

# INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)



ICT SECTORAL ANALYSIS 2011



IT ASOCIÁCIA  
SLOVENSKA

S A R I O

Slovak Investment  
and Trade Development Agency

## 1 Introduction

When you hear the phrase 'leader of the economy' in Slovakia, you almost exclusively hear it in connection with the automotive industry. Sometimes it is connected to the electrotechnical industry and journalists and politicians sporadically do not connect it with a particular sector, but with the largest factories like Volkswagen, Kia, U.S. Steel and Samsung.

Of course, if the measuring unit is the volume of production and export, or the number of employees, no one can doubt that automotive and electrotechnical industries, as well as the largest production factories, deserve the title of leader of the Slovak economy. But if we look at the individual sectors in the light of different parameters, we will find that the time has come to re-evaluate the phrases that have been used for years.

Employment rate, the volume of production, and export are undoubtedly significant parameters for the evaluation of individual sectors' contribution to the economy. However, by at least the same measure the tax rates of employees and their income tax rate, and also VAT volume which they will later levy (VAT is the biggest source of income for the state) also influence the functioning and prosperity of the state. The rate of tax that the enterprises of individual sectors will pay from their income is also important. In some cases, even the rate of unemployment of people in individual sectors of economy is of significance.

While the average monthly wage in the ICT sector exceeds EUR 1,500, it is not surprising that an ICT employee pays approximately two times higher taxes as an average employee in Slovakia. What actually can be surprising is that ICT sector employees levy cumulatively more social and health payments than people in the automotive industry.

Even more interesting is the comparison of income from the taxes of corporate entities. The ICT sector enterprises paid by EUR 170 million more on income taxes in 2009, which is more than all the Slovak industry enterprises combined. And for the sake of interest, they paid 50 times more than all automotive sector production enterprises levied.

These numbers and parameters should be enough to make people use the term 'driver of the economy' with greater caution. The ICT sector, employing tens of thousands of people and with a significant share of social, health and tax payments, as well as the growth of productivity, is an important pillar of the economy.

According to an Economist Intelligence Unit report, Slovakia descended to the lower half of monitored states in terms of competitiveness in the IT industry.

The most complex index for the sake of comparison of ICT sectors in individual countries is The Networked Readiness Index, published by The World Economic Forum. Nor in this case are Slovakia's results favourable. In the course of the past three years, we were the lowest descending country in the list of the ten European post-communistic countries. The worst results are shown by the parameters of the *government ICT assimilation* (95<sup>th</sup> position), the *government's preparedness* (102<sup>nd</sup> position), and the *government's success while enforcing ICT* (120<sup>th</sup> position).

Yet, ICT has great potential for economic growth and post-crisis economy recovery. According to a SAV (Slovak Academy of Sciences) study, the increase of investment into IT in the SR by 1% leads to 0.11% growth of real GDP. European strategy called Digital Agenda 2020 accredits 50% share of economic growth of the EU in the course of the last 15 years to ICT, and sees the sector as the main engine of the post-crisis convalescence. An engine that is additionally in concordance with the requirements for sustainable development.

The period during which the new EU members gained ground by means of low labour cost is coming to an end. If they want to expand dynamically in the future, they have to increase productivity – and ICT plays a significant role in this area.

Slovakia does have some preconditions for ICT potential. For example, the Internet is - despite below-average accessibility - used by an above-average number of Slovaks. The level of citizens' computer literacy is also encouraging, while it is at least at the average level of both EU27 and EU15. What is lacking is electronic services accessibility. For example, while in Slovenia 95 percent and in Estonia 90 percent of the 20 basic public services are accessible, in Slovakia it is only 55 percent.

## 1.1 Executive summary:

### Employees

- The ICT sector has almost 33,000 employees; thereof the primary ICT sector (excluding publishing, audiovisual and broadcasting activities) employs approximately 24,000 employees. Adding self-employed in the ICT sector arrives at 40,000 work positions.
- Ten of the largest ICT enterprises in Slovakia employ more than one-third of the employees. 5,095 enterprises employ less than 10 employees.
- Average monthly wage in the ICT sector exceeds EUR 1,500.
- Unemployment rate in the ICT sector grew 75% slower in 2009 than in any other sector.

### Added value

- The non-financial business sector (industry and services) comprises approximately 78.5% of the added value in economy in costs in economy, where the proportion of ICT sector is 8.62%.
- OECD published a study in which business sector added value in 1995 and 2008 are compared. In 1995, Slovakia had one of the smallest share of the compared countries, but distinctive growth has been achieved and today Slovakia is in the middle of the list of evaluated countries.

### Investment motivation

- Approved state's investment help for the ICT sector was EUR 29.5 million 2002 - 2010, which is 2.6% of the total volume. Accredited state's investment help for the automotive sector reached EUR 661.8 million 59% of the total volume.
- In the automotive industry, the investment help was EUR 33,541 per one job position; it was EUR 9,951 in the information technologies sector.
- In the automotive sector the pay-back period of help provided exceeds 4.5 year. In the ICT sector it is less than a year.

