Mar 2016

# A Technology-focused Angel Investor: Ambient Sound Investments

# Tetsuva Kirihata

- I. Introduction
- II. Estonia-ITC diffusion, high-tech start-ups and venture capital investment
  - 1. ITC diffusion and high-tech start-ups
  - 2. Venture capital investment in Estonia
- III. Ambient Sound Investments
  - 1. The founders and management team
  - 2. The investment process
- IV. The characteristics of the investment style
- V. The investment activities

## I. Introduction

Ambient Sound Investments (hereafter abbreviated as ASI) is a technology-focused angel investor. The ASI was established in Estonia in 2003 by four co-founding engineers of Skype: Toivo Annus, Priit Kasesalu, Ahti Heinla, and Jaan Tallinn. It has been recognized as one of the oldest and most active angel investors for seed and start-up firms in Estonia.

It has been investing in technology-based seed and start-up firms. Aside from the financing, it has shared its experience in engineering and business development. And it has actively supported the growth of its portfolio firms. Its investment style is characterized by its 1) longer investment period, 2) focus on technology, and 3) active involvement in the portfolio firms. In the ASI, there are approximately ten members managing over one hundred million EUR of the Skype founder's assets.

#### II. Estonia-ITC diffusion, high-tech start-ups and venture capital investment

#### 1. ITC diffusion and high-tech start-ups

Estonia, officially the Republic of Estonia, is a state in the Baltic region of northern Europe, which re-established its political and economic independence from the Soviet Union in 1991 and became a European Union member state in 2004. In 2010, Estonia became a

member of the OECD as the thirty-fourth member country. Estonia's population of 1.32 million makes it one of the least-populous member states of the European Union and ranked 154<sup>th</sup> in the world (World Bank, 2015a). The Gross Domestic Product (GDP) in Estonia is worth 19.5 billion EUR in 2014; also ranked 104<sup>th</sup> in the world (World Bank, 2015b). Just after the independence from the former Soviet Union in 1991, economic stagnation was observed. However, more recently, the economy has been steadily growing after the global financial crisis in 2008-2009 (table 1). Manufacturing, wholesale and retail trade and real estate activities are the main fields of economic activity in Estonia (table 2).

Estonia is recognized as a developed nation by ICT diffusion (Nauwelaers, Maguire and Ajmone Marsan, 2013). According to the Ministry of Foreign Affairs of Estonia, all Estonian schools are already connected to the internet. All Estonian towns and villages are covered by the network of public internet access points. Furthermore, utilization of the ICT in government services is also progressing. In 2013, the percentage of electronic tax declarations in Estonia reached over ninety-five. The government has made changes on the cabinet meetings; they use paperless sessions using a web-based document system (figure 1).

Under this well-equipped ICT, the ICT high-tech entrepreneurial activities have been raised in Estonia. Cassidy (2014) describes the entrepreneurial activities in Estonia as follows:

Estonia may be tiny, but in tech terms it's a giant. It has a population of just 1.3 million, yet produces more start-ups per head than any other country in Europe. [...] the tech-savvy country that launched Skype a decade ago countries to be a hotbed of entrepreneurs and innovation.

According to Heidi Kakko, Board Member of the EstVCA and former CEO of the SmartCap, the reasons why Estonia has had a lot of high-tech start-ups are 1) the heritage of Skype as a role model, 2) the Estonian spirit "I can do it!", 3) fewer alternatives for people to millionaires, 4) the global mindset which started from the beginning due to the small domestic market, and 5) the relatively strong political leadership: e-services, tax regime, and

Table 1 The key economic Indicators in Estonia

	2011	2012	2013	2014
GDP at current prices (billion EUR)	16.4	17.6	18.7	19.5
Real growth of GDP (percent)	8.3	4.7	1.6	2.1
GDP per capita at current prices (EUR)	12356	13334	14218	14860
Unemployment rate (percent)	12.5	10.2	8.6	7.4

Source: Web page of the Ministry of Foreign Affairs of Estonia

public focus (Heidi Kakko, Board Member of the EstVCA and former CEO of the SmartCap, in discussion with the author, August 31st 2014).

