

Vladimir Menshikov*
Ludmila Sinica**

THE ROLE OF THE INFORMATION TECHNOLOGY SECTOR AND ITS DEVELOPMENT IN LATVIA

ROLA I ROZWÓJ SEKTORA TECHNOLOGII INFORMATYCZNYCH W ŁOTWIE

Introduction

The term „information technology” in the modern meaning was first published in the „Harvard Business Review” in 1958, the authors Harold J. Levits and Tomas L. Vislers. They wrote: „The new technology does not yet have a single established name. We shall call it information technology (IT).” Their definition includes three categories of importance of IT: techniques for processing, the application of statistical and mathematical methods to decision-making, and the simulation of higher-order thinking through computer programs¹. This definition was intended to separate single-purpose hardware with limited functions from the computing devices that may be programmed to perform different tasks. Nowadays IT goods and services have become so accessible and popular, that are used in all sectors of the economy and in everyday life. Automation of information processes fundamentally transforms the economy and society. There is an extension of IT penetration in the business processes in a wide variety of organizations, governance mechanisms and people’s daily lives. Rapid modernization and automation of production processes is taking place with the development of information society and information technologies, new industries appear accelerating the pace of economic growth.

The information technology sector is one of the most dynamic, innovative sectors with the highest growth potential, due to the constant automation of global manufacturing processes and growing popularity of e-commerce. According to the Statistical Office Of The European Communities (EUROSTAT) almost 3/4 (74%) of all EU enterprises had their own web page or used the services of a third-part provider in 2014². Moreover, the „OECD Internet Economy Outlook 2015”

* Dr. soc. Daugavpils University.

** Mg. oec. Daugavpils University.

¹ H. J. Leavitt, T. L. Whisler, *Management in the 1980s*, „Harvard Business Review” 1958, November/December, pp. 44–48.

² Eurostat, *Statistics explained. Science, technology and digital society*. Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Science,_technology_and_digital_society

data shows that in Organization for Economic Cooperation and Development (OECD) countries 95% of businesses have broadband up from 86% in 2010³. This phenomenon of rapid development and overall use of internet services is historically unique, especially taking into account that the Internet became available for the masses only in the late 1990s and the possibility to create an affordable and custom webpage for commercial purposes appeared only in 2004 with the development of Web 2.0.

Several studies devoted to information technology were implemented in Latvia. Especially active are researchers studying various aspects of IT impact on social processes and education. Thus, the studies of Vera Boronenko and Vladimir Menshikov are devoted to sociological and pedagogical aspects of new media in education in Latvia in the context of the e-society development^{4,5}. The search in this area has led to the need for a deeper look at negative aspects of use of IT, in particular among teenager cyberbullying in Latvia and Russia⁶. Researches has emphasized the importance of a better understanding of the role of different types of capital, including network capital where a huge role is played by the IT in the era of e-society and e-economy⁷. There are also different studies about economic aspects of information technology in Latvia. In particular, works in this area by authors: G. Berina, V. Lipskis, A. Teilans, E. Gaile-Sarkane, J. Briedis, P. Laurinsh and others. However, the main topic of these studies is usually connected with the impact of IT services on other economic sectors and the economy as a whole. There are only a few works dedicated to analysis of the IT sector and its development in Latvia. In addition, many studies cover the entire information and communication technology sector in Latvia, but do not highlight the IT sector itself. That means that, unfortunately, over the last few years these problems falls out of focus of researchers and that makes it necessary to take a closer look at the IT sector in Latvia, especially after the financial crisis in 2008 and taking into account how dynamics the sector is.

The role of the information technology sector in the modern economy

Table 1.1 presents the distribution of global innovation in the world economy by industry. Calculations of the indicator are based on the Derwent World Patents Index.

³ OECD 2015. *OECD Digital Economy Outlook 2015*, OECD Publishing, Paris, 284 p.

⁴ V. Boronenko, V. Menshikovs, *Sociological and Pedagogical Aspects of Application of New Media in Education in Latvia within the Context of E-society*, „Social Sciences Bulletin” 2009, no. 2(9), pp. 62–80.

