THE RATIONALITY FOR GOVERNMENT SPONSORED VENTURE CAPITAL FUNDS IN LITHUANIA: INNOVATION PERSPECTIVE

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Abstract

It is widely accepted that early stage SMEs encounter many obstacles which restrict their innovation performance. Limited access to finance is considered as the key obstacle for business development in its early stage. Market failures emerging due to lack of risk capital provision to early stage firms are one of most popular rationality for governments’ intervention in the venture capital market. Following this purpose many countries around the world are launching various public policy schemes in order to diminish lack of supply of capital to early stage SMEs, for instance Yozma in Israel, SBIC in U.S., Labour Sponsored Venture Capital Corporation in Canada and etc. In this paper we refer to government sponsored venture capital fund as a venture capital fund raised from public and private sources in order to meet public policy objectives – to create favourable environment for early stage business development and to give an impetus for innovation creation potential in SMEs.

Keywords: Government sponsored venture capital fund, innovative Small and Medium Sized Enterprises, public policy.

JEL Classification: G28, G24, O32.

Introduction

Substantial amount of researches emphasized the huge contribution of small and medium sized-enterprises (SMEs) to economic growth, mainly, due to innovation perspective and job creation. Financing of SMEs is very popular topic in academic literature (Adamoniene & Trifonova, 2007; Tamosiunas & Lukosius, 2009). The main goal of governments around the world is to establish favourable environment for business development which usually results in positive impulses to Economy. Recently many actions in Europe towards increasing venture capital investments took place under the EU JEREMIE initiative.

Various governments’ sponsored schemes were analyzed in scientific discourse trying to focus on success factors and to find out the real impact of governments intervention in venture capital market. The empirical researches encompass the well developed venture capital markets in the world: The U.S. Small business innovation research (SBIR) programme investigated by Lerner (1999), the UK public policy scrutinized by Nightingale et al. (2009) and Munari and Toschi (2010); the critics for Labour Sponsored Venture Capital Corporation (LSVCC) in Canada were provided by Cumming and McIntosh (2006). Recently the growing number of researches are focused in the development of venture capital market in less developed economies: Venture capital perspectives in Central and Eastern European countries (Klonowski, 2006); also public policy initiatives in fostering venture capital in Lithuania (Snieska & Venckuviene, 2011) and etc.

In this paper we refer to government sponsored venture capital fund as a venture capital fund raised from public (state or regional government authorities) and private sources in order to meet public policy objectives – to create favourable environment for early stage business development and to give an impetus for innovation creation potential in SMEs.

The analysis in the research field focusing on governments’ intervention in venture capital market provides with advantages and disadvantages. And there is no consensus whether it spurs innovation or provides with counterfactual results. Some researches indicate that governments’ efforts to boost the entrepreneurship, could reveal in the positive economic outcome (Lerner, 2010), meanwhile others emphasize that it results in “crowding out” effect, or increases the risk of irrational allocation of public money (Cumming and McIntosh, 2006). Then research questions arise, what outcome can be expected from government’s intervention in venture capital market and what are the incentives for its successful participation in venture capital market meeting the goals of public policy initiatives.

Thereby, the aim of this paper is to explore the role of government in venture capital market and to identify the core factors for its successful participation in venture capital market seeking to create favourable environment for promising SMEs.

The objectives of the article are presented below:
1) To explore the relation between venture capital and innovation;
2) To reveal the role of government in development venture capital market;
3) To explore the effect of government sponsored venture capital funds in the economy
4) To explore the impact of government sponsored venture capital funds on enhancing innovation in small economy.

Research methods employed in this paper are as follow: literature review, analysis of existing public initiatives for creation government sponsored venture capital funds, EVCA data analysis, and the pilot research in determining the factors of venture capital markets’ development in Lithuania as well.

**Venture capital for innovation**

Venture capital financing is a popular topic in academic literature and public media as well. According to the U.S. practice, “Venture capital firms are Professional, institutional managers of risk capital that enables and supports the most innovative and promising companies” (NVCA Yearbook, 2010, p. 7). While in Europe, the venture capital definition is not so strictly observed, and involves investments in later stage of business development as well. Usually, the target companies for venture capital investor are new technology based firms (NTBFs).

Various research (Lerner & Kortum, 2000; Lerner, 1999), mostly based on the U.S. example, underline the venture capital financing as important factor for the economic growth and its positive effect on innovation and employment.

