POLAND AND ITS INVESTMENT OPPORTUNITY

Kevin Waddell

BCG
THE BOSTON CONSULTING GROUP

Basell Orlen Polyolefins Customer Conference

March 22, 2005 – Frankfurt

WHY IS BCG LOOKING AT POLAND (AND CEE)?

The Five Currents of Globalization

1. Rapid growth of RDE markets
2. Migration of customers to RDEs
3. Continuing RDE cost and capital advantage
4. Accessing RDE talent and R&D
5. Emergence of new global competitors from RDEs

OUR PERSPECTIVE ON POLAND

Expect significant growth in plastics demand

- 175 ths kg/yr more in 2009 vs. 2005

Low labor costs create compelling export economics into Western Europe

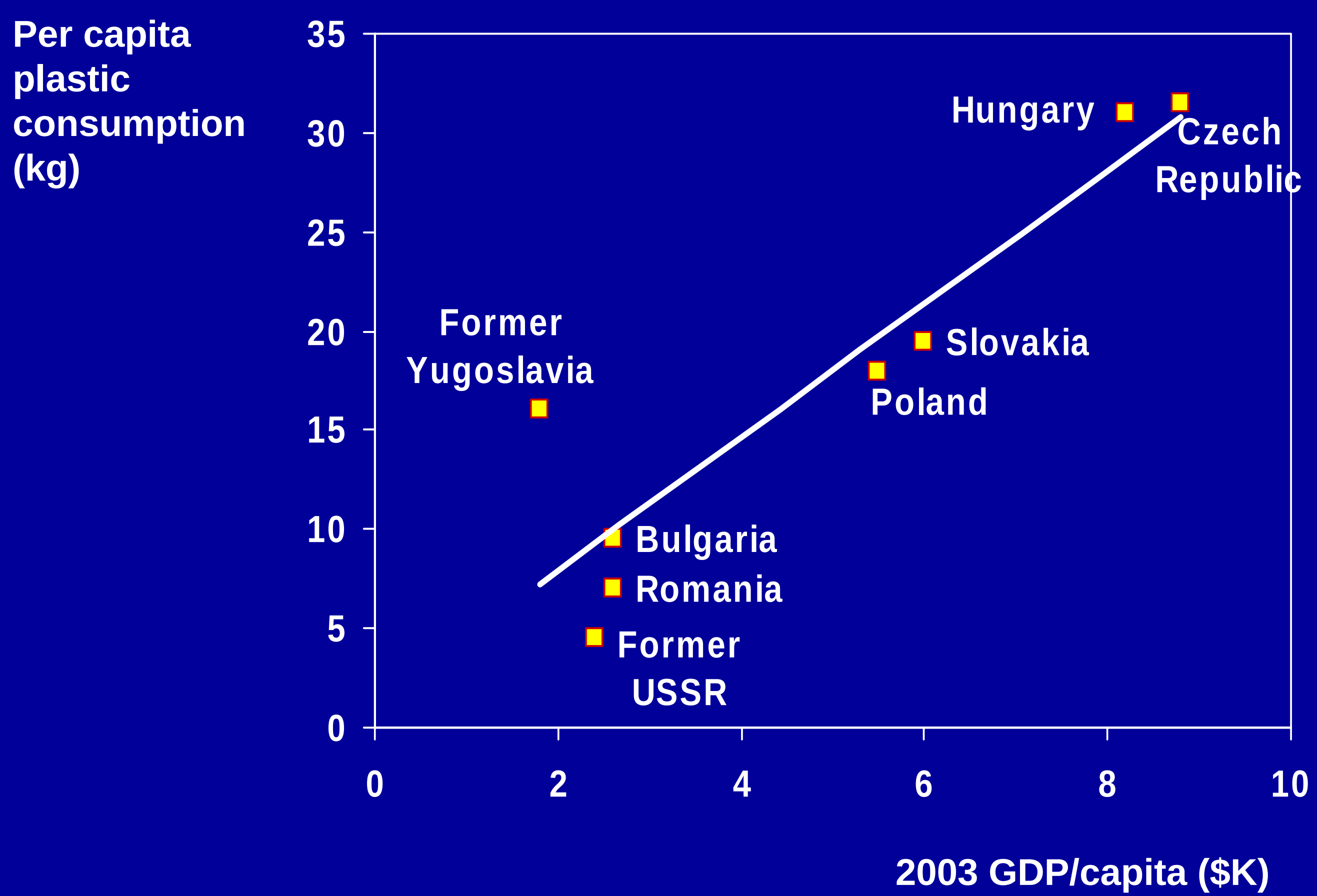
Labor costs will take many years to converge

A large pool of available skilled labor

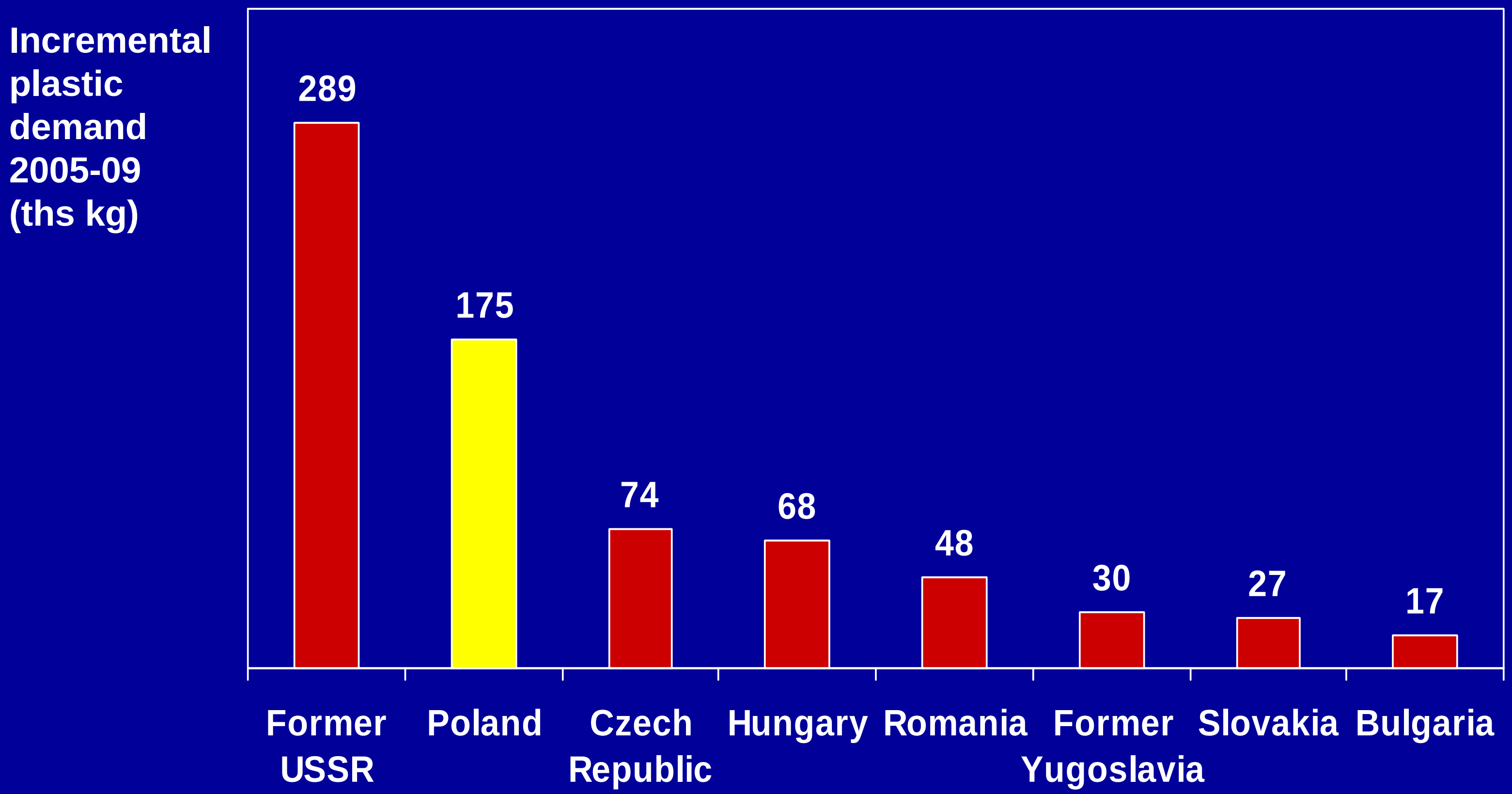
A favorable environment for business investment

