# Information Society Development in the Context of Knowledge Economy

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**ABSTRACT**
"ICT is the most important driver of modern economy", said Mrs. Viviane Reding, Commissioner for Information Society and Media, at "Forum de la Nouvelle Economie" in Madrid, in May 2006. According to this fact all the EU member states, and even more new EU member states, should look at development and economic growth "through glasses" of investment into information and communication technologies. Not just ICT investments, but effective exploitation of ICT and knowledge, are crucial for achieving economic growth within the framework of Knowledge economy. The first and most important step for reaching this goal is to understand potential and necessary prerequisites of the Information society development and thus bring its benefits for all citizens into their everyday life. In this content is necessary to support the Information society development – also in the Slovak Republic, which is still lagging behind the EU average.

**KEY WORDS**
Knowledge Economy, Information Management, eBusiness, eProcurement,

## 1. Knowledge Economy and Knowledge Management

Several definition of Knowledge Economy (KE) or "New Economy" can be founded in current scientific and educational environment. According to Dept. of Trade and Industry in United Kingdom …*"A knowledge-driven economy is one in which the generation and exploitation of knowledge play the predominant part in the creation of wealth"*. OECD defines KE as *"Creating the optimal conditions for increasing the production, mediation and use of knowledge, life-long"*

### 1.1 Pillars of the Knowledge Economy

The first important pillar is an *educated and skilled population* that can create, share, and use knowledge well. Together with *dynamic information infrastructure* (that can facilitate the effective communication, dissemination, and processing of information), *efficient innovation system* of firms, research centres, universities, think tanks, and other organizations (that can tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology) and *economic and institutional regime* that provides incentives for the efficient use of existing and new knowledge and the flourishing of entrepreneurship creates four pillars of knowledge economy.
To achieve full potential of Knowledge (-based) Economy some key points must be realised and existed:

- Access to information and knowledge bases Access to and use of ICT within the whole society
- Inclusion, not exclusion (eInclusion, not Digital divide)
- Governments that focus on stimulating innovation, competition, competitiveness
- Public/private partnerships and joint ventures
- A lifelong learning culture and system
- Innovativeness, creativity in all areas, entrepreneurial spirit
- Investment in ICT

### 1.2 Information Society and ICT

Information and communication technology is considerably important not only, but also for EU. 25% of EU GDP growth and 50% of EU productivity growth is attributed to ICT industries, together with the investments in ICT. Percentage is at the entirely high level, but in the US it is 80% of productivity growth. Figure 1 shows ICT contribution to ICT investments. The EU15 in comparing with USA is at the lower level and improvement is required, because is common fact that ICTs are expected to boost economic growth of economy as a whole.

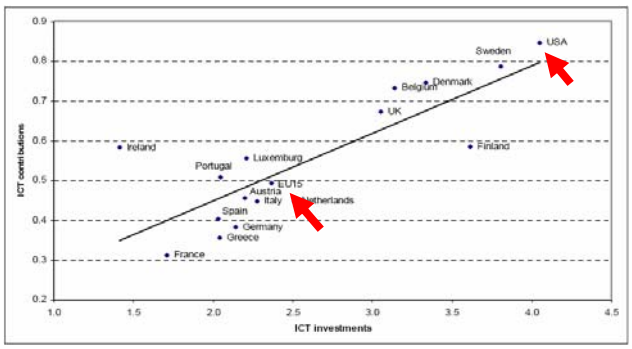


**Fig 1. ICT Capital Investments and ICT Capital Contributions to GDP Growth 1995-2004**

## 2. Application Areas of ICT in Private and Public Sector

### 2.1. Electronic Government (eGovernment)

The European Commission define electronic government as "The use of **ICT** in public administrations (PA) combined with **organisational change** and **new skills** - in order to improve public services and democratic processes and strengthen support to polices". The similar definition is used by OECD … "The use of ICT, and particularly the Internet, as a tool to achieve better government" and UN .."E-Government is a government that applies ICT to transform its internal and external relationships".

