to entrepreneurial ecosystems. Emergence of infrastructure requires 'accretion of numerous instrumental, resource, and proprietary events that co-produce each other over an extended period.' [18:212]. Thus, incorporation of elements of the industry environment into the framework allows an examination of the interdependencies between them happening over time and observing the process of developing the industry infrastructure. However, while

analysing the template, highlighted elements of the environment should not be treated as 'externalities' to the examined industry.

The elements of the framework, which represent a set of environmental factors affecting the VC industry, are extracted from the existing empirical and theoretical literatures on the VC industry in developed economies. The main themes include: the regulatory framework, other institutions having direct and indirect relationships with VC firms, entrepreneurs, market condition, culture, and VC firms' characteristics. Under each of the main themes, specific sub-themes are expanded. Although the number of factors influencing VC industry development discussed in the literature is large, the focus is not equally shared. The following section concentrates on components of the VC industry infrastructure that are believed to have the strongest impact.

Figure 1: A summary framework for VC industry analysis



Regulatory framework

The legal system operating in a particular country establishes the fundamental platform for coexistence and cooperation between organizations and individuals. La Porta et al. [19] points out that the existing legal rules, as well as financial institutions present in a country, are significantly influenced by the origins of the laws. Although there are no two countries with an identical legal framework, there are sufficient similarities in certain areas to allow the identification of separate 'legal families' or 'legal traditions' [20]. The two broad categories of national systems are the 'Civil Law' and the 'Common Law'. 'Civil Law' is based on Roman traditions. The existing regulations are organised in form of codes and statutes. In contrast the 'Common Law' is formulated on the base of precedence. Each independent decision undertaken by a judge in individual case creates a precedent, serving as an empirical benchmark for further similar cases [20]. Because the original source of both categories of law may be seen as a 'style of social control of economic life'[19] some general features, characterising each category can be identified. A 'Common Law' tradition compared to a

‘Civil Law’ approach is perceived as being more protective of outside investors. It represents a lower level of formalism in judicial procedures and judicial independence [19]. Furthermore, the evidence exist that independence of judges and simplified juridical procedures are associated with better contract enforcement and stronger protection of property rights [19]. The prevailing legal system can influence a government’s response to new situations. As a generalisation, ‘Civil Law’ countries are more in favour of direct state control, whereas those where there is a ‘Common Law’ basis focus on litigation, and market supporting regulations [19].

From the VC perspective, the existing legal framework can influence strongly the shape and pace of VC industry development [21, 22]. VC operates in a complex and subtle network of cooperation with a diverse range of agents, working to very fast and flexible schedules. The means and aims of the cooperation are often dominated by sophisticated and emerging technologies that generate legal novelties concerning transfer, or sharing, of ownership rights. Above all, these risk capital providers operate in environments of very high risk and uncertainty as to the commercial success of the enterprises supported. These features mean that much more of the general law is relevant to the industry than just routine contract law. Features most commonly cited in the literature are property rights, ‘capital gains tax’ and other forms of taxation, accounting standards, corporate governance standards, bankruptcy law and labour market regulations. Understanding the legal framework in which the national VC industry is operating allows a deeper assessment in context. Which type of legal tradition applies in the specific case under study provides the background for explaining, and attempting to predict the direction of changes in the legal framework and its consequent implications for enterprise activity and behaviour.

Other institutions

VC firms operate as financial intermediaries [23]. They interact directly with investors and portfolio companies (entrepreneurs). Possible institutional investors, such as pension funds, banks, corporations, insurance companies, endowment and foundations [23] should also be considered here. The characteristics of entrepreneurs and VC funds are discussed in separate sections.

Besides the close relationships between the investor - venture capital fund – entrepreneur, there is a range of other organizations with which they are each either directly or indirectly connected. The participants of VC industry each demonstrate different strengths and types of bargaining power in shaping the relationships. One of the most significant players is the government: which sets the overall framework for VC operation by establishing a legal framework, formulating policies and increasingly creating tailor made programs dedicated to stimulating certain desired outcomes from a VC industry. Government’s actions can both facilitate and constrain the industry [22, 23]. In this case, such elements to be considered include the government’s attitude toward the industry, including consideration of existing and proposed policies as well as ongoing programs.

Other organizations that play significant roles are the incubators and science parks as providers of corporate spin offs and university spin offs that fuel the VC firms’ ‘deal flow’ [24]. Thus the quantity and quality of such institutions need to be considered on industry emergence. The analysis of universities ought to be holistic, as they are education providers for entrepreneurs and potential management teams as well as a source of R&D. In short, knowledge production and access is a key context in order to understand the operation of a modern VC industry

Business angels should be acknowledged as a source of bridge finances for companies which are still too young to seek formal venture capital [24, 25]. The relationship between VCs and business angels is dynamic and important. Thus they require special attention.

Additionally professional associations that promote industry good practices and build/sustain networking are important, especially in situations where the institutional environment is weak [4]. Therefore an analysis should not be limited only to VC associations but should include other professional groups and organizations promoting entrepreneurship, innovation or developing platforms where various stakeholders can meet. The documenting of these interlinked associations should allow us to provide a dynamic topography of the net of relationships between different organizations within the VC industry. Implicit within such a description is the charting of the flow of resources and power between such networked groupings or interests.

Market conditions

One of the dimensions of the environment in which VC firms operate is the macro conditions. VC activity is strongly cyclical and responds to the changing conditions of the public markets [26].

