Abstract of European Competitiveness Report
European Commission, 2009

European competitiveness is at the centre of analysis of the yearly competitiveness report of the European Commission. Its main focus is on recent changes of the EU's productivity growth, which is the key driver of competitiveness in the long run.

The 2009 edition of the European Competitiveness Report looks at the possible implications of the economic downturn; in particular for productivity and for some of the determinants of future EU competitiveness: the evolution of the BRIC countries (Brazil, Russia, India and China); the role of high-skilled migration; the extent and conditions under which training can boost productivity; and the role of product and labor market regulations in influencing ICT (Information and Communication Technologies) investment.

The Report contains 3 volumes:

Volume 1 includes:

Chapter 1 'Competitiveness and the crisis' and

Chapter 2 'EU and BRICS: Challenges and opportunities for European Competitiveness'.

Volume 2 contains:

Chapter 3 'Migration, Skills and productivity' and

Chapter 4 'Training, education and productivity'

Volume 3 includes:

Chapter 5 'ICT, regulation and productivity' and

Chapter 6 'Statistical annex'.

As in previous years, the *Report* approaches the issues using insights from economic theory and empirical research and its ambition is to contribute to policy-making by bringing to attention relevant trends and developments and by discussing policy options. Its main subjects continue to be topics related to **productivity**, as the most reliable indicator for competitiveness over the longer term, and other microeconomic issues in the context of the *Lisbon Partnership for Growth and Jobs*.

Chapter 1 provides a snapshot of recent developments, puts them into perspective compared with earlier recessions and analyses the likely impact on European competitiveness. The economic contraction may not necessarily have a negative impact on long-term **productivity growth**, and therefore growth of GDP as there are powerful mechanisms boosting productivity as well. Indeed, the crisis can also have a positive impact on productivity to the extent that it provides the momentum for structural reforms. In fact, the challenge is to reconcile short-term action with long-term competitiveness, which means that the exceptional measures taken to tackle the crisis should be consistent with the EU's medium-term structural reforms.

The external dimension of EU competitiveness is confronted with **the new challenges and opportunities presented by the BRIC countries (Brazil, Russia, India and China)**. These countries have recently increased their role in world trade and bilateral trade with the EU. Though all have large populations and have in recent years displayed fast economic growth, resulting in quickly expanding markets, each individual BRIC country has followed a different economic development model. Thus, they also pose quite different challenges and opportunities for the EU, which are discussed in *Chapter 2*.

Chapter 3 addresses the issue of migration, skills and productivity, based on the notion that people are the cornerstone of a competitive EU. Considering that competition for talent is more and more a global phenomenon, and that immigration and emigration barriers have fallen, **the EU needs to retain and attract the most qualified people**. At the same time, improving the labor market integration of high-skilled migrants is essential, as high-skilled migrants face higher unemployment rates and a higher risk of being over-qualified. This holds not only for third country migrants, but also for migrants from the new Member States to the EU-15.

This second aspect is further analysed in more detail in *Chapter 4* on education, training and productivity. This part starts out from the notion that ensuring the right qualifications for all participants in the labor market and **matching these qualifications with the needs of the economy** is of crucial importance. Training is one way of improving this match between skills and economic needs. Adequate training can generate higher productivity, and a skilled workforce is a source of long-term comparative advantage for the EU. And ICT, among other factors, may play an important role in such training.

Chapter 5, on regulation, ICT and productivity, analyses the importance of ICT for broader productivity gains in the economy. It explores the extent to which regulation in both the product and labor markets has affected **investment in ICT** versus non-ICT capital, but also investigates whether excessive regulation not only may have negatively affected the adoption of ICT, but also may have hindered the effective translation of investment into productivity gains.

