



The Role of Public Policies in Promoting Innovation – The Case of ICT

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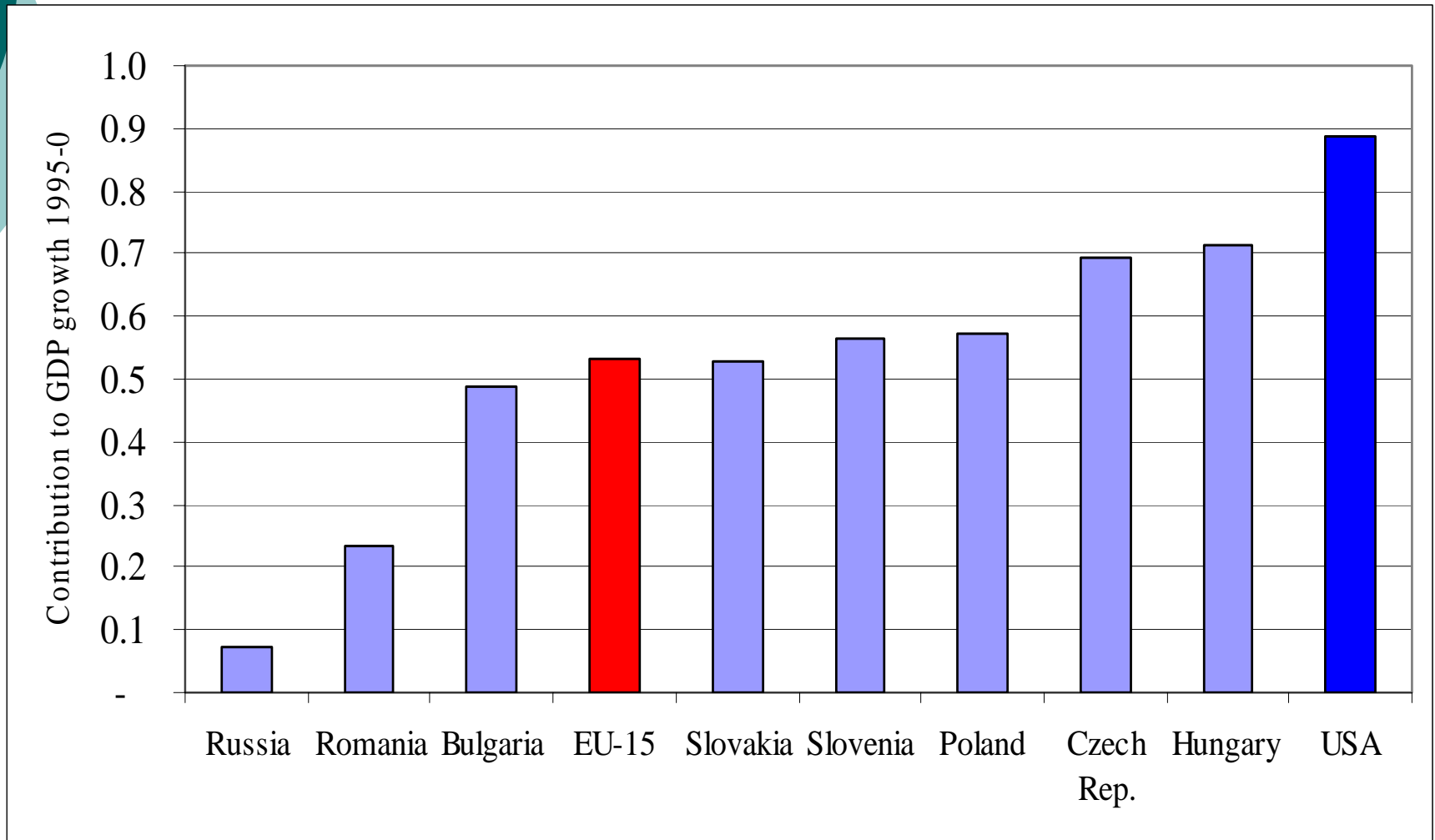


Main points

- ICT has a large potential to accelerate economic development in CEE countries both on the macro and industry-level
- There is a large number of public policies which can help benefit from the potential of ICT

On the macro level, the contribution of ICT investment to GDP growth can be substantial...