- Recent EU accession
- Labor inflexibility largely perception
- Impact of poor infrastructure over-exaggerated

PLASTIC DEMAND GROWS WITH PER CAPITA GDP



AGGREGATE DEMAND GROWTH IN POLAND 2.5-10x OTHER CE COUNTRIES



Backup

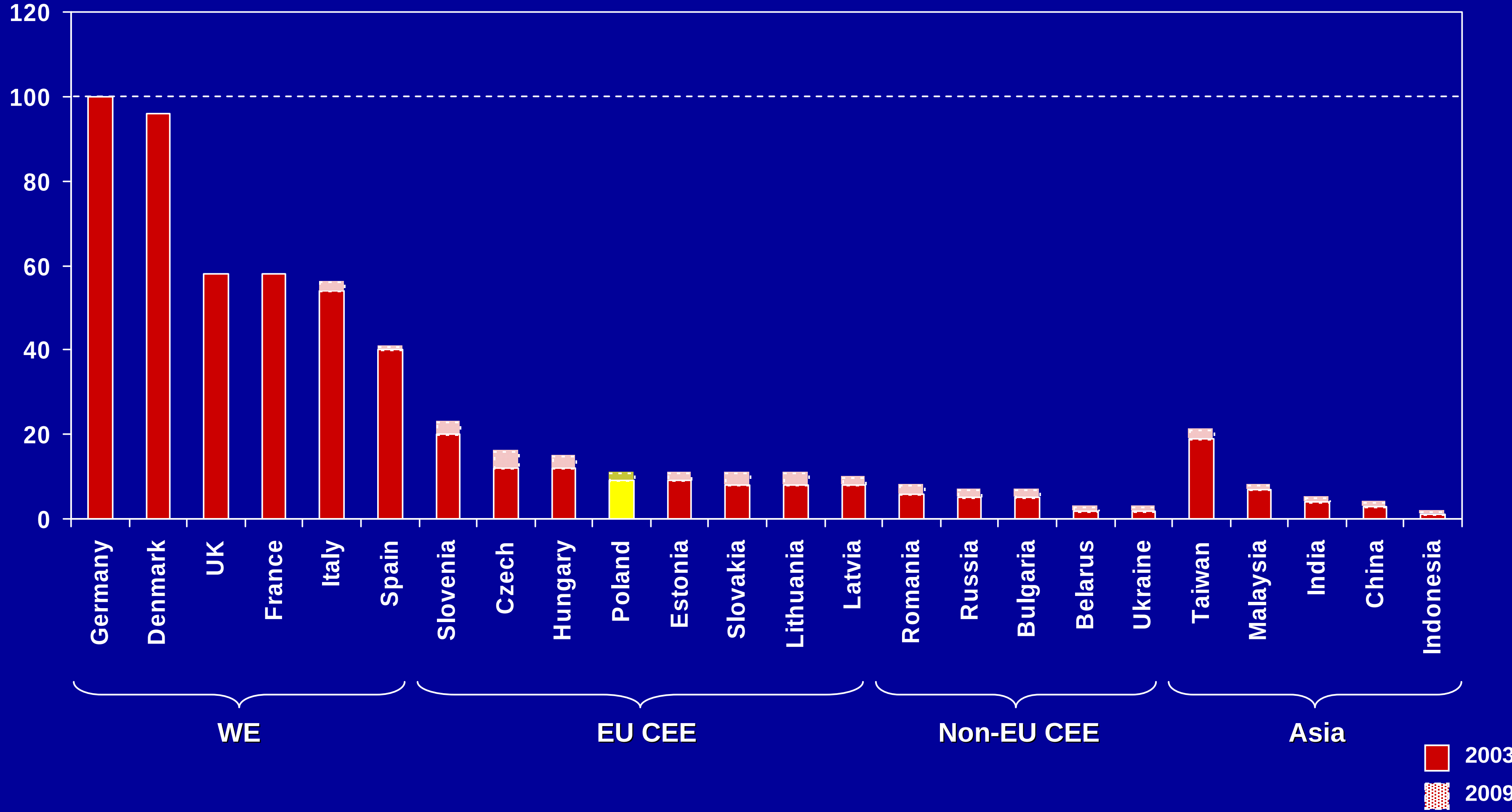
CEE REPRESENTS $1.3 TRILLION GDP

Expected To Grow At Almost 5% Annually Through 2008

	Country	GDP 2003 ($B)	Real GDP CAGR (2004-2008 %/yr)	GDP per capita (USD ths)
CEEs in EU	Poland	209	4.1%	5.4
	Czech Republic	85	4.2%	8.3
	Hungary	83	3.9%	8.3
	Slovakia	33	4.5%	6.0
	Slovenia	27	3.0%	14.1
	Lithuania	18	4.7%	4.9
	Latvia	10	4.7%	4.2
	Estonia	8	4.6%	6.0
Other CEE	Russia	434	4.6%	3.1
	Turkey	238	4.5%	3.4
	Romania	57	4.7%	2.6
	Ukraine	49	5.9%	1.0
	Bulgaria	20	4.2%	2.5
	Belarus	18	4.7%	1.8
	TOTAL CEE	1 289	4.5%	4.0
Asia	China	1 410	8.0%	1.1
	India	592	7.1%	0.6
	Taiwan	286	4.7%	12.5
	Indonesia	208	4.5%	0.9
	Malaysia	103	5.0%	4.3
Other	Mexico	626	2.6%	6.0
	Brazil	495	3.6%	2.8