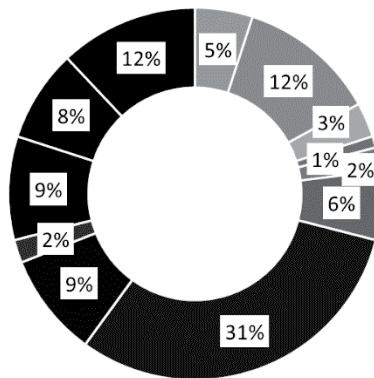
⁵ V. Boronenko, V. Menshikovs, *New media and education in Latvia*, „Kwartalnik Pedagogiczny 2014, ROK LIV: 2009 4(214). pp. 139–155.

⁶ V. Boronenko, V. Menshikov, G. Marzano, *Topicality of cyberbullying among teenagers in Russia and Latvia*, „Social Sciences Bulletin” 2013, no. 2(17), pp. 84–104.

⁷ V. Menshikov, *Theory of Aggregate Capital in the Era of E-Society. Organizacja społeczna w strukturach sieci*, Lublin 2016, pp. 123–128.

Table 1.1
Overall view of world innovation by sectors in 2014 and 2015

Industry	2014 Volume	2015 Volume	Share in Total 2014	Share in Total 2015
Aerospace&Defence	61162	71633	5%	5%
Automotive	153872	166867	12%	12%
Biotechnology	42584	41624	3%	3%
Cosmetics&WellBeing	11017	11307	1%	1%
Food, Beverage&Tobacco	26333	26605	2%	2%
HomeAppiliances	71278	86301	6%	6%
InformationTechnology	380325	429806	30%	31%
MedicalDevices	93462	118658	7%	9%
Oil&Gas	24158	27556	2%	2%
Pharmateuticals	111479	116286	9%	9%
Semiconductors	110761	114488	9%	8%
Telecommunications	161739	166601	13%	12%



Source: made by authors, data source: The Reuters. 2016 State of innovations

According to the „2016 State of Innovation” by Reuters, 31% of the world innovation belongs to the IT sector, as the next largest share is only 12% (at the same level in the automotive industry and communications sector)⁸. It is important to note that the index is characterized by a positive trend – in 2015, compared with the previous year, it rose by 13% and by 1 percentage point increased its proportion in the total share in all industries.

The growth rate of productivity and employment in the IT sector is the most rapid in the EU. According to the survey „Tech Nation Report” for 2016, IT sector is growing 32% faster than the rest of the economy in the UK⁹. Using data from the

⁸ The Reuters 2016, 2016 state of innovations, Thomson Reuters, 80 p.

⁹ Tech City 2016, Tech Nations Report 2016. Transforming UK industries, Nesta, 65 p.

EUROSTAT database, authors calculated the main IT sector indicators' average growth rate in the European Union and the results are presented in the Table 1.2.

Table 1.2
IT sector indicators` growth rate in the European Union in the period 2006–2015

	2006/ 2005	2007/ 2006	2008/ 2007	2009/ 2008	2010/ 2009	2011/ 2010	2012/ 2011	2013/ 2012	2014/ 2015	Average in IT sector (2006– 2014)	Average in all sectors (2008– 2014)
Number of enterprises (% change)	5,5	6,6	4,0	0,5	10,7	5,1	5,9	7,6	8,3	6,0	1,4
Turnover (% change)	7,6	10,8	5,0	–5,6	7,3	6,7	6,6	3,5	7,2	5,5	1,1
Value added (% change)	5,5	10,6	2,7	–5,9	5,8	7,1	7,2	4,3	8,0	5,0	–
Employ- ment (% change)	3,5	8,6	3,2	–1,5	3,9	7,0	3,1	3,8	8,9	4,5	–0,2

