



**MINISTRY OF FINANCE
OF THE SLOVAK REPUBLIC**

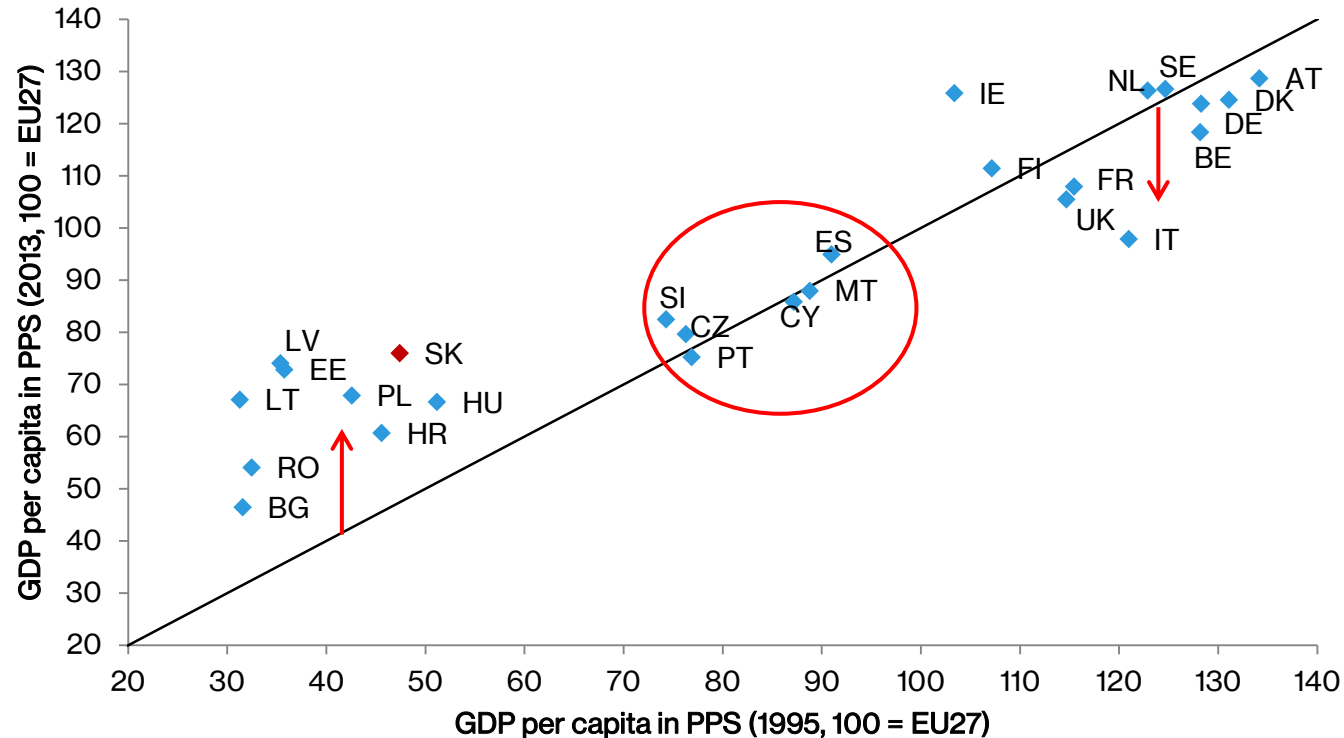
institute for financial policy

**Slovak convergence story:
where we are, where we go**

MINISTRY OF FINANCE
OF THE SLOVAK REPUBLIC



Convergence: state of play



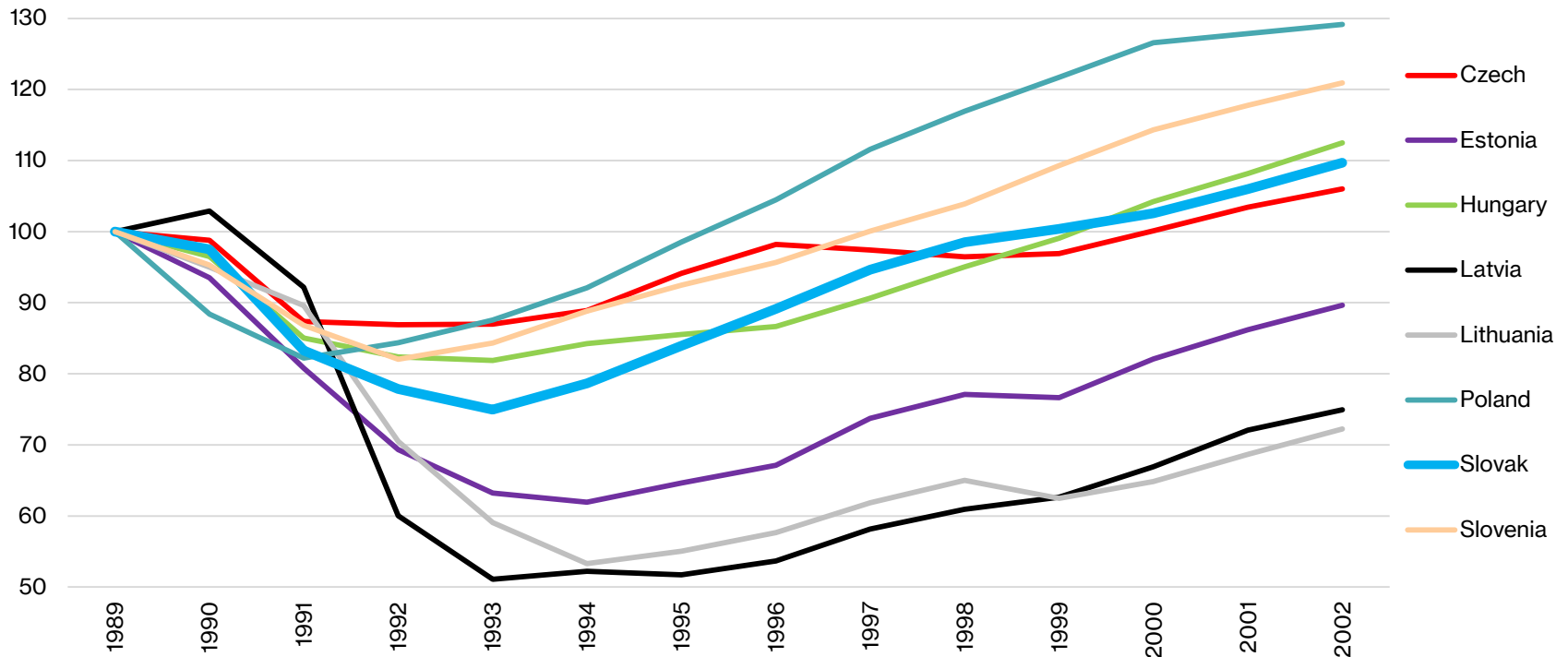
source: Eurostat

- Convergence is taking place in Europe: majority of countries with both low and high starting positions converge towards the EU average, IE being a notable outperformer
- A group of countries at around 80-90% of EU avg. appears stuck on the convergence path (CZ, PT, SI, CY MT, ES)