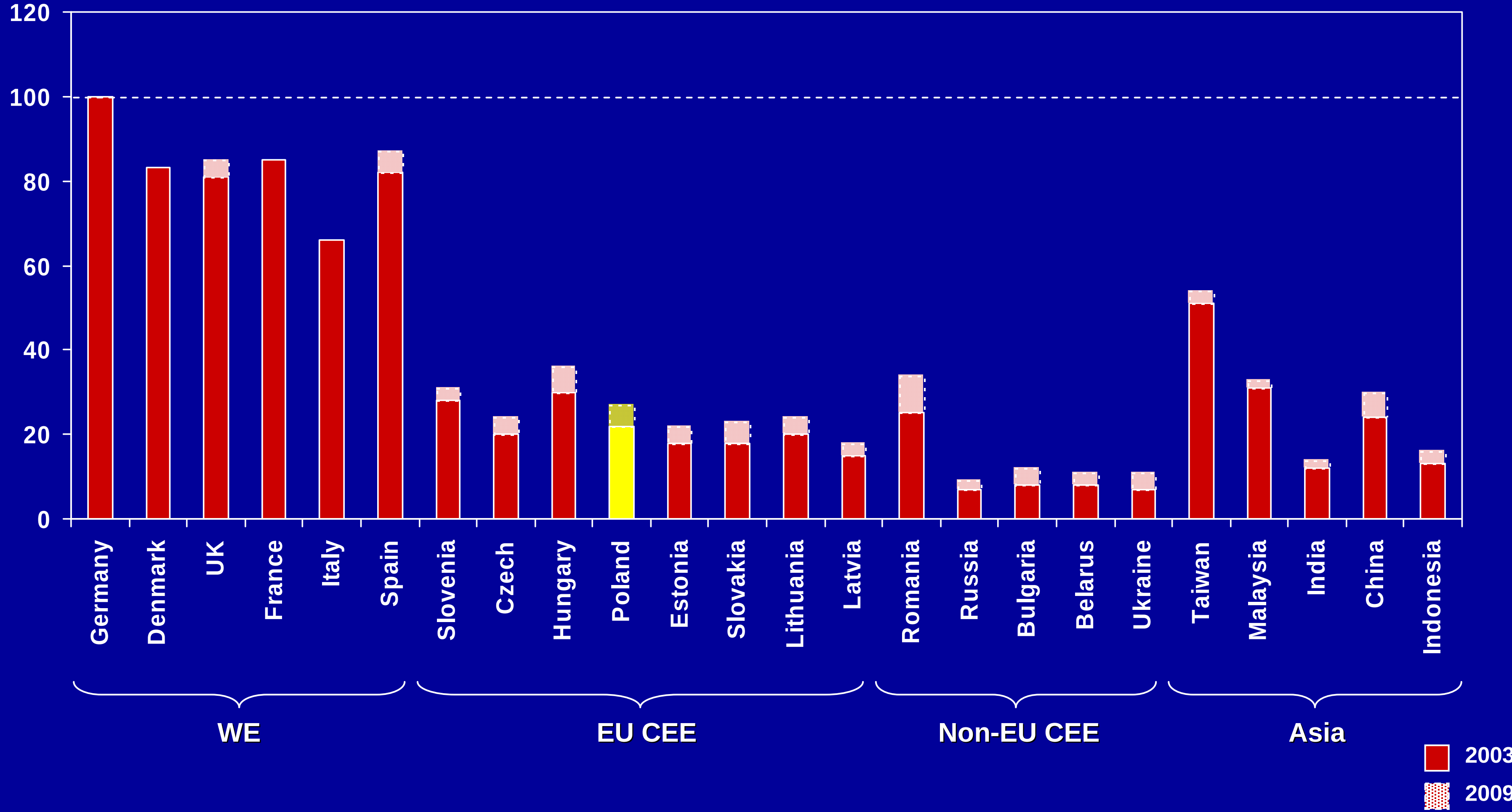
POLISH LABOR COSTS 80-90% BELOW WESTERN EUROPE (I)

Indexed fully loaded production worker cost
(Germany = 100, 2003 vs. 2009)



