



ICT Research & Industry in CEE: status quo (cross-country)

Dr. András, Vértés



“A good hockey player focuses on the puck, I skate to where the puck is going to be.”

Wayne Gretzky

How the labour process has been translated into productivity growth in CEE since 1990s (1.)

- Throughout the process of restructuring, productivity growth may have been driven by a rise in capital intensity, it may also have been supported by technical change.
- When increased investment took place in new types of capital, such as ICT capital, it may have been a major source of accelerated productivity growth.
- Privatization and the surge in capacity utilization, which contributed to high labour productivity growth rates in the CEE countries, were mostly of a one-off nature.

How the labour process has been translated into productivity growth in CEE since 1990s (2.)

- If these two factors could be disentangled from aggregate productivity growth, the relative contribution of ICT capital would most likely still be higher than in the EU15 countries due to its own contribution to restructuring.
- ICT can be seen as an important source of convergence between CEE-countries and the EU15 since 1990s.

High-tech exports – Exports of high technology products as a share of total exports, 2003

Geo	%
EU25 European Union (25 countries)	17.8
EU15 European Union (15 countries)	17.2
Czech Republic	12.3
Estonia	9.4
Latvia	2.7
Lithuania	3.0
Hungary	21.7
Poland	2.7
Slovakia	3.4

Source: EU Commission

Problems on measuring the internationalisation of R&D

- Internationalization of R&D is a „black box” in innovation research and data need to be improved along various dimensions.
- Knowing what percentage of R&D expenditure comes from foreign affiliates in a country would help policy makers understanding the extent to which they can influence and reach quantitative targets in terms of „domestic” R&D.

Total intramural R&D expenditure (GERD) by sectors of performance and fields of science, 2002

Geo	Total*	Engineering and technology*
Czech Republic	959.375	551.841
Estonia	55.699	6.966
Latvia	41.532	15.606
Lithuania	99.641	38.561
Hungary	705.760	288.449
Poland	1188.022	512.804
Slovakia	148.336	72.306

*Millions of euro (from 1.1.1999)/Millions of ECU (up to 31.12.1998)

Source: EU Commission

Information technology expenditure as a percentage of GDP, 2004

Geo	Total*	Percentage of GDP
EU25	279689	3.0
EU15	269566	3.0
Czech Republic	2456	2.8
Cyprus	n.a.	n.a.
Estonia	203	2.3
Latvia	207	1.9
Lithuania	257	1.4
Hungary	1912	2.4
Malta	n.a.	n.a.
Poland	3818	2.0
Slovenia	534	2.1
Slovakia	736	2.2

*Millions of euro (from 1.1.1999)/Millions of ECU (up to 31.12.1998)

Source: EU Commission

Communications Expenditure as a percentage of GDP, 2004

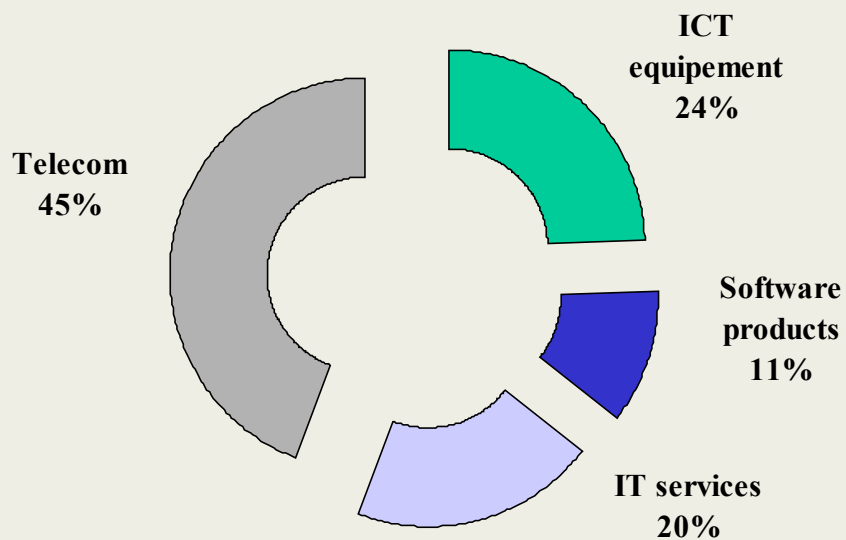
Geo	Total*	Percentage of GDP
EU25	316731	3.4
EU15	295142	3.3
Czech Republic	3677	4.3
Cyprus	n.a.	n.a.
Estonia	564	6.3
Latvia	632	5.7
Lithuania	795	4.4
Hungary	3804	4.7
Malta	n.a.	n.a.
Poland	10055	5.2
Slovenia	809	3.1
Slovakia	1253	3.8

*Millions of euro (from 1.1.1999)/Millions of ECU (up to 31.12.1998)

