
Private Equity in Estonia: Factors Shaping Investor Attraction

Abstract: This paper looks at the current state of the Estonian private equity market by identifying the main obstacles for attracting private investment as well as the strongest attractors. The research consists of a qualitative survey of the relevant stakeholders operating on the market. We identify the main obstacles and attractors and assess their importance as well as discuss potential improvements for the development of private equity in Estonia. The size of the Estonian economy and the opportunities provided by the stock market are identified as the main obstacles while the level of corporate taxation and foreign language skills of the population are the strongest attractors. Relaxing the restrictions on Estonian pension fund investments as well as education of entrepreneurs on private equity opportunities are some of the steps that should be taken to improve the attractiveness of the Estonian private equity market.

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Keywords: Estonia, Private Equity, Venture Capital, Investor attraction

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Abbreviations

BIF – Baltic Innovation Fund

BRIC – Brazil, Russia, India and China

CEE – Central and Eastern Europe

CIT – corporate income tax

EBRD – European Bank for Regional Development

EIF – European Investment Fund

EstBAN – Estonian Business Angels Network

EstVCA – Estonian Venture Capital Association

EU – the European Union

EVCA – European Venture Capital Association

FoF – fund of funds

GDP – gross domestic product

GP – general partner/private equity fund manger

IP – intellectual property

IPO – initial public offering

LP – limited partner/institutional investor in private equity funds

PE – private equity

PM – prime minister

R&D – research and development

SME – small and medium enterprises

VC – venture capital

VCPE-index – The Venture Capital and Private Equity Attractiveness Index of 2013
by Groh, Liechtenstein and Lieser

1 Introduction

Economic growth is one of the top, if not the most important, long term goal for most countries. It is especially crucial for countries that are considered developing, emerging or transition markets as they have decades of economic divergence to cover if they can ever aim to achieve the wealth levels of developed economies. After joining the EU in 2004, Estonia has been one of the most successful transition economies averaging ~3.8% annual real GDP growth over the period of 2004-2012 ranking it number four among EU28 countries (Eurostat, 2013a). This period also includes the global financial crisis which was especially harmful to the overheated Baltic economies, indicating the high growth in the pre and post crisis years. According to Eurostat (2013b), at the end of 2012 Estonia's purchasing power adjusted GDP per capita was 69% of the EU28 average which indicates that there is still a lot of economic convergence ahead. Estonia's research and development spending for 2011 was ~2.4% of GDP (Eurostat, 2013c), putting it above EU28 average of ~2%; however, the spending target in the EU is 3% of GDP by 2020. If Estonia plans to remain a frontrunner in R&D, further investments will be necessary.

Many studies, including a recent article by Shin (2013), show that the development of financial markets is an integral component of economic growth. Rajan & Zingales (1996) proved this notion by comparing the development of industries that are dependent on external financing in countries with developed and underdeveloped financial markets. In this paper we will focus on one particular part of financial markets in Estonia – private equity (PE) and venture capital (VC). Majority of the transactions on the Estonian PE market can be defined as venture capital investments while there are very few buyout transactions. Going forward we define the whole universe of venture capital and buyout transactions as the PE market.

A recent report by Frontier Economics (2013) shows how economic growth is impacted by private equity in Europe through increased productivity, more innovation and improved competitiveness. These three factors are very important drivers of economic growth in general, thus the value of a developed and well-functioning PE market should not be underestimated. Aizenman & Kendall (2008) assert that there are several factors which affect the international flow of PE and VC investments among

which the most important are distance, common language and colonial ties. Additional factors include high-end human capital, good business environment, high military spending and deep financial markets. Groh & Liechtenstein (2007) argue that for emerging markets there are six key driving factors that measure the development of a well functioning PE market – economic activity, entrepreneurial opportunities, taxation, capital market, social environment, investor protection & corporate governance. Given a specific country, these factors can act as attractors or as obstacles to investment. Thus, the questions that this thesis raises are:

- **What are the obstacles for attracting private financial investment to the Estonian PE market?**
- **What are the factors that attract private financial investment to the Estonian PE market?**
- **What steps could be taken to develop the Estonian PE industry?**

Currently the Estonian PE market is dominated by investment from public investment vehicles such as EIF, EBRD and KredEx – the Estonian trade and business financing institution. These investments cannot be considered as pure PE or VC investments as their purpose is to foster development of Estonian companies and economic growth instead of maximizing returns which is the usually the main target of investors globally. In order to ensure sustainability of the economic benefits of PE investments outlined before, it is necessary to attract regular profit-maximizing investors to the Estonian PE market. Thus, we define private financial investors as potential domestic and foreign investors that invest in the PE market directly or through locally managed PE funds.

Due to the relatively short history of the PE market in Estonia and the Baltic countries in general, there is a limited amount of research on this topic. A recent study in this area on Estonia was conducted by Jostov & Sonts (2012), who focus on analysing the effect of the government-backed VC fund “Arengufond” on the development of the Estonian PE market and find it to be limited. Ernst & Young carried out research analysing financing options for Estonian growth companies in traditional industries. This thesis is the first attempt to look at the Estonian PE market from the perspective of the private investor, thus providing a more long term oriented approach and implications.

We first give an overview of the Estonian PE market in more detail and provide a summary of the stakeholders involved. In the literature review we look at relevant research in this field covering various topics, such as the link between private equity and economic growth, private equity and innovation, private equity in emerging markets, private equity in EU policy and review of the research conducted on private equity in Estonia.

The introductory and literature part is followed by a description of the research methodology which includes a survey of the relevant stakeholders in Estonia as well as neighbouring potential investor countries like Finland, Sweden and others on factors acting as obstacles to private financial investment in the Estonian PE market. The factors are largely based on the framework introduced by Groh & Liechtenstein (2007). The data and the potential shortcomings of the research method and the data biases are discussed afterwards.

The final part of the thesis includes an overview of the survey metrics and a comprehensive analysis of the results. The analysis is followed by a review of the implications of the results and a general discussion. It is found that the size of the Estonian economy along with the opportunities provided by the stock market are the main obstacles for attracting private investment while the strongest attractors are the level of corporate taxation and the foreign language skills of the population. Some of the steps that could be taken to develop the Estonian PE market are further establishment of government backed investment vehicles, relaxing the restrictions on local pension funds and educating of the local entrepreneurs on the financing opportunities provided by the PE market.

2 Estonian Market Overview

In their most recent bi-annual Venture Capital and Private Equity Country Attractiveness index Groh, Liechtenstein and Lieser (2013) have ranked Estonia in the 51st place out of 118 countries, an increase of four places compared to the 2011 ranking, putting them somewhere between Lithuania (43rd) and Latvia (60th). The country ranks relatively well, i.e. in the top quartile of the countries, for financial market sophistication, security of property rights, quality of legal enforcement, education and human capital, bribing and corruption, innovation and ease of starting and running a business. However, it is ranked poorly, i.e. in the bottom quartile, for size of the stock market and labour market rigidities. The Estonian PE market has been developing at a strong pace during the last decade. Important steps to facilitate the progress of PE have been taken in the past years, most notably founding of a public venture capital fund in 2008 (Arengufond, 2008) and a national venture capital association, Estonian Venture Capital Association (EstVCA) in 2009 (EstVCA, 2013). The country and the development of the PE industry had previously been criticised for a lack of both these institutions (Kõomägi & Sander, 2006).

A big problem with the PE market is a lack of data on the activity of the General Partners (GPs): investments, divestments, returns, etc. In their research Cornelli et al. (2012) have identified 15 different investments in the country by PE funds between the years 1993 and 2005; however, it is likely that their dataset is not fully representative of the whole market and is lacking entries. Another issue with the data is that the information on the three Baltic states (e.g. in the reports by the European Venture Capital Association, EVCA) is often infused together. A further complication is that most currently active PE funds have a pan-Baltic reach, creating a situation where they report investments that can be in any of the three countries. From the data by EstVCA it can be seen that the investment activity seems to have started increasing after 2005 (EstVCA, 2013); however, new investments have been decreasing after 2010. EstVCA has been able to record more detailed data after its inception (including divestments and follow-on investments), but it only includes information on their reporting members. According to the association (EstVCA, 2013) €18.4 million was invested in Estonian enterprises in 2012 by domestic and foreign PE & VC investors, or 0.108% of the GDP of the country (Ministry of Finance, 2013). For comparison, the European average was 0.26% and the Baltics average was

0.029% (EVCA, 2013), all of which came from venture capital transactions since no buyouts were reported in the Baltics in 2012. While no comprehensive overview of the transactions for the year 2013 is available at the time of writing this thesis, a few large buyout transactions have been announced, including the sale of Starman Group, a telecommunications company (reported enterprise value of €107 million) to its founders in consortium with East Capital Explorer, a listed Swedish investment company (Lepik, 2013c); and the joint sale of Bauhof, a construction goods retailer chain, and MyFitness, a gym chain (Lepik, 2013b).

EstVCA reported €250 million in funds under management by their investing members in 2011 and €192 in 2012 (EstVCA, 2012, 2013); however, those figures only include a portion of their members. The vision of the national VC association is for the PE industry to grow to a size of €1 billion in funds under management by 2020 (EstVCA, 2013). There are currently three active fund managers: BaltCap, SmartCap and BPM Mezzanine; as well as several independent companies that invest in PE, but do not have a fund structure. A fourth PE fund is currently in the process of fundraising. Different actors in the PE market will be discussed below.

2.1 Government Initiatives

In 2008, through an act by the Parliament of Estonia, Arengufond (Development fund) was founded. They identify themselves as a public institution whose aim is to contribute to the economic development of Estonia (Arengufond, 2013). They invest in innovative start-up companies and contribute to the emergence of such companies. The institution has developed over the years of its existence: it started out as a public VC fund, but currently they have created a subsidiary, SmartCap, to manage the direct investments, and the company has focused on research and developing new public initiatives (e.g. StartSmart, Entrepreneurial Estonia, etc.) to further the development of the start-up ecosystem. At the time of writing this paper the fund had invested into 18 early stage companies since its inception in 2008, a few of which had been partially or completely exited. They are mandated to invest jointly with private investors and on the same terms, to only allow for investing at the market conditions.

Another local governmental institution is KredEx, an agency that provides financing solutions to Estonian enterprises in order to improve their development and expansion to foreign markets. They offer loans, credit insurance and state guarantees

(KredEx, 2013). They are also limited partners to the Baltic Innovation Fund (BIF), a private equity fund of funds (FoF) raised by the European Investment Fund (EIF). Representatives from KredEx and Arengufond have stated the need for, and the inception of a local public fund of funds that would invest in VC funds (Sarapik, 2013). A major issue that the FoF would solve is elimination of the need to find private investors for each separate transaction, as is the *status quo* for Arengufond's (SmartCap's) investments, since private investors would be LPs of the FoF, although it could arguably then create a situation where they are able to invest at non-market conditions.

The Baltic Innovation Fund was started at the beginning of 2013. They are a PE FoF that targets the three Baltic countries. They have capital commitments in the amount of €100 million (40% from EIF, 20% from KredEx, 20% from Latvian Guarantee agency, and 20% from Invega, a Lithuanian governmental agency) (KredEx, 2013). Their aim is to invest their capital into Baltic funds within the period 2013-2016 and they will not invest more than 50% of the total capital of a single fund, the rest has to come from private investors and pension funds (KredEx, 2013). A chart illustrating the financing scheme for BIF and their targets can be found in Appendix 1. So far the fund has made capital commitments to funds of three fund managers, all of which have been founded in Estonia, but have a pan-Baltic scope: BaltCap (EIF, 2013), BPM Capital (EIF, 2013) and Livonia Partners (Kreek, 2013). All three fund managers will be discussed in the following section of the paper.

2.2 Private Funds, Independent Investment Companies, Business Angels

BaltCap can be considered the fund manager with the longest history, dating back to 1995 (BaltCap, 2013). They have raised several funds and are well-known PE investors in the region. Their investor base includes EIF, Baltic pension funds, FoFs, EBRD, banks and insurance companies (BaltCap, 2013). In addition to a PE fund they also have VC funds that are part of the JEREMIE (Joint European Resources for Micro to Medium Enterprises) initiative in Latvia and Lithuania. Another currently active fund that also has received a capital commitment from BIF was raised by BPM Capital at the beginning of 2013. They will provide mezzanine financing and have yet to announce their first investment. In October 2013, the board of EIF approved financing for a third pan-Baltic PE fund, Livonia, that will be established by a well-

known investment team from LHV Capital, an Estonian PE company that has been active in the Baltic region as an independent investor. All three aforementioned funds have a pan-Baltic focus, due to the limited size of the countries individually.