## 1.2 ICT contributions

- According to a SAV study, the increase of investment into the IT in SR by 1% leads to 0.11% growth of real GDP and 0.12% growth of GDP per capita.
- According to a study developed by the European Commission, the ICT sector generates 100,000 new job positions a year in the EU, and increases GDP by 0.71% a year.
- According to the OECD, ICT assets increase economic growth by 0.3% - 1.0%.
- According to Viviane Reding, the former commissioner for Information Society and Media, ICT contributed forty percent to total growth of economic productivity 1994 - 2004.
- The Digital Agenda for Europe 2020 accredits 50% share of economical growth of the EU in the course of the last 15 years to the ICT, and sees the sector as the main engine of the post-crisis formation of the European economy, which is additionally in concordance with the requirements for sustainable development.

## 2 Analysis of the status of the ICT sector in relation to the Slovak economy

### 2.1 NACE Sectoral classification rev. 2 in the SR

**The Information and communication** sector includes enterprises registered in the Business Register (including the self-employed), which provide activities according to SC NACE Rev. 2.

The sector includes the production and distribution of information and cultural products, provision of tools for transmission or distribution of these products, as well as data and communication products. The second part of the sector is information technology activities, data processing, and other information services activities. The classification distinguishes between the following divisions:

- 58 – Publishing activities
- 59 – Motion picture, video and TV program production, sound recording and music publishing activities
- 60 – Programming and broadcasting activities
- 61 – Telecommunications
- 62 – Computer programming activities
- 63 – Information services

Publishing includes the acquirement of copyrights for content (information products) and activities related to the mediation of content to the wider public, not including reproduction and distribution of content. All of the realizable forms of publishing (print, electronic or audio form, on the Internet, by means of multimedia products, for example CD-ROM, etc.) are also included in this section. Activities related to television program production and distribution are included in parts 59, 60 and 61 and are divided according to various states during the process. The production of individual programs, motion pictures, television series, etc. is included in division 59, while the production of complete television programs for individual channels comprising independent products is included in division 60. Division 60 also includes the broadcasting of these programs, if it is the case of the actual producer of the products. Distribution of complete television program by means of third parties, i.e. without further content modification is included in division 61. The distribution can be executed by means of satellite or cable systems. The ICT sector classification in NACE rev. 2 is far more extensive (see Attachment 1.3). Yet currently only the above listed divisional classification is used in Slovakia.

To illustrate the status of communication and information technologies related services, where it is possible we include the category Basic ICT sector with the three following divisions:

- 61 – Telecommunications
- 62 – Computer programming activities
- 63 – Information services

### 2.2 Organization structure of the ICT sector

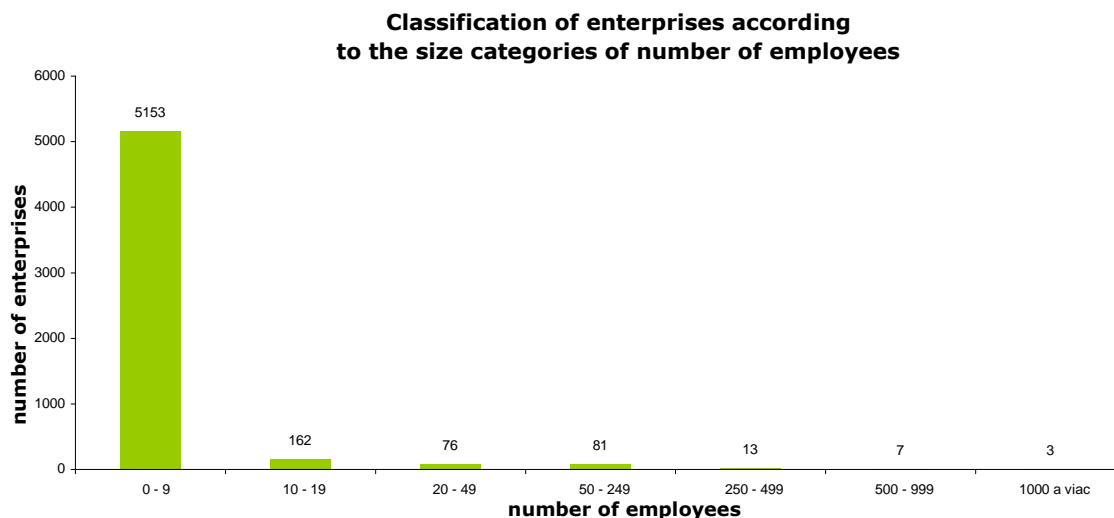
The Statistical Office of the SR registers the following representation of the ICT sector enterprises in classification according to the number of employees:

Enterprise size	Number of ICT enterprises	Number of enterprises in SR	Share
<b>0 - 9</b>	5,153	113,886	4.52%
<b>10 - 19</b>	162	6,159	2.63%
<b>20 - 49</b>	76	3,390	2.24%
<b>50 - 249</b>	81	2,724	2.97%
<b>250 - 499</b>	13	320	4.06%
<b>500 - 999</b>	7	152	4.61%
<b>1000 and more</b>	3	112	2.68%
Total	6,475	143,001	4.53%

Source: Statistical Office of the Slovak Republic, December 2010

	Number in ICT	Number in SR	Share
NP – business-persons	10,177	410,308	2.48%

Source: Statistical Office of the Slovak Republic, December 2010



The percentage of small enterprises in the ICT sector, especially in telecommunications and the IT, is above the average of the SR (78.81%), at 83.72 or 80.61%. This fact, together with the high rate of self-employment necessarily influences the quality of sector parameters estimates, while even the available data on the two groups of the whole sector are obtained exclusively by selective determination of estimates.