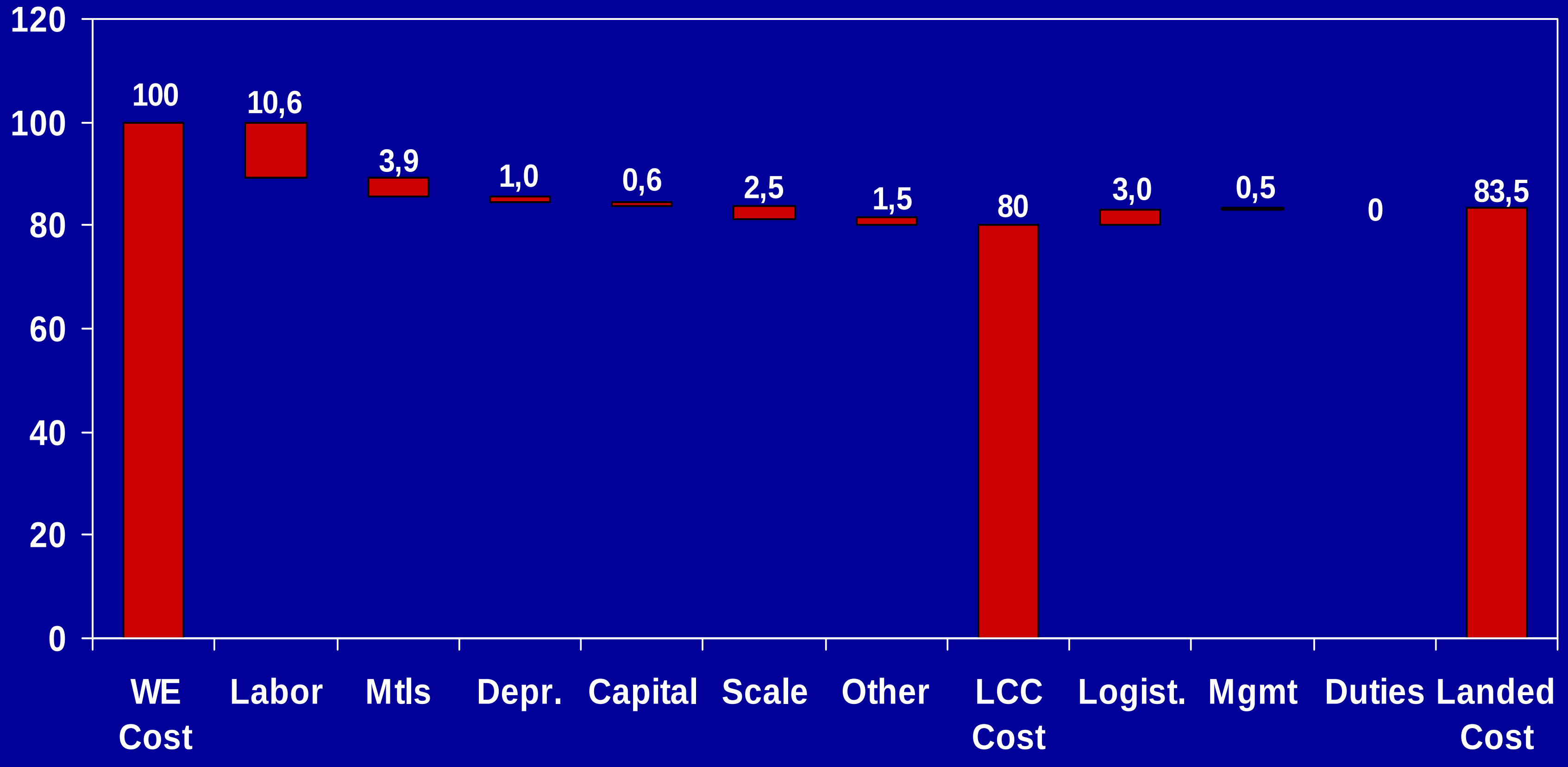
POLISH LABOR COSTS 80-90% BELOW WESTERN EUROPE (II)

Indexed fully loaded annual cost for engineer
(Germany = 100, 2003 vs. 2009)



IMPLICATION IS LOW TOTAL LANDED COSTS INTO WESTERN EUROPE

Economics for Sourcing Films to Germany From Poland



Backup

IMPLICATION IS LOW TOTAL LANDED COSTS INTO WESTERN EUROPE

	Germany	Poland	Difference (Germany/Poland)	Comment
Direct costs				
• Labor	10.0	1.2	8.8	• Primarily blue collar : $2.7/hr vs. $30/hr
• Materials	60.0	56.1	3.9	• Cheaper electricity ($0.05/kWh vs. $0.08/kWh); lower other components
Sales and marketing				
• Labor	3.0	3.0	0.0	• No savings on sales organization
• Logistics	10.0	13.0	(3.8)	• Driven by cargo value ($556) and truck transportation cost ($14.1/cbm)
• Other	7.0	7.0	0.0	
Overheads				
• Labor	2.0	0.2	1.8	• Significant labor cost gap
• Depreciation	5.0	4.0	1.0	• Substituting fixed assets with labor
• Other	3.0	3.5	(0.5)	• Increased management cost
Other savings				
• Scale	0	(2.5)	2.5	• Benefits of larger (2x) plants
• Capital (financial)	0	(0.6)	0.6	• Capital cost savings on lower capex
• Corporate tax	0	(1.5)	1.5	• 19% CIT in Poland vs. 38% in Germany
	100.0	83.5	16.5	

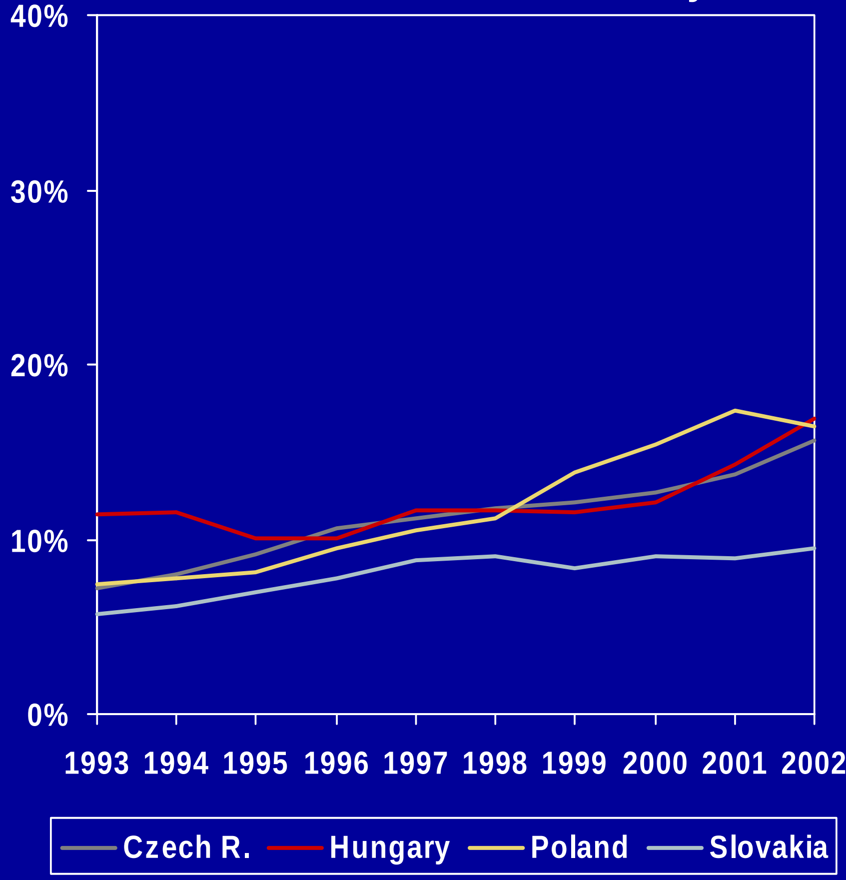
SIMILAR ECONOMICS FOR OTHER PLASTIC PRODUCTS

	Cost index (%)	
	Germany	**Poland**
Medium quality film	**100**	**83**
Granules	**100**	**84**
HQ printed bag	**100**	**82**