Source: authors' calculations, data source: EUROSTAT

The data analysis showed that the average growth rate of the number of enterprises in the sector in the period from 2006 to 2015 was 6%, growth rate of turnover – 5.5%, growth rate of value added – 5% and employment – 4.5%, which are very high indicators for a sector of economy. If such indicator as turnover, which is absolute and presented in euros, can be partially attributed to the effect of inflation, than the share in GDP is a very objective index. Very interesting trend in the sector is a growing rate of employment in terms of escalating demographic crisis in Europe. Comparing the average growth rate of the IT sector indicators with the average indicators across all sectors, the radical difference can be seen. If average growth rate of turnover in the IT sector in the study period was 5.5%, than the same indicator for all sectors was only 1.1%. The same trend is observed in all other study indicators.

Apart from a small decline in 2009, there has been a steady growth in the dynamics of the IT sector indicators over the whole period. It is important to note that in 2009, due to the global financial crisis, all sectors of the economy experienced a downturn, whereas the decline in the IT sector was the smallest one and the number of enterprises even continued to grow. It can also be positively estimated that the sector has quickly recovered from this downturn. Comparing the situation in the IT sector and across all economic sectors as a whole, it was noted that the drop in turnover in all sectors averaged 11% and the indicator returned to the level of 2008 only in 2011, when the decline in the IT sector was more than twice smaller (5%) and the next year (2010) turnover exceeded the level of

2008. This observation points to elasticity and relative independence of the sector so it can be more resistant to stressful situations than other sectors. This can be explained by the fact that there are no substitutes for IT goods and services. The next factor is other sectors dependence on IT services and goods, which does not allow demand to drop rapidly and does not let IT services to give up for a time of financial difficulties.

According to economic researches, the use of IT increases the return on investments and has a multiplier effect on the economy. The IT sector became one of the most important sources of economic growth not only because of its contribution to the GDP, but also because of its positive impact on other sectors. Nowadays IT services are equally used in all sectors of the economy. For example, in the construction this could be different programs for calculations, engineering, accounting and design, software technology for equipment, „smart home” technology etc. In fact, the software development for automation of production processes will bring the economy not only income of the enterprise, which made this software, but also the increase in income of enterprises that will use this modern program.

World Bank data shows that companies around the world which use IT in their work have a 10% higher profitability than companies that do not use¹⁰. Scientists from different countries have investigated the positive impact of the IT sector on the economy, demonstrating the positive influence of the sector in different regions and in different years (Weill (1992); Hitt and Brynjolfsson (1996); Shao and Lin (2001); Lee and Menon (2000); Gholami et al. (2004); Badescu and Garcés-Ayerbe (2009); Mouelhi (2009); Abri and Mahmoudzadeh (2015)).

As the main sources of the sector positive impact and main factors, which allow the sector to develop rapidly, authors most often mentioned:

- the use and development of innovation;
- IT products multiple and multifaceted use;
- low investments in capital goods and low initial costs;
- the possibility of distant performance;
- the emergence of new sectors and activities based on IT;
- the widespread use in other sectors and their dependence on IT;
- low marginal costs;
- high added value;
- knowledge-based industry.

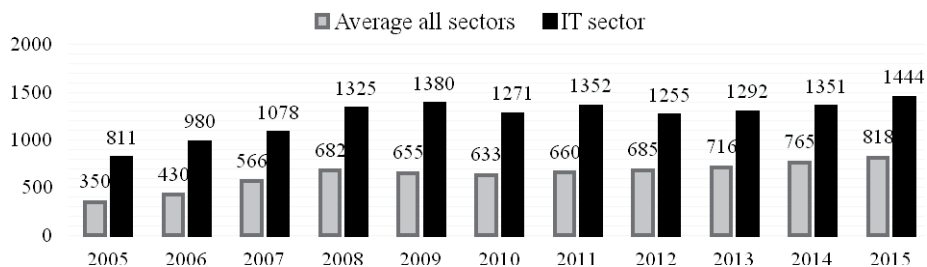
The Information Technology and Innovation Foundation wrote about IT: „ICT is a general-purpose technology that has a wide range of effects throughout the entire economy, reshaping the whole systems of production and distribution. IT diffuses throughout the economy; they engender extensive spill overs in the forms of externalizes and technological complementarities, and their evolution and diffusion span for decades”¹¹.