Table 2 The total GDP by main fields of economic activity in Estonia -as % of the total GDP-

Manufacturing	16.0
Wholesale and retail trade; repair of motor vehicles etc.	12.7
Real estate activities	10.5
Transport and storage	8.0
Construction	7.1
Public administration and defense; compulsory social security	7.0
Information and communication	5.0
Education	4.9
Administrative and support service activities	4.6
Professional, scientific and technical activities	4.0
Electricity, gas, steam and air conditioning supply	3.5

Source: Web page of the Ministry of Foreign Affairs of Estonia

## Figure 1 The Information society indicators in Estonia

- 80% of the population aged 16-74 years uses the internet.
- 98% of households with children have internet capabilities.
- · All Estonian schools are connected to the internet.
- Rapid wi-fi internet connections are available in more than 1007 public places; in many places that service is free of charge. The area of wi-fi internet is constantly growing and encompasses all of Estonia
- · 98% of banking transactions in Estonia are conducted through the internet.
- Income tax declarations can be made electronically via internet. In 2013, over 95% of income tax declarations were presented through the e-Tax Board.
- Cabinet meetings have been changed to paperless sessions using a web-based document system.
- There are more mobile phone contracts than residents 139 per 100 people.
- · Estonia is completely covered by digital mobile phone networks.

Source: Web page of the Ministry of Foreign Affairs of Estonia

#### 2. Venture capital investment in Estonia

According to the Estonian Private Equity and Venture Capital Association (hereafter abbreviated as EstVCA), all forty investing members in the EstVCA have 578 million EUR of assets with a total of seventy-two active portfolio firms under management in 2014. Since its establishment in 2009, their portfolio firms have created 7,735 employees (Estonian Private Equity and Venture Capital Association, 2015).

With regard to investments in Estonian firms, 48.2 million EUR were invested in sixty firms which consist of twenty-eight new and thirty-two follow-on investments. Twenty-three

percent of the investments came from local capital, meanwhile, seventy-seven from outside Estonia. The sector split of sixty newly or follow-on investee firms in 2014 is illustrated in figure 2. Information technology is the highest and consumer services follows. The development stage of the investees in 2014 is shown in figure 3. The seed stage shared thirty-three percent, the highest, and the start-up stage follows with thirty percent (Estonian Private Equity and Venture Capital Association, 2015).

According to Kakko, there was little venture capital investment especially in the seed, start-up and early stage in Estonia in the early 2000's. Kakko describes the situation confronted at that time as follows:

We had to start by explaining what venture capital is and what angel investors are to

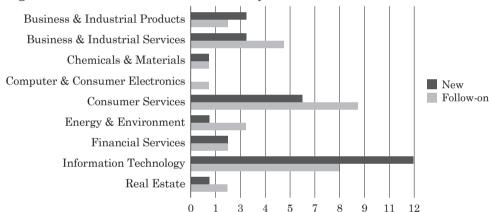
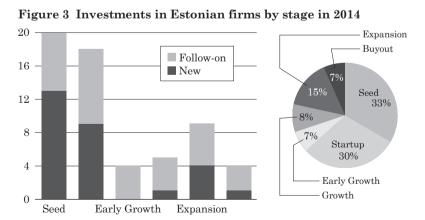


Figure 2 Investments in Estonian firms by sector in 2014

Source: Estonian Private Equity and Venture Capital Association (2015)



Source: Estonian Private Equity and Venture Capital Association (2015)

the Estonian public and convince them that financing high-tech start-ups was critical for the Estonian economy. However, thanks to the rapid activation of entrepreneurial high-tech start-ups, we were able to establish the EstVCA in 2009 faster than what we expected (Heidi Kakko, Board Member of the EstVCA and former CEO of the SmartCap, in discussion with the author, August 31st 2014).

#### III. Ambient Sound Investments

## 1. The founders and management team

In the ASI, there are approximately ten members managing over one hundred million EUR of the Skype founder's assets. The members have four co-founding engineers, CEO, head of venture capital investment and other investment managers, portfolio managers and analysts.

With regard to the co-founding engineers, first of all, Toivo Annus, one of the co-founders of ASI and Skype, built its technology investment basis after leaving Skype. When he was affiliated with Skype, he managed the engineering organization, which was based in Tallinn, Estonia. He was also responsible for the hiring and engineering processes in general as well as for the delivery of the core P2P functional component. The second co-founder is Priit Kasesalu. He is involved in the assessment of all of its technology investments. Before founding it, he played a central role in developing Skype. Cryptography, data communication and computer game development are his areas of expertise. Ahti Heinla, the third co-founder, conducts the technical reviews of its potential investments. He was the lead technical architect in Skype and worked on artificial intelligence, 3D graphics engines, signal processing, and the building of mobile phones. Lastly, Jaan Tallinn, the fourth co-founder, works on the overall strategy in researching and reviewing potential portfolio firms. He has experience in developing the core elements for Skype (Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, in discussion with the author, March 4th 2015).