The number of funds in the region is small; however, there are several active independent investment companies that engage in PE deals and that do not have a fund structure. These include Ambient Sound Investments, WNB Project, Redgate Capital, and U.S. Invest, to name a few. Unfortunately only a handful of that type of companies are members of EstVCA, which means that most of the data on the industry, which has been criticised as being very limited, only includes the reporting members and thus omits many significant actors in the marketplace. There are also foreign PE companies that have made investments in the country (e.g. East Capital, Askembla Asset Management, Amber trust, etc.). In addition to the aforementioned, there is activity by business angels. In late 2012, the Estonian Business Angels Network (EstBAN) was founded as an umbrella organisation for business angels and business angel groups that seek investment opportunities in Estonia or its neighbouring regions (EstBAN, 2013). The company has listed 44 angels on their website at the time of writing this paper and it includes prominent entrepreneurs, venture capitalists, bankers, and other professionals. Various sources report different total amount of funds invested by the business angels that ranges from over €2 million to over €4 million (Siimar, 2013; Lepik, 2013d). EstBAN is working on creating a “leverage fund” that would enable to lever up the investments of business angels and cover financial risks (Sarapik, 2013). Similar governmental mechanisms are in place in many European countries to encourage seed-stage investments.

2.3 Business Incubators and Accelerators

Many opportunities exist for seed and early stage companies: for example, start-up subsidies from “Töötukassa” – Estonian Unemployment Insurance Fund (Töötukassa, 2013), start-up loans from KredEx (KredEx, 2013d), as well as help from various business incubators and accelerators. These include, for example, Startup Wise Guys, an initiative that provides seed funding and intense mentorship programs to technology start-ups (Startup Wise Guys, 2013). A series of events that started in Estonia in 2010 is Garage48. They provide individuals or teams with the possibility of pitching their business ideas to a panel of mentors and then to turn their ideas into tangible products and services through intense workshops (Garage48, 2013). The

initiative has spread to Northern Europe and even Africa. An entrepreneurship accelerator called Gamefounders was started in 2012 and it targets any companies working in the electronic gaming industry, it is financed through European Regional Development Fund (Tööandjate Keskliit, 2013). Their goal is to develop a gaming sector similar to that in Finland. Other examples include incubators that provide companies with working space in addition to mentoring, e.g. Technopolis Ülemiste and Incubator Tallinn. There is a science park in Tallinn that provides a facilitative environment for companies in the technology sector and also hosts the Tallinn Technical University as well as the IT College. In 1992 in Tartu, the second biggest city in the country, a science park was established in collaboration between the city, the county, and two universities with the purpose of “nurturing start-up companies into global businesses” (Teaduspark, 2013).

3 Literature review

3.1 Introduction to Private Equity

3.1.1 Different Stages of Private Equity Investments

Private Equity is an asset class in which investments are made directly into the equity of companies without the intermediation of a stock exchange. Depending on the stage of development of a target company, a PE investor will acquire equity of a company in the amount that is anywhere between a minority stake to buying the whole company. The different stages of PE are summarized in the table below and described in the following paragraphs. Private Equity will further refer to investments in all stages, including both venture capital and buyout stages.

Table 1 Stages of Private Equity Investments

Private Equity					
Venture Capital stages			Buyout stages		
Seed	Start-up	Post-creation/ Growth	Expansion/ Development	Distressed/ Turnaround	Transfer/ Succession

Created by the Authors. Source: EVCA

The “Seed” stage is the earliest type of venture financing as it involves investment in ideas in the development/pre-development stage. Investments are mainly used to finance research and development, creation of prototypes and similar.

This stage involves the highest degree of uncertainty and the highest risk, which is why the types of investors operating in this stage are limited. Some of the investors in this stage are angel investors (EVCA, 2013), academic institutions as well as specialised “Seed” investment funds that are usually backed by public financing. The most common type of investor in the “Seed” stage is typically referred to as “friends, family and fools”, namely individuals that are socially close to the entrepreneur and usually are not professional investors.

The “Start-up” stage is still considered early, but there is usually something more than just an idea in the company. The financing is used to launch a product or a service and market it (EVCA, 2013). The uncertainty in this stage is still quite high, but the risk is smaller compared to the “Seed” stage as usually there is already a comprehensive business plan in place and a working product/prototype. The most common investors in this stage are venture capital funds and also wealthier business angels. The investor usually takes a minority stake in the company to keep the entrepreneur properly incentivised. The “Post-creation” stage is sometimes combined with the “Start-up” stage in classification as it includes financing of the full launch of business operations.

As a company has successfully launched its operations, it needs additional financing to further scale the business in the period of high growth (EVCA, 2013). This is where “Expansion/Development” investments take place. These are most often secondary or tertiary rounds of venture investments that not only provide additional financing for the company, but also an exit opportunity for the “Seed” and/or “Start-up” investors. This is the stage where the distinction between venture capital and buyout becomes difficult and is dependent on the structure of each separate transaction.

“Distressed/Turnaround” investments deal with companies that need restructuring due to economic and/or financial distress. The buyout investors who specialize in distressed companies are looking for opportunities to turn these companies around using their expertise and experience, thus extracting value from being able to acquire these companies at significant discounts.

The most common type of buyout investment is “Transfer/Succession”, where a buyout investor acquires a well-established company that they believe will yield

positive returns in the nearer future. Such transactions are often leveraged to ensure higher returns. The management of the company is usually changed (EVCA, 2013). These investments are most often made by buyout funds, family offices or independent investment companies that engage in such transactions on a one-by-one basis instead of starting a fund.

3.1.2 Structure of a Private Equity Fund

Private equity funds are usually formed as partnerships with two main types of partners, namely general partners (GPs) and limited partners (LPs) (EVCA, 2013). The GP is the investment manager and is responsible for choosing the target companies as well as managing the investments after the companies have been acquired. The GPs are personally liable for any debts or legal proceedings the partnership is exposed to. The GP usually invests a considerable amount of their personal wealth in the fund so that the incentives of GPs are aligned with the return targets of their investors. The GPs are usually remunerated through management fees to cover the operating expenses of the fund and a carried interest from the returns generated to further align the stakeholders' incentives.

The LPs are the providers of capital to the fund and have limited liability to the extent of their investment towards the partnership. These are most often institutional investors (insurance companies, banks, pension funds, etc.), funds of funds, large corporations, family offices and others (EVCA, 2013). The LPs trust the GPs with their money and do not have direct influence over the investment decisions of the fund if these investments are in line with the terms included in the initial partnership agreement.

3.2 Private Equity, Innovation and Growth

The emergence of the US as a technology leader is closely connected to the success of Silicon Valley which has benefited greatly from venture capital investments being a model that many countries look up to and wish to replicate in some form, which is shown by Koh & Koh (2002). They underline the importance of venture capital for economic growth using Singapore as an example of a country that has implemented a number of reforms to become as close as possible to the successful model of Silicon Valley. However, it is not that simple due to the fact that in addition to creating a legal framework that supports the industry, a change in culture is necessary. A culture that

discourages conservatism and promotes new ideas and risk taking is needed for such a model. If other countries are to be as successful innovators as the US, they must replicate not only the physical and legal environment, but also the culture, which will be a critical factor for future success.

The connection between innovation and private equity is a topic that has sprouted different researcher views on the underlying causality. Kortum & Lerner (1998) argue for the “PE-first” hypothesis which implies that the accessibility of external funding motivates entrepreneurs to innovate. By looking at patented inventions in twenty industries over a period of thirty years they find that inflow of private equity funding in an industry leads to an increase in its patenting rate. In the more recent sample it is found that despite the fact that only 3% of the total R&D investments in the US were backed by private equity, 15% of innovations came from PE-backed companies. A contrasting view states that innovation is a strong attractor of external risk capital, and thus the causal relationship goes the other way. This is sometimes referred to as “innovation-first” hypothesis. This view is supported by Hirukawa & Ueda (2008), who analyse this relationship in the US manufacturing industry using both a productivity growth factor and a patent factor. They find that there is a positive and significant relationship between productivity growth and future venture capital investment, but there is no evidence that risk capital causes increases in innovation. On the contrary, it is found that often there is a significant negative relationship between one-year lagged venture capital investment and both productivity growth and patent registration. These findings imply that if such a causal relationship exists, it starts with productivity and innovation instead of risk capital investment.

To finalize the discussion about the link between private equity, innovation and economic growth a report by Frontier Economics (2013) sheds some light onto this question by analysing findings from over 60 research papers on private equity in Europe. They find that the three main channels through which private equity fosters economic growth are innovation, productivity and competitiveness. There is an inner link between the three as more innovation increases productivity which leads to higher competitiveness against peers. They find that while only 6% of European private companies are backed by private equity, 12% of the industrial innovation and 8% of R&D spending is attributable to them. Not only R&D spending amount is important for innovation, it is also the efficiency of these investments. In some industries the

presence of private equity leads to higher efficiency of R&D investments, e.g. in biotechnology PE funding increases the probability of patent registration nine times compared to non-PE financed R&D investments. Another important indicator of innovation is patent registration and citation. Patent citation increases by 25% if private equity is financing the company owning it. As mentioned before more innovation leads to higher productivity, however PE enhances productivity not only through more innovation. Through PE financing companies have access to more funds for capital investments, surplus liquidity in times of crisis as well as operational improvements with the help of experienced PE professionals that have experience with a portfolio of companies. PE-backed companies have proven to be at least as resistant to crises as other companies and to be 50% less likely to fail. Improved operational performance is proved by the fact that during three years after PE investment, the companies showed 4.5% to 8.5% operating performance improvement and an EBITDA improvement of 6.9% on average. Additionally to the performance improvements PE also facilitates sustainability of employment. Finally, the productivity improvements both from innovation and other productivity enhancements lead to increased competitiveness. PE ownership was found to motivate companies to be more focused on internationalization (Frontier Economics, 2013).

All in all it can be concluded that there definitely exists a causal relationship between private equity and economic growth, however one must be careful with the direction of the causality as academics have argued that it might as well be that private equity simply invests mostly in industries that have higher degree of innovation (Frontier Economics, 2013).

3.3 International Allocation of Private Equity Investments

There are significant differences between countries in the world when it comes to available opportunities for investment and funds available for investment. As a consequence of this, PE investments go across borders. It is important for developing countries to be attractive enough to make the investments flow in their direction. Aizenman & Kendall (2008) look at some of the main factors influencing the directions of international PE investment flows. By looking at data covering about 100 countries over 30 years, they conclude that significant determinants are common language, distance and colonial ties. These factors are connected to the ease of investing and/or ease of doing business. It is easier to invest in countries that are closer

to the investor both physically and culture-wise. However, these factors are something that is almost impossible to change, thus they do not hold much meaning for helping countries attract PE investment. What they can be used for is marketing of investment opportunities to investors from countries that are geographically near, speak the same or similar language and/or have colonial ties with as these investors are more likely to invest compared to other investors. Aizenman & Kendall (2008) also determine some local factors that are less inherited and more changeable than the abovementioned ones. These factors include the presence of high-end human capital, a better business environment, higher military spending and deeper financial markets. In addition to the determinant factors, they find evidence of path dependency in the investment flows which could arise from network effects as well as fixed market entry costs and barriers.

The most comprehensive research on this topic has been carried out by Alexander Peter Groh and Heinrich von Liechtenstein covering global private equity as well as focusing on separate regions, like Central and Eastern Europe as well as emerging markets, such as the BRIC countries. They are also two of the academics involved in compiling the annual Venture Capital and Private Equity Country Attractiveness Index which has been created since 2006 and provides detailed country evaluations with respect to PE attractiveness. The index is based on six main factor categories:

- economic activity;
- state of the capital markets;
- investor protection and corporate governance;
- taxation;
- human and social environment;
- entrepreneurial culture and opportunities.

Most of the further research by Groh and Liechtenstein is based on these factors.

Various researchers have contributed to the issue of international PE allocation by looking at separate relationships, e.g. Kaplan & Schoar (2005) claim that there is a strong relationship between PE investment and stock market activity; La Porta et al. (1997) show that the legal environment is critical for PE investment as it determines the development of a country's capital markets, thus affecting accessibility of external

financing; Gompers & Lerner (1998) emphasize the importance of the level of capital gains tax, thus underlining tax issues as highly relevant for entering/exiting companies. Canela, Groh & Liechtenstein (2008) combine most of the factors previously discovered in a survey addressed at institutional investors worldwide. The aim of the survey is to determine the most important factors the actual decision-makers take into account when choosing countries for investment. They find that the biggest concern is the protection of property rights while it is as important to find competent local GPs. The investors are looking for a strong deal flow from entrepreneurs with good management skills. Contrary to other literature they find that the size and liquidity of the stock market as well as IPO activity is not an important factor for LPs. The presence of entrepreneurial activity and culture is also of importance while accessibility of public funding does not serve as an attractor for private investment.