- After the Baltic countries Slovakia was the fastest converging country in the EU, increasing GDP per capita in PPS from **47%** in 1995 to **76%** in 2013





The size of transition shock



source: EBRD Transition Reports

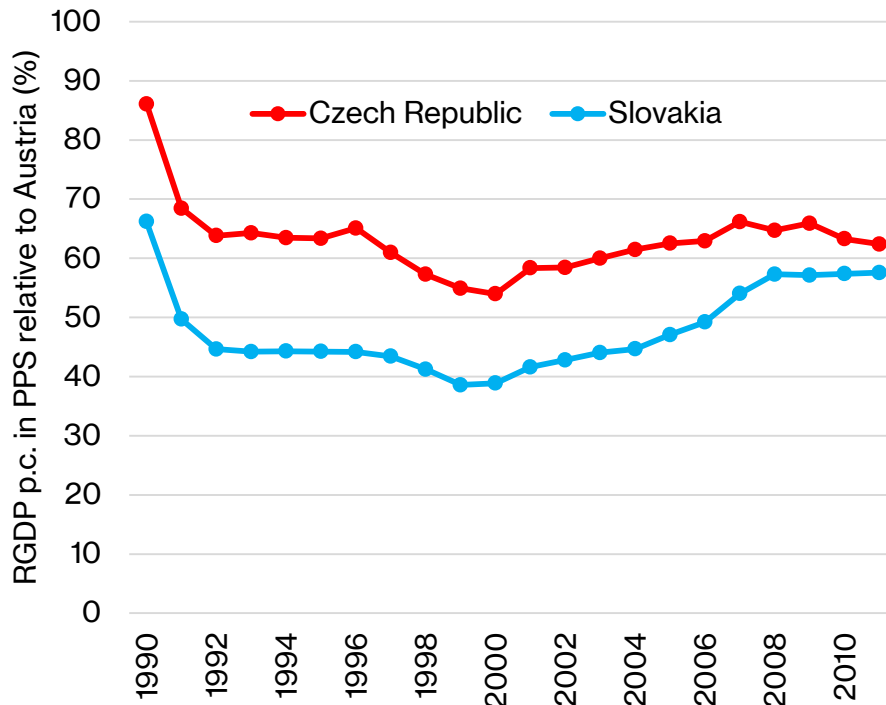
- Baltics and Slovakia experienced the transition shock with the highest amplitude compared with other CEECs
- Slovakia bottomed in 1995 (establishment of the Republic)
- This significantly influenced starting positions of these countries





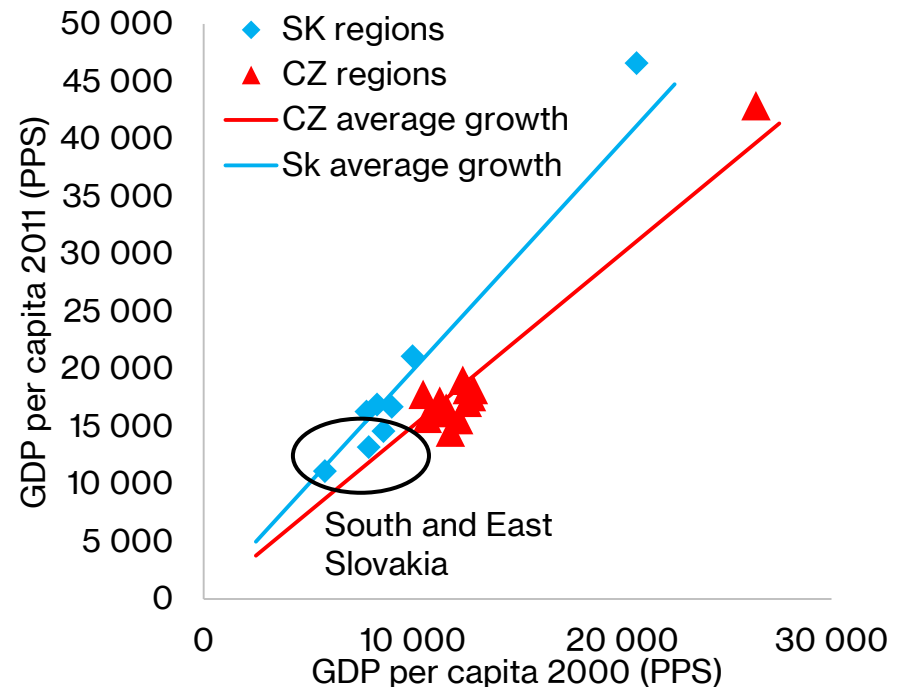
Slovakia catching up, while Czech Rep. stagnates

SK converging to Austria and the
Czech Republic...