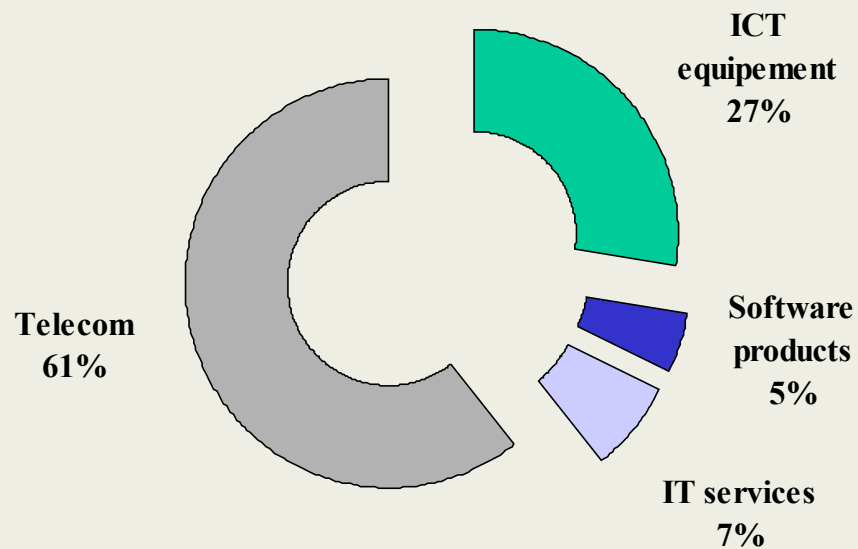
Source: EU Commission

ICT market breakdown

EU



CEE



The importance of ICT in the NDPs

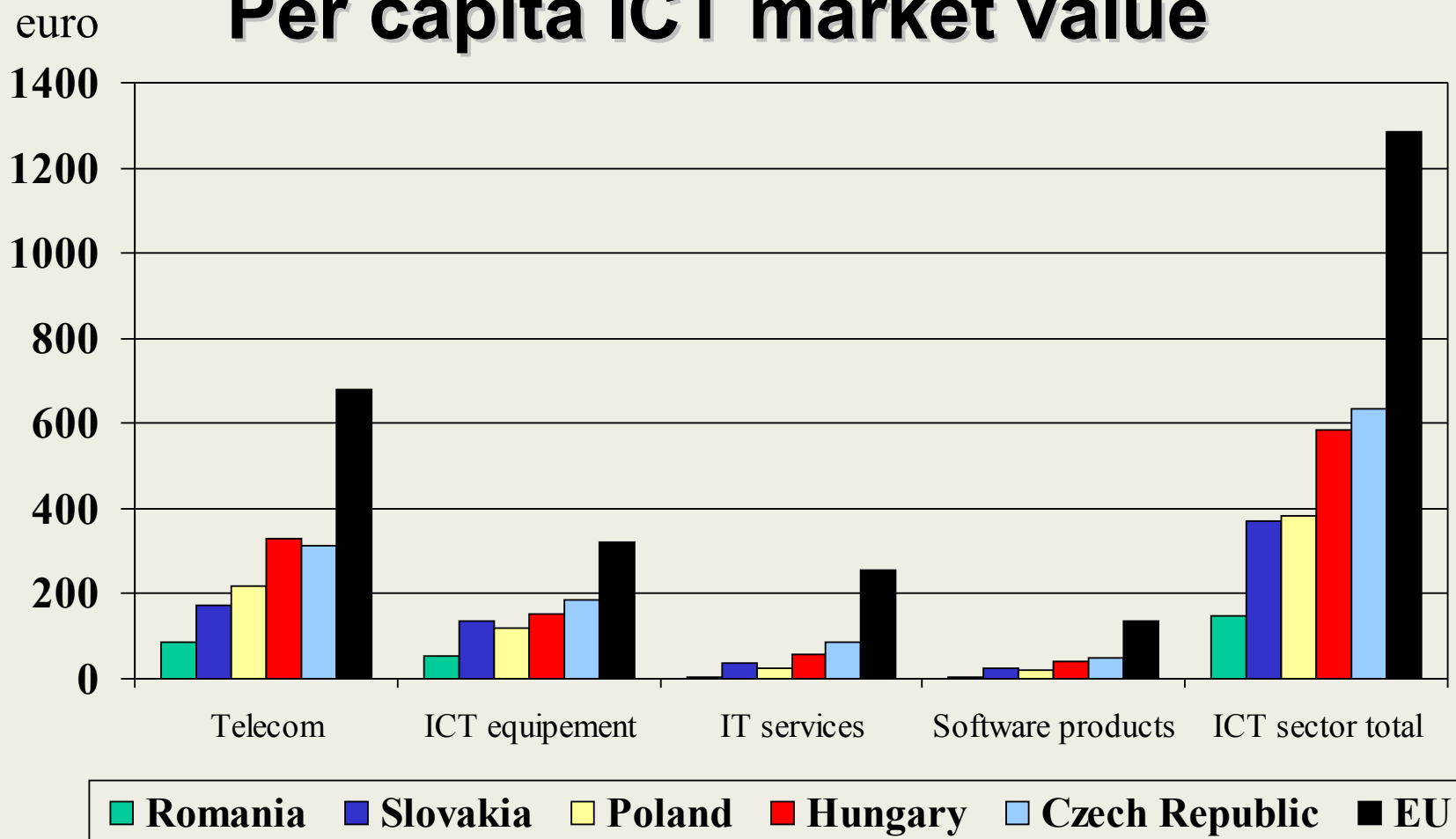
- In CEE New Member States major projects to upgrade IT infrastructure to meet EU norms were undertaken in the public sector, particularly in the areas of tax administration, customs, law enforcement and justice.
- CEE New Member States began to implement their National Development Plans (NDPs), which detail how EU structural funding will be used. These will have a significant impact on the ICT market through to 2006, acting to stimulate spending principally in the government (both central and local), education and SME sectors.

The major gap is in the usage...

- The telecom markets of CEE have continued their marked shift from fixed-line to mobile in the wake of further liberalization.
- The ratio of IT investments to GDP and per capita IT spending by country indicate that a major gap in usage persists between the CEE New Member States and the former EU 15 countries.



Per capita ICT market value





Gazdasági Kutató Intézet
GKI Rt.

I appreciate your attention!