The researches in the field of venture capital financing provide evidences, that venture capital financing is related to the higher portfolio companies’ professionalization level (Hellmann & Puri, 2002), faster product to market strategy (Hellmann & Puri, 2000), positive increase in internationalisation activities (Fernhaber & McDougall-Covin, 2009; Lockett, Wright, Burrows, Scholes, & Paton, 2008); firms’ growth in terms of employment (Engel & Keilbach, 2007); firms innovation strategy (Da Rin and Penas, 2007). According to Da Rin and Penas (2007) “(...) venture capitalists selectively push portfolio companies towards choosing innovation activities which result in the accumulation of absorptive capacity, and towards more permanent in-house R&D efforts”.

Yet there are some studies, which provide weak support for venture capital financing and innovation. For instance, Engel and Keilbach (2007) found, that innovation performance did not change significantly, after receipt of VC financing comparing to control group. Caselli et al. (2009) provide evidences that venture capital influences the growth in firms’ sales, rather than innovation performance.

It must be noted, that whether venture capital influences the innovation creation mostly depends on what we consider as innovation. Yet most research on venture capital impact on innovation use “patents’ counts” as the main measure for innovation (Caselli, Gatti, & Perrini, 2009; Engel & Keilbach, 2007), although other studies uses “total factor of productivity” (Hirukawa & Ueda, 2011). To summarize this section, it can be noted, that quantitative research in assessing venture capital impact on the investees innovation performance is the most popular.

Still patents do not purely represent the multidimensional innovation performance in a company. Thus maybe the qualitative empirical methods (interview or questionnaire) with the chief management team as experts could reveal the broader impact of venture capital on different investees’ innovation aspects.

**Governments intervention in venture capital market**

Enhancing entrepreneurship through creation of favourable environment for business development, by providing direct and indirect (through the independent financial intermediaries) government’s support for innovative young companies is essential topic in the venture capital research scope during the last decade (Brander, Du and Hellmann, 2010; Murray, Cowling and Liu, 2010; Lerner, 2010).

The OECD study depicts three main governments’ participation in venture capital market (OECD, 1997): 1) direct participation in terms of provision of capital to venture capital firms, 2) indirect – making financial incentives for venture capital funds and 3) regulations and control.

Recent research by Brander et al. (2010) assess the government participation in venture capital market and they depict three types of government sponsored venture capitalists (GVCs): 1) “full GVCs” – government–owned venture capital funds; 2) “partial GVCs” – government investment in venture capital funds with other private investors (for instance US Small Business Investment Company (SBIC) and the UK...
Innovation Investment Fund (IIF)); 3) “Indirect GVCs” – providing subsidies or tax relief for venture capitalists (Canada’s Labour-Sponsored Venture Capital Programme).

The analysis of earlier venture capital models revealed that the main actors in venture capital financing process are: 1) passive investors, which invest in venture capital fund under the limited liability partnership agreement, and are named as limited partners (LPs); 2) venture capitalists, who are responsible for management of venture capital fund, and are considered as general partner (GPs); and 3) entrepreneurs (or companies), the target investees for venture capital funds. Such a model is proposed by Zider (1998), where the government represents the first group and is passive investors (among others private and institutional investors).

The model in figure 1 is tailored to the situation when government and private investors’ co-invest in venture capital fund and the management of this fund is delegated to professional venture capital management firm. This structure often is name as ‘hybrid’ due to involvement of public and private sources. According to Murray et al., (2010) “As a special LP, and usually the largest single investor in the fund, the government can choose to use its financial leverage to the direct benefit of other investors in the fund rather than maximising its own financial returns”.

However the model in figure 1 does not reflects the other aspects of government sponsored venture capital funds: the indirect government’s intervention when the tax relief is provided; or the situation when government is the only investor.

Figure 1. Generic Model of an ‘Equity Enhancement’ Program based on UK’s Small Business Service proposed Enterprise Capital Funds, 2004 (Murray et al., 2012)

Whereas recent research by McCahery and Vermeulen (2010) highlights the importance of government’s participation not only like co-investor but also its role in ensuring the trust among participants. According to McCahery and Vermeulen (2010) government should co-invest in venture capital funds alongside with corporate investor, thus twofold aims could be met: 1) to guarantee the trust among participants in the market; and 2) to enhance the emergence of sector-specifics venture capital market (McCahery & Vermeulen, 2010).

