

VENTURE CAPITAL AS A CATALYST OF BUSINESS DEVELOPMENT IN LITHUANIA

У статті робиться спроба встановити як відповідні фінансові ресурси – особливо фонди з венчурним капіталом – могли б виявити якісь стратегічні можливості нових та інноваційних компаній і в цілому національної економіки. Ставиться питання про те, який – приватний чи суспільний – венчурний капітал більше здатен вирішити проблему недостатності капіталу для відкриття інноваційного бізнесу.

Ключові слова: венчурний капітал, суспільний венчурний основний фонд, інновація.

В статье делается попытка установить как соответствующие финансовые ресурсы – особенно фонды с венчурным капиталом – могли бы выявить какие-либо стратегические возможности новых и инновационных компаний и в целом национальной экономики. Ставится вопрос о том, какой – частный или общественный – венчурный капитал более способен решить проблему недостаточности капитала для открытия инновационного бизнеса.

Ключевые слова: венчурный капитал, общественный венчурный основной фонд, инновация.

Article tries to establish whether (and how) appropriate financing sources – especially venture capital funds – could reveal any strategic opportunities of new and innovative companies and of the whole national economy. The question is raised about which – private or public – venture capital is more able to solve the problem of insufficiency of capital for the beginning of innovative businesses.

Keywords: venture capital, public venture capital fund, innovation.

The sufficient supply of capital is the essential condition for the creation of new businesses, and the share capital, especially the venture capital, is particularly important for the establishment and development of the enterprises having a high growth potential, and exactly such enterprises mostly face the problems of start-up financing. The venture capital is usually offered by the investors ready for the higher risk in exchange for the potentially higher return of the investment.

The goal of the research is to establish whether (and how) appropriate financing sources – especially venture capital funds – could reveal any strategic opportunities of new and innovative companies and of the whole national economy. The methods of the research cover a comparative analysis of scientific literature and a correlation analysis. The article starts from the importance of venture capital for the development of new and innovative businesses, and presents the results of the empirical research. Imperfect market situations are discussed later and the question about whether public venture capital fund would operate better under these specific circumstances is raised. The paper ends in conclusions and proposals for the development of the national venture capital market.

Venture capital as the source of innovation financing

The importance of venture capital in economy is related to its role in financing new innovative enterprises, as the bank-specific financing for the latter ones is mostly inaccessible due to the insufficiency or the absence of the pledges [1]; the capital markets are, in turn, accessible only to the major public limited liability companies. The similar results are also revealed in the research conducted by the Social and Economic Development Centre [2] in Lithuania: key obstacle faced in establishing and developing new business is the lack of financing, and in search for the financing, the major challenge remains the fact that much property must be pledged in order to receive the financing [3]. Moreover, while assessing the risk, the banks have

become even more careful after the crisis of the years 2008 and 2009.

Venture capital has also positive effect on creation of industrial clusters ensuring positive external effects on technological innovations. Nevertheless, some authors [4] state that there is optimum size of venture capital market in a country: too much venture capital can actually reduce, and not increase innovative efforts of companies. This can happen when too much venture capital provides easy conditions for the new technological companies to establish; in that case venture capital can reduce R&D expenditures of well-established businesses. Such assumption is based on idea that the more venture capital (or, generally, essential complementary assets), the easier key employees of the corporations can leave office and start their own business which reduces profit of their former workplace, and also the investments in R&D. On the other hand, the negative effect of the incentives may be regulated by legal measures, e.g. by prohibiting ex-employees to start their own businesses for a certain period of time (non-competitive clauses) or to take the valuable knowledge away from the enterprise (confidentiality clauses).

Existence of empirical relationship between private equity (including venture capital) investments and national innovation capacity could be showed with the help of data provided by the European Venture Capital Association about private equity investments in different European countries (as a percentage of national GDP in the EU Member States, Switzerland and Norway) and data of national innovation indicators, e. g. the Global Innovation Index 2011 estimated by the INSEAD business school [5]. Between the series of previously mentioned data a positive correlation of medium strength is obtained (correlation coefficient is 0,58). The correlation coefficient of similar strength is also obtained having replaced the Global Innovation Index data with the Summary Innovation Index estimated by the EU [6]. Then, correlation between private equity investments into national economy (expressed as a percentage of GDP) and the Summary Innovation Index of the country would be as follows (Table 1):

Table 1. Correlation between private equity investments (as a percentage of GDP) and Summary Innovation Index

Year	Correlation coefficient
2006	0,57
2007	0,56
2008	0,55
2009	0,53
2010	0,55

Source: EVCA, [6], authorial computation

Therefore, in order to increase national innovation capacity together with country's competitiveness in international markets, where only innovative products are competitive, it is of utmost importance for the country to create favorable conditions for the development of alternative financing sources including private equity market and venture capital funds.