Annual growth rates of real GDP per capita, %, 2006 - 2008

UE COUNTRIES	2006	2007	2008
BE	2.31	1.99	1.17
BG	6.59	6.17	6.01
CZ	6.45	5.38	2.50
DK	3.00	1.22	-1.72
DE	3.08	2.59	1.46
EE	10.61	6.52	-3.53
IE	3.11	3.50	-4.09
EL	4.08	3.62	2.52
ES	2.31	1.80	-0.44
FR	1.56	1.56	0.22
IT	1.46	0.82	-1.89
CY	2.15	2.93	2.65
LV	12.85	10.55	-4.16
LT	8.49	9.52	3.55
LU	4.78	3.58	-2.64
HU	4.28	1.23	0.65
MT	2.60	2.70	1.00
NL	3.22	3.23	1.73
AT	2.77	2.65	1.41
PL	6.31	6.69	4.79
PT	1.03	1.67	-0.19
RO	**8.11**	**6.45**	**7.29**
SK	8.42	10.31	6.13
FI	4.50	3.76	0.46
SE	3.66	1.81	-1.00
UK	2.21	2.69	0.25
EU-15	2.38	2.11	0.14
EU-27	2.73	2.45	0.48
US	1.82	1.04	0.19

Source: EC

Romania registered large increases in annual rates of real GDP per capita in the period 2006-2008. In the years 2006 - 2007, Romania lags behind (8.11% and 6.45%) countries like Estonia, Latvia, Lithuania, Slovakia. In 2008, while most countries growth rates have been negative or have shown low positive growth, Romania had the highest annual growth rate of real GDP per capita (7.29%).

VOLUME II

This volume looks at the relationship between the migration of high-skilled workers and productivity performance. The literature on international migration has repeatedly emphasised that **the extent and structure of migration** has an important impact on the competitiveness of regions and countries. A number of studies have stressed that highly skilled migrants are an important resource pool, which can be used to strengthen national R&D systems as well as integration within international business networks, to increase entrepreneurial activity, to improve the integration of both

sending and receiving countries within the international division of labor, to overcome bottlenecks in regional labor supply, and to support regional clusters of high-tech activity.