**The sector structure according to the legal form is described in the following table:**

ICT sector			
Business organizations			Non-profit institutions
Enterprises	NP – business-persons		
	Self-employed	Freelance occupation	
6,475	10,177	0	16
16,652			16
			16,668

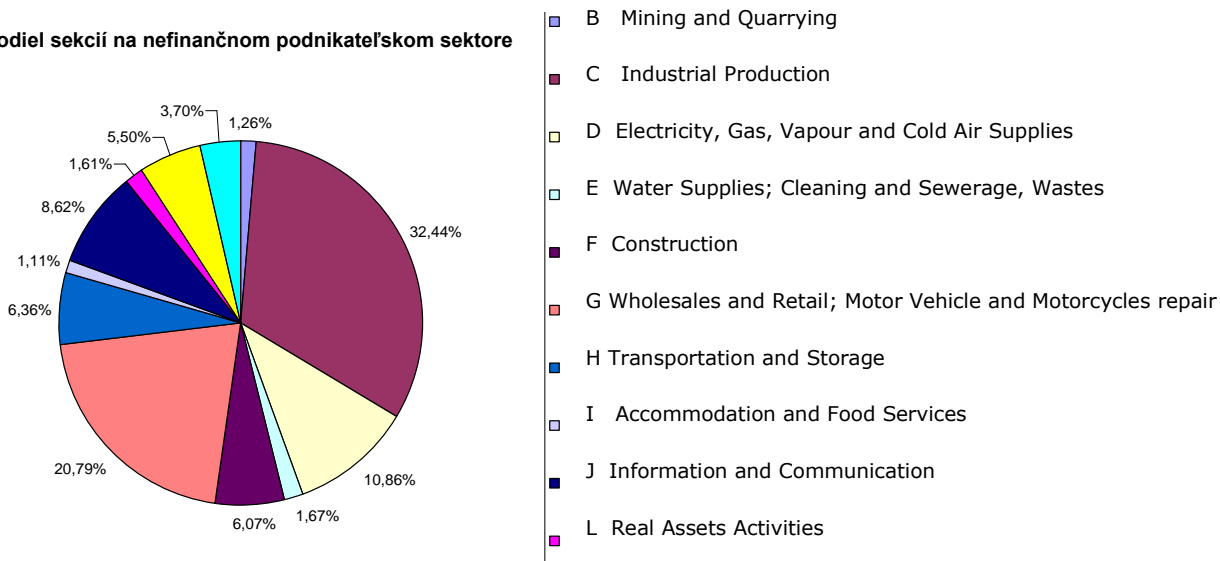
Source: Statistical Office of the Slovak Republic, December 2010

## 2.3 The status of the ICT sector in the economy of the SR

The non-financial business sector comprises approximately 78.5% of the added value in the economy, where the proportion of ICT sector is 8.62%. The ICT sector takes a share of total added value formation (including financial and public sector) with 6.8%. This share is estimated because of problems with data comparison according to OKEČ (Branches Classification of Economic Activities) and NACE methodology described in the first part.

## Contribution of Sections on Non-financial Business Sector

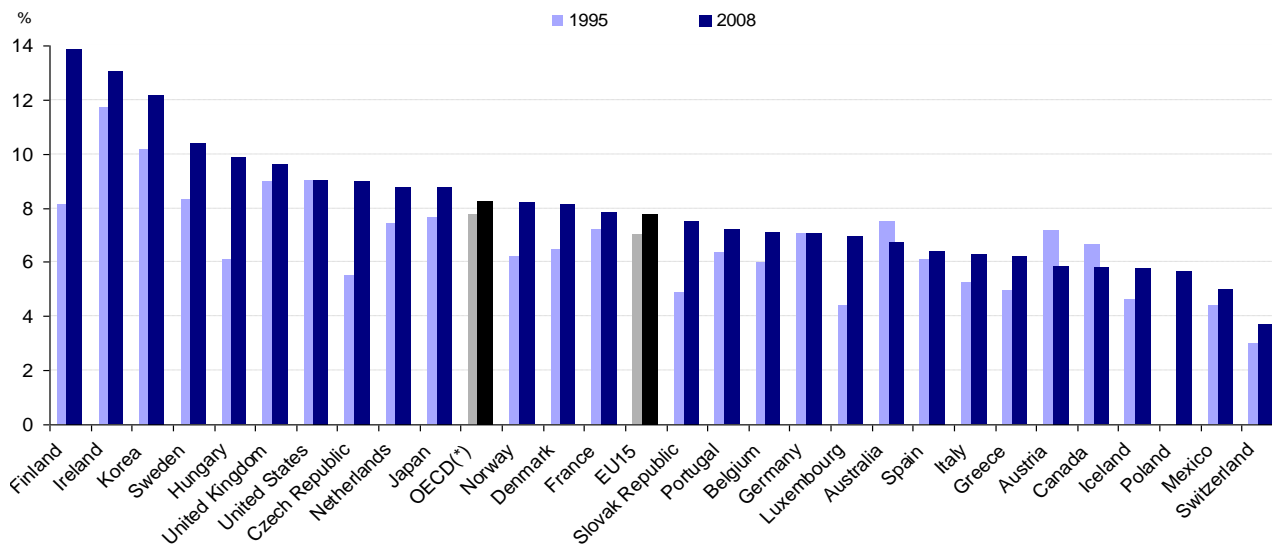
Podiel sekcií na nefinančnom podnikateľskom sektore