Tauno Tats is the current CEO of ASI. He is the one who runs operations, management, administration, and business development. He is also in touch with the portfolio firms on a regular basis. Before joining it in 2007, he served as the vice-chancellor for the Ministry of Finance of Estonia. Margus Uudam is the head of venture capital investment. He is responsible for all of its direct investments—from managing the search for the new projects to the development of the existing ones. He was the economic policy vice-chancellor at the Ministry of Finance before he joined it. Additionally, there are investment managers and

analysts under the head of venture capital investment. As table 3 shows, each investment manager basically has his/her own portfolio firms. The investment manager is also responsible for the growth of the portfolio firms until their exit.

Aside from what's already mentioned, the co-founders have also been frequently involved in the portfolio firms as board members or advisers based on their interest and expertise. Furthermore, the co-founders first established their own technology-based firms before they got the investment from ASI and after the approval of all its members in some cases (Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, in discussion with the author, March 4th 2015).

Table 3 The portfolio firms of Ambient Sound Investments

Firm	the type of industry, whether the firm has exited or is still active, and the area	VCist
Armorize Technologie	Software and services, Exited, Asia.	_
Blaast Oy	Internet and consumer services, Active, EU.	Margus Uudam
Blip.tv	Internet and consumer services, Exited, US.	Margus Uudam
Celecure	Healthcare and life sciences, Active, EU.	_
Clifton	Semiconductors and components, Active, EU.	Ahti Heinla
DailyPerfect	Enterprise software and services, Active, EU.	Margus Uudam
Drimki	Internet and consumer services, Active, EU.	Kristjan Laanemaa
EcoFleet	Hardware and systems, Active, EU.	Margus Uudam
Egeen	Healthcare and life sciences, Active, US.	Kristjan Laanemaa
Eleutian	Internet and consumer services, Active, Asia.	Kristjan Laanemaa
Evikon MCI	Hardware and systems, Exited, EU	_
Flowplay	Internet and consumer services, Active, US.	Margus Uudam
Frenzoo	Internet and consumer services, Active, Asia.	Kristjan Laanemaa
GuardTime	Software and services, Exited, EU	_
Inkspin1	Internet and consumer services, Active, EU.	Margus Uudam
MoySklad	Enterprise software and services, Exited, EU.	Kristjan Laanemaa
MarkIT	Software and services, Active, EU.	Margus Uudam
Mendeley	Internet and consumer services, Exited, EU.	Kristjan Laanemaa
Modesat	Networking and communications, Exited, EU.	Kristjan Laanemaa
MyHeritage	Internet and consumer services, Active, EU	Kristjan Laanemaa
Nordic Sonar	Hardware and systems, Active, EU.	Kristjan Laanemaa
Progeniq	Hardware and systems, Active, Asia.	_
Senseg	Hardware and systems, Active, EU.	Margus Uudam
Versita	Software and services, Exited, EU.	Kristjan Laanemaa
Wahanda	Internet and consumer services, Active, EU.	Margus Uudam

Source: Created by the author based on the website of Ambient Sound Investments and the interviews with Jaan Tallinn and Indrek Jaaaska

#### 2. The investment process

The ASI's investment decision-making involves 5 steps: 1) primary consideration, 2) analysis of the business proposal, 3) term sheet, 4) due diligence process, and 5) the signing of the shareholders' agreement. The investment decision-making is basically done based on all members' approval (Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, in discussion with the author, March 4th 2015).

With regard to the first process which is the primary consideration, all members shall review their potential portfolio firms. According to Tallinn, if the products or services excite them, then they could already move on to the next step. In the subsequent step which is the analysis of the business proposal, they should look into the details of the potential portfolio firm's management team, technology, finance, business model, customers, and strategic partners. And then they should meet with the team members in person most especially when necessary. In the step which is the term sheet, all the members should gather and discuss whether they should agree on the value of the businesses or not. They should also talk about the amount and terms of investment in each of the potential portfolio firms. In the fourth step which is the due diligence process, they should verify the value of the technology and business as well as assess its legal aspects. Finally, in the fifth step which is the signing of the shareholders' agreement, they formalize their investment with the entrepreneurs and other potential shareholders. Within each step of the process, it conducts multiple rounds of question-and-answer activities with the potential portfolio firms, and talks to their customers, strategic partners and other investors. It typically invests from half a million EUR to two million EUR per firm (Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, in discussion with the author, March 4th 2015).