¹⁰ The World Bank 2015, *Annual Report 2015*, World Bank, 60 p.

¹¹ B. Miller, R. D. Atkinson, *Raising European Productivity Growth Through ICT*, The Information Technology & Innovation Foundation, 2014, 43 p.

Statistical sources prove that the IT sector is one of the highest-paying sectors. This observation directly points to the lack of specialists and high value added of IT products, in addition to its importance both at the state level and at the level of private enterprises. Figure 1.1 displays a comparison of gross salary in the IT sector and the average salary in Latvia from 2005 to 2015.

Figure 1.1
Average gross salaries in Latvia by sector 2005–2015 (EUR)



Source: made by authors, data source: the Central Statistical Bureau of Latvia

The data of the Latvian Central Statistical Bureau shows that in 2015 the average gross salary in the IT sector was 1 444 euros, when the average national salary was only 818 euros (43% smaller) and the difference is not reducing significantly with the passage of time. The average salaries growth rate in the sector over the past 10 years was 6.4% and the average salary in the sector increased by 178%.

This trend also is supported by the investment paradox. This is a very interesting phenomenon of huge investments in the IT sector companies, even though the negative results of their economic activity. For example, „Twitter”, „Uber”, „Amazon”, „Yelp” are companies with one of the highest capitalization in the world, but in reality a long time since the beginning of their establishment were not able to generate a cash flow and did not bear real income to investors. Nevertheless, the market value of their shares has been rising steadily. This paradox is explained by the potential of these companies and the sector as a whole, giving investors a reason to trust and expect significant capital growth over the long term.

Interesting findings are presented in the study „Facebook`s Global Economic Impact”. This is a study about the effect of one IT enterprise on a global economy. The analysis showed that one IT company in 10 years of existence was able to bring 227 billion US dollars income to the world economy and 4 million workplaces. The research also presents data about the effect on the US economy: 100 billion US dollars income and 1.1 million workplaces¹².

¹²C. Williams, *Facebook`s Global Economic Impact*, The Creative Studio at Deloitte, 2015, 36 p.

The development of the information technology sector in Latvia

Speaking about the development of IT business in Latvia, it is very important to name a number of positive factors or prerequisites for the development of the IT sector in the country. Firstly, it is an improved and made approachable for the last 5 years global IT infrastructure. Thanks to services like Amazon Elastic Compute Cloud (Amazon EC2), or cloud hosting service for data storing, any company or individual can establish the infrastructure for the implementation of IT project at affordable price and from any place in the world. It blurs boundaries between countries and lets IT specialists and companies work with the same resources regardless of the location.

Next, important factor of the IT sector is development of network capital and the ability to work in any company of the world without leaving a house. An excellent example of such cooperation is freelance or, in other words, remote work outside the company state, like a private practice. Professionals of different professions, who are able to carry out their work in electronic format or deliver it to another country, organize special online communities and look for customers in digital environment. One of the most popular communities is Upwork service (former oDesk) and their statistics show that in early 2015 they had 9.7 million registered freelancers and 3.8 million firms offering work¹³. Another example is an outsourcing or in other words the possibility to transmit certain enterprise processes and functions to other organization. Outsourcing has also become possible thanks to the development of technologies and social capital accumulation. Despite the fact that income from the final product belongs to the customer country, taxable administrative and personnel costs as well as the performer company's profit bring significant revenue to economy. These types of cooperation are particularly relevant in times of shortage of skilled IT developers.

Undoubtedly, the main advantage of Latvian IT sector is comparatively low salaries, which is one of the main sector costs positions. Regarding salaries, Latvia occupies one of the last places in the EU with the average salary 19 thousand euros per year with an average of 47 thousand (60% less) in the ICT sector¹⁴. Earlier in the figure 1.1 the data about the IT sector salary level in Latvia was presented. Despite the fact that Latvian salaries are among the lowest in the EU, they are one of the highest in the country and are great motivation to choose this profession, which may not be as true for countries where the difference between salaries is not so great.