There have been attempts of researching allocation of PE investments to particular regions. Groh & Liechtenstein (2010) take a closer look at the CEE region which is of particular interest to the authors of this thesis as Estonia is a part of this region. By conducting a survey among institutional investors including both investors that have exposure to CEE and ones that do not, the researchers find that there are significant differences between the two groups when it comes to opinions about the region and investing in it. The investors that have exposure in CEE regard entrepreneurial opportunities there as positive and are in general more optimistic about emerging markets and their growth prospects. They also find the local GPs in CEE countries very professional. Economic growth prospects in emerging/transition economies are considered positive in general, thus growth in itself cannot act as an attractor for investors in a particular country. Institutional and cultural characteristics will serve as a differentiator between the countries in emerging/transition markets.

3.4 The Role of the Public Sector in Developing Private Equity

One of the main goals of governments of market based economies is correcting imbalances in the economy that the market cannot fix on its own or in other words – market failures. According to Stiglitz (2000), there are six main types of market failures; these are externalities, public goods, incomplete markets, information failures, imperfect competition as well as unemployment and other macroeconomic disturbances.

Grundling et al. (2009) argue that the advocates of public venture capital use externalities, public goods, information failures and incomplete markets as reasons for necessary public sector intervention in the PE market to fill the funding gap for small and medium enterprises in the technology sector. They use a case study approach comparing China (i.e. a developing market) to the US, Europe, Singapore and Japan (i.e. developed markets) to evaluate the impact of the public sector investment programmes on the PE market. The main findings indicate that the role of the government is gradually decreasing in a developing market from being an active participant (market maker) to a service provider catering to the parts of the sector where it is most needed, e.g. providing business incubators, financing grants, trade guarantees, tax exemptions and other. They also find that government participation is a positive factor for existence and development of early stage high technology companies in developing economies.

Lerner & Watson (2007) propose that there exists a “virtuous cycle” that public investment in private equity can create as a pioneering investor that facilitates subsequent investments. The “virtuous cycle” first of all helps the entrepreneurs in the economy become familiar with the concepts of risk capital and the terms and structures associated with them. The government presence will make the entrepreneur more trusting towards the investor and his advice. Secondly, the lawyers and accountants will become familiar with the venture capital process and thus will be able to advise the entrepreneurs and financiers with more competence. As the industry creates a track record, other institutional investors become more comfortable with the viability of the sector and are willing to invest in the funds. Finally, the venture capitalists themselves will be able to find other co-investors and achieve sharing of risks through syndication, which also helps them make more informed decisions.

The role of the government differs depending on whether the country has a developing PE market or it is already developed and self-sustainable to a large extent. Meyer (2007) compiles the research and experience from different countries to come up with a framework for the role of the government in creating and maintaining independent self-sustainable markets. The main role of the government in developing markets is creating a track record and a “seal of approval” type incentive for private investors as they will be more likely to invest if a fund is backed by a public investor with successful track record. In a developed market the public investor’s main role is

to support the market in a downturn when many investors avoid investing in higher risk early stage ventures. It also has strong signalling power during downturns through continued backing of the general partners they invest with. The first type of public investment that is proposed is “investing according to private sector rules”. It is not suitable for developing markets as it imposes risks such as adverse selection (investing in weak funds) and moral hazard (attract investors to too weak funds). It is suitable for developed markets in downturn, but the public investor has to be careful not to squeeze out the private investors during market stability due to factors such as more trust from entrepreneurs, lower cost of capital and others. Adequate tools for public investment are providing upside leverage and improving the risk capital eco-system. Finally, it is concluded that due to increasing maturity and investment returns public investments need to be complemented and consequently replaced with private investor funding (Meyer, 2007).

An alternative approach is taken by Da Rin et al. (2005) who look at the effect of government policy on the amount of high-tech venture capital investments, consequently looking at the impact on the development of the PE market using country specific data from 14 European countries. They find that the strongest contributors are opening of stock markets targeted at entrepreneurial companies as well as reduction in the capital gains tax. A reduction in labour regulation also facilitates the growth of high-tech venture capital investments. Surprisingly they conclude that there is no shortage of venture capital funds in the market, and there is no positive effect from increasing public R&D spending on the share of high-tech venture capital investments. These findings somewhat contradict the conventional perceptions of the link between R&D spending and venture capital as well as the necessity of government backed venture capital funds in the economy.

3.5 The European Union Policy on Private Equity

The main target of the European Commission when it comes to the private equity sector is to ensure an integrated market where investors can invest in private equity across borders (European Commission, 2013). In order to achieve this, the Commission has passed several pieces of legislation. The latest proposal has been the Commission proposal for a Regulation on European Venture Capital Funds (December, 2011), which provides a new “European Venture Capital Fund” label and includes new measures to foster cross-border invest in the EU. The main achievement

of the Single Market Act (April, 2011) was ensuring that there are no additional obstacles for a fund created in a given member state to obtain financing in any other member state.

The main tool that the EU employs to foster private equity investments and successful development of the high-tech industry is the European Investment Fund (EIF, 2013). It offers financing in all stages of corporate innovation, but mainly focuses on the venture capital segment of private equity, primarily supporting early and growth phases of European start-ups. The goal is to support the creation of a private sector run venture capital market that addresses the market gaps and opportunities, thus increasing the attractiveness of European venture capital as an asset class. One of the fund's objectives is supporting regional development. The biggest initiative up to date in this area has been the JEREMIE (Joint European Resources for Micro to Medium Enterprises) which has been implemented union-wide with the aim to support the growth of SMEs. A more recent country and sector-specific initiative has been implemented in the Baltic countries called the Baltic Innovation Fund. The target for this initiative is investing through Baltic GPs alongside business angels, family offices and institutional investors into early and growth phase SMEs.

The European Bank for Reconstruction and Development (EBRD, 2013) provides financing for projects that otherwise would be unable to attract financing in regular markets. Alongside EIF, EBRD plays the role of the public investor in the European private equity market.

3.6 Private Equity in Emerging Markets

An analysis of PE in the BRIC countries by Cabejsek and Pedretti (2013), drawing from research by Groh and Liechtenstein (2009, 2010) and Groh, Liechtenstein and Lieser (2011, 2012), revealed that in emerging economies investor protection and corporate governance are crucial factors affecting PE investment decisions. Investors start considering other aspects of a country once they have sufficient legal protection and corporate governance rights. Bliss (1999) compared the decision making process of Polish VCs with the model in Western countries and identified several issues affecting the industry that can be generalised to emerging markets. His research revealed that deal origination in transitioning economies was hindered by an established network of referrers. The importance of networks for PE has also been

discussed and stressed by Ahlstrom and Bruton (2006) who analyse emerging Asian economies and find that in these developing markets informal networks, i.e. interpersonal relationships, actually substitute formal ones, as opposed to findings in developed countries. Hochberg et al. (2007) find that better-networked VC firms experience significantly better fund performance, as measured by the proportion of investments that are successfully exited through an IPO or a sale to another company. Similarly, the portfolio companies of better-networked VCs are significantly more likely to survive to subsequent financing and eventual exit.

Bliss (1999) also found that managerial ability of GPs was difficult to evaluate due to their short track records, a problem that is also clearly present for Estonian GPs. Another issue he identified was that limited exit strategies were offered for VCs due to a lack of developed equity markets in transition economies, making IPOs an unlikely option. This is confirmed by Köke and Shröder (2003), who find that CEE stock exchanges are underdeveloped and less important to their domestic economies. Bliss (1999) also noted that education of entrepreneurs was crucial when it comes to PE investments. It is important to teach them of the viability of such a venue of financing as well as to familiarise them with the peculiarities of such financial investors.

3.7 Previous Research on Estonian Private Equity

Various papers have touched upon different topics that relate to the PE sector in Estonia. Kõomägi and Sander (2006) used a case study approach to study VC investments and financing. Their main findings included that the VCs invested primarily in ordinary production and service enterprises that were not very risky, innovative or young. They also state that investments were primarily made in the growth stage and staging of investments is not used. We argue that by the time of writing the current paper the industry has radically changed and an important part of it is innovative ICT companies, exemplified just by the sheer number of start-ups that have received VC funding. Major changes to the industry also include inception of a public VC fund and a VC association, something Kõomägi and Sander (2006) claimed were important for the development of PE in the country.

Jostov and Sonts (2012) looked at the effect of Arengufond, the Government-backed VC initiative, on the PE market. Their results showed that the impact of Arengufond on the market had been limited and they identified several issues with the

design of the initiative. By the time of writing this paper, Arengufond has had some changes in its structure and adopted a fund of funds approach, a recommendation given by Jostov and Sonts, and thus some of the findings of the authors have limited value at the present time. They also recognise the problem with a lack of pension funds investing locally, an issue that has also been noted by Finance Estonia (2012) and Ernst & Young (2013).

Ernst & Young carried out a capital availability study (2013) that looked at growth companies in traditional sectors. One of their biggest findings was that despite the companies' need for third party financing they were reluctant to involve PE investors due to their lack of knowledge about that type of investments, which is why they stressed the importance of educating the entrepreneurs through various means. They also identified a lack of supply of financial investors and limited competition among capital providers and proposed several recommendations based on their findings, including further creation of local GP teams and having them educate the market, creation of FoFs for early and seed stage investments and ensuring the continuity in the FoFs and flow of capital to companies.

4 Methodology

4.1 Research Design

To best capture the collective perception of the different factors driving investment in the Estonian PE market a survey is conducted among relevant stakeholders of the PE market in Estonia and in some countries in the region. The respondents were approached by e-mail and asked to fill an online based survey. The survey consists of 38 questions (see Appendix 2 for details), 35 of which are questions that asked for a subjective ranking of different factors affecting the attractiveness of the Estonian PE market. The factors are largely based on the six key drivers of international PE investment allocation introduced by Groh & Liechtenstein (2007). The larger categories thus are economic activity, state of the capital market, investor protection and corporate governance, taxation, human and social environment, and entrepreneurial culture and opportunities. We complement the six segments with factors that are of interest to us. The factors are evaluated by the respondents on a 5-point Likert scale: from a specific factor being a significant obstacle in attracting

investor capital to significantly contributing to attracting investor capital to the country. As the list of factors outlined in the survey is not exhaustive, the respondents are also given a chance to suggest any additional factors that may either have a positive or negative effect on the research topic. The respondents are also encouraged to offer any possible steps to be taken by any of the parties involved (e.g. governments, companies, investors, etc.) to improve the availability of private equity capital as a source of financing for companies.

After the respondents have submitted their answers in order to make the survey responses quantitatively measurable, we assign them with the following numerical values: significant obstacle = -10; obstacle = -5; neutral = 0; attractor = +5; significant attractor = +10. These values are chosen to underline whether the factor is positive or negative which is not as obvious on a 1-5 scale. To ensure objectivity all responses are given equal weight and the scale from -10 to +10 is used to make the results more interpretable. To identify the main obstacles as well as attractors of private investment to the Estonian PE market we look at the mean scores +/- one standard deviation. We determine the degree of unanimity in the responses by looking at the standard deviation. These scores are then interpreted and compared to secondary sources of information if possible to either complement or contradict the findings. On top of analysing the complete sample of responses, we look into specific responses of different respondent groups and comment on any interesting outcomes. The scores of Estonian respondents are compared to the respective non-Estonian respondents' scores factor by factor. Similarly, the responses of separate groups of stakeholders (e.g. providers of debt capital, LPs, etc.) are analysed to better understand the variability in the outcomes. The findings from the different respondent group analysis are more informative than definitive as the number of respondents in most of the separate groups is less than 20. Each segment is evaluated overall and compared to the Venture Capital and Private Equity Attractiveness Index by Groh et al. (2013) to see whether our findings are supported by the index rankings. Other factors that the respondents have indicated as important obstacles or attractors are discussed afterwards. Finally, implications of the findings are outlined and recommendations to relevant stakeholders are presented. These are complemented by the recommendations provided by the respondents of the survey.