It must be noted, that four main interested parties in government sponsored venture capital funds should be discerned. The interaction among the interested parties is the background for effective venture capital markets’ performance.

1. Private and institutional investors encompass the first interested party. Their main interest is to invest fruitfully and yield high return on investment (ROI).
2. Risk capital management firms are the second interested party, which aims to find young promising companies, to venture them and successfully organise the exit of investment, which is the core element for future investments partnerships and ensure the trust and endorsement among the institutional partners.
3. Entrepreneurs and innovative young firms comprise the third interested party, which aim to get finance for the developing new ideas, products or to spur the company’s growth. Their target is competitive and fruitful innovative company.
4. The fourth interested party is the government (the State) which represents societies’ interests – to ensure the friendly environment for business creation and development, which yields benefits for the economy and society as well. The practical examples show that sometimes there is lack of transparency and accountability in various public decisions. For example, there is a negative preconception in the society in terms of organising public procurements for the structural funds allocation and etc. Thus important role of
government is to ensure that public money is given into reliable ‘hands’, and will yield benefits for the society.

**Empirical research review on effect of government sponsored venture capital funds**

Various authors attempt to assess the effect the government sponsored venture capital funds have on Economy. Mostly the academic literature covers the research studies of government sponsored venture capital in developed countries: U.S. SBIC (Small business investment companies) and SBIR (Small business Innovation research) programmes, UK (Enterprise Capital Funds (ECF), - Early Growth Funds (EGF) and etc.), Israel Yozma, Australia, Canada and etc.

There is no consensus in academic literature, whether government’s support for venture capital funds is effective way to foster entrepreneurship and innovation. However, empirical evidences provide advantages and disadvantages for government sponsored venture capital funds (GVC).

**GVC fosters the development of venture capital markets.** Cumming (2007) find a relation to Australian venture capital market development; Del-Palacio et al. (2009) argue that government’s intervention is related to Spanish venture capital development.

**GVC tends to invest more in early stage companies with high technology background** (Munari & Toschi, 2010; Murray et al. 2010; Cumming, 2007). For example, Cumming (2007) indicates that “(...) that the IIF program has facilitated investment in start-up, early stage and high tech firms as well as the provision of monitoring and value-added advice to investees”.

**GVC is associated with growth of high tech employment.** The analysis of hybrid venture capital funds in UK (Nightingale et al., 2009) find that “The actual number of additional jobs created by all the 782 recipient firms was 1,407 more than would be expected without funding (or 1.8 extra jobs per firm)”. 

**GVC financing is related to subsequent follow-on financing.** The research by Murray et al. (2010) show that companies financed by governments sponsored venture capital scheme (in a case of Australian Common Wealth Innovation Investment Fund - IIF) are more likely to get a subsequent follow-on financing in the future.

The study of government’s impact on venture capital market provides important implication for designing public schemes for venture capital market development (Nightingale et al., 2009):

- In long run perspective the GVC financed companies have perspective to outperform their peers.
- The fund size is important for the effective implementation of GVC scheme, in order to reach the economy of scale, the GVC funds size should be no less than 50 million pounds.

The contra-arguments for government’s intervention in venture capital market can be extracted too. For instance, the research by Brander et al. (2008) covers the sample of 3,720 enterprises during the period of 1996-2004. And their results implicate that private venture capital outperforms governments sponsored venture capital financed companies in terms of value creation, competition and innovation. They provide evidences that private venture capital financed companies “are more likely to have successful exits (IPOs or third-party acquisitions) and tend to generate higher value conditional on successful exit” and moreover “The expected commercial value of an enterprise financed by private venture capital (PVC) is significantly higher than for an enterprise financed by government-sponsored venture capital (GVC)” (Brander et al., 2008).

In addition some researches detected that companies financed by government sponsored venture capital have greater propensity for failure and moreover such a governmental scheme did not generate a high margins of return (Murray et al. 2010).

Research of perceived non-financial support of venture capital in biotechnology sector in Finland reveals that public venture capitalists in contrast to private venture capitalists “(...) monitor their VCs more through contractual arrangements and less by being personally in contact with the investee company” (Maunula, 2006). So maybe it is the reason, why the aforementioned problems arose when seeking innovation approach.

