

Brussels, 17 March 2010

The innovation performance in the EU Member States in 2009

This memo provides a synopsis of the innovation performance of the different Member States, as measured in the European Innovation Scoreboard 2009 (EIS). Commissioned by the Directorate-General for Enterprise and Industry of the European Commission, the European Innovation Scoreboard is prepared by the Maastricht Economic and social Research and training centre on Innovation and Technology (MERIT), assisted by the Joint Research Centre of the European Commission.

Since 2001 the European Innovation Scoreboard has been providing an annual assessment of innovation performance across the EU. The 2009 report follows the methodology established in 2008, with a revised set of indicators which better recognise the importance of service sectors, non-technological innovation and innovation outputs. Overall innovation performance is calculated on the basis of 29 indicators covering seven dimensions of innovation, which are grouped in three main blocks, covering enablers, firm activities and outputs (see Table 1 below).

Four country groups have been identified using the average results of hierarchical clustering analysis of their innovation performance (Summary Innovation Index) over a five-year period:

Innovation leaders: countries with innovation performance well above that of the EU27 and all other countries.

Innovation followers: countries with innovation performance below that of the innovation leaders, but close to or above that of the EU27 average

Moderate innovators: countries with innovation performance below the EU27 average

Catching-up countries: countries with innovation performance well below the EU27 average, but converging towards the EU27 average over time

Enablers captures the main drivers of innovation that are external to the firm as:

- **Human resources** – the availability of high-skilled and educated people.
- **Finance and support** – the availability of finance for innovation projects and the support of governments for innovation activities.

Firm activities captures innovation efforts that firms undertake recognising the fundamental importance of firms' activities in the innovation process:

- **Firm investments** – covers a range of different investments firms make in order to generate innovations.
- **Linkages & entrepreneurship** – captures entrepreneurial efforts and collaboration efforts among innovating firms and also with the public sector.
- **Throughputs** – captures the Intellectual Property Rights (IPR) generated as a throughput in the innovation process and Technology Balance of Payments flows.

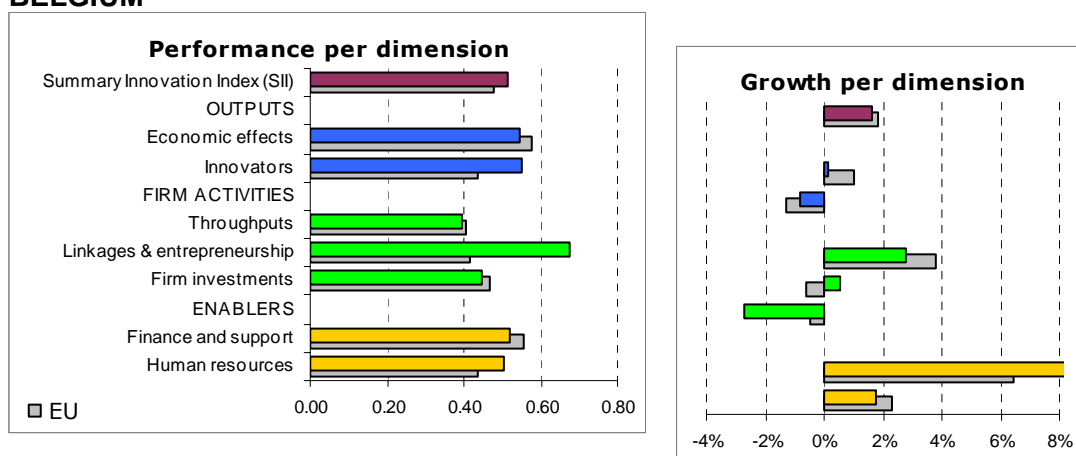
Outputs captures the outputs of firm activities as:

- **Innovators** – the number of firms that have introduced innovations onto the market or within their organisations, covering technological and non-technological innovations.
- **Economic effects** – captures the economic success of innovation in employment, exports and sales due to innovation activities.

Country performances

A detailed country profile is shown for each country including the relative strengths and weaknesses in innovation performance and its main drivers of innovation growth. For each country detailed data tables are available from the INNO Metrics website (<http://www.proinno-europe.eu/metrics>).