As the another Latvia's advantage, in terms of IT sector development, serves skilled workforce and well-developed education system. Using targeted politics it can be adapted to the labor market needs of the IT sector to prepare the necessary specialists. However, we should not overestimate the education system and

¹³ Upwork 2015, *Online WorkReport 2014*, Available: <http://elance-odesk.com/online-work-report-global>.

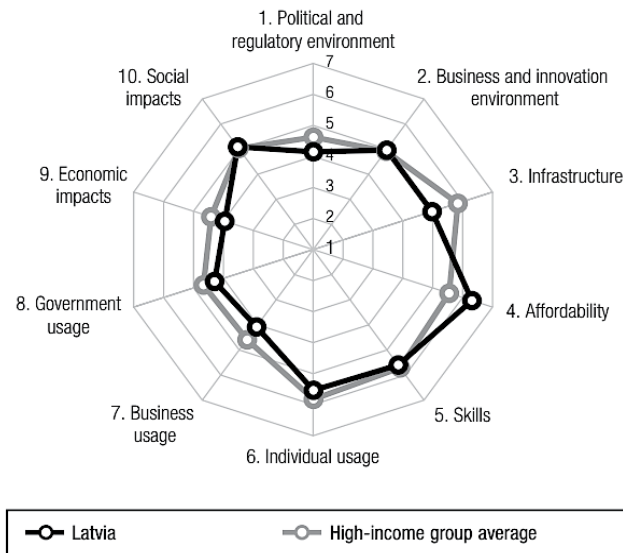
¹⁴ Eurostat, *Statistics database. Industry, trade and services*, Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Science,_technology_and_digital_society.

its scales in Latvia. Studies shows, that more important is the country’s ability to attract business professionals including IT professionals from abroad¹⁵. The problem of labor deficit and the brain drain in the sector is extremely topical and requires further in-depth study.

Furthermore, big advantages are an excellent technical readiness and beneficial geographical position – through the territory of Latvia goes a modern fiber optic cable Baltic Highway that provides high speed and high quality data transmission. It is noteworthy that Latvia ranks 10th in the world as a country with the fastest Internet¹⁶. This high-performance infrastructure offers a great investment opportunity for companies that work with large volumes of data. In addition, the country is characterized by a low price for the Internet and relatively cheap, but prepared and developed infrastructure. A definite advantage can also be called knowledge of the English language and Western work culture.

Next indicator to be called as a Latvian IT sector potential prove is Latvia’s 32 rank in the Network readiness global index¹⁷. The country’s results for index individual indicators are displayed in a Figure 1.2.

Figure 1.2
Network readiness index: county profile for Latvia



Source: S. Dutta, T. Geiger, B. Lanvin, The Global Information Technology Report 2015

¹⁵ A. Stankevičs, V. Meņšikovs, S. Ignatjeva, *Higher Education’s Contribution Info Economic Performance and Innovativeness of Latvia: Exploration Research*, „Economic Annals” 2014, 59–202, pp. 7–2.

¹⁶ Fastmetrics, *Internet speed by country*, Available: <https://www.fastmetrics.com/internet-connection-speed-by-country.php#top-10-worldwide>.

¹⁷ S. Dutta, T. Geiger, B. Lanvin, *The Global Information Technology Report 2015*, World Economic Forum, 381 p.

The index characterizes the level of information and communication technologies development and infrastructure in countries around the world. When the minimum and maximum result of 2.20–6.04 among world countries, the result of Latvia is 4.8 points. Among the EU countries Latvia ranks 15th.