More efficient government can provide better services and better use of available resources. Electronic government is more effective than tradition one. eGovernment is user-driven and user-centred. It is more **accessible** – via new channels (Internet, kiosks, and mobile devices) and new ICT-enabled service routes (one stop shops, call centres). Is also **flexible** with the ability to interact at more convenient times, providing new types of services and i**nclusive.** The eGovernment is able to reach a greater percentage of population. Transparency and openness is the most important fact of electronic government especially in new member states of the European Union.

### 2.2 Electronic Business (eBusiness)

Electronic business, as a relatively new phenomenon, is also driver for the information society development. Turban define electronic business as "... buying and selling, servicing customers, collaborating with business partners and conducting electronic transactions within an organisations". The Slovak Republic is still lagging behind European Union states. According to GFK study in 2005, only 40% of the populations older than 15 years are Internet users and only 5% use Internet for online shopping. The same study shows that 3.1% of Slovak citizens used the Internet for online shopping more than once. We can observe that online Business to Consumer (B2C) in Slovak Republic is very weak.

The situation in Slovak's online Business to Business (B2B) area is superior to B2C. 92% of companies using the Internet, but 77% are using Internet for communication with business partners. In 2005, only 12% of companies (connected to the Internet) offering possibility of making orders online and 1.6% offering payment through company web site. In most important sectors in Slovakia (engineering and chemical industry) is situation similar.

In the year 2005, 23% of engineering companies used electronic procurement and electronic sales in their business activities. In chemical industry, 16.5% of companies used eProcurement and eSales used 14% of companies at the same time period.

Improvement in the eBusiness area is expected because growth of foreign investments in the automotive industry has an impact on plans of companies to invest in ICT.

### 2.3 Electronic Procurement (eProcurement)

Electronic Procurement can be defined as "The use of web-based technologies and electronic communications networks for transactional purchasing …"

eProcurement, especially public eProcurement is very important in economic environment. Public sector is the single largest purchaser in the economy (public consumption - up to 20.6% of GDP in 2002).

Public procurement in EU was in 2002 at the level of €1,500 billion or 16% of 16% of EU's GDP (i.e. purchases of goods, services, public works by governments and public utilities).

The benefits of eProcurement can be summarised in several components such as price (i.e. in lower transaction costs, lower inventory holding costs or lower price), quality (i.e. increased user satisfaction, increased responsiveness of the system) just as in optimisation of procurement processes (i.e. process time reduction - higher process quality, improved ability to analyse and measure spend and performance, control of maverick spend and better use of corporate contacts, standardised and streamlined purchasing practices, improved management information across all areas of purchasing, improved transparency on all purchases, visibility and „hands-on" control for budget holders) together with administration and personnel cost reduction. Table 1 shows estimated annual saving in EU15 in public procurement.

**Table 1 - Estimated annual saving in EU15** (Public Procurement)

| **Savings on purchasing price** | **Savings on operational costs** |
|---|---|
| Value of public procurement in EU15: **1,500 billion EUR** | Total annual number of public proc. transactions in EU: **665,000** If e-Proc **at 25%** uptake: **166,000 trans.** |
| If e-Proc take up rate: 25%, i.e. **375 billion EUR** | Savings per invitation to tender for buyers (estimates): **8%-35%**. |
| Estimated savings on purchasing price: **5%** | Conservative estimate per transaction: **50 EUR** |
| **18.75 billion EUR/year** | Total savings on operational costs: **166,000 x 50 = 8.3 million EUR/year** |
| **18.75 billion EUR/year + 8.3 million EUR/year** | |

As we can see, in table 1, through using effective and well managed eProcurement are Public authorities able achieve significant savings.

## 3. Conclusion

Effectiveness of economy can be increased by the usage of and the investments into information and commu-

nication technology. Furthermore, eGovernment exploitation can increase effectiveness and transparency not only to the public authorities.

In the area of information society some changes are required. At first political will on the top level is necessary with involvement of the financial sector (venture capital). A vision and comprehensive strategy is needed. Last but not least, financial and legal framework is significant for ICT absorption and consequently achieving its benefits.

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