Source: Penn World Tables

...but South and East lag behind



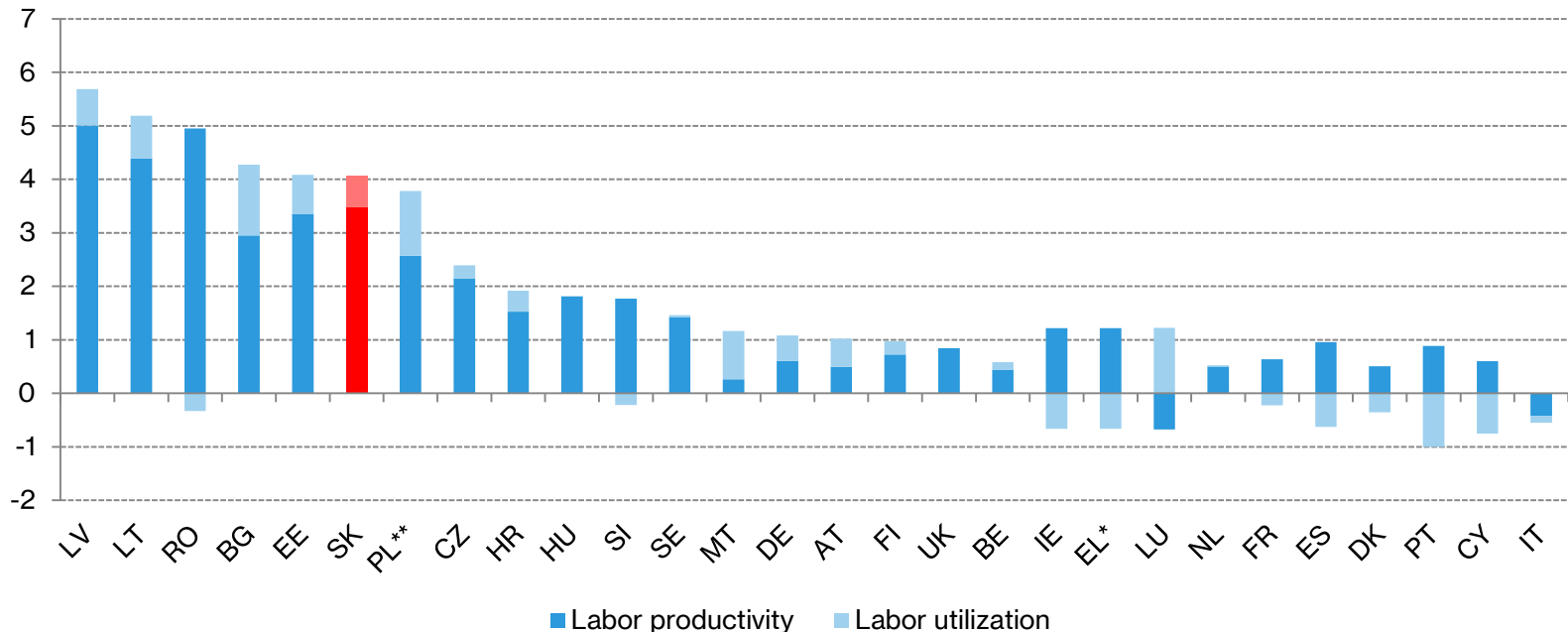
Source: Eurostat

- Convergence driven by the capital Bratislava and regions which enjoyed a boost in the FDI inflow, notably those being involved in the car cluster



Growth accounting – part I

Real GDP per capita growth decomposition
(annual average 2000-2013)



* Annual average 2004-2013

** Annual average 2000-2012

Source: Eurostat,
MF SR calculations

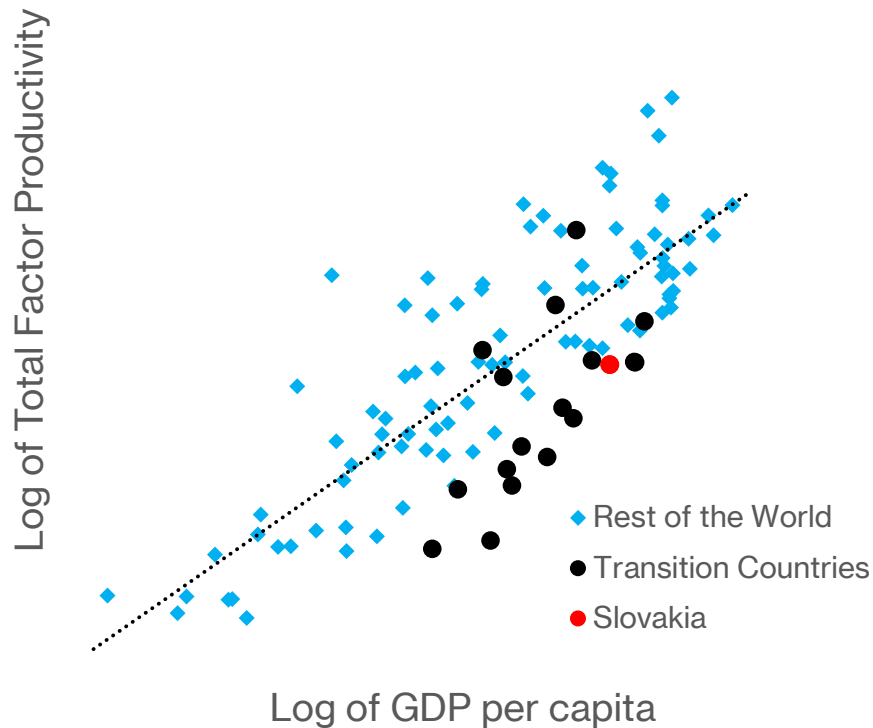
- In general, transition countries showed larger growth of labor utilization compared to advanced countries but...
- ...the growth in CEECs was driven mainly by the labour productivity gains