Figure 1. The contribution of ICT investment to GDP growth in CEE countries, EU-15 and the US, 1995-2003



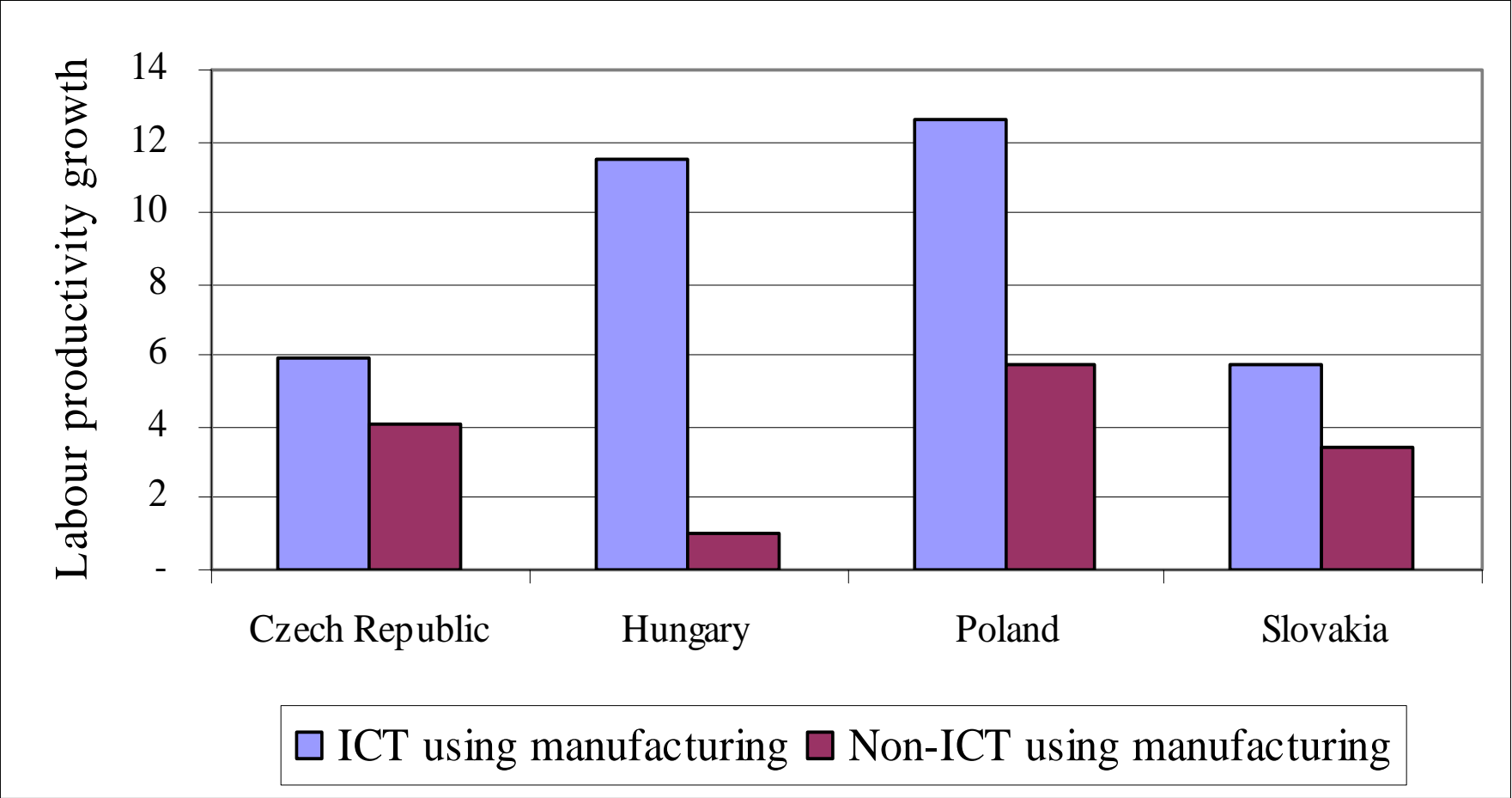
On the industry level, there is evidence that ICT use increases productivity growth..