We use Wilcoxon Signed Rank Tests to determine the ranking of the different factors affecting the attractiveness of the PE market in order to end up with the five biggest obstacles and five biggest attractors. It is a nonparametric test that can be used to compare two sets of scores that come from the same participants. The two assumptions of the test are (Lund Research, 2013): (1) the dependent variable is measured at the ordinal or continuous level and (2) that the dependent variable should consist of two categorical, related groups or matched pairs. A Likert scale, such as the one used to measure the survey respondents answers, is an ordinal variable. Since all respondents answered all questions then there exists a matched pair between each two variables that is answered by the same individual. This means that both assumptions for the test have been met. We use a 0.10 significance level due to a small number of respondents to determine statistical significance.

4.2 Data description

The survey respondents were representatives that were considered to have knowledge of the Estonian PE market and they were categorised as follows: providers of debt capital, LPs in PE/VC funds, GPs in PE/VC funds, legal advisors, entrepreneurs/industry representatives (i.e. target companies for PE investors), financial advisors, public investment vehicles, business incubators/accelerators, angel investors, academics and “other”. The last group included representatives from governmental agencies and the stock exchange. The amount of respondents from each group is listed in Table 2. In the last category the respondents had the opportunity to describe their position. A further distinction was made based on whether the respondent listed their country of domicile as Estonia or not. Altogether 97 responses were recorded, out of which 21 respondents listed a country of domicile different from Estonia (respondents were contacted in Finland, Sweden and Poland), giving a response rate of 18.3% for Estonian respondents and 5.6% for others. It should be noted that since many individuals contacted for the survey turned out not to have any knowledge of the specific industry and thus did not fill out the survey then it creates a downward bias to the response rates as they would have been higher if only people with relevant knowledge had been contacted. For example, many foreign GPs whose mandate includes investing in Eastern Europe had not actually had any exposure to the region and as a result they were unable to provide their opinion. The largest number of

responses came from financial advisors and GPs, respectively 27% and 20% of the total recorder results.

Table 2 Amount of respondents in each respondent groups (n=97)

Respondent group	N	Percentage of total
Academic	7	7.2%
Angel investor	5	5.2%
Business incubator / accelerator	5	5.2%
Financial advisor	26	26.8%
General Partner of a PE/VC fund	19	19.6%
Industry/entrepreneur	9	9.3%
Legal advisor	7	7.2%
Limited Partner investor in PE/VC funds	5	5.2%
Provider of debt capital	6	6.2%
Public investment vehicle	4	4.1%
Other	4	4.1%
Total	97	100%

4.3 Validity, Reliability and Biases

There are research design issues that have to be addressed in order to make sure that the obtained results are meaningful and trustworthy. The most important among these issues are validity and reliability, which also includes potential biases in the obtained data/sample.

Internal validity shows that a causal relationship exists in the proposed research question and it is proven by using statistical measures to determine the significance of the relationship (Social Research Methods, 2013). This is not an issue of importance for this thesis as there is no causal relationship proposed/researched, the approach is observational/descriptive.

External validity is the degree of possibility to generalize the findings of a research to the general population (Social Research Methods, 2013). The three main issues when determining external validity are people, place and time. This research looks at a question that majority of the population does not have an informed opinion on, thus the sample that is drawn is targeted instead of random as it is possible to approach a very significant amount of the total population of informed individuals. With the response rate of 18.3% among the Estonian respondents, it can be said with a high degree of certainty that the findings of this paper are applicable to the part of the Estonian population that is engaged in the PE market to some extent and have

knowledge about it. When it comes to foreign respondents, only people that potentially have knowledge about the Estonian PE market were approached and responded, thus adding to the Estonian population. As the survey is distributed over the internet, the place issue does not play a role in the validity. PE is an area of the financial sector, which makes the time issue irrelevant as the respondents feelings towards the questions asked should not be impacted by the hour of the day of response or season of the year.

The part of the analysis that looks at differences between Estonian and non-Estonian responses is more informative than analytical as the low number of foreign respondents, the low response rate and other limitations does not allow us to generalize the separate results generated by them to their respective populations; however, these responses are valuable for our main research question.

Another important potential research design issue is reliability. It deals with the consistency/repeatability of a research (Social Research Methods, 2013). As the survey mostly deals with opinions rather than facts, the results obtained may slightly change if the survey was re-done by the same respondents. This could be caused by change in the mood of a respondent or some new information attained. This, however, should not have a major impact on the overall conclusions of the research as the number of respondents is high enough to offset any single change of opinion. There is little chance of mistakes in the dataset creating process as it is fully computer based and no manual input is done by the authors.

There are some potential biases that the dataset is exposed to. First of all, most of the respondents are Estonians which on the one hand makes them more informed about the research topic; on the other hand it can make the results less objective. The responses from foreigners let us double check if there is something that the Estonians are too optimistic or pessimistic about, but there are no very significant differences in the results between the two groups, implying that the objectivity issue is not very prominent in the sample. Continuing with the objectivity issue, some of the questions directly concern some of the respondent groups (e.g. the amount of professional financial advisors) and as there are financial advisors answering this question, there is a subjectivity risk. Another potential bias might arise from the fact that all of the survey questions are marked as mandatory, thus the respondents are forced to rate factors that they might not know much about. If that is the case, some of the answers

can be perceptions rather than informed opinions. Overall it cannot be a significant issue as the respondents would simply abandon the survey if they would feel that they are not knowledgeable in the area in general. This is proven by the fact that we received e-mails from respondents stating that they are not knowledgeable enough about the industry to fill in the survey.

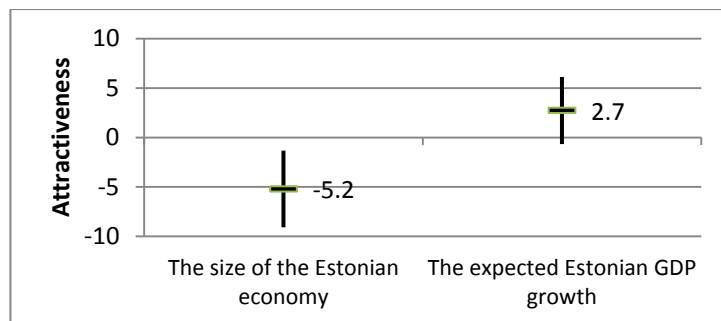
5 Empirical Findings and Analysis

5.1 Survey Results

5.1.1 Economic Activity

Economic activity includes such factors like the size of the economy and its growth prospects, but it is not limited only to these. Different factors that affect economic activity like demographic tendencies or government policy also can be considered. We focus on economy size and growth prospects in the survey and look at additional factors that the respondents propose at the end of the survey. Detailed survey results for each factor can be found in Appendix 4.

Figure 1 Evaluation of economic activity



The size of the Estonian economy is found to be the biggest obstacle among all factors in this study as it has received a mean score of -5.2 with a standard deviation of 19%, indicating that in general there is an agreement that this is a major obstacle. According to the World Bank (2013), Estonia is 102nd by economy size in absolute terms in the world which underlines the factor being a potential obstacle for investment attraction. The non-Estonian respondents rate this as less of an obstacle as their mean score is 9% higher than for Estonian respondents; however, they still see it as a considerable obstacle. Among the separate stakeholder groups angel investors rate this as the biggest obstacle with a score of -7.0, which is the most negative view. The

problem with this factor is that it is not possible to change the situation in a short time period; however the growth prospects of Estonia mentioned in the introductory part of the thesis indicate that this problem should lessen to some extent in the future.

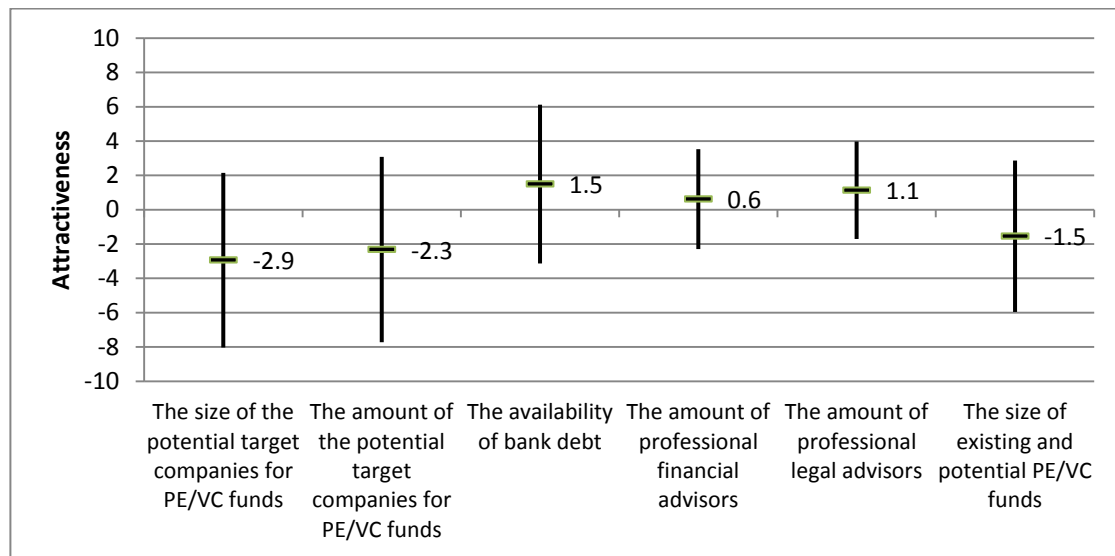
A more positive result is attained by the expected Estonian GDP growth which has received a mean score of 2.7 with a standard deviation of 17%. This result indicates that the respondents do not see it as a very strong attractor of private investment as it is not far from being neutral. This is a surprising finding taking into account the historic Estonian GDP growth and the remaining expected convergence with the EU average. The fact that Estonian GDP per capita is only 69% of EU average (Eurostat, 2013b) implies that there is still a lot of potential for growth of this relatively small economy. LPs and entrepreneurs see this as an attractor the least, both giving a mean score of 1.0 indicating that it is a neutral factor. This is once again quite surprising as it indicates a lack of belief in Estonian growth which could be related to the problems in the Eurozone (which Estonia is a part of) and the EU in general which includes most of Estonia's main trading partners. As the local market is fairly small, Estonia must focus on exports and problems in Europe can have a negative effect on Estonian growth prospects.

All in all, economic activity is a controversial area as it includes both the biggest obstacle (economy size) and potentially one of the biggest attractors (economy growth), which is, however, not supported by the survey results. The VCPE-index (2013) rates Estonia 82nd (out of 118) in economic activity which is not a surprise and goes together with our findings. However, as the funds that operate in Estonia usually operate also in the other two Baltic States, the problem of the size of the economy might be overstated. Other factors the respondents have mentioned as important are the poor demographic situation as an obstacle and geographical location as both an obstacle and an attractor. An obstacle in the sense that many foreigners still see Estonia as a part of Russia and thus are not very knowledgeable about the investment environment. An attractor because it is a hub between Russia and the EU and particularly due to its connectedness to the Scandinavian markets – the main trading partners of the country are Finland, Sweden and Russia (Oja, 2013).

5.1.2 State of the Capital Market

PE investments are highly dependent on the state of the capital market due to such factors as deal flow, debt availability, and exit opportunities, all of which are crucial parts of a deal execution process. With a poor market infrastructure, there are limited opportunities for executing PE transactions.