According to Jaaaska, ASI has not advertised its investment activities through mainstream media like TV, newspaper and magazine. Instead, all the members including the investment managers and founders would frequently attend high-tech start-ups exhibitions, sample fairs, and conferences. Through face-to-face meetings and word of mouth, it has gotten a reputation among entrepreneurs. It annually receives a minimum of three-hundred fifty to a maximum of four-hundred applications from all over the world. However, it invests in only a few of them (Indrek Jaaaska, former Investment Manager in Ambient Sound Investments, in discussion with the author, August 30th 2014).

Once the ASI has invested in the firms, it provides its expert-support and financial assistance. Aside from the financing, it aims to share its experience in engineering and

business development and actively contribute to the growth of portfolio firms. Each member provides his/ her expert advice on technology development, organizational growth, financial management, intellectual property strategy, international expansion, and team motivation based on his/her individual specialty (Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, in discussion with the author, March 4th 2015).

# IV. The characteristics of the investment style

The ASI's investment style is characterized by its 1) longer investment period, 2) focus on technology, and 3) active involvement in the portfolio firms. As for its longer investment period, it is no longer a venture capital firm. It particularly recognizes itself as a private investment vehicle and not as a typical venture capital firm because it only has invested funds of the co-founders and is not required to raise money from outside investors. In general, venture capital firms are obliged to sell their investments after a number of years—usually ten years—to refund their investors' money. However, its investment doesn't have a sell-by date; therefore, it can invest for a longer term (Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, in discussion with the author, March 4th 2015).

The ASI's focus on technology is an additional characteristic. Its investment targets are: 1) to place R&D at the core of the portfolio firm's business model, 2) to be in the seed, start-up and early stage of the firm's life-cycle, 3) to be built by entrepreneurs who hope to be global leaders in their field, 4) to provide technological products or technology-based services to their customers, 5) to obtain intellectual properties in their core technology area. From its investment records, there are plenty of investments in seed and start-up firms in the area of technology like B2C software, web or mobile application, and social media. It appears to be due to its founder's expertise and working experiences related to Skype. However, according to Tallinn, It has tried to avoid being constrained by a particular technology focus. It has simply invested in the best people and best ideas regardless of the technology area or the region the firms are situated in (Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, in discussion with the author, March 4th 2015).

Lastly, with regard to its active involvement in the portfolio firms, ASI seeks to contribute to their investee's growth by situating at least one of its members in the boards of its portfolio firms. It aims to share its experience in engineering and business development. On the other hand, it essentially attempts to avoid becoming the majority or largest shareholder in its portfolio firms as a sign of respect towards the management and the

independence of their portfolio firms. It usually becomes a minority investor in its portfolio firms with approximately twenty-five percent, although it occasionally takes more than fifty percent especially in seed stage firms based on the firm's strong requests (Indrek Jaaaska, former Investment Manager in Ambient Sound Investments, in discussion with the author, August 30th 2014).

According to Jaaaska, human resources are one of the ASI's strength regarding handson support. Most of its executives are connected with some of the most relevant individuals
in the field of business. They use their network to bring advantage to the portfolio firms that
they deal with. For instance, through its network of business experts, former CTO of
Modesat Communications, which was its third investment, was eventually replaced by one
of the most skilled and experienced executives who used to be affiliated with Skype's group
firm. Moreover, it has also frequently influenced changes on the top portion of their portfolio
firms, such as CEOs and board members.

## V. The investment activities

The ASI was established in 2003 by the Skype's founders. However, it only began to operate the investment at the end of 2005, after selling its stake on Skype Technologies to eBay. Its initial investment amounted to two million USD in Clifton, which was an Estonian start-up firm that aims to mass-produce heat-resistant semiconductor switches for the electronics industry. It took place in March 2006; right after starting its actual investment activities (table 3). The second investment that they made was in Oskando, an Estonian telematics solutions provider, with two-hundred thousand EUR worth of investments in April 2006.