The weaknesses of Latvia in the index are recognized as a role of government in the use of IT services, state support, popularization of IT, as well as political and regulatory environment. In turn, the strengths of Latvia are: qualitative infrastructure (excluding electricity and mobile coverage), skilled workforce, favorable business and innovation environment and the availability of technology. We can positively estimate the annual increase in Latvian ranking: from 52nd place in 2010 to 31st place in 2016, which emphasizes the increasing capacity and country readiness to the further development of the IT sector.

Regarding the role of the government and its support in IT sector development, one of the positive examples are Canadian and US immigration policies, providing lightweight conditions of emigration and assistance in integration and employment for IT professionals. One more example is the policy of Holland, where emigrated IT engineers have 30% tax discount on the gross salary that allows them to be in a better position than local workers. Many European companies offer a complete package of services for IT engineers who come from abroad, like search and arrangement of housing, registration of documents, language courses, school search for children etc.

Speaking about the prerequisites of the sector development in the country, a positive indicator is also the Latvia's 22nd place in the Easy doing business index, which indicates the favorable business conditions in countries around the world¹⁸. In particular, Latvia takes the 27th place as a country where are good tax conditions, 27th place – good conditions for starting a business and 19th place – possibility to get a credit. Among the EU countries, Latvia takes the 10th position.

In the context of the IT sector and favorable environment for its development it is important to note that at the beginning of 2016 Latvia had the third place in the index after Macedonia and Lithuania in Europe and Central Asia as a country that is not in OECD high income group. In fact, Latvia is the third country in the European and Central Asia region with favorable conditions for doing business and, at the same time, a country where salary level is much lower than the average level in the region. EUROSTAT data shows that Latvia is in the second place after Romania among the EU countries with the lowest salaries in the IT sector¹⁹. This factor is extremely important and is related to the fact that salaries in the IT sector is one of the main positions of expenditure and can play a crucial role in the ability of the Latvian IT sector to attract foreign companies and outsourcing projects.

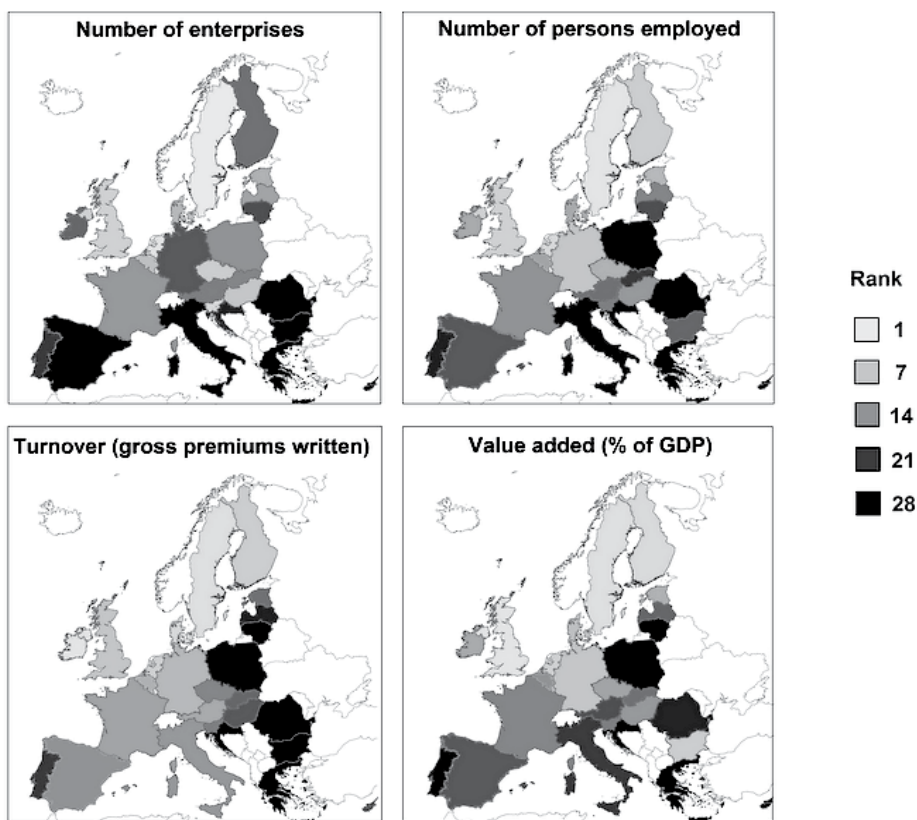
¹⁸ World Bank Group 2016, Doing Business 2016, International Bank for Reconstruction and Development, The World Bank, 338 p.