Figure 2 Evaluation of the state of the capital market I



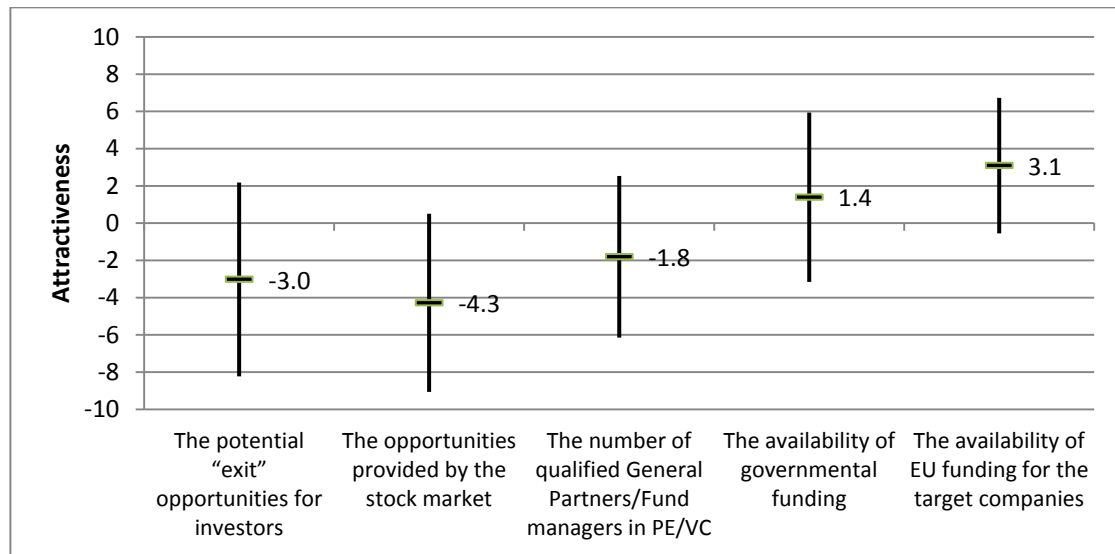
The size and amount of potential target companies are seen as obstacles with mean scores of -2.9 and -2.3; however there is strong lack of consensus among the respondents as the respective standard deviations are 26% and 27% (among the highest in the sample). While geographical breakdown does not yield any differences of opinions, there are differing opinions in the different stakeholder groups, e.g. legal advisors see the size of targets as an obstacle (-5.0) while academic see it as neutral (0.7). It has to be noted, however, that most of the different groups see size as an obstacle. When it comes to the amount of investment targets, there is some interesting difference in opinions. LPs see it as an obstacle with a score of -4.0 while angel investors rate it at 2.0. The perspective of these two stakeholder groups should be similar as both of them are potential active investors on the market. The difference can be explained by the segmentation of the PE market, i.e. there are more companies in the earliest stages that are attractive to angel investors and not that many in the growth or buyout stage.

The results show that the respondents do not see availability of bank debt as an obstacle. Mean score of 1.5 shows that this factor is valued as neutral with a positive

tendency. The standard deviation of 23% is supported by rather different opinions of some stakeholder groups. Business incubators see availability of bank debt as an obstacle rating it at -3.0 while providers of debt see it as an attractor (3.3). The providers of debt are likely positively biased in this question as it directly touches upon their main business. The amount of professional financial and legal advisors is seen as a neutral factor as the respondents have given mean scores of 0.6 and 1.1. A high level of consensus is shown by the lowest standard deviations in the sample (14% for both factors). One could argue that financial and legal advice are “hygiene factors”, namely they only affect investment decisions if they are bad as basing an investment decision on the good legal and financial advice that is available does not make much sense.

The size of existing and potential VC/PE funds is seen as a mild obstacle with a mean score of -1.5 and a standard deviation of 22%. According to EstVCA (2013d), seven funds reported €192 million funds under management in 2012, averaging €25-30 million per fund. Fund of that size could have investment lots of about €2.5-5 million per LP, which is a very small amount. A positive sign in the market regarding fund size are the GPs that have secured the Baltic Innovation Fund as an LP as, for example, Livonia Partners plan to have €85 million as the total fund size (Neveling, 2013). The entrepreneurs and LPs are the most negative towards this factor with scores of -3.9 and -3.0 while angel investors see it more as neutral rating it at 1.0. As most of the LPs that responded are domiciled in Estonia this is quite an alarming signal as pension funds (the main LPs) in Estonia have €1.64 billion total funds under management (Financial Supervision Authority, 2013) and only 8% of total pension funds were allocated in Estonia in 2013 (Kallas, 2012). This means that despite the 10% limit for allocation to PE, Estonian pension funds choose not to invest in PE in Estonia and fund size appears to be an important obstacle as the pension funds are also limited at 10% for investment with a single GP (Riigi Teataja, 2013).

Figure 3 Evaluation of the state of the capital market II



One of the biggest obstacles among all factors is the opportunities provided by the stock market with a mean score of -4.3 and 24% standard deviation. As an IPO is one of the potentially most lucrative exit opportunities, a lack of an active stock market can discourage PE investment. According to Nasdaq OMX Baltic (2013), there have been eight IPOs on the Tallinn stock exchange since 2004 and only one since 2008, which implies that the stock market has not offered attractive financing opportunities since the global financial crisis. The foreign respondents see the stock market as less of an obstacle rating it at -2.4 which is 12% higher than the Estonian respondents. All of the respondent groups agree that stock market is an obstacle with Entrepreneurs being one of the most sceptical (-5.6) underlining that this truly is an important issue not only for investors, but entrepreneurs themselves.

The potential exit opportunities as a whole is also seen as an obstacle with a mean score of -3.0 and a standard deviation of 26%. In this case the high dispersion can be explained by many respondents seeing this as a significant obstacle. It is in some sense a vicious cycle as the lack of investors in the buyout segment results in lack of exit opportunities for early stage investors.

The availability of qualified GPs is seen as a mild obstacle with a mean score of -1.8 and 22% standard deviation. The main issue for this factor is the lack of track record for local GPs as it is one of the main criteria on which the qualification of GPs is based on. If the Baltic Innovation Fund initiative is successful and the GPs will deliver good results, this issue should not be an obstacle any more. It is interesting to

see that the foreign respondents rate this factor 7% higher than Estonians rendering it a neutral factor for them. The potential investors for the funds, the LPs and angel investors, are the respondents that have rated this factor the lowest (-4.0 and -3.0 respectively).

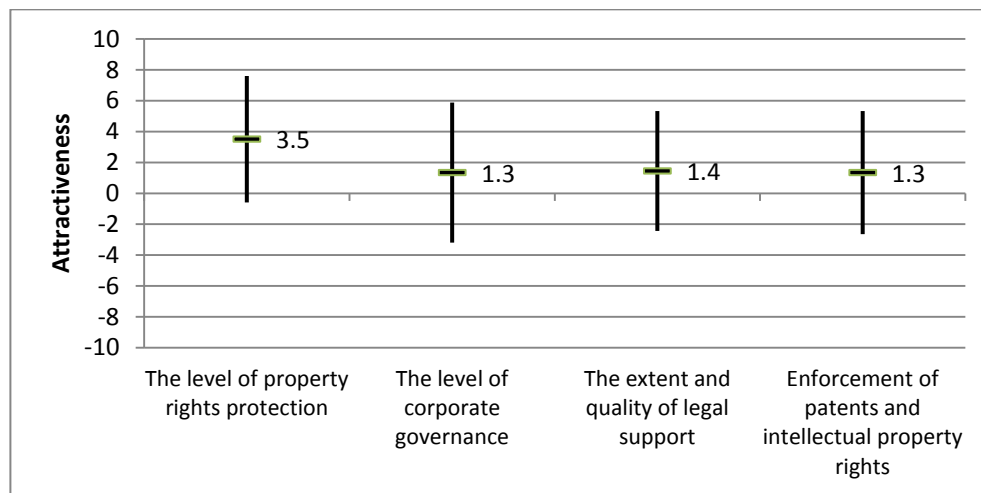
The respondents rate the availability of government funding as neutral with a positive tendency (1.4). However, the availability of EU funding is seen as an attractor with a mean score of 3.1 and a standard deviation of 18%. EU funding is a good way to increase the returns of an investment without increasing the leverage as this money is free of interest and is not required to be repaid. According to Mr Ansip, Estonia's PM, Estonia will receive 5.9 billion euro from the EU over the next planning period 2014-2021 (ERR, 2013). It should be noted that the availability of government and EU funding has been rated an attractor by LPs (3.0) and that these are the only attractors for LPs in this segment.

To sum up, the state of the capital market acts as an obstacle for private investment attraction. The main obstacle is the limited exit opportunities for investors (especially on the stock market) as well as the small size of PE/VC funds. The VCPE-index (2013) ranks Estonia No. 71 in the capital market segment which supports our findings. Under other factors acting as obstacles we found that the inactivity of local pension funds in investing in Estonian PE market sends a negative signal to LPs abroad as currently they are hesitant to invest while the locals do not invest themselves.

5.1.3 Investor Protection and Corporate Governance

Many studies (e.g. Groh & Liechtenstein, 2007) have shown that the level of investor protection and corporate governance is the most important determinant of international PE investment allocation. In addition, La Porta et al. (1997, 1998) prove that the legal environment strongly determines the size and extent of a country's capital market and local firm's abilities to receive outside funding. On top of the factors implied by the title of the broader category, we also look at protection of intellectual property and patents as well as the quality of legal support for PE investment.

Figure 4 Evaluation of investor protection and corporate governance



The level of property rights protection is seen as an attractor with a mean score of 3.5 and a standard deviation of 20%. Property rights protection in Estonia ranks on the 40th place globally and 5th regionally according to International Property Rights Index (2013). This indicates that for an investor who plans to invest in the CEE region, Estonia is an attractive target from the perspective of property rights protection. A negative difference of 13% for the non-Estonian respondents shows that there are some information differences as the relatively high international ranking should theoretically serve as an attractor.

Corporate governance and enforcement of intellectual property rights are rated as neutral with mean scores of 1.3 for both. There is more disagreement on the corporate governance factor as the standard deviation is 23% (among the highest in the sample). There are no meaningful differences between Estonian and non-Estonian respondents. The LPs rate corporate governance in Estonia as an obstacle (-3.0) which is not a good sign as corporate governance has been found a key factor in PE investment decisions, as was discussed earlier. Academics see the enforcement of patents and IP protection as more of an obstacle than other respondents rating it at -1.4, while legal advisors see it as an attractor rating it at 5.0. Legal advisors should be more informed than other stakeholders on these issues; however they also might be positively biased.

The respondents have rated the quality of legal support as neutral with a mean score of 1.4 (standard deviation 19%), thus it can be rated with a high degree of certainty as a neutral factor. This result shows that the legal support available in Estonia is not an obstacle for PE investment. LPs rate this factor as an obstacle (-2.0)

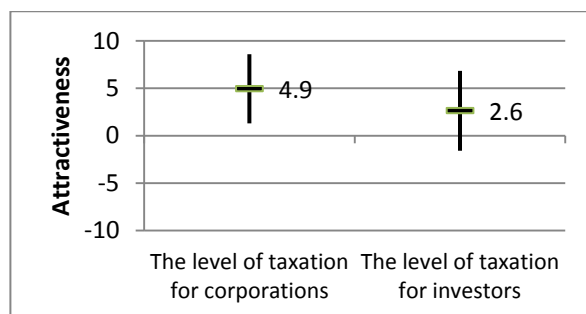
while providers of debt capital see it as an attractor (4.2). This difference is hard to explain, but could be attributed to the fact most providers of debt capital have whole legal departments at their disposal, thus they are not very dependent on external legal advisors resulting in a more positive view.

To conclude, investor protection and corporate governance in Estonia is found to be neutral for attracting private investment. The only exception is the property rights protection which is found to be an attractor. The findings of this survey for this segment do not go together well with the VCPE-index (2013) where Estonia is ranked No.26, which indicates that it should be rated as an attractor by the respondents. Other factors that the respondents have indicated as obstacles are the low level of minority shareholder protection and the inefficiency of the court system. These criticisms were also found in the Ernst & Young report (2013).

5.1.4 Taxation

Taxation has a direct impact on an investment decision as the respective effects from the levels of different types of taxation are very tangible and relatively easy to quantify. This makes taxation a key driver for PE investment decisions as the investor can measure a direct effect on the profitability of their investment, which is most often not the case for other key investment decision drivers such as investor protection or social environment.

Figure 5 Evaluation of taxation



The level of taxation for corporations is the biggest attractor among all factors considered in the study with a mean score of 4.9. There is a relatively high level of unanimity among the respondents compared to other factors which is proved by the standard deviation of 18.2% (among the lowest of all factors). The high score is explained by the fact that the companies in Estonia have to pay an income tax of 21% only on profits that have been distributed, thus reinvested profit is not taxed (Estonian

Investment Agency, 2013). This should serve as a significant attractor for investors as there are not many countries where such a corporate income tax system exists. The mean score among people outside Estonia is 4.3, which is nearly 5% less than the Estonian score of 5.1 indicating that the fact that Estonia employs a very favourable CIT system might not be known to foreigners. Out of the separate respondent groups two stand out with more extreme answers. Business incubators have the highest mean score (7) among the respondents while LPs have the lowest mean score (1.25) on this factor which is a surprise as it would seem that LPs would especially favour their investments being taxed less.