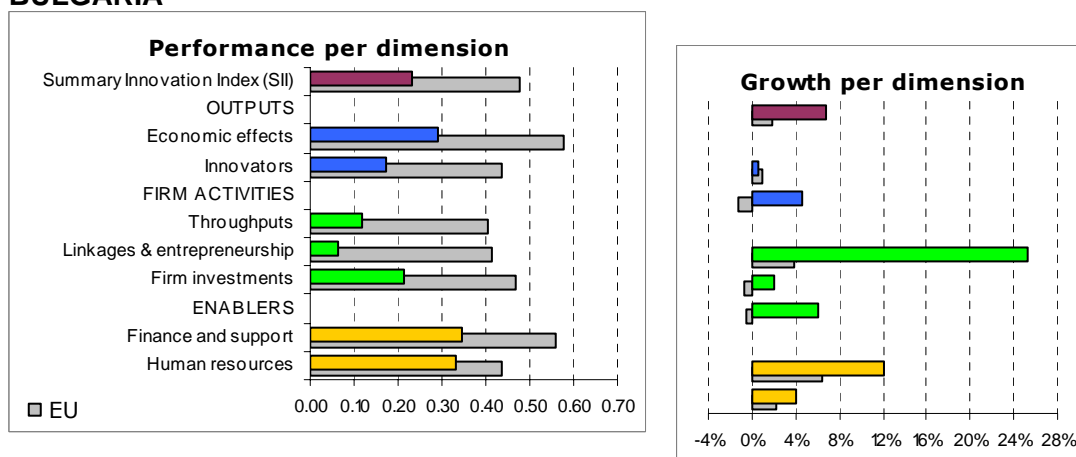
BELGIUM



For Belgium, one of the Innovation followers, innovation performance is above the EU27 average but the rate of improvement is below that of the EU27. Relative strengths, compared to the country's average performance, are in Linkages & entrepreneurship, Innovators and Economic effects and relative weaknesses are in Firm investments and Throughputs.

Over the past 5 years, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Venture capital (17.8%). Performance in Firm investments and Innovators has worsened, in particular due to a decrease in Non-R&D innovation expenditures (-8.5%).

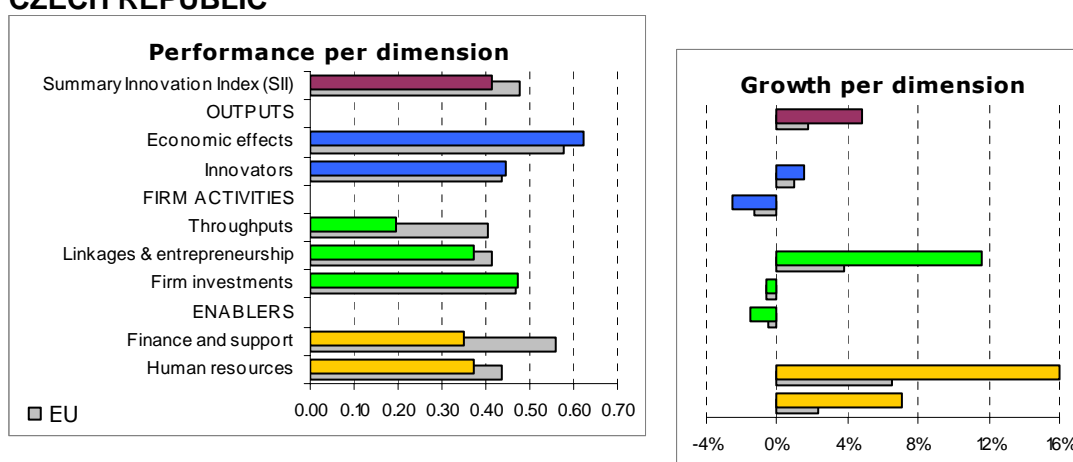
BULGARIA



Bulgaria is one of the Catching-up countries with an innovation performance well below the EU27 average but the rate of improvement is one of the highest of all countries and it is a growth leader within the Catching-up countries. Relative strengths, compared to the country's average performance, are in Human resources, Finance and support and Economic effects and relative weaknesses are in Linkages & entrepreneurship and Throughputs.

Over the past 5 years, Throughputs and Finance and support have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Private credit (19.8%), Broadband access by firms (22.0%), Community trademarks (69.6%) and Community designs (24.1%). Performance in Economic effects has hardly grown, in particular due to a decrease in New-to-market sales (-5.7%) and New-to-firm sales (-3.1%).

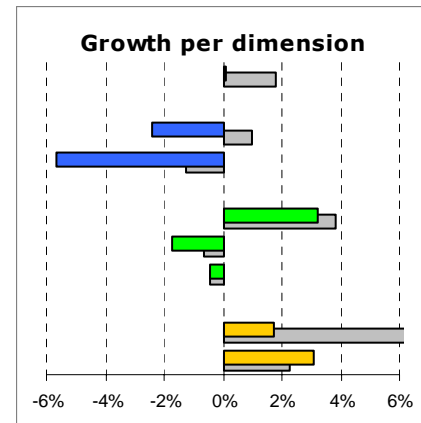
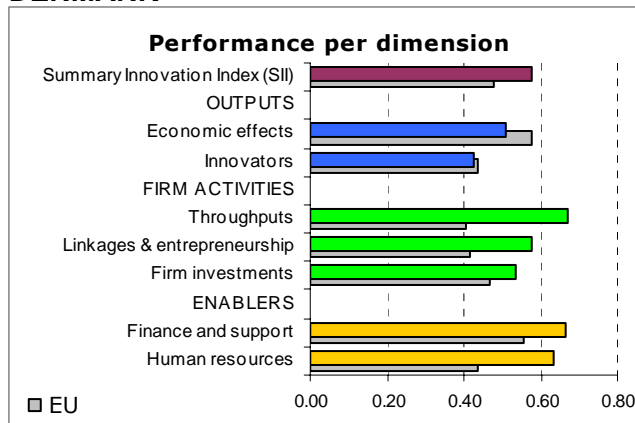
CZECH REPUBLIC



The Czech Republic is among the group of Moderate innovators with innovation performance below the EU27 average but the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Firm investments, Innovators and Economic effects and a relative weakness is in Throughputs.