Source: Statistical Office of the Slovak Republic, 2009

## 2.4 ICT sector development in OECD

OECD published a study in which the added value share of the business sector added value in 1995 and 2008 are compared. In 1995, Slovakia had one of the smallest shares of the compared countries, while distinctive growth was achieved and today Slovakia is in the middle of monitored countries.



Source: OECD Information Technology Outlook 2010

The table records accurate added value rates for individual countries:

	1995	2008
Finland	8.1	13.9
Ireland	11.7	13.0
Korea	10.1	12.2
Sweden	8.3	10.4
Hungary	6.1	9.9
United Kingdom	9.0	9.6
United States	9.0	9.0
Czech Republic	5.5	9.0
Netherlands	7.4	8.8
Japan	7.6	8.8
OECD <sup>(*)</sup>	7.8	8.2
Norway	6.2	8.2
Denmark	6.4	8.1
France	7.2	7.8
EU15	7.0	7.8
<b>Slovak Republic</b>	<b>4.9</b>	<b>7.5</b>
Portugal	6.4	7.2 <sup>(*2006)</sup>
Belgium	6.0	7.1
Germany	7.1	7.1
Luxembourg	4.4	7.0
Australia	7.5	6.7
Spain	6.1	6.4
Italy	5.2	6.3
Greece	4.9	6.2
Austria	7.2	5.9
Canada	6.6	5.8 <sup>(*2006)</sup>
Iceland	4.6	5.7
Poland		5.7
Mexico	4.4	5.0
Switzerland	3.0	3.7

Source: OECD Information Technology Outlook 2010

### 3 Number of employees in the ICT sector

Currently two relevant estimates of the number of ICT employees are available.

The first results from the selective determination of work force (further only VZPS), which is consequently applied to the most current demographical status at the time of determination. According to this estimate, the ICT sector has **33,193** employees.

VZPS is based on a quarter-yearly determination of the situation in the labour area and the employment rate in households by means of a questionnaire. Regions of the SR, age groups and gender are taken into account. An employed person is such person who in the course of the monitored week worked for at least one remunerated hour. Employed people include the maternal/paternal care in business-persons' households, who do not get any wage or remuneration for their activity, professional members of armed forces, as well the civil service. Employed people are also persons who have a job but they are not working in the course of the monitored week because of illness, vacation, a proper maternity leave, education training, bad weather, strike or closure, excluding persons on a long-term unpaid leave and persons on parental leave. With regard to the limited sample of households (10,250), this system of quantification brings a certain risk of inaccuracy. The parameters obtained using this method are also presented by Eurostat.

The second estimate of the employment rate in the sector is based on Statistical Office data on the registered number of employees. The office acquires data on the basis of the obligation of enterprises to submit statements on the number of employees. That is why this method is more accurate to a certain extent, but its success is influenced by insufficiencies in the statistics for units where the number of employees is estimated using selective determination.

Statistical Office data shows that the ICT sector had 33,193 employees in 2010 and 9,962 self-employed in 31.12.2009.

<b>According to registered number of employees (2009, 2010)</b>	<b>2009</b>	<b>2010</b>
Publishing, audiovisual and broadcasting activities	6,963	7,866
Telecommunications	9,578	9,508
IT and other communications services	21,011	14,819
<b>ICT sector total</b>	<b>37,552</b>	<b>33,193</b>

Source: Statistical Office of the Slovak Republic, 2011

This data roughly corresponds to the Social Insurance Company (Sociálna poisťovňa) data, therefore we consider it to be a realistic estimate. Both data suggest that the share of employees in the ICT sector was 2.25% of the total number of employees in the SR.