Table 1. Labour productivity growth in ICT producing, using and non-ICT using industries, 1995-2003 average

	EU-15	US	Czech Republic	Hungary	Poland	Slovakia
Total Economy	1.61	2.49	2.73	2.61	5.31	4.34
ICT Producing Industries	8.9	11.4	5.5	11.3	9.3	10.9
ICT Producing Manufacturing ^a	18.5	24.8	11.1	16.1	14.0	6.4
ICT Producing Services	5.6	4.9	5.1	9.4	7.3	12.1
ICT Using Industries ^b	1.5	4.4	6.4	3.9	4.1	2.4
ICT Using Manufacturing	1.9	2.1	6.0	11.5	12.6	5.8
ICT Using Services	1.4	4.8	6.7	1.7	1.4	0.3
Non-ICT Industries	0.9	0.4	0.7	1.1	5.3	4.5
Non-ICT Manufacturing	2.1	2.4	4.1	1.0	5.7	3.4
Non-ICT Services	0.3	0.2	-1.4	0.9	2.9	5.3
Non-ICT Other	1.9	0.7	1.3	1.6	5.9	5.3

Productivity growth in traditional manufacturing industries is lower than in those using ICT...

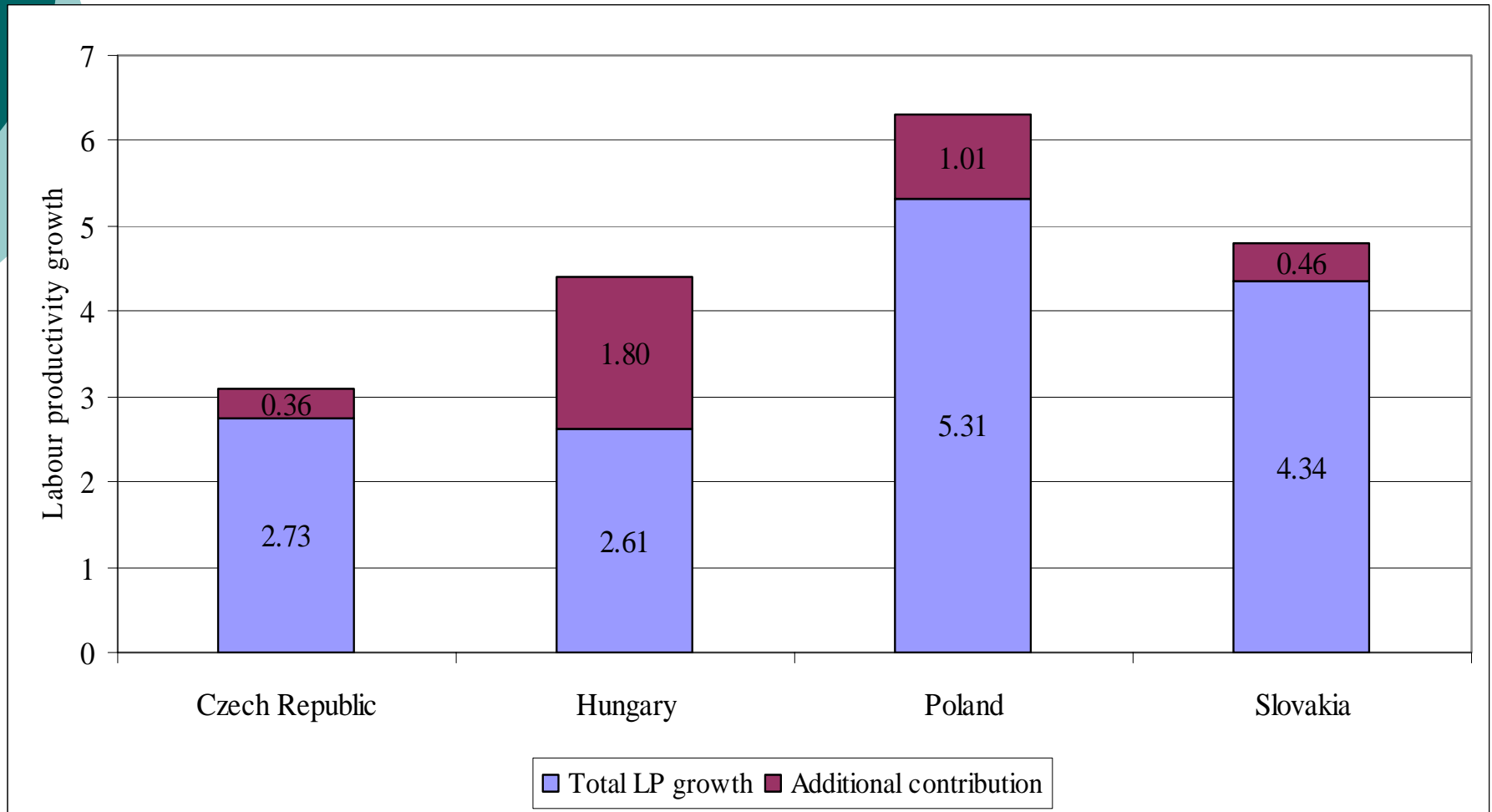
Figure 2. Labour productivity growth in ICT-using and non-ICT using manufacturing industries, 1995-2003 average