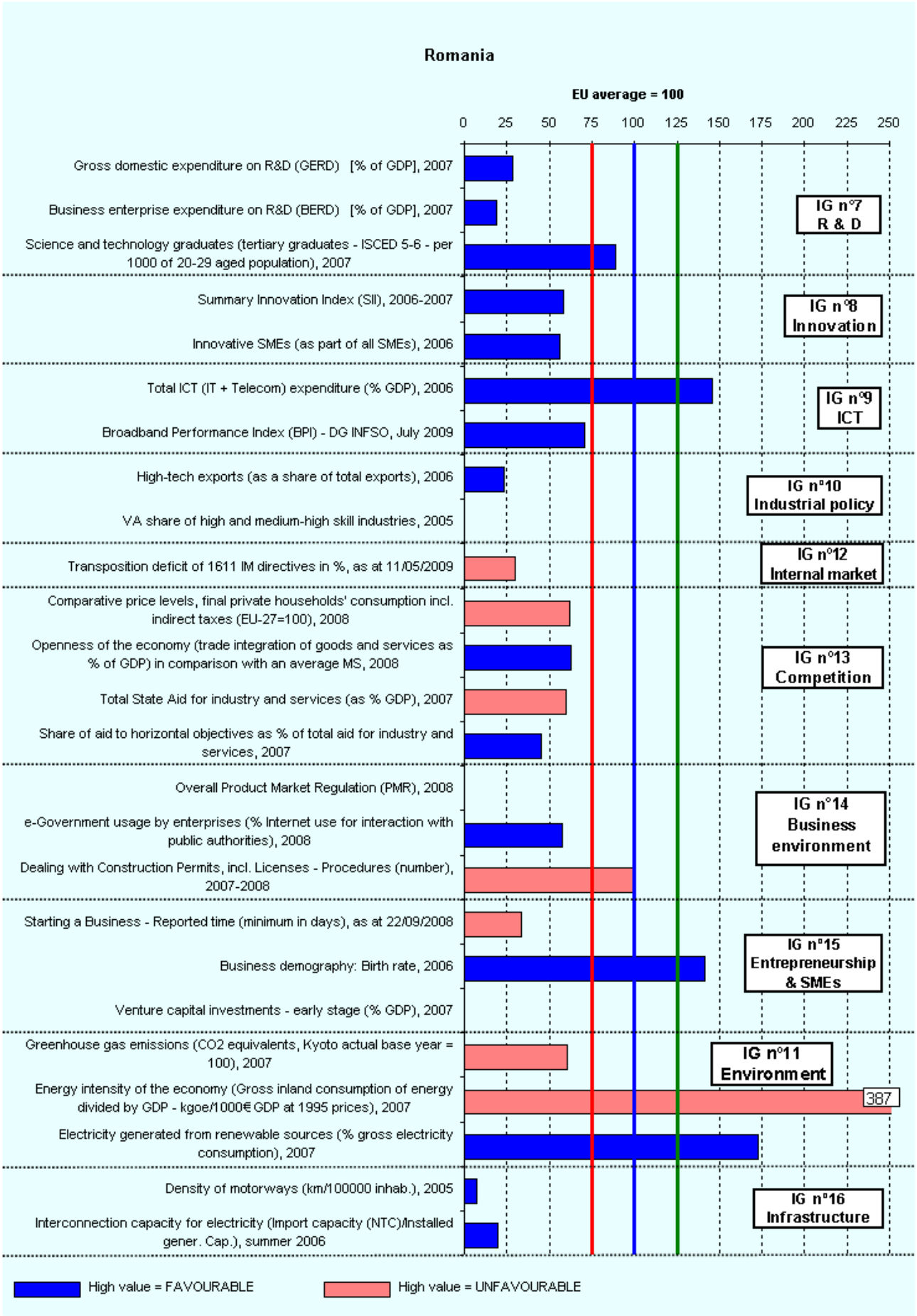
Remaining competitive in an increasingly globalised world requires that European nations maintain their comparative advantage in having a highly skilled labour force. Workers not only need to be skilled, but also have to adapt fast to change. **On-the job training and education are therefore important sources of long-term competitiveness and means of adjustment.** Indeed, as part of its "Growth and Jobs Strategy", the EU intends to "adapt education and training systems in response to new competence requirements". The "New skills for new jobs" initiative aims to understand better how these objectives can be met. In the face of rapidly changing technology (for example, the changes brought about by information and communications technology), it is imperative that skills are appropriate and up to date. Providing basic skills is mostly the responsibility of the general education system, but changing education provision is often time-consuming.
Firms or workers can instead make up for any skill shortfall by engaging in training. In times of crisis, **training and education help mitigate** the effects of the downturn. When people are maintained in jobs but activity is slowing down, inhouse training can be an opportunity for re-training to facilitate mobility within the organisation.

VOLUME III

Since the mid-1990s considerable attention has focused on the productivity effects associated with the adoption of Information and Communications Technologies (ICT). During a period in which **US productivity growth** exceeded that of most European countries, the impact of assets incorporating the latest technologies, such as ICTs, has proved to be significant in explaining these differences. The constraints the EU faces compared with the US, which are preventing large-scale exploitation of ICT technology or, for example, the lack of complementary assets such as suitable skills and appropriate management systems.

Economic reforms have been central to the *European Union's Single Market Programme*, as it was thought that economic gains would result from **intensification of competition in markets**, lowering of trade barriers, and economies of scale brought about by expansion of the market. More recently, economic reforms have been central to the *Lisbon Strategy* launched in 2000, where one of the aims is to use product market reforms to increase productivity in the EU.

The country fiches present the performance of each Member State in the policy areas covered by the microeconomic pillar of *the Strategy for Growth and Jobs (the Lisbonagenda*). The EU average is given as a benchmark. Providing a common framework for all Member States, the integrated guidelines for growth and jobs specify the overarching objectives to be pursued in each policy area. The main policies constituting the microeconomic pillar are: Research, Innovation, encouraging investments in ICT, Industry, internal market, competition, encouraging the sustainable use of resources and the synergies between environmental protection and growth, creating a more attractive business environment, promoting entrepreneurship and expanding infrastructure.