#### The largest telecommunication businesses listed according to sales:

<b>Company</b>	<b>Average no. of employees (2010)</b>
Slovak Telekom	4,984
Orange Slovensko	1,333
Telefónica O2 Slovakia	410
Towercom, a.s.	256
GTS Slovakia	184
Swan	200
Slovanet	199
Energotel	85
Antik Telecom	124
Satro	102
Vnet	44
UPC Broadband Slovakia (sales undisclosed)	230
Digi Slovakia (sales undisclosed)	NA

Source: Trend TOP ICT, May 2011



## Largest enterprises in the IT sector listed according to EBITDA:

Company	Average no. of employees (2010)
Eset	245
Asseco Central Europe	1,672
Soitron	714
T-Systems Slovakia	1,766
Siemens IT Solutions and Services	536
Tempest	237
Datalan	233
PosAm	254
RWE IT Slovakia	198
Siemens PSE	700

Source: Trend TOP ICT, May 2011

## Largest ICT service centres:

Company	Average no. of employees (2010)
Slovak Telekom	1,458
Soitron	590
Hewlett-Packard Slovakia	890
Dell	1,643
Accenture Technology Solutions – Slovakia	600
Lenovo	600
Accenture	350
InsData	251
Competence Call Center Bratislava	240
Datalan	66
IBM International Services Centre	3,600
Amazon	Est.100 employees in 2011

Source: Trend TOP ICT, May 2011

The tables suggests that the 10 largest ICT enterprises in Slovakia employ more than one-third of the employees. It is further evidence of a very unbalanced division of employees, while the ICT sector has 5,095 enterprises with less than 10 employees, which employ the rest of the 18,096 employees. The ICT sector is specific because of its high number of enterprises with a small number (1-3) of employees, a large number of self-employed on one side, and a few dominant enterprises on the other.

## 4 Education and average wage in the ICT sector

The average wage in the business sector is detected exclusively based on selective quarter-yearly detection, i.e. from a sample of approximately 10 thousand households, based on which the Statistical Office of the SR accounts individual divisions in the ICT sector. Incorrect listing of division can result in irregularity, or failure to provide the actual wage value by the statistic unit, which distorts the final estimate.

### Average monthly wage in the ICT sector

	2009	2010
<b>Information and communication total</b>	<b>1,541.91</b>	<b>1,572</b>
<b>Primary ICT sector</b>		
Publishing activities	1,148.98	854
Motion picture production	1,015.92	527
Programming and broadcasting activities	1,335.74	1,651
Telecommunication	1,730.93	1,725
Computer programming, consulting and related services	1,681.03	2,008
Information services	1,326.33	1,446

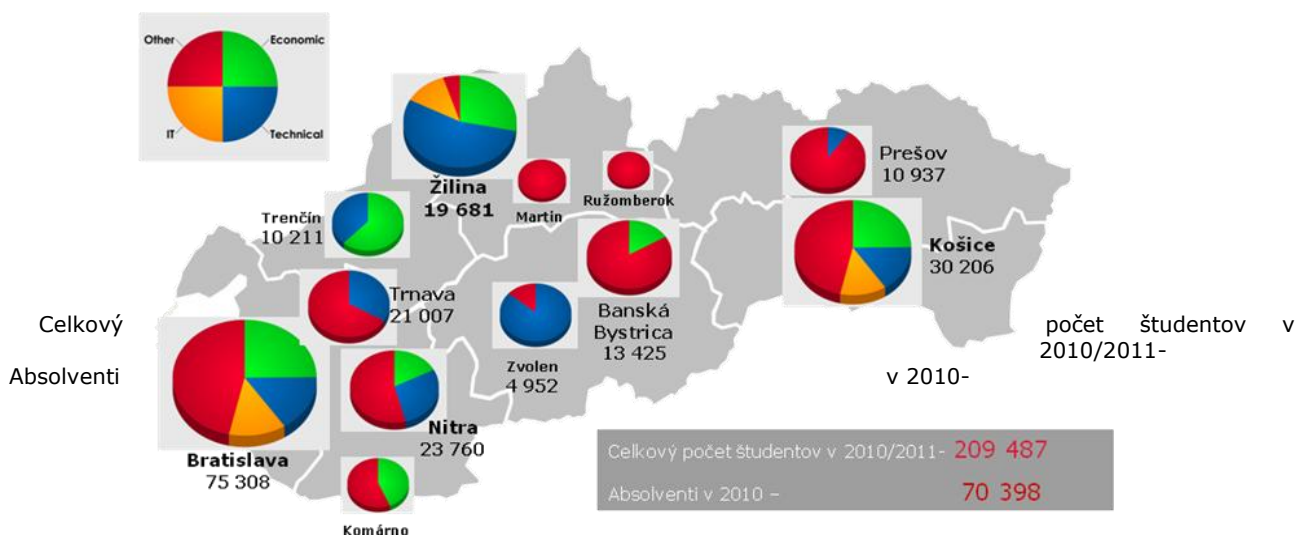
Source: Statistical Office of the Slovak Republic, 2011