Source: Van Ark and Piatkowski (2005)

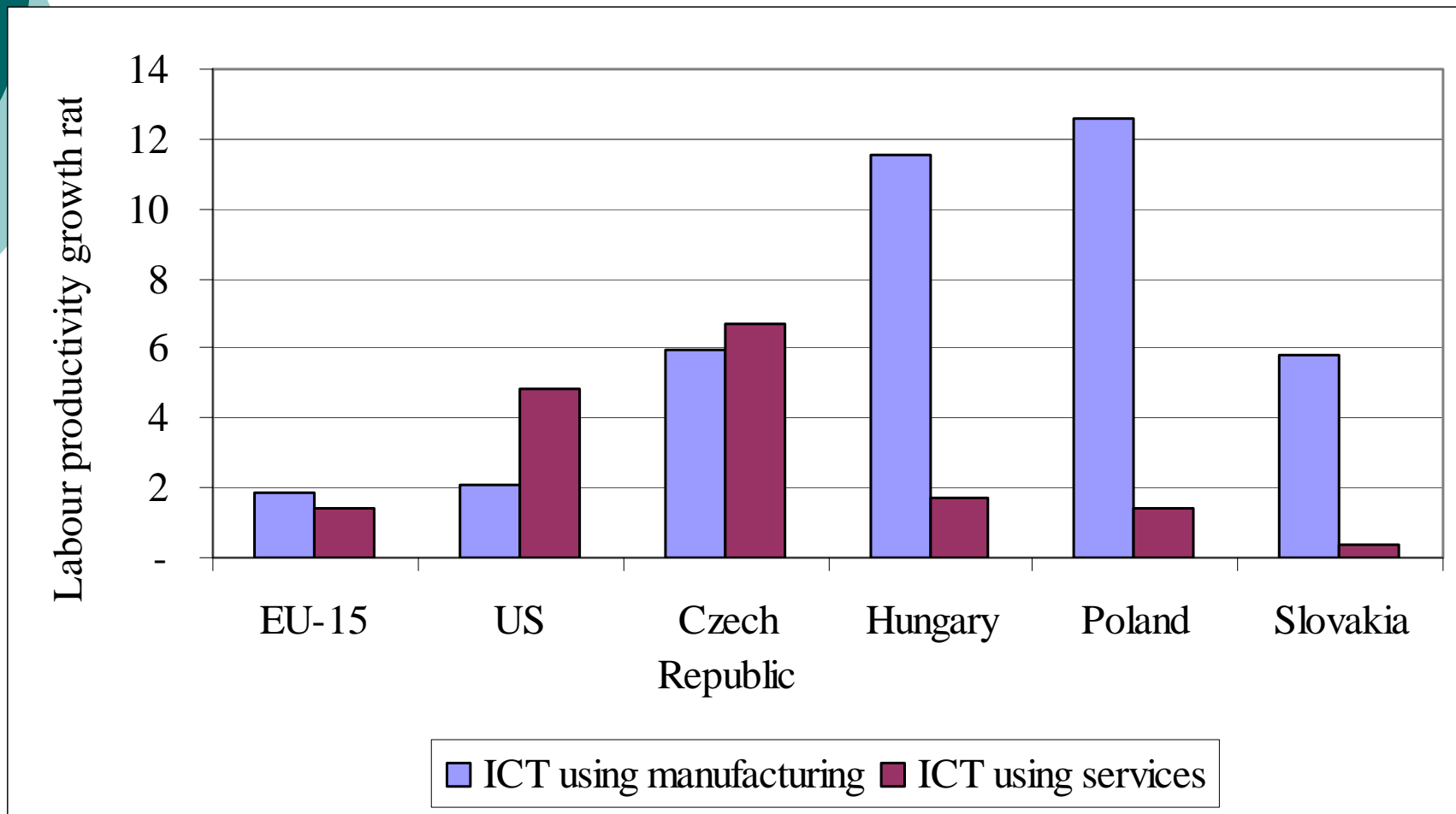
... If they caught up with productivity growth in ICT using manufacturing, benefits would be substantial...