Besides, it is possible to show that there is also a relationship between country's innovation capacity and the part of employees working in high technology sector comparing to the total workforce of a country. Correlation and regression analysis carried out using the Global In-

novation Index 2011 data and Eurostat data about employment and salaries in high technology sector shows that there is a positive strong relationship (correlation coefficient is 0,73) between country's innovation capacity and the part of employees working in high technology sector. Determination coefficient which equals 0,53 indicates that more than a half of workforce dispersion in the sector of high technologies could be explained solely by data of the country's innovation capacity.

Similar results were obtained after having used the Summary Innovation Index data and the same data of employment (Table 2):

Table 2. Correlation and determination between Summary Innovation Index and employment in high-tech sector (as a percentage of total employment)

Year	Correlation coefficient	Determination coefficient
2006	0,75	0,56
2007	0,75	0,56
2008	0,72	0,52
2009	0,71	0,51
2010	0,73	0,54

Source: EVCA, [6], authorial computation

Thus, venture capital acts as a catalyst among new ideas and their potential markets. Without finding financing, new ideas cannot become new products/services for new (often still not existing) markets. Therefore, financing of the new ideas is also a development of the new (future) markets.

Unfortunately, financial crisis of 2009 reduced private investors' wish to finance the innovative companies [7]; therefore, the question is what could become a catalyst of venture capital market itself. We think that public venture capital fund could become such a catalyst.

Venture capital: selection between private and public

In the entrepreneurial society, venture capitalists make venture decisions by using collective experience and knowledge [8; 9], whereas in the society where traditionally no entrepreneurial spirit exists (e. g. in Lithuania like in many other Eastern European countries) investors' knowledge is based only on their previous experience. In case of venture capital it means that venture capital investments are based on the longevity of venture capital firm [10] and the number of ventures in which the firm have invested previously [11]. Therefore, in such society small and newly established funds can finance less beginning and high-technology enterprises, selecting larger or longer operating instead – it is especially relevant to the countries where venture capital market is still in the stage of creation and no large or longer operating private venture capital funds exist. On the other hand, public venture capital fund, being able to accept higher risk, would not experience above-mentioned problems of selection.

Another main reason why it can be worth selecting public venture capital is the fact that development of private venture capital market in itself not always takes place smoothly. Its development is affected by different factors, one of which is culture (culture is defined as a set of values, behavioral models, beliefs and underlying assumptions which are followed by individuals in a certain society). Two cultural dimensions are important to the development of venture capital [12]: avoidance of uncertainty, and collectivism. Avoidance of uncertainty indicates low toleration of activities considered being risky, such as venture capital investments, and it raises alternative costs of risky activities. Collectivism shows the tendency to count on informal relationships of the groups in solving problems of transac-

tions [13]. In collectivistic society, conformism and harmony are considered being a norm, and the behavior which can be understood as opportunism can bring shame [14]. Collectivistic orientation can restrict venture capitalists' transactions by their "circle of acquaintance" [15] and prevent potential external investors (venture capitalists) from joining already mentioned circle, by thus restricting their investment opportunities.

Lithuania is characteristic of both the avoidance of risk (according to the EU-wide research, Lithuanians have the lead across the EU countries in the terms of the fear of bankruptcy when starting business [16]) and the collectivism (as well as the other Eastern European countries); therefore, the development of venture capital in itself takes place (and will take place) heavily. Moreover, as risk premium required from venture capital investments in risk-avoiding society is higher than in non risk-avoiding societies, it should be thought that venture capitalists will also more heavily react to indirect efforts of the Government intended to encourage the development of venture capital. One of the ways to solve it is a public venture capital fund.