The third one became one of the most successful exits in its portfolio firms. In May 2006, it acquired one-third stocks of Modesat Communications, an Estonian developer of radio communications technology, by investing five-hundred thousand EUR. According to Jaaaska, the main purpose of this investment in Modesat Communications was to help the firm gain international expansion. The firm only had ten employees at that time. Six years after the investing, Modesat Communications was acquired by Xilinx, a programmable logic devices producer (Indrek Jaaaska, former Investment Manager in Ambient Sound Investments, in discussion with the author, August 30th 2014).

The first investment outside Estonia was done in July 2006. ASI obtained thirty-percent of Connecty's stocks. Connecty is a Lithuanian high-tech start-up firm that provides remote

monitoring and control solutions. In this investment, it provided business-alliance support to the firm, with its other portfolio firm's network. It introduced Connecty to Oskando to form a strategic business alliance. The alliance's objective was to develop solutions and create novel products using both Connecty's software technology and Oskando's hardware technology.

In October 2006, ASI, in collaboration with two Estonian information security experts, established GuardTime, a company that aims to develop technology for checking the data and date integrity of digitally archived content. Moreover, it aims to create a mass market technology that enables users to attach a time stamp on their files, serving as a proof of the file's creation time and the integrity of digitally archived documents. In this firm's case, it participated not only as an investor but also as one of the founders. Aside from this, its cofounders were also active in investing in and establishing other firms like DailyPerfect, a behavioral targeting start-up, and targetAPI, a behavioral targeting solutions provider.

From May to June in 2007, ASI invested in Hong Kong and in the U.S. as well. It invested in Frenzoo, a 3D social networking firm based in Hong Kong. It did the same with regards to Blip.tv, a video-sharing site that originated in the U.S. These investments were the initial ones in Asia and the U.S. Since 2007, its portfolio firms had expanded to other areas like U.K., Russia, Poland, Finland, France, and Taiwan.

In September 2008, ASI hired Margus Uudam to head its private equity investment. According to Jaaaska, this was done in order to build a strong global investment team that would manage its investments not only in the technology sector but also in other areas. From 2007 to 2008, it had been gathering individuals which would compose the core staff, in order to expand their investment internationally and promote its active involvement in the

Table 4 The investments and exit deals of Ambient Sound Investments

Date	
Mar-06	The first investment of ASI, the investment in Clifton, an Estonian high-tech start-up semiconductor maker (2 million USD).
Apr	The second investment of it, investment in Oskando, an Estonian telematics solutions provider (200,000 EUR, 42 percent stocks).
May	The investment in Modesat Communications, an Estonian developer of radio communications technology (500,000 EUR, a third of the stocks).
Jul	The first investment outside Estonia, the investment in Connecty, a Lithuanian start-up that provided remote monitoring and control solutions (30 percent stocks).
Oct	The establishment of a joint firm, GuardTime, a R&D firms to develop technology for checking the data and date integrity of digitally archived content.
Nov	The investment in Evikon MCI, which develops sensor-based measurement devices and systems (1.5 million EEK, 22 percent stocks).
Dec	The investment in MarkIT, an Estonian IT start-up (2 million EUR).

Jan-07	The investment in Celecure, an Estonian biotechnology drug developer (1.6 million EUR, 26 percent stocks).
May	The first investment in Asia, the investment in Frenzoo, which is 3D social networking firm.
Jun	The first investment in the U.S., the investment in Blip. $tv$ which is the video sharing site.
Oct	The investment in United Dogs & Cats, an Estonian pet owners' social networking sites (15 percent stocks).
Jan-08	The investment in Egeen, a clinical research firm conducting clinical trials of drugs $(250,000 \ \mathrm{USD})$ .
Feb	The investment in FlowPlay, a developer of community oriented casual gaming technology in the U.S.
Feb	The investment in Kindo, a London-based online family networking platform, Kindo. $$ com.
Feb	The investment in LogneX, a Russian E-warehouse Service (200,000 USD, 30 percent stocks).
Mar	The investment in Versita, a Polish online scientific publisher $(400,000 \text{ EUR}, 20 \text{ percent stocks})$ .
Apr	The investment in SourceKibitzer, an inventor of metrics and performance indicators for software teams.
May	The investment in Senseg, a Finnish start-up developing touch interface technology.
Jun	The investment in Drimki, a Paris-based firm with a new online real estate platform.
Jul	The investment in Wahanda, a UK-based online wellness marketplace.
Aug	The investment in AirDio Wireless, a Taiwan-based hand held component maker. $(200,000~{\rm EUR},14~{\rm percent~stocks}).$
Sep	ASI hired Margus Uudam to head its private equity investment.
Sep	The first exit deal, the deal of Kindo by MyHeritage.
Dec	The investment in Idapted, a Chinese start-up provider of live on-demand Mandarin and English language training.
Feb-09	The investment in Mendeley, a UK-based developer of a free platform for managing and sharing research papers.
May	The investment in Kublax, a UK-based online platform for personal money management.
Jun	$The\ establishment\ of\ Daily Perfect,\ a\ newly\ established\ behavioral\ targeting\ startup.$
Jun	The investment in Armorize Technologies, software security firm focused on web application security in the U.S.
Dec	The establishment of target API, a newly established behavioral targeting solutions provider.
Apr-10	The investment in Progeniq Pte, a provider of acceleration solutions for the animations and visual effects industries in Singapore.
Jan-11	The exit deal of Oskando by Track24 Group.
May	The exit deal of LogneX by 1C.
Jan-12	The exit deal of Versita by De Gruyter, a Berlin-based academic publishing firm.
Sep	The exit deal of Modesat Communications by Xilinx.
Apr-13	The exit deal of Mendeley by Elsevier.