The level of taxation for investors is found to be more an attractor than an obstacle; however it is quite close to being neutral with a mean score among respondents of 2.6. There is moderate variation in the responses as the standard deviation is 21% which results into lack of significant difference from being a neutral factor. The level of investor taxation in PE is best described by the capital gains tax which is applied when an investor sells its holdings in a company. According to a report by Ernst & Young (2012), the average GDP-weighted capital gains tax in the EU (excluding Sweden) was 23.3%, thus the Estonian 21% is slightly below, which explains why it is an attractor, but not a very strong one. The same report listed a 15% capital gains tax in Latvia and 0% in Lithuania, thus there are more attractive tax regimes nearby. The mean score for foreigners is 0.7 which is 12% less than the Estonian score. This indicates that foreigners might see better alternatives for capital gains tax regimes. The level of capital gains tax is most positively viewed by legal advisors (5.7), while the worst score was given by GPs (1.05). Given the previously mentioned data on capital gains tax in Europe, the score of GPs can be explained by it being near EU average, while the lawyers might have more insight into the tax legislation and potential optimization strategies.

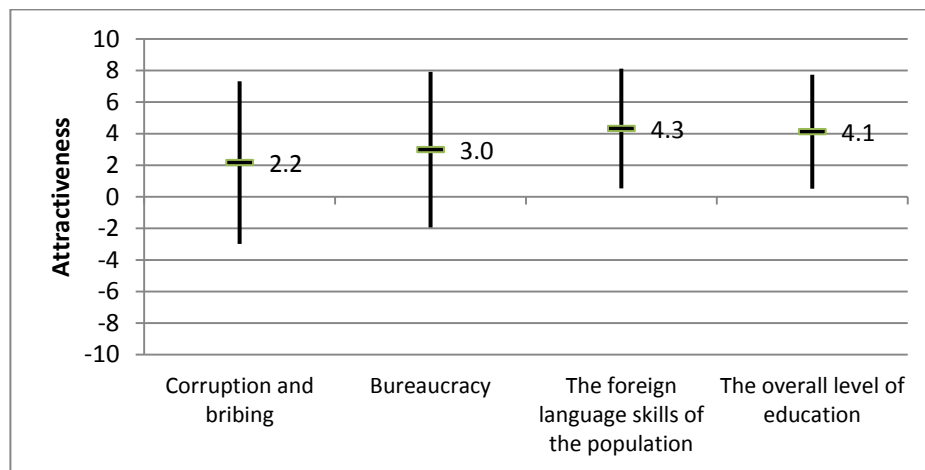
To sum up, the taxation in Estonia seems to be an attractor of private investors mainly due to the favourable corporate income tax regime. This finding is in line with the ranking of taxation in Estonia in the VCPE-index (2013), where Estonia is ranked 38th globally. Among other factors that the respondents listed there was one that deals with taxation – tax allowances for IP. There has been a discussion in Estonia regarding this issue and a report by Staehr (2010) argues that introduction of tax benefits for

R&D investments should be a top priority for Estonia; however no legislation has been passed up to date to support this.

5.1.5 Human and Social Environment

The human and social environment from an investment perspective has a lot to do with people, culture and trust. To attract investment the business practices have to be honest, transparent and with a certain amount of skill and expertise.

Figure 6 Evaluation of human and social environment I

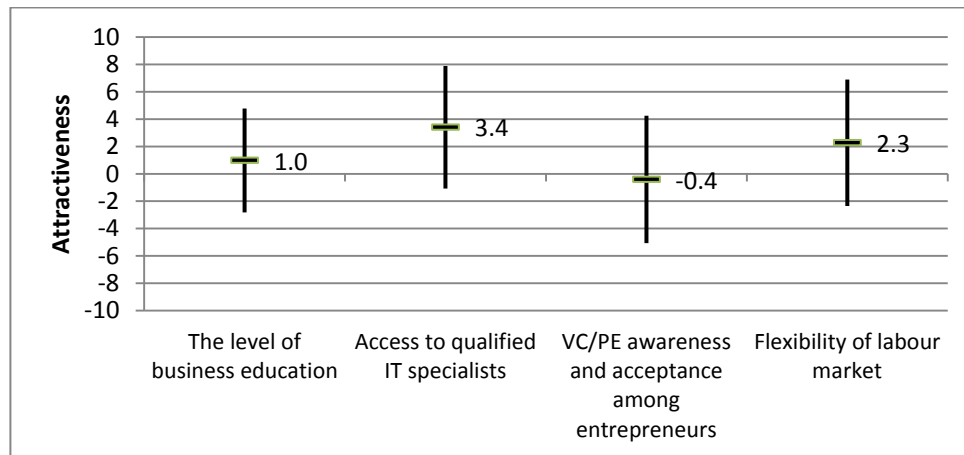


The level of corruption and bribing as well as bureaucracy have been rated as positive, but not significantly different from being neutral (respective means of 2.2 and 3.0), which indicates that Estonia does not have major corruption and bureaucracy issues. The standard deviations are 26% and 25% respectively leaving the results within the “neutral” area. According to Transparency International (2012), Estonia ranked 32nd in the world in the corruption index, which supports it being more a positive than a negative factor. Interestingly, the rating of corruption by people outside Estonia is negative at -1.0 (20% worse than rated by Estonians), indicating that foreigners view corruption as an obstacle. It has to be noted that the standard deviation for this score is quite high (28%) which implies that there is a lack of consensus among the non-Estonian respondents on this issue. Corruption is found an obstacle by LPs (-3.0) while providers of debt capital see it as an attractor (5.0). Bureaucracy is not seen as an obstacle by any of the groups.

Majority of the respondents agree that the foreign language skills of the population are an attractor of private investment as the mean score is 4.3 (standard deviation 19%). According to Education First (2013), Estonia is No.4 in the world in

English proficiency as a second language, which supports our findings that it can serve as a strong attractor of investment. There is almost no difference in the rating of this factor between Estonians and non-Estonians. The group that views the foreign language skills the lowest are the LPs with a mean score of 2.0, which is more neutral than positive.

Figure 7 Evaluation of human and social environment II



The overall education level in Estonia is seen as an attractor of private investment as shown by a mean score of 4.1 and there is not much disagreement on this matter as the standard deviation is only 18%. According to PISA (2013), Estonia ranks in the top 10 globally in mathematics, reading and science among 15-year old students putting it above OECD average in all three categories. All of the scores showed improved results compared to the previous PISA test, indicating that not only Estonian education level is high, but it is improving. There is no difference in the views of Estonians and foreigners on this issue; however there is some disagreement between the separate respondent types, e.g. the legal advisors rate education at 6.4 while LPs and GPs see it as neutral (1.0 and 2.6 respectively). As the global ranking of Estonian education is quite high, the reason for a neutral score from LPs and GPs could be that the overall level of education is not a very important factor for PE investment decisions. The level of business education seems to lag behind the overall level of education with a strongly neutral score of 1.0 (standard deviation of 19%).

Access to qualified IT specialists has been evaluated as an attractor with a mean score of 3.4; however there is disagreement between the respondents underlined by a standard deviation of 22%. Most of the respondents see this factor more as an attractor while there is an outlier – the angel investors who see it as an obstacle with a

score of -3.0. This group decreases the mean and increases the standard deviation, thus prohibiting this factor to be among the top five attractors. This might be due to the fact that angel investors have more experience with “not so good” IT specialists, thus worsening their view of the total population.

The awareness and acceptance of private equity and venture capital among entrepreneurs is neutral with a negative tendency (-0.4) and there is some disagreement among respondents as the standard deviation is among the highest (23.3%). The foreigners evaluate this factor at 1.7 which is 13% higher than Estonians. The difference can be explained by the fact that the foreign respondents have some perceptions which can be different from the reality. This phenomenon can most likely be measured by interpersonal relations with Estonian entrepreneurs that are stronger for the Estonian respondents. The neutral ranking of this factor is surprising as Ernst & Young (2013) identify the low awareness and acceptance as one of the biggest issues among the entrepreneurs, based on their survey.

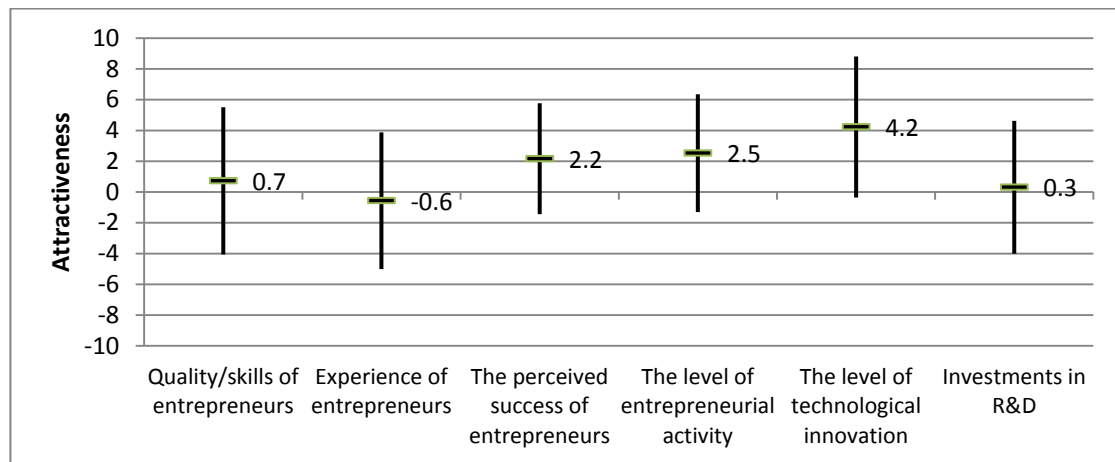
There is quite high disagreement among the respondents on the flexibility of the labour market resulting in a score of 2.3 (standard deviation 23%). The main difference in opinions lies between the angel investors (-1.0) and business incubators (4.0). The total view, however, is quite positive, but it does not seem to play an important role in making an investment decision.

All in all, the human social environment in Estonia can be valued as positive, but not a very strong attractor of private investment. Some of the factors, such as the level of education and foreign language skills are found to be attractors while most of the factors are neutral. Estonia ranks on the 45th spot globally in the VCPE-index (2013). This goes together with our results on this factor being neutral. The level of education is ranked 28th which is quite high, thus adding to the factor being an attractor. Corruption and bribing is valued relatively higher by the index than by our respondents which is an interesting finding. Surprisingly, there is a very big difference on the rigidity of labour market issue. This factor ranks No.106 (out of 118) in the index which is very low indicating that it is a major obstacle for PE investment; however the respondents see it as neutral and more as an attractor than an obstacle. As the Baltic countries are known for the flexibility of their labour markets (researched by e.g. Sippola (2011)), the poor result on the VCPE-index is questionable.

5.1.6 Entrepreneurial Culture and Opportunities

Attraction of PE investment is highly dependent on existence of an entrepreneurial environment which results in a high amount of investment opportunities. We look at several factors related to entrepreneurial culture to determine if Estonia has the necessary environment to attract investors.

Figure 8 Evaluation of entrepreneurial culture and opportunities



The quality and skills of entrepreneurs and managers in Estonia are seen as neutral leaning to positive as the mean score is 0.7 with a 24% standard deviation. Surprisingly, the foreigners have a more positive (higher by 12% than Estonian respondents) view of the skills of entrepreneurs. The difference might arise from the fact that the foreigners get exposure to the best entrepreneurs/success stories, thus not having a full view of the population. Majority of the respondent types agree that the skills are neutral with the exception of LPs who see the skills as an obstacle (-3.0). The amount of experience of Estonian entrepreneurs is also seen as neutral, but leaning towards the negative with the mean score of -0.6 (standard deviation 22%). This factor is also viewed more positively by foreigners with score 10% higher than Estonian respondents. Both LPs and providers of debt capital view this more as an obstacle than neutral while other stakeholders saw it as neutral.

The level of entrepreneurial activity and the perceived success of entrepreneurs is rated positively (2.5 and 2.2), but not seen as a very strong attractor as it is close to the “neutral” area. Estonia does not have many international success stories, but it does have some, e.g. Jostov & Sonts (2012) find that success stories like Skype and Playtech have contributed a lot to improving the image of entrepreneurship in Estonia and act as role models in encouraging entrepreneurship. The Estonian respondents are

more critical of these factors than the foreigners as for both factors there is a 5% difference in the mean scores. LPs see the perceived success as more of an obstacle (-1.0) compared to all other groups that rated this factor as more positive.

The biggest attractor in this group and one of the biggest in the whole study is the level of technological innovation (4.2); however there is quite high variation in the responses (standard deviation 23%). The dispersion is partially explained by foreigners rating technological innovation 6% lower than Estonian respondents, but there are also differences of opinions amongst the different stakeholder groups, e.g. legal advisors rate technological innovation at 7.8 while LPs rate it at 2.0. The high volatility is due to some groups that value this factor a lot higher than the mean. Estonia is seen as a frontrunner in innovation in Europe when it comes to internet-based solutions (European Commission, 2012), thus this image could be used to attract private investors.