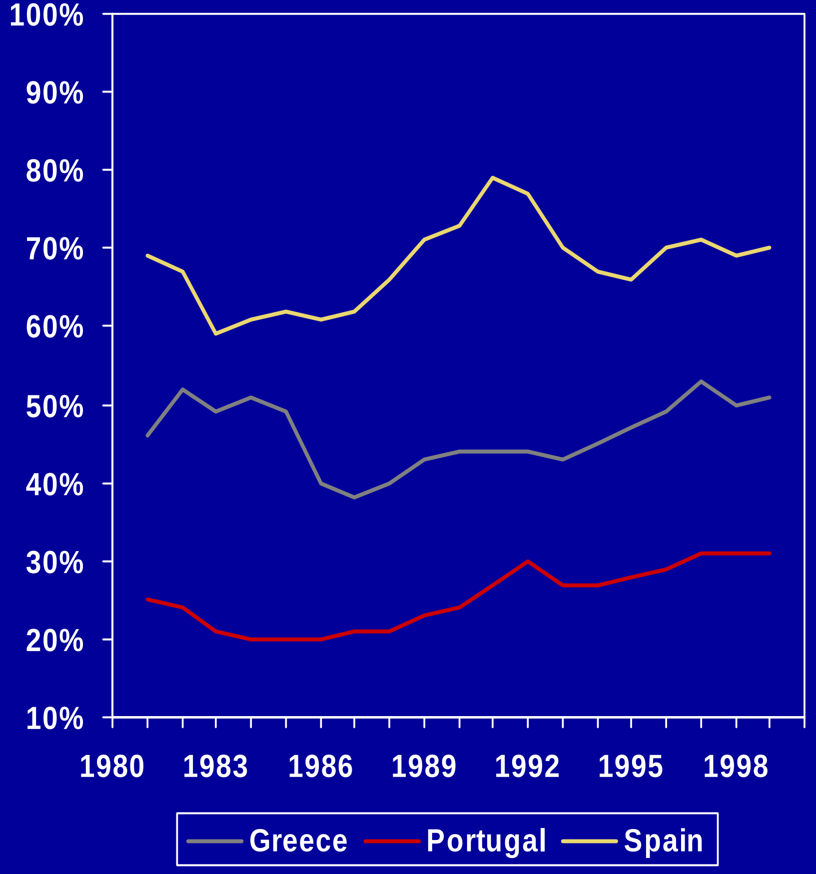
WAGE CONVERGENCE TAKES DECADES

Relative Wages vs. France

Relative wages between CE and France decrease slowly

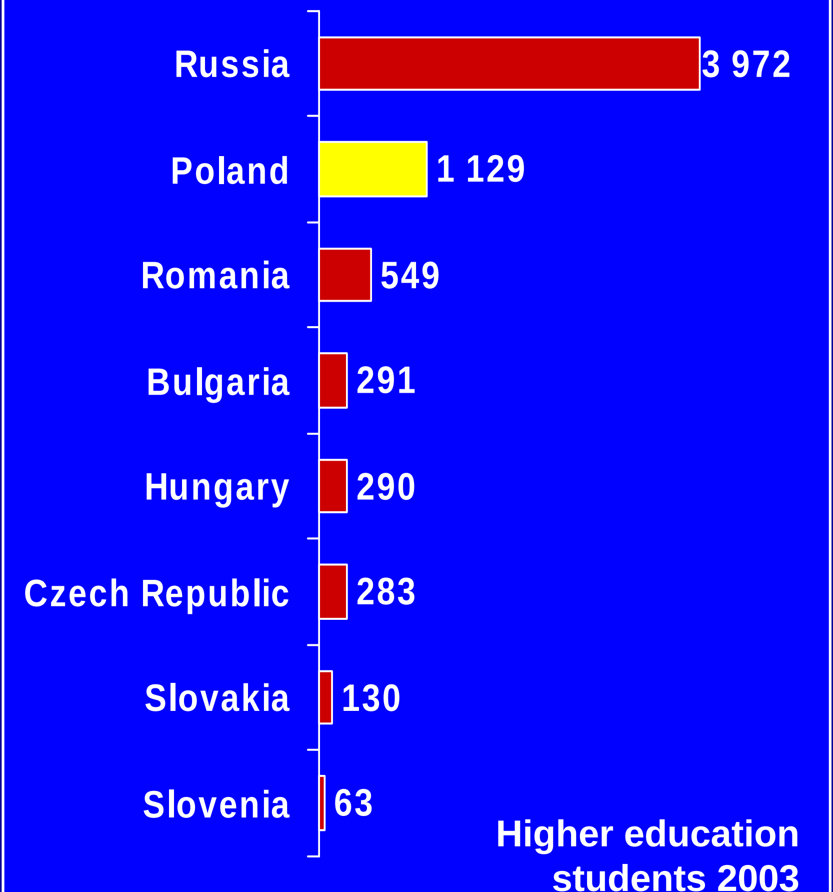


EU accession did not affect relative wages in Greece, Portugal and Spain



POLAND HAS HIGH AVAILABILITY OF SKILLED LABOR

Pool of skilled labor in Poland is significant



Skills and productivity as good as in Western economies

„Around 10% of our staff holds PhDs and 90% have Masters degrees. They are all exceptionally well educated"

Director, Motorola Poland

"The Polish factory (of General Motors) is believed to be the best within the whole concern in the world with regard to quality and efficiency"

"Automobilwoche"

"LEONI Auto Cable Polska is one of the sites with the highest efficiency in cable loom production"

"Automotive Intelligence", 11 July 2003

"Kraków has a great academic infrastructure and is a perfect place to look for technically skilled employees"

CEO, Sabre Polska

POLAND COMPARES FAVORABLY ON MANY DIMENSIONS IMPORTANT TO INVESTORS

Romania, Bulgaria and Russia Riskier Environments

	Labor flexibility index(1)	Infrastructure index(1)	Corporate income tax	Currency risk index	Corruption index(1)	Intellectual property protection index
Poland	1.7	4.0	19%	A+	3.6	4
Czech Republic	7.0	6.8	28%	A	3.9	4
Hungary	7.7	4.2	16%	A+	4.8	4
Slovakia	7.7	5.3	19%	A-	3.7	3
Romania	7.3	3.1	25%	BB+	2.8	3
Bulgaria	7.3	3.8	24%	BBB-	3.9	3
Russia	9.0	3.2	24%	BB+	2.7	2