Source: Created by the author based on the website of Ambient Sound Investments and the interviews with Jaan Tallinn and Indrek Jaaaska

Note: Texts within parenthesis indicate the amount of investment, the share of stock

portfolio firms (Indrek Jaaaska, former investment manager in Ambient Sound Investments, in discussion with the author, August 30th 2014).

The first exit deal of ASI was Kindo, London-based online family networking platform, Kindo.com. It was on September 2008, seven months after its investment. Kindo was acquired by MyHeritage, an online network for families. Its exit deals have been increasing ever since its first exit case.

# Acknowledgment

I wish to express my utmost gratitude to the people who provided assistance during the completion of this paper. I am deeply indebted to Jaan Tallinn, Co-founder of Skype and Ambient Sound Investments, Indrek Jaaaska, former Investment Manager of Ambient Sound Investments, Heidi Kakko, Board Member of the EstVCA and former CEO of the SmartCap, Meelis Kitsing, Head of Economic Analysis, Economic Development Department, the Ministry of Economic Affairs and Communications. I also want to especially acknowledge them for all the helpful information and opinion they spared during the interview.

#### Questions

- Q1. Describe the features of the following:
  - Q1.1. The economy in Estonia
  - Q1.2. The entrepreneurship activities and venture capital investment in Estonia
- Q2. Discuss the pros and cons of the ASI's investment characteristics on the following terms:
  - Q2.1. Longer-term investment
  - Q2.2. Technology-focus
  - Q2.3. Active involvement in its portfolio firms
- Q3. Find the most promising high-tech start-up in Japan and create the investment proposal for the founders of the ASI.

#### References

Cassidy Nigel (2014) Next Silicon Valleys: Small Estonia has big ideas, BBC news technology, 23 February 2014.

European Commission (2005) Best practices of public support for early-stage equity finance.

Kakko Heidi (2012) Challenges and opportunities for the public venture investor in the Baltic states.

Kitsing Meelis (2013) Government as a venture capitalist: Evidence from Estonia, Industry Studies Association Annual Conference.

Kitsing Meelis (2014) Political economy of government venture capital, Midwest Political Science Association Annual Conference.

Kalvet Tarmo (2001) ICT, innovations and innovation policy: The case of Estonia, Working Paper, Archimedes Foundation and PRAXIS Center for Policy Studies.

Lange Lex de, Ger De Bruin, Bart Kleyn, Alessandro Favalli, Eri Vázquez Muñoz and Andrea Di Anselmo (2004) Access of enterprises to venture financing in Estonia: Feasibility study of government support scheme.

Mari Vavulski (2015) Venture and private equity in Estonia

Nauwelaers Claire, Karen Maguire and Giulia Ajmone Marsan (2013) The Case of Helsinki-Tallinn (Finland-Estonia) - Regions and innovation: Collaborating across borders, OECD Regional Development Working Papers, OECD Publishing.

OECD (2013) Entrepreneurship at a glance 2014.

World Bank (2015a) Population 2014.

World Bank (2015b) Gross domestic product 2014.

World Economic Forum (2010) The Global economic impact of private equity report 2010, Globalization of Alternative Investments Working Papers 3.