The level of R&D investment has been rated neutral (0.3) with quite high dispersion of responses (standard deviation 22%). This result is quite surprising as the same respondents rated the level of technological innovation at 4.2 which is significantly higher. As technological innovation is related to R&D investment, this outcome is somewhat puzzling. On top of that Estonia spends more on R&D than the EU average (Eurostat, 2013c) and a significant part (51% in 2012) was invested by the private sector (Eurostat, 2013d). This adds to the factor being an attractor rather than being neutral. An explanation for the puzzling score given by our respondents could be a conviction that R&D spending is not an important factor for attracting private investment. This factor is rated 10% higher by foreign respondents indicating that they find R&D more important for PE investments than Estonian respondents. LPs and providers of debt capital see this factor more as an obstacle than attractor.

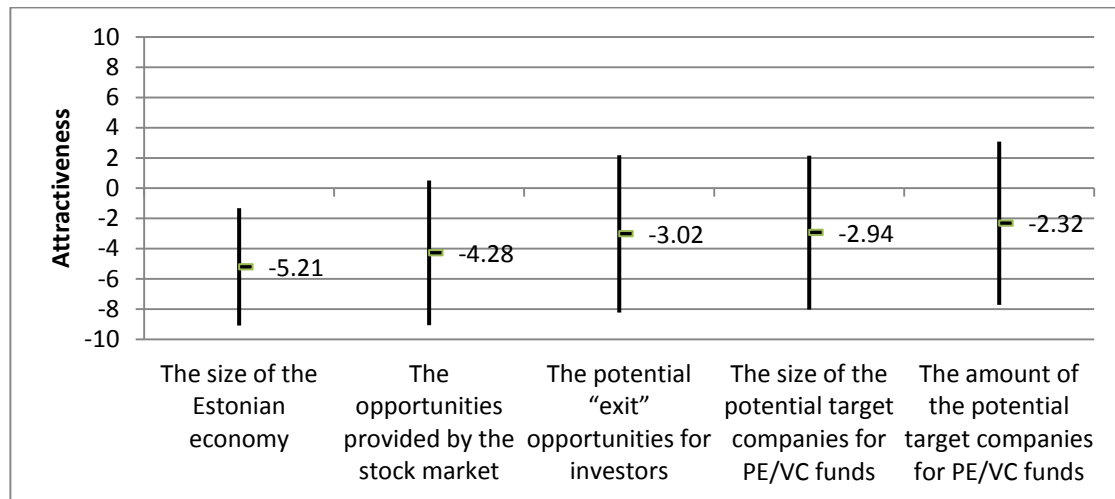
To conclude, the entrepreneurial culture and opportunities in Estonia are quite favourable for creating a well-functioning PE market with the level of technological innovation being the key attractor of private investment. Estonia is ranked No.34 in the VCPE-index (2013) on entrepreneurial culture and opportunities which is quite high. The survey respondents seem to value this driver relatively worse than the index as the factors mostly are close to neutral. The level of technological innovation is, however, appreciated both in the survey and the index (Estonia ranked 23rd in

innovation), which strengthens the conclusion that this factor truly is an attractor of private investment.

5.2 The Most Significant Factors Identified

5.2.1 Most Relevant Obstacles Identified

Figure 9 Five biggest obstacles ranked by their mean values as identified by respondents



Using the mean values of the ratings of the factors that can describe attractiveness of the Estonian PE market we have come up with a ranking of the five most significant obstacles and five most significant attractors. The factors with the lowest mean scores are: the size of the economy (-5.21), the opportunities provided by the stock market (-4.28), the potential exit opportunities (-3.02), the size of the potential target companies for PE/VC funds (-2.94) and the amount of the potential target companies for PE/VC funds (-2.32). An overview of Wilcoxon Signed Rank test results with the hypotheses $H_0: \mu_i = \mu_k$, and $H_1: \mu_i \neq \mu_k$ can be found in Appendix 3 and the findings are summarised in Table 3. A significance level of 0.1 was used due to a limited number of observations.

Table 3 Five biggest obstacles for attracting private financial investors to Estonia

Factor	Rank(s)
The size of the Estonian economy	1
The opportunities provided by the stock market	2
The size of the potential target companies for PE/VC funds	3 or 4 or 5
The potential "exit" opportunities for investors	3 or 4 or 5
The amount of the potential target companies for PE/VC funds	3 or 4 or 5

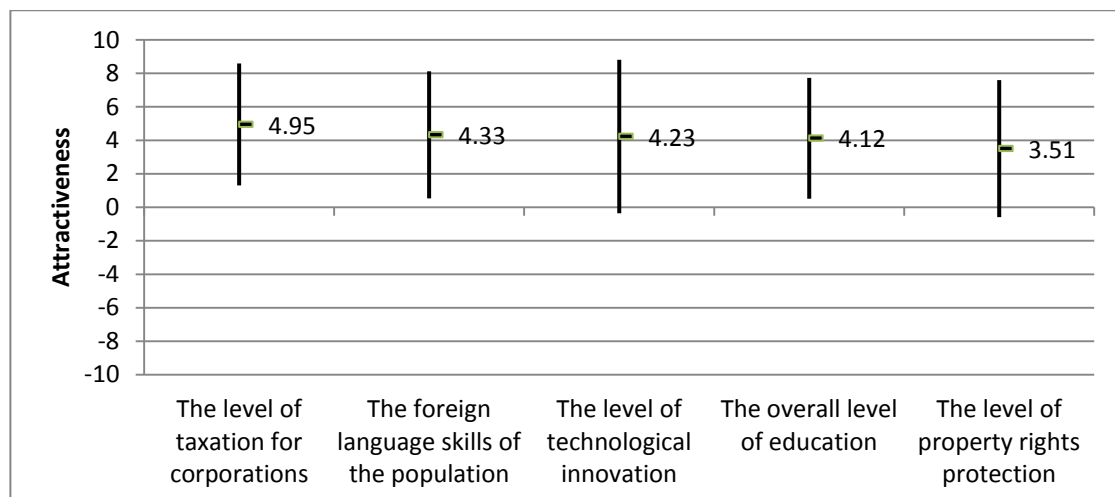
The hypothesis testing revealed that clearly the dominant obstacle is the size of the Economy. Stock market opportunities followed the dominant obstacle at rank 2.

Unfortunately the following factors were not possible to rank that clearly at the chosen significance level. A smaller standard deviation would place the size of potential target companies before the potential exit opportunities for investors, even though their average values would suggest otherwise. Finally the amount of potential target companies is ranked at the 4th or 5th place. Factors that are not among the top five according to their mean value but are not statistically significantly different from the last discussed factor are the number of qualified GPs, and the size of PE/VC funds.

The results of Canela et al. (2008) show that one of the most important factors for international asset allocation by LPs is the presence of qualified GPs. While the number of GPs is currently low and considered a big obstacle by the respondents, it does seem that the number of funds is increasing, especially in light of the inception of the Baltic Innovation Fund. Another factor identified by Canela et al. (2008) is the deal flow. The deal flow can be partially proxied by the amount and the size of the target companies, which we have identified as some of the most problematic areas for the country. The deal flow also depends on the willingness of the targets to engage in PE transactions, and the acceptance of PE in general, both of which have been identified as low in previous research (Ernst & Young, 2013). Clearly these are some of the key areas that need to be addressed.

5.2.2 Most Relevant Attracting Factors Identified

Figure 10 Five biggest attracting factors ranked by their mean values as identified by respondents



The factors with the highest mean scores are: the level of taxation for corporations (4.95), the foreign language skills of the population (4.33), the level of technological innovation (4.23), the overall level of education (4.12) and the level of property rights

protection (3.51). A description of Wilcoxon Signed Rank tests with the hypotheses $H_0: \mu_i = \mu_k$, and $H_1: \mu_i \neq \mu_k$ can be found in Appendix 3 and the findings are summarised in Table 4.

Table 4 Five biggest factors for attracting private financial investors to Estonia

Factor	Rank(s)
The level of taxation for corporations	1 or 2 or 3
The foreign language skills of the population	1 or 2 or 3 or 4
The level of technological innovation	1 or 2 or 3 or 4 or 5
The overall level of education	2 or 3 or 4 or 5
The level of property rights protection	3 or 4 or 5

Unfortunately due to small differences between mean scores and relatively high standard deviations ranking the factors with statistical significance yields obscure results. Factors that are not significantly different from the level of property rights protection are access to qualified IT specialists, availability of EU funding for target companies, level of bureaucracy and expected GDP growth.

Canela et al. (2008) found property rights protection to be one of the most significant factors affecting LPs decision for international VC/PE allocation. The importance of that factor is also confirmed by La Porta et al. (1997, 1998). It should be noted that, with the exception of one neutral respondent, all legal advisors rated it with a positive score (mean 5.7), giving rise to have confidence in strong property rights protection in the country. However, several respondents did express concerns over protection of minority shareholders. In their report Ernst & Young (2013) criticise the country for having weak investor protection, confirming those concerns. They further suggest that it may be one of the reasons behind the low activity in the stock market.

5.3 Discussion and Recommendations

The biggest obstacle that was identified was the size of the economy. This also links to the size and amount of potential target companies for PE companies, two other relevant obstacles. This is a big issue for attracting foreign capital since it means that funds with large amounts of available capital are not able to invest in the country due to the investment opportunities being too small. This applies for both investments into funds and direct investments. While Estonia has shown an above EU average economic growth in the past decade (Eurostat, 2013a), the country is small and its growth is a long organic process; however, the GPs have the possibility to expand

their investment region outside of the country and it is something that has been done with all the later stage funds as well as the BIF. Working on a pan-Baltic scale gives the funds access to a considerably larger amount of targets and bigger investment opportunities.

Another key problematic area that hampers the attractiveness of PE investments in the country is the limited number of exit opportunities for financial investors. There are four main exit routes preferred by PE investors: a trade sale, sale to another financial investor, management buyout or a public listing. In addition to the aforementioned, a partial exit can be achieved through a dividend recapitalisation and liquidation of the company is also an exit route, albeit not a preferred one. Currently the limited amount of financial investors makes secondary buyouts an unlikely exit route for PE investors and this can only be changed by adopting methods to increase the number of GPs. Creation of different fund of funds that would invest in local GPs, including first time GPs, is the solution that has been proposed as the current best alternative (Ernst & Young, 2013) to increase the number of fund managers. As has been previously mentioned, currently there is a new fund of funds being raised by KredEx and Arengufond, with the leadership of EIF. Unlike the generalist focus of the BIF, the new FoF will have an early stage focus. It is of paramount importance that there is continuity in raising those FoFs to ensure a stable capital flow to the industry and a growth of the number of GPs. An abundance of financial investors can be especially important for early stage companies that either need to provide an exit to their angel investors or other early stage financiers or to raise additional capital for expansion. Currently several Estonian companies, e.g. Plumbr (Lepik, 2013a), TransferWise, GrabCAD, Erply (Rohelaan, 2013) have been able to raise substantial amounts of equity in foreign capital markets, however with a bigger availability of local funds the success rate of start-ups could be higher since capital would be more readily available.

The small activity in the stock market is a concern voiced not only by the survey respondents, but also by the general business community of the country. An issue that was noted by several respondents is limited protection of minority investors. Improvements to the legislation in that area could possibly increase stock market activity (Ernst & Young, 2013). Another idea provided by an Estonian LP in the survey was for the government to do minority listings of state-owned enterprises.

There are several companies which could be suitable candidates for public listings, for example Elering, the electricity transmission network operator, Eesti Energia, an energy company, or Tallinn Port, to name a few. In addition to creating more activity in the stock market, being publicly listed should improve corporate governance and increase efficiency of those companies.

A topic that was not identified in the survey results as an obstacle, but was pointed out by several respondents and in previous research (Kirikal, 2013) and thus should be mentioned is the low awareness and acceptance among entrepreneurs. This is a serious matter since many companies are not aware of private equity capital as a real alternative to more conventional sources of financing due to a lack of education in the area. Various solutions to this problem have been proposed: having the GPs or different agencies (e.g. EstVCA) educate the entrepreneurs and creating specific websites that would be directed at addressing this issue. It is a matter that requires a fundamental change in the business culture and not something that can be achieved in the short term, but it is a necessary step in order to increase the deal flow and activity in the PE market. It should also be mentioned that this is most likely a bigger problem for companies in traditional sectors, as opposed to innovative ICT companies who are, to a large extent, already involved with financial investors.