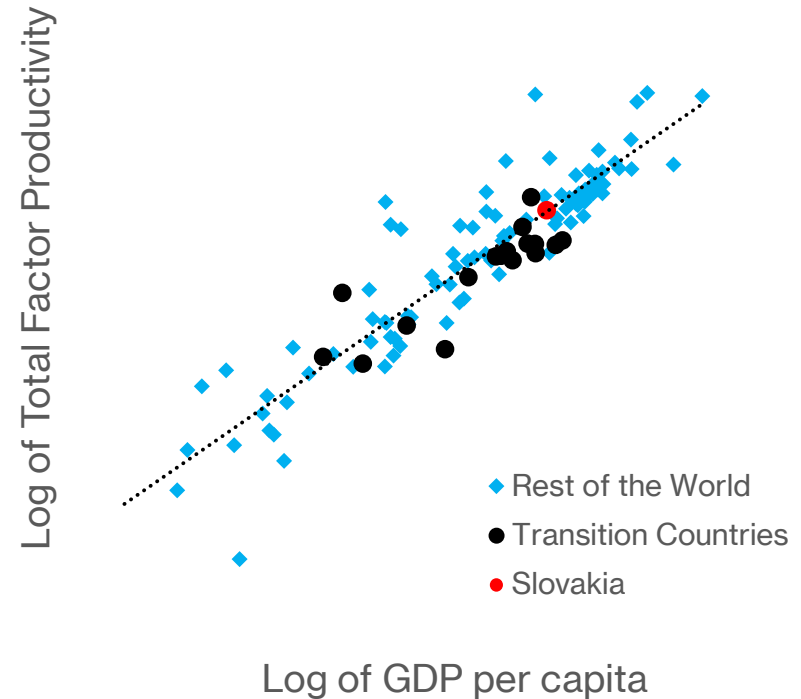


Growth accounting – part II

Productivity Gap (1990)



Productivity Gap (2010)



- Obsolete capital needed replacement

Source: Penn World Tables, inspired by EBRD Transition Report 2013



Overview of key drivers

- **CEE countries specifics:**
 - Growing private sector – foreign ownership has a robust impact on TFP level and growth
 - A progress in the conditions for doing business, notably start-up and operations indicators
- **Visegrad countries specifics:**
 - Favourable geographical position - proximity to export markets...
 - ... which attracted FDI supporting a successful integration with vertical supply links
 - Skilled labour – a structure of education matched needs of medium-tech industries
- **Slovakia's specifics (unlike Czech and Visegrad peers):**
 - Privatisation by direct sale in 1990s did not support the growth, while the bank restructuring around 2000 might have played a role (Hanousek et al., 2007)
 - Flat tax reform (2004) – decreased tax burden and shift to labor taxation helped the growth
 - Euro adoption (2009) – ex-ante evidence on positive impact on FDI and export growth (Brouwer et al. 2007), but the ex-post literature on Slovakia is ambiguous (Cieslik et al., 2012)



Impact of privatisation on TFP

	CEE			Russia and CIS		
	Private domestic	Any private	Private foreign	Private domestic	Any private	Private foreign
Positive effect	Large effect (>15%)	● ●	○ ● ● ● ● ● ● ● ●		●	● ●
	Medium effect (5–15%)	● ● ●			●	
	Small effect (<5%)				●	
Negative effect	Insignificant	●	● ●	●	○	●
	Small effect (<5%)			●		
	Medium effect (5–15%)			●		
	Large effect (>15%)		○			

Figure 1. Total Factor Productivity Level

Notes: White circles denote effects of studies that cover the early-to-mid 1990s period. Black circles denote effects of studies that cover the mid-to-late 1990s onwards. Half-white/half-black circles denote effects of studies covering both periods. One circle represents result for one country.

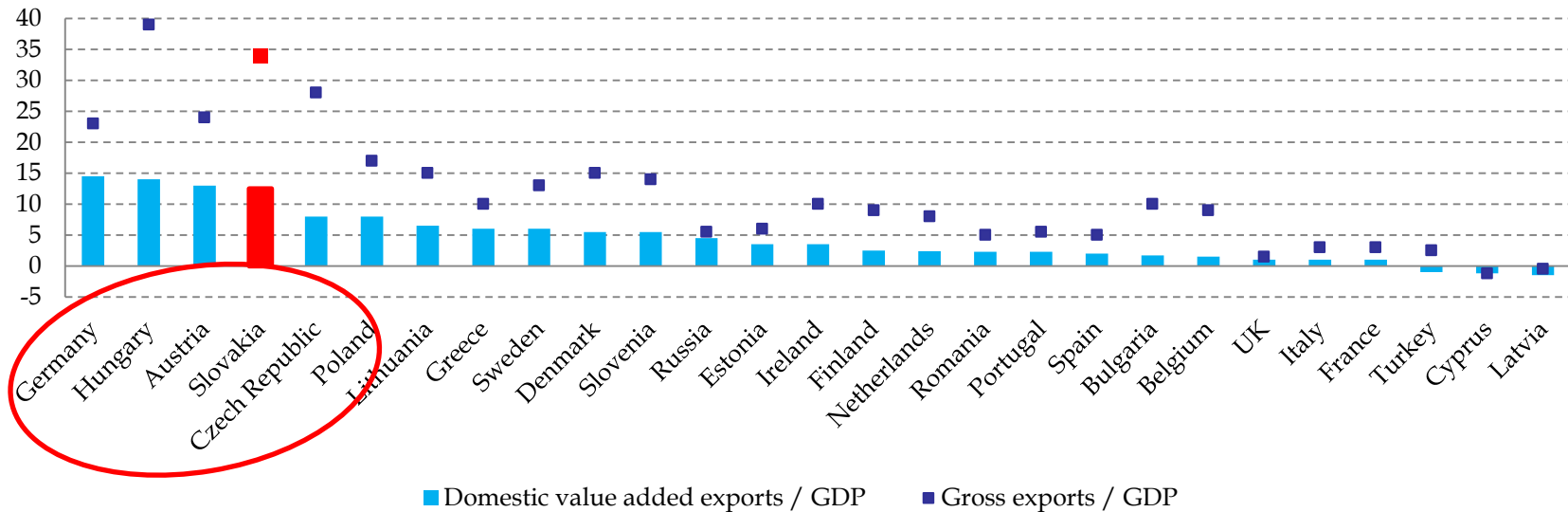
- Private ownership increased from 10% in 1990 to 80% in 2000 in Slovakia (comparable to CZ, more than HU, Baltics, RO and BG)
- 17 studies uniformly suggests that privatisation to foreign owners greatly increases efficiency
- The effect of domestic private ownership is quantitatively much smaller

Source: Svejnar, et al. (2009) „Effects of Privatisation and Ownership in Transition Economies“.