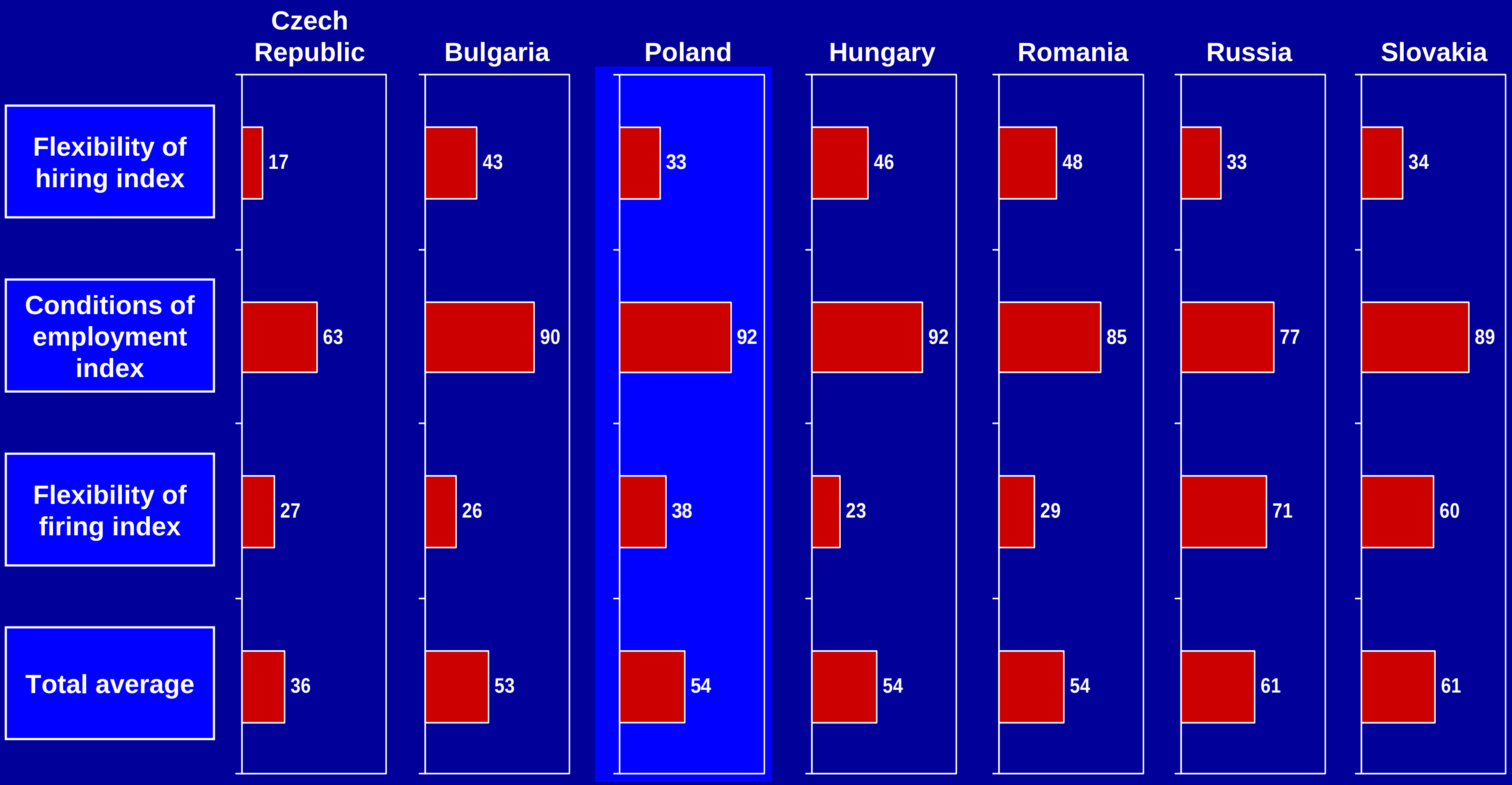
(Perceived) Labor flexibility and infrastructure primary disadvantages