### Average wage for selected positions in ICT per regions

	BA	TT	TN	NR	ZA	BB	PO	KE
<b>ICT in total</b>	1,915€	815€	872€	835€	1,120€	1,304€	1,027€	1,287€
<b>Programmers</b>	1,846€	1,237€	1,169€	863€	1,252€	1,204€	1,200€	1,309€
<b>Developers and IT systems analysts</b>	2,328€	1,304€	1,165€	1,727€	1,421€	1,816€	NA	1,632€
<b>Communication electricians and technicians</b>	1,249 €	959 €	809 €	838 €	909 €	960 €	798 €	1,016 €
<b>Electronic systems and telecom. networks developers, engineering electricians</b>	2,334 €	1,090 €	1,577 €	1,367 €	NA	NA	NA	1,300 €

Source: TREXIMA, 2011

Slovakia in recent years has offered many university opportunities for ICT sector studies. The best representation of ICT study fields is in Bratislava, Košice, Žilina and Trenčín.



## 5 Status of Slovakia in international comparison

### 5.1 ICT, economic growth and competitiveness

The positive influence of ICT on economic growth cannot be doubted. The information sector contributes to GDP not only directly (by means of formatting ICT products and services), but mostly indirectly. The increase of ICT assimilation in the economy increases the efficiency of the development, production and distribution of practically all products and services in all sectors. The advancement of the country, from the ICT structure development, is therefore becoming a significant factor for judging a country's competitiveness. While judging the suitable destination for their intentions, traditional investors no longer look at the quality of highways or the electricity network, with factors like broadband Internet coverage and the computer skills of citizens becoming significant indicators.

Competitiveness of the ICT sector itself is also important. As one of the components of the knowledge economy, this sector has advantages – it is one of the most strongly growing sectors (pre-crisis growth of global expenditure on the ICT was at almost 15%, post-crisis growth is estimated at about 7% a year<sup>1</sup>) and in 2009 almost one fifth of Slovak employees

Country	The share of job positions with intensive ICT assimilation 2009
EU15	22.31
Luxembourg	36.39
UK	28.30
Denmark	27.90
Latvia	26.4
Lithuania	25.9
Slovenia	24.53
Estonia	24.22
Hungary	23.75
Czech Republic	23.38
<b>Slovakia</b>	<b>19.91</b>
Poland	19.06
Bulgaria	15.0
Romania	12.0

Source: OECD

assimilated ICT intensively for their work (Table 1). The development of the ICT sector is a way of ensuring economic growth at a time of demographic downswing by means of increasing human asset quality. As the European Commission pointed out in its 2009 Aging report, in the course of ten years European work productivity will become one of the main factors establishing future economic growth<sup>2</sup>. The less physically demanding nature of the ICT sector is the most significant positive at a time of increasing retirement ages. Last but not least, we need to mention the lower environmental demand of the ICT sector compared to traditional industry sectors.

<sup>1</sup> Economist Intelligence Unit, [http://www.ventajasobjetivas.com/cosas\\_informacion/2009\\_eiu\\_global.pdf](http://www.ventajasobjetivas.com/cosas_informacion/2009_eiu_global.pdf)

<sup>2</sup> Solution of the issue of aging of the EU citizens)

## 5.2 Slovakia's profile according to competitiveness and ICT

This section's concern is the profile of Slovakia as per the general competitiveness of the ICT sector, and indicators of ICT development and eGovernment. For the sake of comparison, the charts include countries with the best ranks and EU members from the former Eastern Bloc, with regard to similar starting points on which the ICT sector is built. In most cases we also state the change in comparison to a selected previous period.

According to the Economist Intelligence Unit report, Slovakia is again ranked amongst the lower half of the monitored states in IT industry competitiveness (Table 5). Besides other factors, low state support for ICT industry development, which is seventh amongst the post-socialist countries, is dragging Slovakia down. This indicator is not aimed at direct financial support; it rather includes the existence of a compact government strategy for the ICT, governmental expenditure on the information technologies, and equal access of the government to subjects in the sector (Table 6). The country is also lagging in the area of human assets.

**Table 5: IT Industry Competitiveness**

Country	Rank 2009	Change in comparison to 2008
USA	1	0
Finland	2	+11
Sweden	3	+1
Canada	4	+2
Netherlands	5	+5
Estonia	23	+1
Czech Republic	26	+3
Hungary	28	0
Slovenia	29	-3
Lithuania	31	+4
Latvia	33	+1
<b>Slovakia</b>	<b>34</b>	<b>-3</b>
Poland	35	-3
Romania	36	+3
Bulgaria	47	-2

Source: The Economist

The period during which the new members of the EU gained ground by means of low labour cost is coming to an end. If they want to expand dynamically in the future, it is necessary for them to aim to increase their productivity – and ICT plays a significant role in this area. A good example is Estonia, which is still on the leading position in competitiveness, also thanks to the high development of the ICT sector in the private and state sector. In contrast, Slovakia has sunk significantly during the last 5 years. ICT technology enforcement in the national sphere and the acceptance of eGovernment philosophy for the better efficiency of state administration should be seized as tools for increasing Slovakia's competitiveness.