The role of vertical integration

Change in gross and domestic value-added exports of goods and services, 1995-2008, p.p.



Source: Rahman and Zhao (IMF)

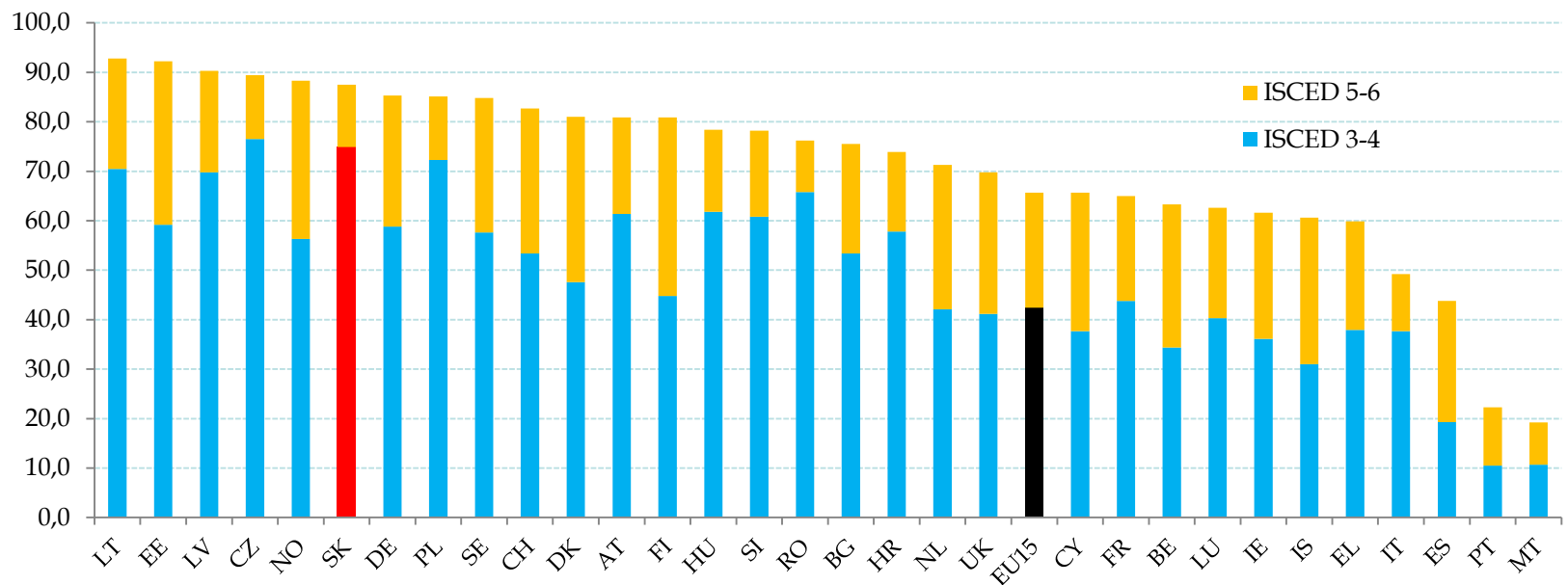
- Slovakia integrated into a Germany-led manufacturing cluster
- A divergence picture – countries with the high level of VA exports increase their export orientation, while those with the low level witness low increases or even decreases in exports





The role of education I: good starting position

Education of cohorts born between 1950-1970 according to ISCED



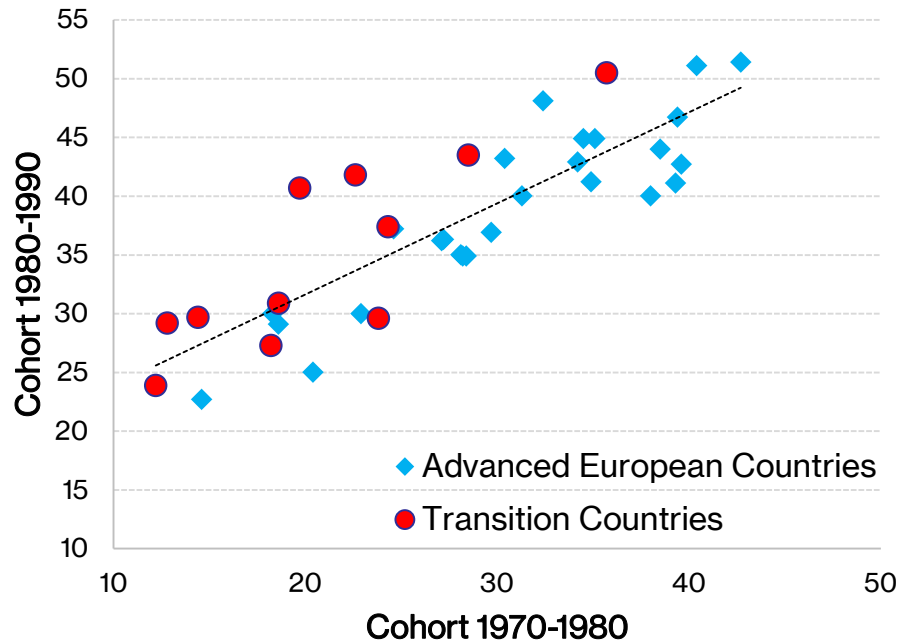
Source: Eurostat

- Medium-tech industries benefited from the favourable structure of unemployed – high share of ISCED 3-4 education