The last problematic area to be discussed is the low involvement of local pension funds in the PE sector. As was mentioned earlier, only 8% (Kallas, 2012) of funds under management of local pension funds were allocated to Estonia. The current legislation allows for all investments of a pension fund to be made outside of Estonia and some pension fund managers have used that option (Kallas, 2012). A possible solution could be to introduce a threshold on the proportion of funds that need to be invested in the country. This could include all types of investments (e.g. listed financial products like equity or bonds as well as alternative investments like real estate, PE or timberland). On the other hand a forced level of domestic investments can arguably oppose the idea of free movement of capital, so rather than increasing restrictions, the opposite strategy may work better. One of the issues facing pension funds is that the legislative restrictions of being allowed to obtain a maximum of 10% stake in a single GP or a single direct investment can be seen as major inhibitors for pension fund investments. In addition to that, pension funds have stated that they find the compensation of PE funds to be too high. Removal of unnecessary obstacles

(Kirikal, 2013) can be a step towards increasing the motivation of pension funds for increasing investments in the country. It is clear that getting the pension funds active in the PE sector is a key issue for the sector. A foreign GP in the survey has said that foreign investors are hesitant to invest in the country since locals themselves not investing sends a problematic signal.

Other suggestions by the survey respondents for improving the PE sector include decreasing taxes for foreign investors, country-wide specialisation in a single industry, and building an intellectual property culture in the country.

6 Conclusion

The aim of the research was to identify the biggest obstacles and attractors for private investment in the Estonian PE market. The main body of analysis consisted of a web-based survey conducted among relevant stakeholders in Estonia and in some of the neighbouring countries. The framework introduced by Groh & Liechtenstein (2007) was used as the basis for constructing and analysing the survey.

The biggest obstacles for attracting private investment to the Estonian PE market were found to be the size of the Estonian economy and the opportunities provided by the stock market. These are followed by the potential exit opportunities as well as the size and amount of potential target companies. The biggest attractors for private investment in Estonian PE were found to be the level of corporate taxation and the foreign language skills of the population. Other attractors found were the level of technological innovation, the level of education and the level of property rights protection.

There are several potential improvements that can be made by the government of Estonia and the industry participants themselves in order to lessen the obstacles identified. First of all the GPs should not limit their investments to Estonia, but also include the other Baltic countries and possibly some additional neighbouring countries. This is done to some extent by the existing GPs and this is a good way to lessen the perception of a small economy size for Estonia. The limited exit opportunities are an obstacle that can be solved by increased financial investor activity in the secondary markets. The Estonian government should continue creating public funding initiatives, i.e. new FoFs that would ensure a stable flow of funding to the

industry and increase the number of GPs, thus improving the activity on the PE market. Another important potential exit route for PE investors is the stock market which is relatively inactive in Estonia. A first step to increase the activity on the stock market is partial listing of the state-owned enterprises which could be done by the government relatively easily and would not take years to complete. The biggest LPs in Estonia, the pension funds, are regulated by law and are limited in their investment decisions. A loosening of certain restrictions that are currently imposed on the pension funds is proposed in order to motivate them to invest in Estonian PE as it is also important for establishing credibility of the market to foreign LPs. Finally, there are problems also on the entrepreneur side as they are not knowledgeable enough about the opportunities offered by the PE market. They need to be educated by the industry representatives and the government so that the potential deal flow can be improved.

The results suggest that the Estonian PE market is on the right track and there are many factors that act as attractors of investment rather than obstacles. However, there are important improvements that still need to be made in order to become a self-sustainable and well-functioning market. It should be noted that the findings are coherent with the literature on similar markets thus also being generalizable to a certain extent. The construction of this research results in the findings of this thesis being mainly applicable to Estonia, but due to relative similarities between countries in the CEE region they can be insightful for relevant stakeholders in other countries with similar degree of development of the PE market, especially the other Baltic countries.

We have looked at many qualitative factors that influence the private investor attraction to the Estonian PE market, but due to lack of data we have not looked at one very important quantitative factor – the track record of PE funds. For further research, depending on the time when the necessary data is available, we suggest doing a quantitative study on the performance of PE funds in Estonia and possibly a comparison to the funds in other Baltic countries.

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Appendices

Appendix 1: Structure of the Baltic Innovation Fund



Retrieved from <http://www.KredEx.ee/venture-capital/>

Appendix 2: Survey questions

Below are the questions listed to the survey respondents.

This survey intends to assess the attractiveness of the Estonian Private Equity (PE) and Venture Capital (VC) markets to private financial investors (both foreign and domestic). Currently the vast majority of investments into the Estonian PE/VC market are possible due to public investment vehicles (EIF, EBRD, KredEx, etc.), but these are invested through programs for development and convergence of the transition economies. In developed markets we see that the role of these investors is substantially smaller, if any. With the help of your responses we will identify the biggest current obstacles for attracting investors other than the previously mentioned governmental institutions to the Estonian PE/VC market. This survey will take 5-10 minutes of your time.

1. Which of the following actors in the economy would you identify yourself as (please choose the most relevant)?

- Provider of debt capital
- Limited Partner investor in PE/VC funds
- Legal advisor
- Financial advisor
- Industry/entrepreneur
- Public investment vehicle
- Business incubator / accelerator
- General Partner of a PE/VC fund
- Angel investor
- Academic
- Other (Please specify)

2. Is your country of domicile Estonia?

- Yes
- No

The following factors can be used to describe the attractiveness of Estonian companies to private financial investors. We define those investors as domestic and foreign investors that invest in the PE/VC markets directly or through local PE/VC funds and companies. We exclude Governmental investment vehicles for development (e.g. EBRD, EIF) and strategic investors (e.g. TeliaSonera, Carlsberg).

Please rank these factors based on whether, in your opinion, they currently attract private financial capital or act as an obstacle in attracting investors.

Questions 3 - 35 have the same possible answers:

- | | |
|-------------------------|------------------------|
| • Significant attractor | • Obstacle |
| • Attractor | • Significant obstacle |
| • Neutral | |

3. The size of the Estonian economy
4. The expected Estonian GDP growth
5. The size of the potential target companies for PE/VC funds
6. The amount of the potential target companies for PE/VC funds
7. The availability of bank debt
8. The amount of professional financial advisors
9. The amount of professional legal advisors
10. The size of existing and potential PE/VC funds
11. The potential “exit” opportunities for investors
12. The opportunities provided by the stock market
13. The number of qualified General Partners/Fund managers in PE/VC
14. The availability of governmental funding
15. The availability of EU funding for the target companies
16. The level of taxation for corporations
17. The level of taxation for investors
18. The level of property rights protection
19. The level of corporate governance
20. The extent and quality of legal support (beyond M&A transactions)
21. Corruption and bribing
22. Bureaucracy
23. The quality and skills of entrepreneurs/managers
24. The amount of experience of entrepreneurs
25. The foreign language skills of the population
26. The overall level of education
27. The level of business education
28. Access to qualified IT specialists
29. VC/PE awareness and acceptance among entrepreneurs
30. Flexibility of labour market
31. The perceived success of entrepreneurs
32. The level of entrepreneurial activity
33. The level of technological innovation
34. Enforcement of patents and intellectual property rights
35. The level of investment in research and development

The last two questions allowed the respondents to give free-form suggestions

36. Please list any additional factors that may have a positive or negative effect on attracting private financial investors for Estonia

37. What steps do you think should be taken (e.g. by the governments, companies, investors, etc.) to improve the availability of PE/VC capital as a source of financing?

Appendix 3: Wilcoxon Signed-Rank Test Results

Test Statistics^a

	Stock market opportunities - Economy size	Exit opportunities - Economy size	Size of target companies - Economy size	Amount of target companies - Economy size	Exit opportunities - Stock market opportunities
Z	-1.657 ^b	-3.528 ^b	-3.627 ^b	-4.307 ^b	-2.197 ^b
Asymp. Sig. (2-tailed)	.098	.000	.000	.000	.028

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Test Statistics^a

	Size of target companies - Stock market opportunities	Amount of target companies - Stock market opportunities	Size of target companies - Exit opportunities	Amount of target companies - Exit opportunities	Amount of target companies - Size of target companies
Z	-2.059 ^b	-2.929 ^b	-.149 ^b	-1.175 ^b	-1.312 ^b
Asymp. Sig. (2-tailed)	.040	.003	.882	.240	.190

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Test Statistics^a

	Foreign language sills - Corporate taxation	Technological innovation - Corporate taxation	Level of education - Corporate taxation	Property rights protection - Corporate taxation	Technological innovation - Foreign language sills
Z	-1.312 ^b	-1.544 ^b	-1.827 ^b	-2.719 ^b	-.307 ^b
Asymp. Sig. (2-tailed)	.190	.123	.068	.007	.759

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Test Statistics^a

	Level of education - Foreign language sills	Property rights protection - Foreign language sills	Level of education - Technological innovation	Property rights protection - Technological innovation	Property rights protection - Level of education
Z	-.647 ^b	-1.825 ^b	-.213 ^b	-1.422 ^b	-1.367 ^b
Asymp. Sig. (2-tailed)	.518	.068	.831	.155	.172

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Appendix 4: Descriptive Statistics of Survey Results

	ESTONIANS		FOREIGNERS		TOTAL	
Number of respondents	75		21		96	
	ESTONIANS		FOREIGNERS		TOTAL	
	Mean	St. Dev	Mean	St. Dev	Mean	St. Dev
The size of the Estonian economy	-3.81	4.15	-5.59	3.74	-5.21	3.88
The expected Estonian GDP growth	2.62	3.75	2.76	3.31	2.73	3.39
The size of the potential target companies for PE/VC funds	-2.86	4.63	-2.96	5.24	-2.94	5.09
The amount of the potential target companies for PE/VC funds	-1.90	4.87	-2.43	5.57	-2.32	5.40
The availability of bank debt	1.43	4.23	1.51	4.76	1.49	4.63
The amount of professional financial advisors	0.95	2.56	0.53	3.01	0.62	2.91
The amount of professional legal advisors	0.24	1.92	1.38	3.01	1.13	2.84
The size of existing and potential PE/VC funds	-0.95	5.15	-1.71	4.21	-1.55	4.41
The potential "exit" opportunities for investors	-3.33	4.83	-2.93	5.33	-3.02	5.21
The opportunities provided by the stock market	-2.38	4.64	-4.80	4.72	-4.28	4.79
The number of qualified General Partners/Fund managers in PE/VC	-0.71	4.27	-2.11	4.34	-1.80	4.34
The availability of governmental funding	1.90	5.12	1.25	4.41	1.39	4.55
The availability of EU funding for the target companies	2.38	4.07	3.29	3.52	3.09	3.64
The level of taxation for corporations	4.29	3.96	5.13	3.56	4.95	3.64
The level of taxation for investors	0.71	3.27	3.16	4.31	2.63	4.21
The level of property rights protection	1.43	4.51	4.08	3.80	3.51	4.09
The level of corporate governance	0.71	4.82	1.51	4.47	1.34	4.54
The extent and quality of legal support	0.71	2.87	1.64	4.11	1.44	3.88
Enforcement of patents and intellectual property rights	1.67	4.83	1.25	3.75	1.34	3.99
Corruption and bribing	-0.95	5.62	3.03	4.70	2.16	5.15
Bureaucracy	0.95	5.84	3.55	4.53	2.99	4.93
The foreign language skills of the population	4.05	4.36	4.41	3.65	4.33	3.79
The overall level of education	3.81	3.12	4.21	3.75	4.12	3.61
The level of business education	1.19	3.50	0.92	3.89	0.98	3.79
Access to qualified IT specialists	3.33	3.29	3.42	4.78	3.40	4.48
VC/PE awareness and acceptance among entrepreneurs	1.67	4.56	-0.99	4.55	-0.41	4.66
Flexibility of labour market	1.67	4.56	2.43	4.65	2.27	4.62
Quality/skills of entrepreneurs	2.62	4.07	0.20	4.86	0.72	4.79
Experience of entrepreneurs	0.95	3.40	-0.99	4.62	-0.57	4.44
The perceived success of entrepreneurs	3.10	4.02	1.91	3.46	2.16	3.60
The level of entrepreneurial activity	3.33	4.28	2.30	3.69	2.53	3.83
The level of technological innovation	3.33	5.08	4.47	4.44	4.23	4.58
Investments in R&D	1.90	3.70	-0.13	4.39	0.31	4.32