Figure 3. Contribution to labour productivity (LP) growth from faster LP growth in non-ICT using manufacturing industries, 1995-2003 average



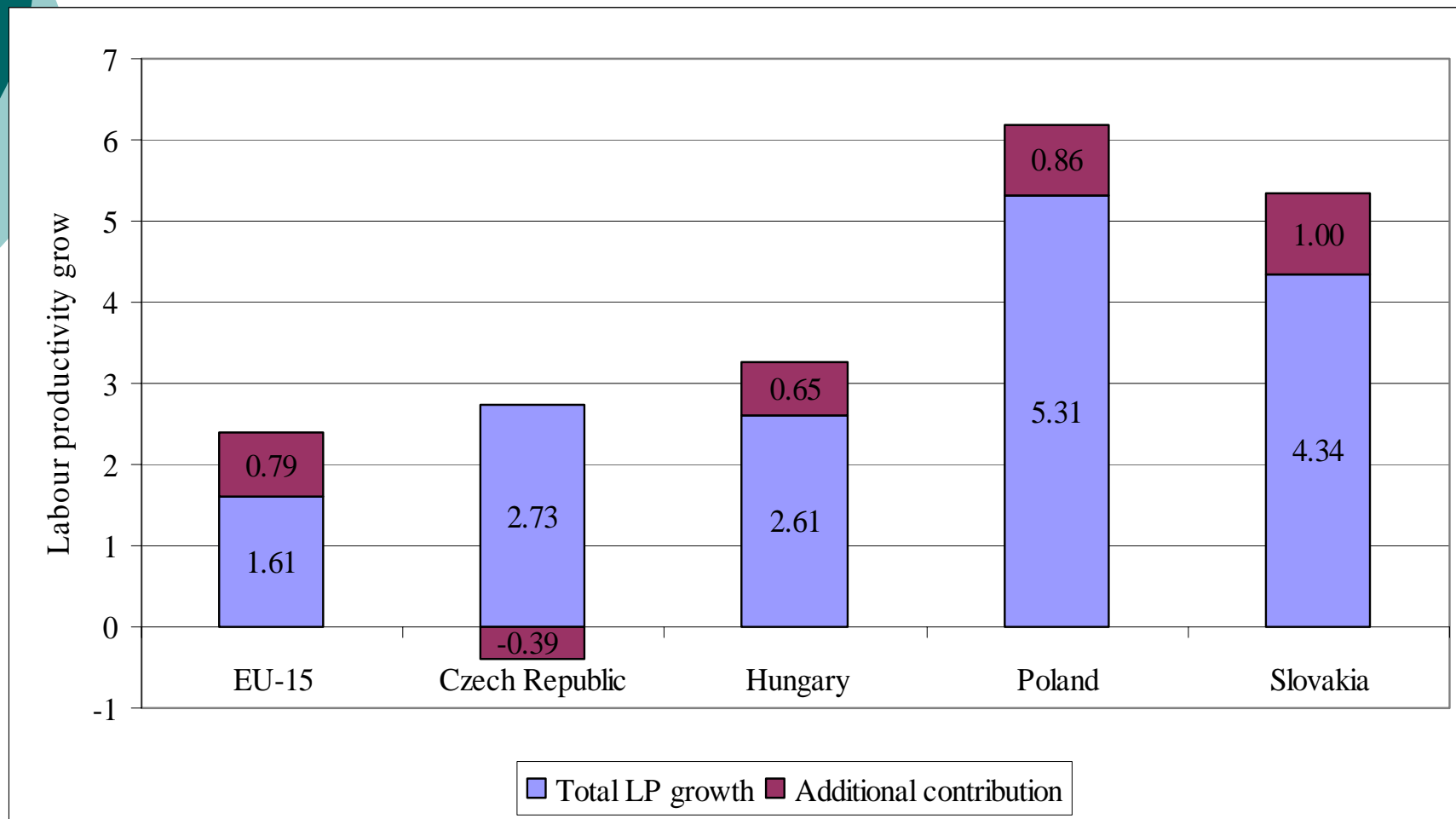
Also, productivity growth in ICT using services in CEE countries is lower than in the US and in manufacturing...

Figure 4. Labour productivity growth in ICT-using manufacturing and services, 1995-2003 average



If ICT using services caught-up with the US productivity growth, benefits would also be substantial...

Figure 5. Additional contribution to labour productivity growth due to faster growth in the service sector productivity



For the ICT-driven modernization to happen, public policy needs to:

- Have a vision and strategy of a long-term development based on information society and knowledge based economy
 - Mission and a vision statement.
- Promote more conducive economic and institutional environment
 - ✓ Macroeconomic stability, developed financial markets (VC), flexible labor markets, low administrative barriers, effective regulations, high level of competition, FDI, protection of IPRs

It also needs to ...

- Promote ICT use in traditional manufacturing and in services
 - Public rankings of industrial productivity, peer pressure, educational programs, public grants and PPP financing.
- Improve corporate governance to enhance managerial quality

High-quality management practices are essential to the productive use of ICT...

Table 2. Changes in firm-level productivity based on a survey by LSE and McKinsey on 100 manufacturing companies in France, Germany, UK and USA

MANAGEMENT PRACTICE		HIGH (top 25%)	+ 8%	+ 20%
		LOW (bottom 25%)	0	+ 2%
			LOW (bottom 25%)	HIGH (top 25%)
			IT USE	

IT investment has to go hand-in hand with management skills

Source: Dorgan and Dowdy (2004)

Finally, public policy needs to...

- Implement full e-government, online public services, and e-procurement (push strategy)
 - Develop public e-services
 - Establish mandatory deadline for electronic communication between the administration and enterprises (the case of Poland's ZUS)
 - Implement centralized public e-procurement (spillover effects)
 - Provide bonus payments financed by EU structural funds for achieving agreed targets