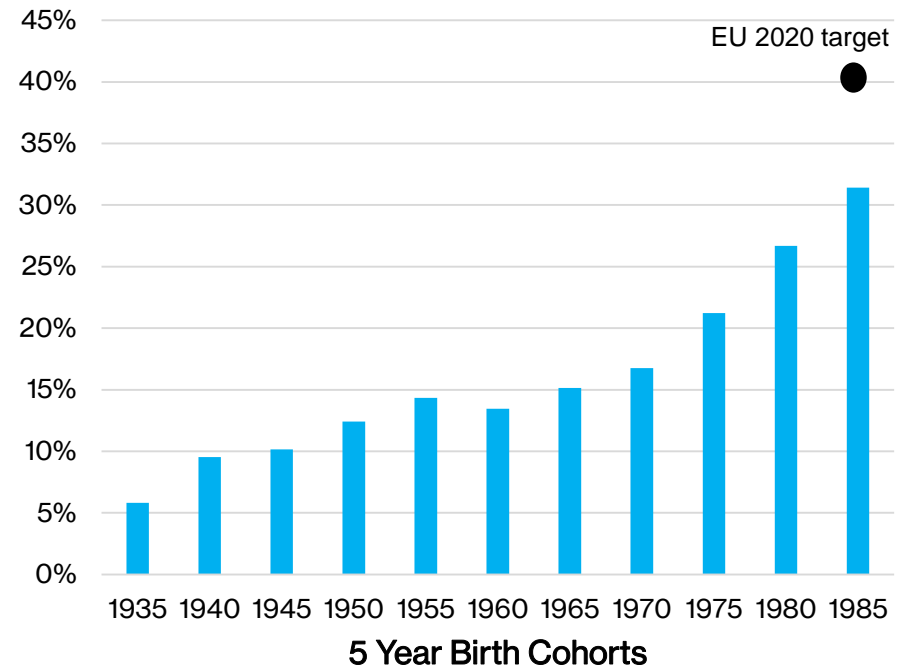
The role of education II: transition countries catching up in tertiary education

Share of population with tertiary education (%)



Source: Eurostat

Share of population with tertiary education in Slovakia (2014, %)



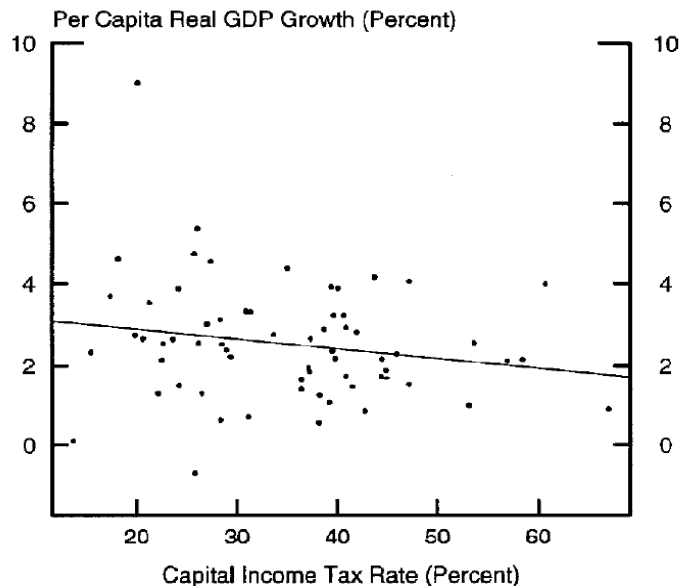
Source: Labour Force Survey

- College-educated cohorts entering labour market...
- ... help to improve future growth prospects



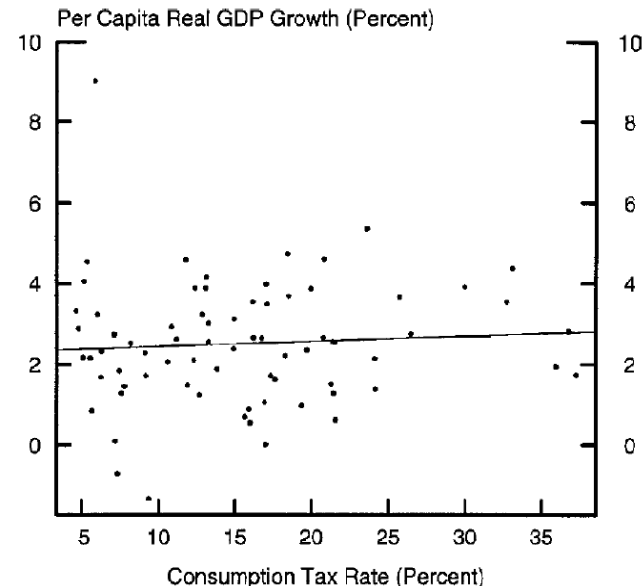
Flat tax reform: taxation shifted more to consumption

Growth and the Capital Income Tax, OECD Countries



Source: Mendoza, Milesi-Ferretti, Asea, 1996.

Growth and the Consumption Tax, OECD Countries



Source: Mendoza, Milesi-Ferretti, Asea, 1996.