(1) 10 = most favorable

POLISH LABOR LAW AS FLEXIBLE AS OTHER CEE COUNTRIES

Much More Flexible Than Perceived

Employment laws index – the higher the index the more rigid law

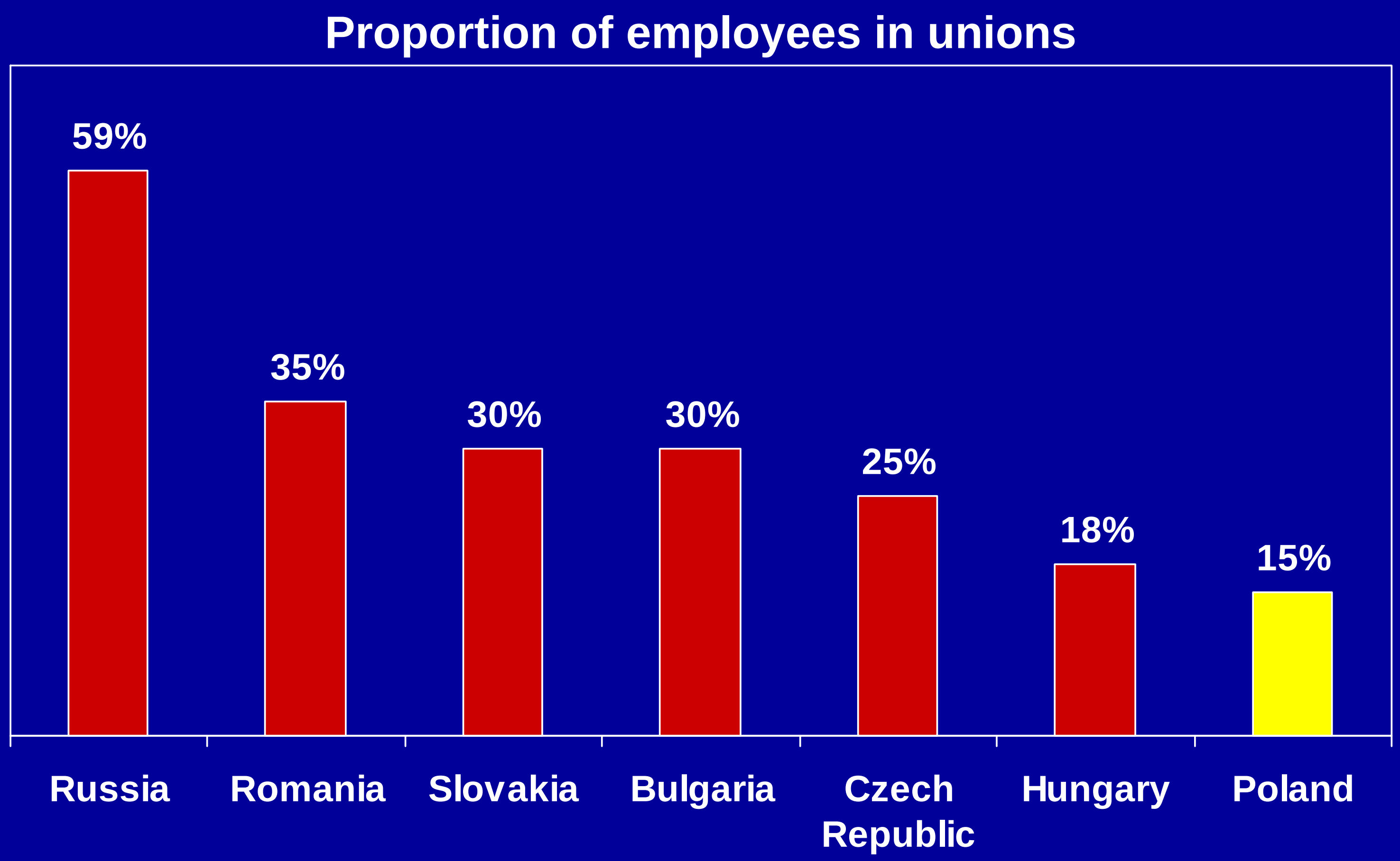


Backup

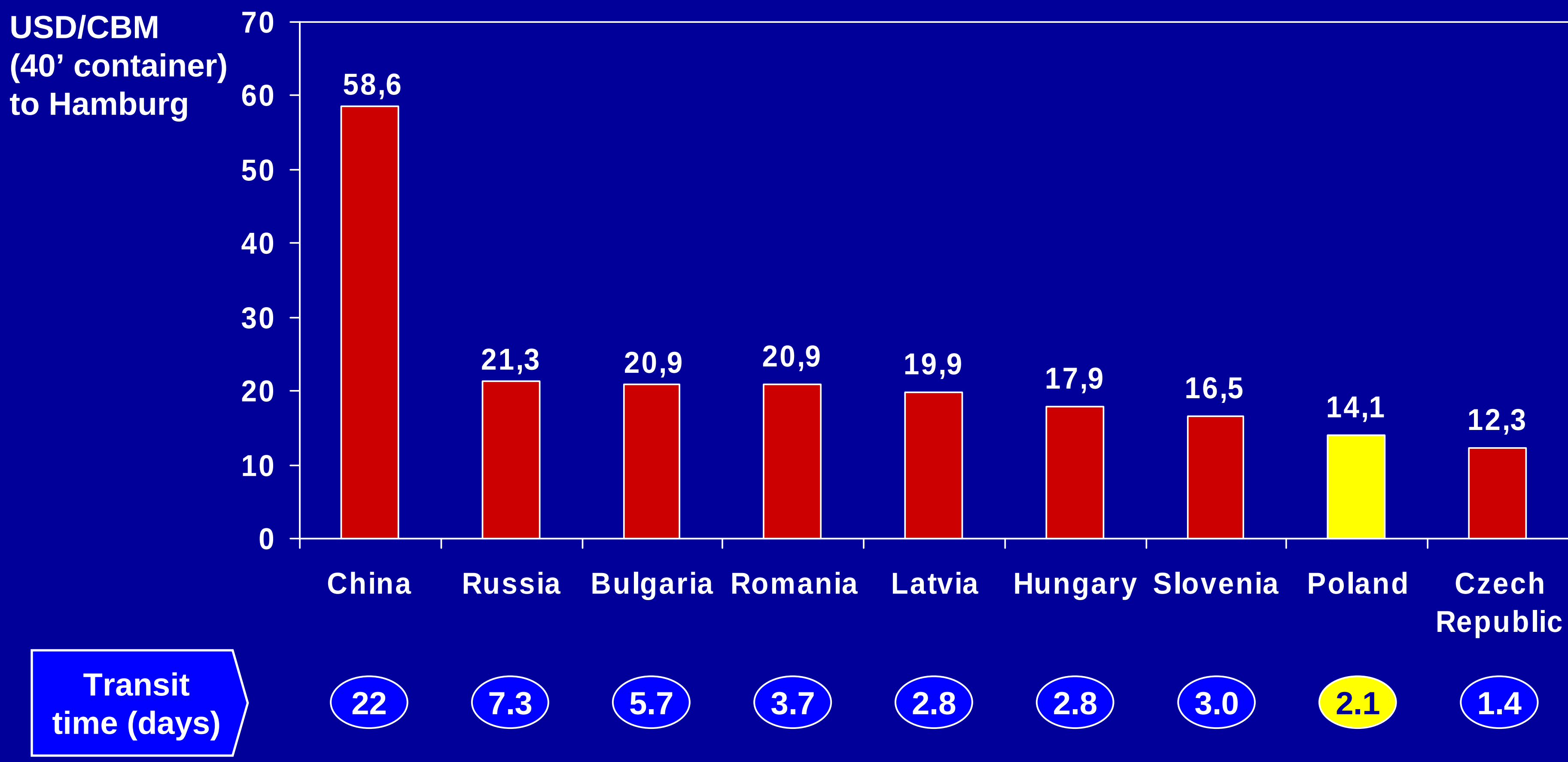
EMPLOYMENT LAWS INDEX – METHODOLOGY

Issues considered	Flexibility of hiring	Conditions of employment	Flexibility of firing
	Part-time contracts • Part-time employment is prohibited • Part-time workers not exempt from mandatory benefits of full-time workers • Difficulty to terminate part-time workers as compared to full-time workers **Fixed-term contracts** • Allowed only for fixed-term tasks • Maximum duration of fixed-term contract	**Hours of work** • Mandatory daily rest • Maximum number of hours in a work week • Premium for overtime work • Restrictions on night work **Leaves** • Days of annual leave with pay • Paid time off for holidays **Minimum wage** • Existence of mandatory minimum wage • Conditions of employment in the constitution	**Grounds for firing** • Termination without cause • Public policy list of "fair" grounds for dismissal • Economic-based redundancy considered "fair" **Firing procedures** • Obligation of notifying third party • Approval of third party needed • Compulsory retraining prior to dismissal • Priority rules for dismissal • Priority rules for re-employment **Notice and severance payment** • Period of notice • Amount of severance pay

POLAND WITH LOWEST UNION PARTICIPATION RATE



LOGISTICS FROM POLAND COMPETITIVE WITH REGION



Poor (but improving) infrastructure adds hours, not days, to transit times

SUMMARY

Dimension		Comment
Growth in plastics demand	●	**2.5-10x other CEE; only Russia larger**
Export economics (labor cost)	◕	**Only Romania, Bulgaria lower total landed cost**
Labor cost convergence	●	**Relative wage growth likely slow in Poland**
Pool of available skilled labor	●	**Large number of higher education students**
Environment for business investment	◕	**Low risk and exaggerated disadvantages**