Public venture capital fund would be also important in the way that, without sufficient private venture capital in a country, it could play the role of a catalyst by attracting foreign venture capital, as the investments of venture capital funds are limited by geographical distance: with the increase in distance, the spread of information about possible investment targets decreases [17]; moreover, investors wish to physically take part in the management of a target company [18]. Therefore, without local venture capital it is also practically impossible to attract further existing foreign venture capital: investors of the Silicon Valley (venture capitalists) limit themselves to the 1-hour trip by car [19], whereas the limit of 150-250 miles is reached to the extent of all USA [20]. Other authors [21] have established aforementioned distance in the UK being equal to 1,5-hour trip by car, and more than 2 hours in the USA. This distance is equal to 232 km in Germany [22].

One of the ways to solve the above-mentioned problems is the syndication of venture capital funds [23]. After interviewing German venture capital providers, it became clear that investors often use syndicates to find themselves closer to their investment targets [24]. One of the members of a syndicate has always been established not far from the investment target and exactly he performs its supervision.

The other members of a syndicate play the role of passive co-investors [25]. Thus, syndicated investments can be located at a larger distance from venture capital funds than the non-syndicated; however, provided that at least one member of a syndicate will have been established relatively close to the investment target. This is exactly the reason why it can be expected that investors being far from investments will look for a partner of a syndicate, who is closer. Therefore, it is important for a region (or a country) to have a sufficient number of venture capital providers who could act as catalysts, when connecting regional economy with further global supply chains by way of syndication.

Thus, public venture capital fund established in a country, could, even not being of high volume, act as a catalyst and, by attracting foreign venture capital, invest in high technology companies. This could also happen in a syndicate manner. Moreover, while being public, it would provide foreign investors with the "guarantee of reliability" [26].

In general, importance of public venture capital to a country (or a region) could be shown by stochastic dependence, which could be a function of respective parameters discussed above. Design of such dependence is the object of our further research.

Conclusion. There is a positive medium-strength correlation between private equity (including venture capital) investments in a country and innovative capacity of this country; there is a strong correlation between country's innovation capacity and the proportion of people employed in high technology sector, thus, in order to create a high added value economy, country needs innovative companies that would create competitive business environment in the country and would contribute to the growth of employment and economy; innovative companies need adequate financing infrastructure which could be ensured by venture capital funds.

Public venture capital fund would be useful to those countries where traditionally no entrepreneurial spirit exists, where uncertainty is avoided and a strong sense of collectivism exists. Public venture capital fund, keeping in mind specific character of venture capital investments (there is a tendency to invest at limited geographical distance), could, even not being of high volume, act as a catalyst and, by attracting foreign venture capital, invest in high technology start-ups. And this could also happen in a syndicated manner.

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ASSET-BASED POLICY: A NEW DIRECTION FOR SOCIAL POLICY IN CEE COUNTRIES?

Стаття коротко представляє новий напрямок соціальної політики – політику, що базується на активах. Розглядаються та порівнюються різні варіанти впровадження цієї політики в інших країнах. Розглядаючи ідентифіковані виплати, піднімається питання про те, чи буде корисним впровадження політики, що базується на активах у країнах Центральної та Східної Європи.

Ключові слова: активи, політик, що базується на активах, нерівність, країни Центральної та Східної Європи.

Статья коротко представляет новое направление социальной политики – основанную на активах политику. Рассматриваются и сравниваются различные варианты внедрения этой политики в других странах. Рассматривая идентифицированные выплаты, поднимается вопрос о том, будет ли полезным внедрение основанной на активах политики в в странах Центральной и Восточной Европы.

Ключевые слова: активы, основанная на активах политика, неравенство, страны Центральной и Восточной Европы.

The article briefly presents a new direction for social policy – Asset-Based Policy. Various cases of the implementation of this policy in other countries are overviewed and compared. Considering the identified benefits, the question, whether the implementation of the Asset-Based Policy in CEE countries would be useful, is raised.

Keywords: assets, asset-based policy, inequality, CEE countries.