**Table 6: IT industry development support**

Country	Score
Sweden	88.6
Canada	86.5
Netherlands	86.3
Sweden	88.6
Canada	84.6
Estonia	69.8
Slovenia	66.8
Czech Republic	56.1
Hungary	56.1
Poland	56.1
Lithuania	55.5
Latvia	52.5
Slovakia	52.5
Romania	46.7
Bulgaria	44.3

Source: The Economist

### 5.3 eGovernment and ICT development – international comparison

The execution of necessary non-productive administrative actions means financial and time costs for enterprises, and these are taken into account during foreign enterprise investment considerations, and they significantly influence the will of the local populace to do business in their domestic market.

The best summary can be found in the World Bank's Doing Business report, which monitors the difficulty level of doing business in individual states. In 2011, Slovakia was 41<sup>st</sup> on the global scale and 4<sup>th</sup> of the ten post-socialist countries. Despite good progress in some areas, the weight of administration is still too great in Slovakia. The issue of building permission, one of the keys of investment, takes twice as long as in Estonia, and 12 times as long as in Singapore. The performance of tax duties takes 31 payments on average, which is the second largest of the ten selected countries after Romania (Table 7).

**Table 7**

Doing Business			Start of business		Building permissions		Property registration		Taxes	
Country	Year	Rank	Number of actions	Number of days	Number of actions	Number of days	Number of actions	Number of days	Number of yearly payments	Number of yearly hours
<b>Hong Kong</b>	2011	2	3	6	7	67	5	36	3	80
<b>Singapore</b>	2011	1	3	3	11	25	3	5	5	84
<b>New Zealand</b>	2011	3	1	1	7	65	2	2	8	192
<b>Estonia</b>	2006	..	6	35	12	116	3	51	7	81
<b>Estonia</b>	2011	17	5	7	14	134	3	18	7	81

<b>Lithuania</b>	2006	..	8	26	17	163	3	3	11	166
<b>Lithuania</b>	2011	23	6	22	17	162	3	3	11	175
<b>Latvia</b>	2006	..	5	16	26	216	10	55	29	320
<b>Latvia</b>	2011	24	5	16	24	186	6	42	7	293
<b>Slovakia</b>	<b>2006</b>	..	<b>9</b>	<b>25</b>	<b>13</b>	<b>287</b>	<b>3</b>	<b>17</b>	<b>32</b>	<b>325</b>
<b>Slovakia</b>	<b>2011</b>	<b>41</b>	<b>6</b>	<b>16</b>	<b>13</b>	<b>287</b>	<b>3</b>	<b>17</b>	<b>31</b>	<b>257</b>
<b>Slovenia</b>	2006	..	9	60	15	214	6	391	22	260
<b>Slovenia</b>	2011	42	2	6	14	199	6	113	22	260
<b>Hungary</b>	2006	..	6	38	31	217	4	78	13	340
<b>Hungary</b>	2011	46	4	4	31	189	4	17	14	277
<b>Bulgaria</b>	2006	..	11	32	20	127	9	19	31	616
<b>Bulgaria</b>	2011	51	4	18	24	139	8	15	17	616
<b>Romania</b>	2006	..	5	11	17	243	8	103	108	190
<b>Romania</b>	2011	56	6	10	17	228	8	48	113	222
<b>Czech Republic</b>	2006	..	10	40	36	230	4	123	27	930
<b>Czech Republic</b>	2011	63	9	20	36	150	4	43	12	557
<b>Poland</b>	2006	..	10	31	32	311	6	197	40	418
<b>Poland</b>	2011	70	6	32	32	311	6	152	29	325

Source: World Bank

These numbers are the result of ineffective processes of state administration. One of the causes is below-average accessibility of public services on the Internet. For the sake of comparison – according to Eurostat, 95% of 20 basic public services on the Internet are accessible in Slovenia, in Estonia 90%. Slovakia is 7<sup>th</sup> and with 55% it is far from the EU27 average (Tables 8 and 9).

**Table 8: Percentage of accessibility of 20 basic public services on the Internet 2009**

<b>Slovenia</b>	<b>95</b>
<b>Estonia</b>	90
<b>Latvia</b>	65
<b>Hungary</b>	63
<b>Czech Republic</b>	60
<b>Lithuania</b>	60
<b>Slovakia</b>	55
<b>Poland</b>	53
<b>Romania</b>	45
<b>Bulgaria</b>	40

Source: Eurostat

**Table 9: Percentage of accessibility of 20 basic public services on the Internet**

	<b>2009</b>	<b>2007</b>
<b>SR</b>	55	35
<b>EU15</b>	81	59
<b>EU27</b>	74	68

Source: Eurostat

## 5.4 Internet accessibility

There is significant interest for citizens and businesses in using these services. Despite less than average electronic public services accessibility, a higher percentage of businesses than the average of EU27 and even EU15 uses the services (Tables 10 and 11).