A compelling proposition and worth a serious look

THE BOSTON CONSULTING GROUP

A leading global strategy consulting firm…

- **60 offices world-wide in major business centers**
- **Over 2,800 consultants**
- **Majority of revenues with continuing relationships**

…dedicated to helping our clients manage change to achieve and sustain competitive advantage

- **Strategic insight**
- **Operational effectiveness**
- **Superior implementation process**

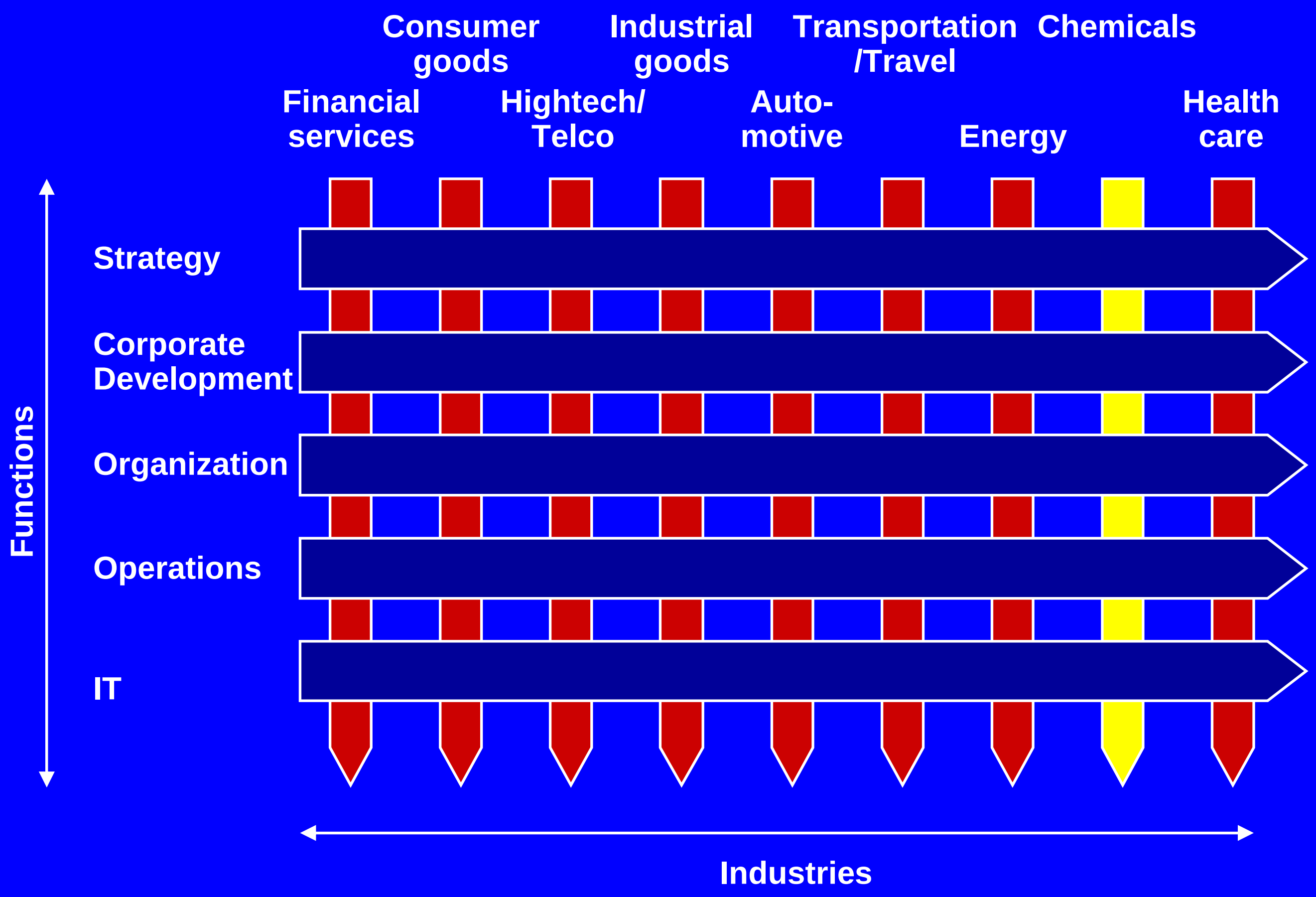
BCG HAS WORLDWIDE PRESENCE

60 offices strategically placed worldwide

BCG LEADING STRATEGY CONSULTING FIRM IN CENTRAL AND EASTERN EUROPE

- Long-standing established offices in Budapest, Warsaw, Prague, Bratislava, and Moscow
  - active in region since 1985
- Focus on the largest CEE companies and multinationals plus governments
  - e.g. strategy, sales and distribution, pricing issues, regional entry and expansion
- Highly experienced CEE team of over 100 local staff having worked on over 300 projects
  - deep experience of local business and region
  - top MBAs (e.g., Harvard, INSEAD, Wharton)
- Wide coverage of key industries
  - chemicals
  - steel
  - automotive
  - white goods
  - consumer goods and retail

PRACTICE AREAS ARE BCG'S KNOW-HOW CENTERS



- Development and management of BCG know-how
- Research specialists in all areas to support the project teams
- Permanent regional and global know-ledge sharing

DEEP EXPERIENCE IN CHEMICALS
Select Examples

In recent years, BCG has worked with:

- **4 of top 5 European Chemicals companies**
- **3 of top 5 Global Chemical companies**
- **4 of top 5 leading Private Equity companies (on Chemicals)**

BCG REFERENCE TOPICS IN THE CHEMICAL INDUSTRY

	Corporate	Functions	
Strategy	Value management	Realizing Global Avantage	HR Management
	Portfolio management	Pricing strategy	Strategic growth opportunities
	M&A strategy	Strategic purchasing	Production network
Operations	Accelerated performance improvement	Supply chain management	Technology-Scouting
	Value driver management/ complexity management	Growing the core business	Asset productivity
	E-commerce	Production excellence	Project management/ Roadmapping

WHAT WE BRING TO OUR CLIENTS

Insight and creativity	Experience and analysis	Superior process
Strategic perspective Ability to question traditional paradigms • "Ability to look at what everyone has seen and to see what no one saw" Experience from other companies and other industries • What works when • Pitfalls to avoid	Industry knowledge and best practices Rigorous pursuit and development of data Global network, experience Objectivity	Collaborative • Mutual dependence • Shared discovery Experience with team structure and disciplined pace Experience with creating lasting change • Action planning • Measurements • Processes • Organization