¹⁹ Eurostat, Statistics database. Industry, trade and services, Available: http://ec.europa.eu/eurostat/statistics-explained/index.php/Science,_technology_and_digital_society.

With regard to Romania, it is worth to mention its positive example in the promotion of the IT sector in the country and globally. Thanks to a competent policy of the government, operating with the previously mentioned data about salary level, Romania has managed to attract the world’s major IT companies for the organizing branches in the country and now is gaining rapid pace in terms of the IT sector development.

The next task of the research was to compare a situation in Latvia with other EU countries. For this purpose a ranking method was used. Calculations were made using Eurostat data and in a result 4 indicators on a comparable basis were produced. These 4 indicators describe development of the IT sector in the EU countries. The results were ranked from 1 (the best result) to 28 (the worst result). The results are displayed on the maps in the Figure 1.3, where the first place is indicated with the lightest color and the last, respectively, with the darkest.

Figure 1.3
Main IT sector indicators’ ranking in European Union countries



Source: made by authors. Calculations are based on EUROSTAT data

Data in the Figure 1.3 suggests that Latvia takes the 12th place in the EU in the number of IT companies per 1 inhabitant, which is above average. In addition, Latvia ranks 15th in the number of persons employed in the sector. However, in relation to a turnover of the IT sector, expressed on a comparable basis, Latvia ranks only 22nd out of 28 countries. Moreover, the proportion of IT sector in the country's GDP at current prices in Latvia is only 18th highest in the EU. Taking into account earlier detected preconditions for the development of IT sector in Latvia, including advantages over the other EU countries, it can be concluded that the country does not use its full potential, and this issue requires further in-depth study.

Table 1.3
IT sector indicators' correlations

		Correlations			
		Turnover	% in GDP	Number of enterprises	Employment
Turnover	Pearson Correlation	1	,760**	,841**	,665**
	Sig. (2-tailed)		,000	,000	,000
	N	28	28	28	28
% in GDP	Pearson Correlation	,760**	1	,531**	,490**
	Sig. (2-tailed)	,000		,004	,008
	N	28	28	28	28
Number of enterprises	Pearson Correlation	,841**	,531**	1	,553**
	Sig. (2-tailed)	,000	,004		,002
	N	28	28	28	28
Employment	Pearson Correlation	,665**	,490**	,553**	1
	Sig. (2-tailed)	,000	,008	,002	
	N	28	28	28	28

** Correlation is significant at the 0.01 level (2-tailed)

Source: authors' calculations, datasource: EUROSTAT

An interesting observation: in spite of the statistically significant correlation (see Table 1.3), IT sector indicators are not necessarily linked with each other. For example, a high number of businesses per capita does not guarantee a high contribution to GDP and so on. The example of this observation is Slovenia with the 4th result in the EU in the number of IT companies, but at the same time the country ranks only 16th in all other indicators. An interesting situation is in Bulgaria, which ranks 23rd in the number of enterprises, the 24th in terms of turnover,

the 18th in employment, but takes the 6th place in the IT sector contribution to the GDP. In other words, the IT sector in Bulgaria is well developed and makes a great contribution to the GDP, but as a country with one of the lowest GDP in the EU, the IT sector turnover per 1 inhabitant is relatively low. This suggests that the number of companies does not characterize the scope of the IT sector and its contribution to the economy, and turnover per 1 inhabitant is not comparable with a share of GDP, as it does not display the difference in the level of income. Therefore, all 4 indicators are important and characterize the different aspects of the development of the IT sector.