Income inequality, high poverty rate prevent development of society and state, have a significant impact on health and education of residents, conditions of housing

2. Socialinės ir ekonominės plėtros centras, VŠĮ. Europos Sąjungos ir kitų valstybių neformaliųjų individualių investuotojų ("Verslo angelų") investavimo kultūros patirties analizė. Taikomojo mokslinio tyrimo darbas [Analysis of the experience of the investment culture of the informal individual investors (business angels) of the European Union and other countries. Applied scientific research work] 2006. 3. Kompetencijos gildija, UAB. Incentives for Venture Capital Funds' Investments in Small and Medium Sized Enterprises Feasibility Study. Applied scientific research work, 2006. 4. Colombo L., Dawid H., Kabus K. When do thick venture capital markets foster innovation? An evolutionary analysis // Springer-Verlag, 2010. 5. Dutta S. The Global Innovation Index 2011. Accelerating Growth and Development, 2011. 6. European Commission. Innovation Union Scoreboard 2010. The Innovation Union's performance scoreboard for Research and Innovation, 2011. 7. Lerner J. Innovation, Entrepreneurship and Financial Market Cycles // OECD Science, Technology and Industry Working Papers, 2010. – 2010/3. 8. Cyert R. M., March J. G. A behavioral theory of the firm – Englewood Cliffs, NJ: Prentice-Hall, 1963. 9. Nelson R. R., Winter G. S. An evolutionary theory of economic change – Cambridge, MA: The Belknap Press of Harvard University Press, 1982. 10. Dimov D., Murray G. Determinants of the incidence and scale of seed capital investments by venture capital firms // Small Business Economics, 2007. – 30(2). – P. 127–152. 11. Gompers P. A., Kovner A., Lerner J., Scharfstein D. S. Skill vs. luck in entrepreneurship and venture capital: Evidence from serial entrepreneurs // NBER Working Paper, 2006. – No. W12592. 12. Li Y., Zahra S. A. Formal institutions, culture, and venture capital activity: A cross-country analysis // Journal of Business Venturing, 2012. – Vol. 27. – P. 95–111. 13. Fukuyama F. Trust: The Social Virtues and the Creation of Prosperity – New York, NY: Free Press, 1995. 14. Steensma H. K., Marino L., Weaver K.M. The influence of national culture on the formation of technology alliances by entrepreneurial firms // Academy of Management Journal, 2000. – Vol. 43 (5). – P. 951–973. 15. Zacharakis A. L., McMullen J. S., Shepherd D. A. Venture capitalists' decision policies across three countries: an institutional theory perspective // Journal of International Business Studies, 2007. – Vol. 38 (5). – P. 691–708. 16. European Commission. Entrepreneurship in the EU and beyond. Analytical report, 2010. 17. Green M. B. Preferences for U.S. venture capital investments 1970–1988. In Venture capital: International comparisons, ed. M. Green. London and New York: Routledge, 1991, p. 18–58. 18. Petersen M. A., Rajan R. G. Does distance still matter? The information revolution in small business lending. // Journal of Finance, 2002. – Vol. 57:2533–70. 19. Zook M. Grounded capital: Venture financing and the geography of the Internet industry, 1994–2000 // Journal of Economic Geography, 2002. – Vol. 2:151–77. 20. Florida R. L., Kenney M. Venture capital, high technology and regional development // Regional Studies, 1998. – Vol. 22. – P. 33–48. 21. Sapienza H. J., Manigart S., Vermeir W. Venture capitalist governance and value added in four countries // Journal of Business Venturing, 1996. – Vol. 11:439–69. 22. Fritsch M., Schilder D. The Regional Supply of Venture Capital: Can Syndication Overcome Bottlenecks? // Economic Geography, 2011. – Vol. 88(1). – P. 59–76. 23. Sorensen O., Stuart T. E. Syndication networks and the spatial distribution of venture capital investments // American Journal of Sociology, 2001. – Vol. 106:1546–88. 24. Fritsch M., Schilder D. Does venture capital investment really require spatial proximity? An empirical investigation // Environment and Planning, 2008. – Vol. A 40:2114–31. 25. Wright M., Lockett A. The structure and management of alliances: Syndication in the venture capital industry // Journal of Management Studies, 2003. – Vol. 40:2073–102. 26. Lerner J. The government as venture capitalist: The Long-Run Impact of the SBIR Program // Journal of Business, 1999. – Vol. 72(3). – P. 285–318.

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and delinquency rate. Income inequality and wealth disparity cause political discontent that may lead to severe social disorders.