The literature indicates well developed financial markets [22, 27], growth in gross domestic product (GDP) and technological opportunities [21, 28] as the proxies for VC activity. Gilson and Black [27] highlighted the crucial role of financial markets in exit strategies for VC funds. The opportunity to liquidate the VC fund's investment though initial public offering (IPO) offers advantages for all stakeholders involved in the investment process. From the investors' perspective, successful exits though IPOs (or other routes including trade sales) allow an evaluation of the managerial skills of venture capitalists. Investment results dictate which VC managers to cooperate with in future. They provide assessment of the risk to return of investment ratio, which creates a basis for deciding whether to continue of or withdraw investments into VC funds. Additionally, IPOs offers a benchmark for appraising the performance of the industry. Taking in account the difficulty in acquiring reliable data on VC industry performance this option provides additional information. The VC fund builds up its reputation, as well as being able to maintain some control over the portfolio company after going public. The portfolio company gains credibility with third parties. Presence of well developed stock markets increases the efficiency of contracts between investors and VC funds and between VC fund and portfolio companies [27].

Growth in gross domestic product (GDP) is perceived as another factor influencing the VC industry. Consequent on a growth in GDP, new opportunities arise for entrepreneurs, and thus the demand for VC financing is increased [21]. However, in less market oriented economies, the positive effect of GDP rates on VC flows is can be reduced by the high degree of labour market rigidity [28].

Classic VC activity is also influenced by the existing technology opportunities, such as the growth rate of research and development (R&D) investment, the available stock of knowledge and the number of high value patents [28]. Gompers and Lerner [21] indicates the positive relation between industrial firms' R&D spending and VC investments. Government's investments in R&D along with defence spending in general are perceived to be important factor of enabling conditions for VC industry development both in the US and Israel [29].

Within this section, attention should be dedicated to the analysis of the general state of the national economy in which the VC industry is operating. Special attention should be given to financial markets, followed by the evaluation of stock markets for young companies. The level and quality of R&D as well as alternative sources of finance for young companies' should be acknowledged including state aid and banks. The market conditions along with the legal framework construct the environment in which VC is immersed. The crucial question is how the VC industry copes with this environment.

VC funds characteristics

The individual characteristics of a VC funds influences their opportunities, motivations and performance. Gompers [30] argued that young VC firms take their portfolio companies public earlier compared to older VC firms. Gompers rationalised that the motivation behind such a behaviour was the need to establish quickly a reputation with investors in order to facilitate the raising of further funds. In addition to reputation, the age and size of a fund affect the ability of the fund to raise new capital [21].

Venture capitalists' expertise is often based on tacit knowledge, which is gained though apprenticeship. Therefore the funders' experience influences the fund's performance [31]. Walske and Zacharakis [31] indicated prior venture capital experience and senior management experience as two leading elements of success. Longer presence on the market easier acquisition of further funds due to established networks, proved quality, better opportunities to syndicate, and secure underwriters to take their portfolio companies public. The VC fund benefits from senior management experience in three ways. Firstly, senior managers are usually the standards to which entrepreneurs aspire. Secondly, experienced managers have acquired the operational skills for monitoring investments. Thirdly, the extensive network in the industry in which they worked previously helps them to recruit high quality personnel [31].

The expectation of a required rate of return differs between funds depending on the stage of investment as well as whether they are privately or publicly funded. Early stage specialists require higher returns compared to those investing in later stages. Independent VC usually expects higher returns compared to captive or public ones [32].

The investment style, whether is passive or active, depends on investor types [8]. The prior business experience of investors usually leads to more active style of investing. The human factor is perceived as crucial to recognizing opportunities, as well as for financial intermediation [8].

Clustering of VC firms in certain geographical areas, which provide unique business infrastructure, provides additional development opportunities, where such complexes as Silicon Valley or Route 128 could serve as examples. The regional advantage in such cases arises from the contiguous process of innovation and collective learning [33].

The following section should focus on the internal structure of the industry such as characteristic of funds in operation, their management teams, and patterns of investment, syndication and clustering.

Entrepreneurs

The entrepreneurs seeking VC finance for their projects generate the demand for the industry [26]. Thus their presence is crucial for the industry. Becker and Hellmann [34] indicated a dearth of high quality entrepreneurs as one of the factors responsible for the failure of the German attempt to create agile venture capital. Also Keuschnigg and Nielsen [35] suggested management mistakes as the root of business failure, at the same time indicating the need for governments' support of entrepreneurial training.

Thorough analysis of the available human capital is required at this stage. This includes the demographics of potential and existing entrepreneurs, their education and professional training, as well as their level of risk awareness and motivation behind running their businesses.

Culture

Referring to North [16], norms and conventions create the informal incentives in the economy. The influence of culture on individual and firms actions is subtle but substantial. Entrepreneurial behaviour is neither mechanistic nor homogeneous [36] therefore culture, as a source of informal institutions, and the role of trust, as a factor shaping behaviour, are given priority in the analysis. According to the research, VC operates better in countries where entrepreneurs are given high status [37]. The corollary to this is that lack of entrepreneurial traditions and lack of ethos is often perceived as major obstacle for VC performance [38].

Trust defined as "the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action." [39:5] will be given special attention because it has significant effect on VC investment decisions at both the individual and organizational level [39].

Conclusion

This theoretical template aims to capture the complexity of VC industry infrastructure. It allows the analysis to be conducted in several dimensions: within the theme; between the main theme and the VC industry; as well as between themes. It also fulfils the postulate of 'engaged scholarship', where the research aims to investigate different perspectives of the key stakeholders [40]. The five main themes extracted from the literature are believed to provide the core factors responsible for the shape of VC industry in developed economies. The hierarchy of factors for researched VC industry should be revised individually and in particular context.

The limitations of the framework arise from the complex and dynamic character of the VC phenomena. There might exist some factors, unique for the individually research industry, which are not included in the discussed template. Thus, the researcher should be aware and ready to tailor the framework in order to fulfil needs of individual cases.

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