Recent research by Brander et al. (2010) provides important findings in terms of different level of government’s involvement in venture capital market. The authors differentiated the moderate and extensive government sponsored venture capital (GVC). And they argue that in the value creation perspective, “Enterprises with moderate GVC support outperform enterprises with only PVC support and those with extensive GVC support”. And moreover, the same effect emerged in the innovation perspective: “Enterprises with moderate GVC support outperform those with only PVC support and those with extensive GVC support in patent creation” (Brander et al. 2010).
OECD (1997) study distinct two main rationales for government’s intervention in venture capital: first one, public benefit, which refer to expected outcome in terms of new job creation and creation of new technology and the second one, funding gaps, which refer to lack of money for the business or product development in early stage of lifecycle.

To the aforementioned rationales some additional rationales for government’s intervention in venture capital market should be mentioned:

- Providing an alternative financing for SMEs. Financing the smallest firms is encouraged in most economies, as it is the way to more “perfect competition”.
- The growth of internationalisation activities could be expected. Few researches (Fernhaber & McDougall-Covin, 2009; Lockett et al., 2008) emphasize the venture capital positive impact on the export growth in financed companies.
- Enhancing private sector investors to invest in early stage financing in such a way to increase the supply of money.

**The impact of Government sponsored venture capital funds on enhancing innovation in Lithuania**

Based on previous researches results the main rationale for GVC is to choose an indirect way to boost entrepreneurship by creating favourable incentives for investors. Gilson (2003) argue that passive government’s role is effective way in allocating public money (Gilson, 2003). Active stock market is emphasized as important factor for venture capital market development, but in addition the changes in corporate thinking and attitude towards entrepreneurial culture are needed (Becker & Hellmann, 2002).

Considering the small economy like Baltic countries, where the venture capital market is just in the emerging stage, the government’s role is extremely important. Figure 2 below depicts the ratio of private equity investment value to GDP in three Baltic States (Lithuania - LT, Latvia – LV, Estonia - EE). In respect of this ratio, Baltic States lag behind the CEE region (0.119 percent of GDP, in 2010) and the whole Europe (0.314 percent of GDP, in 2010) (EVCA: Central and Eastern Europe Statistics 2010).

In year 2009 under JEREMIE initiative two government venture capital funds and one business angel co-investment fund were launched in Lithuania. The money supply for early stage SMEs increased markedly. In order to assess the factors for venture capital market development in Lithuania, the questionnaire was prepared and the pilot research undertaken. The target respondents (experts) – the manager of aforementioned funds created under JEREMIE initiative in Lithuania. Three venture capitalists were inquired.

The inquiry revealed that the Government’s policy towards investors is the main factor for the venture capital market development. One expert pointed out that the country’s size is very important when considering government’s intervention, because the bigger the country the more capital it can attract.
The all three respondents did not agree with the statement that government might have negative aspect in venture capital market in terms of crowding out other private investors. Thus venture capitalists support the government initiatives toward the creation of government sponsored venture capital funds in Lithuania. Finally, government and Structural funds play significant role in flourishing environment for the SMEs, through investing in venture capital funds in Lithuania.

Conclusions

The main rationale for the governments intervention in venture capital market is the widely considered “equity gap or “funding gap”, which is very evident in the early stage of business development. It is believed that venture capital investment is related to innovation and economic growth, while the strong relation among them is not justified (see section 1).

Considering the social aspect of government’s support the question arises why should government intervene in the venture capital market, where primary purpose of venture capitalists is to yield high rate of return on investment, and their active involvement in portfolio companies management and monitoring is the way they seek the primary target. Thus we argue that government’s intervention in venture capital market is rationale only under some conditions:

- The target companies – are subject to SMEs definition, and they really have potency to grow and innovate;
- There is huge equity gap in the region, where banks are reluctant to finance early stage SMEs;
- Financial intermediaries have enough capabilities to realise investments.
- A transparent and accountable management system is implemented in order to guarantee the effective allocation of public money.

Thus the important role of government is essential in the beginning stage when designing the incentives for venture capital market development schemes and the accountability and the transparency will ensure the societies’ positive attitude towards the public policies’ decisions.

The inquiry of three venture capitalists in Lithuania implicates, that governments role is important in providing incentives for venture capital markets development.

References