**Table 10: Percentage of businesses using the Internet for filling in the forms while communicating with public administration**

	<b>2009</b>	<b>2005</b>
<b>SR</b>	59	16
<b>EU15</b>	56	31
<b>EU27</b>	55	33

Source: Eurostat

**Table 11: Percentage of citizens using the Internet for filling in the forms while communicating with public administration**

	<b>2010</b>	<b>2005</b>
<b>SR</b>	12	7
<b>EU15</b>	15	7
<b>EU27</b>	13	6

Source: Eurostat

Despite below-average Internet and broadband Internet accessibility in Slovakia (Tables 12 and 13), an above-average number of Slovak citizens use the Internet (Tables 14 and 15).

**Table 12: Share of households with Internet access (in %)**

	2010	2005
<b>SR</b>	67	23
<b>EU15</b>	73	53
<b>EU27</b>	70	48

Source: Eurostat

**Table 13: Share of households with broadband Internet access (in %)**

	2010	2005
<b>SR</b>	49	7
<b>EU15</b>	64	25
<b>EU27</b>	61	23

Source: Eurostat

**Table 14: Share of people regularly using the Internet**

	2010	2005
<b>SR</b>	73	43
<b>EU15</b>	65	43
<b>EU27</b>	69	46

Source: Eurostat

**Table 15: The share of businesses with broadband Internet access (in %)**

	2009	2005
<b>SR</b>	78	48
<b>EU15</b>	88	62
<b>EU27</b>	83	65

Source: Eurostat

The level of citizens' computer literacy is also encouraging, while it is at the average level (and sometimes even exceeds) both EU27 and EU15. (Table 16)

The regional layout of the ICT infrastructure (unlike the road one) is also balanced (Table 17), which opens opportunities to attract ICT investments even to regions the economies of which suffer insufficient road-traffic infrastructure.



**Table 16: Share of citizens with the knowledge of operating the Internet, 2010**

	Basic	Intermediate	Advanced
<b>SR</b>	29	41	9
<b>EU15</b>	33	31	10
<b>EU27</b>	32	30	10

**Table 17: Share of households with broadband Internet access**

Bratislava region	Western Slovakia	Central Slovakia	Eastern Slovakia
57	48	43	54

Source: Eurostat

**Table 18**

	ICT Development Index 2008	Broadband costs (% of yearly GDP per capita) 2009
<b>Sweden</b>	1	0.84
<b>Luxembourg</b>	2	0.59
<b>Korea</b>	3	1.41
<b>Estonia</b>	22	2.24
<b>Slovenia</b>	26	1.09
<b>Hungary</b>	34	2.84
<b>Lithuania</b>	35	1.54
<b>Czech Republic</b>	37	3.13
<b>Slovakia</b>	<b>38</b>	<b>2.36</b>
<b>Poland</b>	40	1.39
<b>Latvia</b>	41	2.52
<b>Bulgaria</b>	43	3.24
<b>Romania</b>	44	1.1

Source: ITU

From the point of view of general ICT development, Slovakia is amongst the average of the post-socialist ten. **ICT Development Index** of the International Telecommunication Union (ITU) puts us on the global 38<sup>th</sup> position (Table 18). It judges 11 indicators such as spatial and financial accessibility of the Internet and the level of Internet skills. One of Slovakia's problems is broadband Internet costs, which are twice as high as in some of the ten monitored countries.

**Table 19**

The Networked Readiness Index 2009-2010		Change in comparison to 2006-2007
Sweden	1	+1
Singapore	2	+1
Denmark	3	-2
Switzerland	4	+1
USA	5	+2
Estonia	25	-5
Slovenia	31	-1
Czech Republic	36	-2
Lithuania	41	-2
Hungary	46	-13
Latvia	52	-10
<b>Slovakia</b>	<b>55</b>	<b>-14</b>
Romania	59	-4
Poland	65	-7
Bulgaria	71	+1

Source: WEF

The most complex index judging ICT sectors in individual countries is **The Networked Readiness Index**, a part of the Global Information Technology Report published by The World Economic Forum. (Table 19) It monitors 9 sections, divided into 68 components.

Slovakia's results are not favourable. In the past three years, Slovakia was the lowest decreased country on the list of the ten European post-communistic countries. More detailed analysis (Table 20) shows what the weaknesses are. It is mainly *individual readiness* (102<sup>nd</sup> position out of 133 countries), *government readiness* (again 102<sup>nd</sup>), and the *government's ICT assimilation* (95<sup>th</sup>). Of these areas, the worst was *government's success in enforcing ICT* (120<sup>th</sup>).

## 6 Useful contacts

### IT Association of Slovakia (ITAS)

ITAS is an occupational association of the most significant national and foreign businesses operating in the information and communication technologies sector.

IT Association of Slovakia members contribute to improve the efficiency of companies operating by means of applying information-communication technologies.

IT Association of Slovakia was established in September 1999. Currently the number of members is over 87, an ICT sector share higher than 80% covering 22,000 employees.

Members work in hardware, software, distribution, telecom, Internet, IT consulting and services.

ITAS has been a member of the European association EICTA and RUZ (National Union of Employers) since May 2004.

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