- Slovakia managed to attract sizeable FDI projects after the introduction of the flat tax reform in 2004
- „Flat tax rates“ were only a part of the tax reform concept: tax bases were unified and broadened and the taxation was shifted from income to consumption; zero tax rate was introduced on the capital flows
- Most of the features of the tax reform are still in place except the „flat“ concept





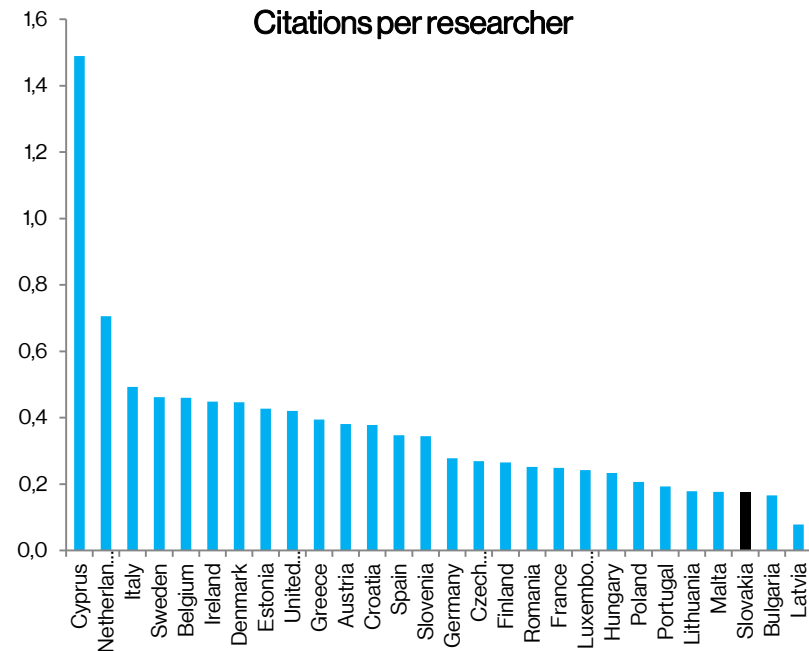
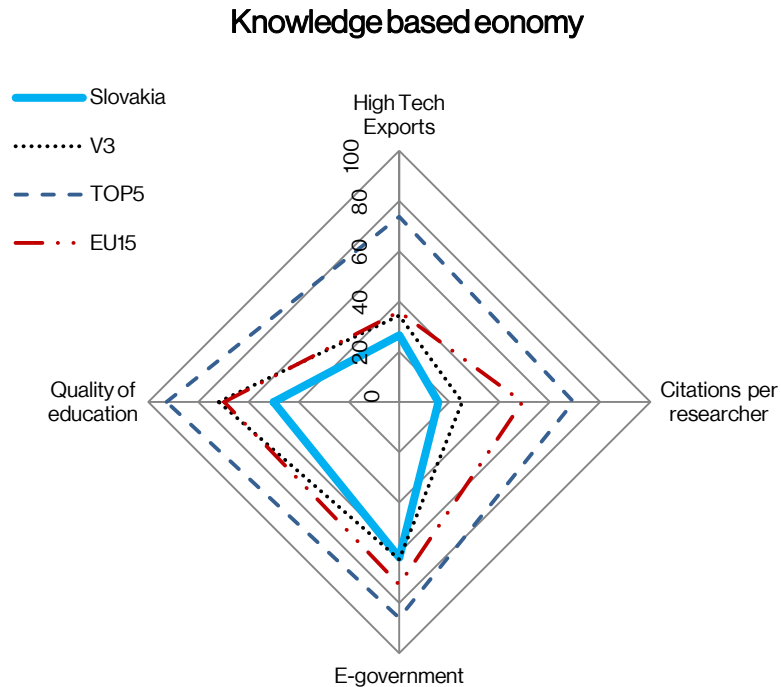
Modern economy – where we go

Pillar	Description	Indicators (examples)	TOP performance
Knowledge	Knowledge based economy producing high value added goods and services.	High Tech Exports, Citations per researcher, PISA, E-government	Ireland, Norway, Netherlands, Finland, Sweden
Sustainable, low-carbon economy	Environmental friendly and fiscally sustainable economy using cost-effective technologies with minimal impact on environment.	S2, CO2 intensity, air quality, water, deforestation	Iceland, Sweden, New Zealand, Norway, Belgium, Austria
Life quality	An economy offering high quality life.	Income and wealth, quality of housing, health care, life satisfaction	Australia, Norway, Sweden Switzerland, Canada, USA

- I envisage **modern economy** as a highly productive, sustainable knowledge-based economy, which is also a low-carbon, environmentally friendly and provides a high quality of life.
- Gap analysis – using selected indicators we assessed relative performance of Slovakia with peers



Knowledge – 1st pillar

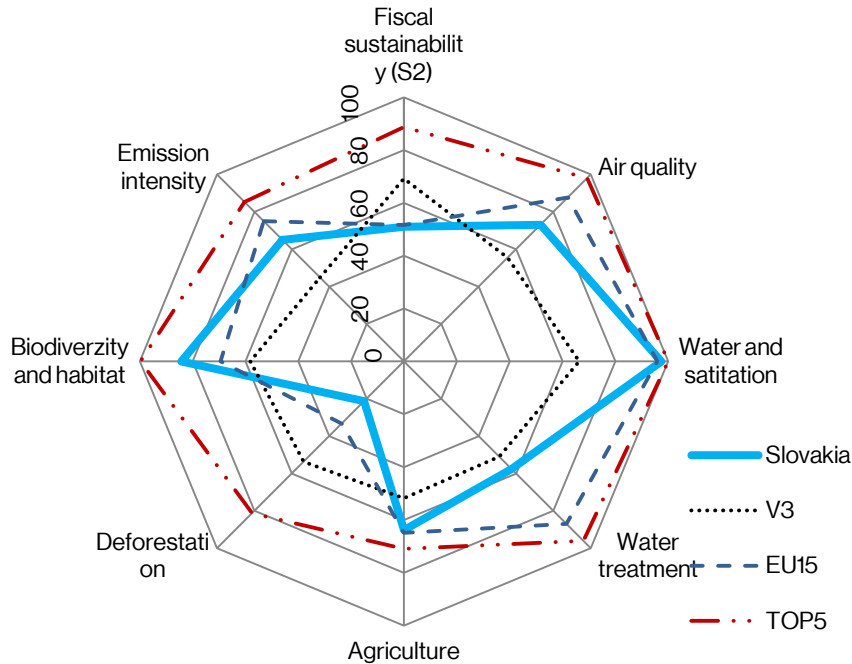


- Lagging behind in **all aspects** of research and knowledge-based economy
- In particular, research output is very low compared to peers