Romania
EU average = 100
0
25
50
75
100
125
150
175
200
225
250
Gross domestic expenditure on R&D (GERD) [% of GDP], 2007
Business enterprise expenditure on R&D (BERD) [% of GDP], 2007
Science and technology graduates (tertiary graduates - ISCED 5-6 - per 1000 of 20-29 aged population), 2007
IG n°7 R & D
Summary Innovation Index (SII), 2006-2007
Innovative SMEs (as part of all SMEs), 2006
IG n°8 Innovation
Total ICT (IT + Telecom) expenditure (% GDP), 2006
Broadband Performance Index (BPI) - DG INFSO, July 2009
IG n°9 ICT
High-tech exports (as a share of total exports), 2006
VA share of high and medium-high skill industries, 2005
IG n°10 Industrial policy
Transposition deficit of 1611 IM directives in %, as at 11/05/2009
IG n°12 Internal market
Comparative price levels, final private households' consumption incl. indirect taxes (EU-27=100), 2008
Openness of the economy (trade integration of goods and services as % of GDP) in comparison with an average MS, 2008
Total State Aid for industry and services (as % GDP), 2007
Share of aid to horizontal objectives as % of total aid for industry and services, 2007
IG n°13 Competition
Overall Product Market Regulation (PMR), 2008
e-Government usage by enterprises (% Internet use for interaction with public authorities), 2008
Dealing with Construction Permits, incl. Licenses - Procedures (number), 2007-2008
IG n°14 Business environment
Starting a Business - Reported time (minimum in days), as at 22/09/2008
Business demography: Birth rate, 2006
Venture capital investments - early stage (% GDP), 2007
IG n°15 Entrepreneurship & SMEs
Greenhouse gas emissions (CO2 equivalents, Kyoto actual base year = 100), 2007
Energy intensity of the economy (Gross inland consumption of energy divided by GDP - kgoe/1000€ GDP at 1995 prices), 2007
387
Electricity generated from renewable sources (% gross electricity consumption), 2007
IG n°11 Environment
Density of motorways (km/100000 inhab.), 2005
Interconnection capacity for electricity (Import capacity (NTC)/Installed gener. Cap.), summer 2006
IG n°16 Infrastructure
High value = FAVOURABLE
High value = UNFAVOURABLE

Conclusions:

1. *The 2009 edition of European Competitiveness Report* reviews the EU's overall competitiveness performance as well as the external and internal aspects of competitiveness.

2. A recent paper by Hunt and Gauthier-Loiselle (2008) cites literature that foreign-born individuals in the US account for about 26% of US Nobel prize recipients, 25% of the founders of venture-backed US companies, 25% of new high-tech companies with more than one million US dollars of sales and 24% of international patent applications from the US, although they account for only 12% of US residents.

3. While in 2006 the average American employee worked 1775 hours per year, the corresponding figure for Belgium was 1571, for France 1540 and for Germany 1431. For Romania the corresponding figure is of 1850 hour/year, with this value being over many EU member states and US.

4. For the medium-skilled, levels of over-qualification, by contrast, are substantially lower both for the foreign-born and for natives. On the average for the years 2006 and 2007 around 7.7% of the natives with an educational level equivalent to ISCED 3 or 4 were over-qualified for their occupation in the EU-27. Among the foreign-born the equivalent share was 19.4%. As with high-skilled workers, over-qualification among medium-skilled female workers is substantially higher than among males. While the over-qualification rate for native-born women in the EU-27 amounted to 8.4% in the EU-27 and was thus only 1.2 percentage points higher than that of men, for foreign-born medium-skilled women the gender gap amounted to 9.7 percentage points (men 15.2%, women 24.9%).