Nevertheless, the Latvian IT sector continues to evolve. Data of the Central Statistical Bureau of Latvia shows that the number of companies in the IT sector is increasing annually – if in 2008 it was slightly more than 1000 companies, than in 2014 this figure increased almost threefold. The same with the IT sector earnings – compared with 2008 this figure increased 2.5 times. A significant increase is observed in the share of the IT sector in total value added: from 0.54% in 2000 to 2.34% in 2014. The number of employees in the last 7 years has almost doubled from 5 764 people in 2008 to 10 748 in 2015.²⁰

Conclusion

Information technology plays an increasingly important role in the modern economy. Business processes and privacy of households are largely involved in the sphere of information and information technology. The larger the scope of IT is becoming, the more urgent is the need for the economic analysis of the functioning mechanism of the sector.

By analyzing the study results it can be concluded that, taking into account the prerequisites for the IT sector growth in Latvia, the sector contribution to economic development and continuous extension of the sector in the world, Latvia has great potential to attract foreign investments and for the creation and development of local enterprises. The main advantages of Latvia are comparatively low salaries in the IT sector, well established and prepared infrastructure and a favorable environment for business. However, it was concluded that the country does not use its full potential in terms of IT sector development and this issue requires further in-depth study.

In addition to the positive factors, there are also objective problems associated with the development of the IT sector in Latvia, which are primarily related to labor deficit connected with the brain drain or professional emigration. Secondly, the topical problem is the passivity of foreign investors and the lack of knowledge about the potential of the Latvian IT sector, as well as the lack of the government cooperation and support. These problems require a deeper research to find a way of minimizing their negative effect on the IT sector development in the country.

²⁰ Central Statistical Bureau of Latvia. *Statistics Database*. Available: <http://www.csb.gov.lv/en/dati/data-23959.html>.

IT sector goods and services are characterized by a high value added, this is a knowledge-based sector and it does not require a large capital investment to start a business. Therefore, efficient use of resources in the sector can make a significant positive impact on economic development.

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SUMMARY

Information technology (IT) takes significant role in the global economy. The information technology sector (IT sector) is one of the fastest growing sectors in the world and in Latvia. The global IT market growth amounted to an average of 5% until 2016 that puts it among the fastest-growing major markets in the world. It occupies a special place in the economy and its status is determined by a great impact on productivity growth and quality of life. The sector is mobile, dynamic and does not require significant investments in fixed assets. All these

factors characterize need to support and develop the sector, as well as to trace current trends of its condition in the country and region. The article deals with the economic aspect of the IT sector, the importance of the sector in the world economy, analyzes question of its development potential in Latvia. The article reveals state of the sector in the European Union (EU) and determinates Latvia`s place among the countries of the Union.

Keywords: information technology, IT sector, information technology sector, innovations.

STRESZCZENIE

Technologie informatyczne (IT) pełnią znaczącą rolę w globalnej ekonomii. Sektor technologii informatycznych (sektor IT) należy do jednych z najbardziej rozwijających się na Łotwie i na świecie. Szacowany do 2016 roku 5% wzrost globalnego rynku IT sprawia, że jest on jednym z głównych szybko rozwijających się ryków na świecie. Znaczący wpływ, jaki ma na wzrost produktywności i jakości życia powoduje, że zajmuje on szczególne miejsce w ekonomii. Jest to sektor mobilny, dynamiczny i nie wymaga znaczących inwestycji w aktywa trwałe. Wszystkie te cechy wskazują na potrzebę wspierania i rozwoju sektora IT, jak również śledzenia bieżących trendów w kraju i regionie. W artykule przedstawiono ekonomiczne aspekty sektora IT, jego znaczenie dla światowej ekonomii oraz zbadano istotę jego potencjału rozwojowego w Łotwie. Artykuł ukazuje stan sektora technologii informatycznych na świecie oraz wskazuje miejsce rynku łotewskiego wśród krajów Unii.

Słowa kluczowe: technologie informatyczne (IT), sektor IT, sektor technologii informatycznych, innowacje.