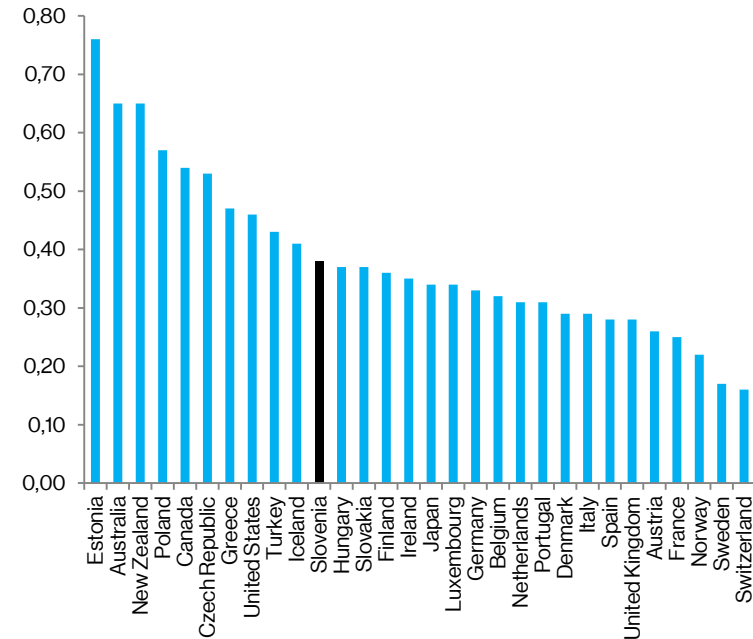


Sustainable, low-carbon economy – 2nd pillar

Sustainable, low-carbon economy



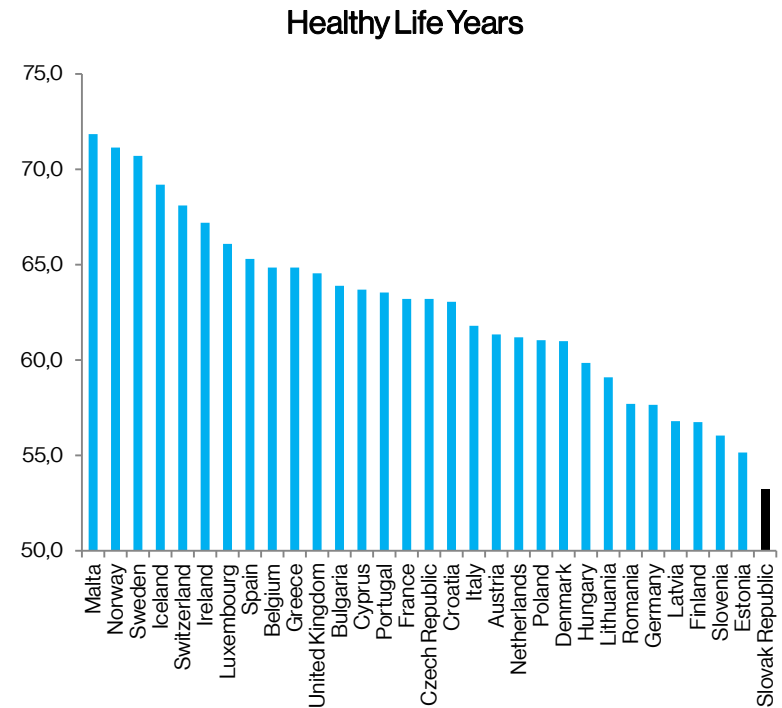
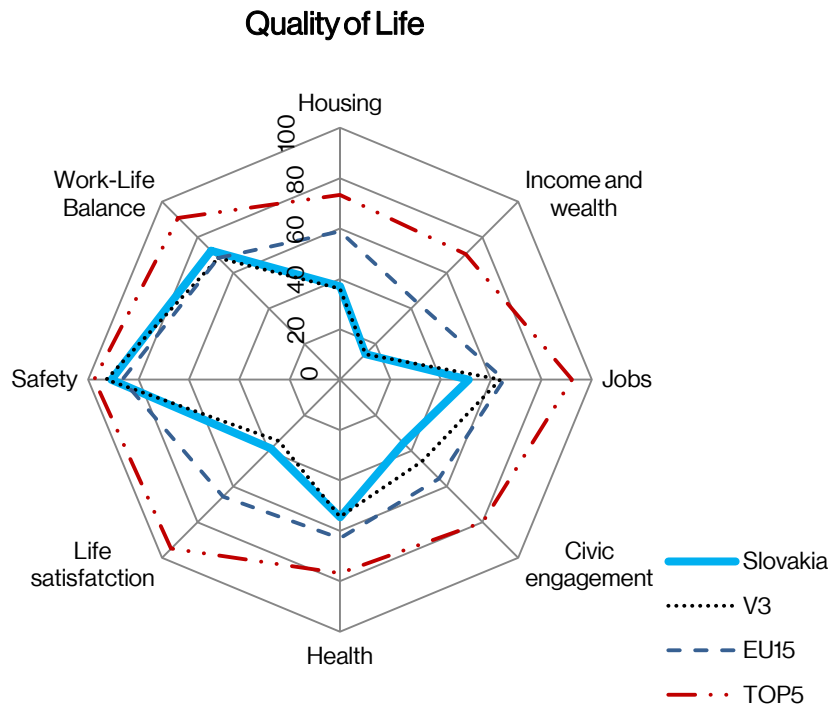
Emission intensity (GHG/GDP)



- Strong at some environmental aspects but poor in sustainability indicators
- Main challenges: fiscal sustainability, air quality and emission intensity



Quality of Life – 3rd pillar



- Performance very similar with neighbouring countries in all areas (V3)
- However, we considerably lag behind in labour market, civic engagement and efficiency of health sector (given the results)



Thank you for your attention