Over the past 5 years, Throughputs, Human resources and Finance and support have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH graduates (18.1%), Venture capital (26.6%), Private credit (13.6%), Broadband access by firms (20.1%), Community designs (24.5%) and Technology Balance of Payments flows (14.5%). Performance in Innovators has worsened, due to a decrease in SMEs introducing product or process innovations (-2.6%).

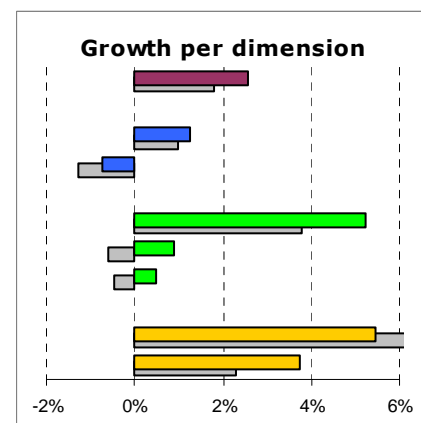
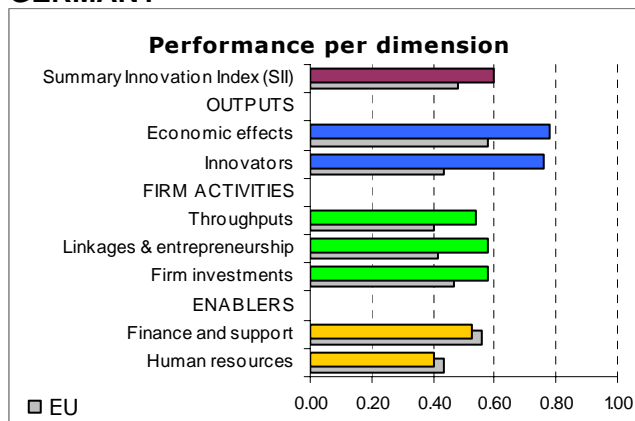
DENMARK



For Denmark, one of the Innovation leaders, innovation performance is well above the EU27 average but the rate of improvement is not only below that of the EU27 but virtually zero. Relative strengths, compared to the country's average performance, are in Human resources, Finance and support and Throughputs and relative weaknesses are in Firm investments, Innovators and Economic effects.

Over the past 5 years, Human resources, Finance and support and Throughputs have been the main drivers of a stagnating innovation performance, in particular resulting from strong growth in S&E and SSH graduates (8.1%), Private credit (8.4%) and Community trademarks (4.9%). Performance in Firm investments, Linkages & entrepreneurship, Innovators and Economic effects has worsened, in particular due to decreases in Innovative SMEs collaborating with others (-8.0%), SMEs introducing product or process innovations (-5.7%), New-to-market sales (-7.7%) and New-to-firm sales (-8.5%).

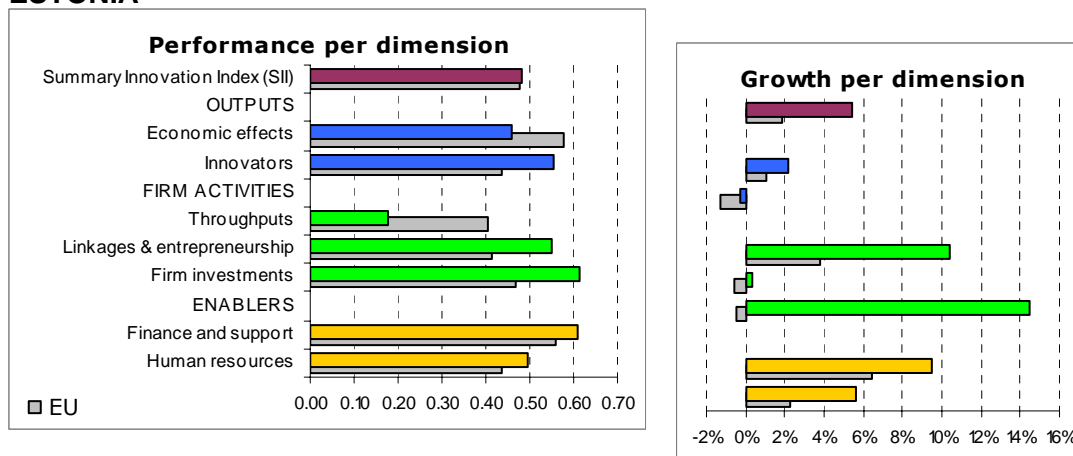
GERMANY



Germany is one of the Innovation leaders with innovation performance considerably above the EU27 average and the rate of improvement is also above that of the EU27. Relative strengths, compared to the country's average performance, are in Innovators and Economic effects and relative weaknesses are in Human resources, Finance and support and Throughputs.

Over the past 5 years, Human resources, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH graduates (12.2%), Venture capital (10.4%), Broadband access (11.7%) and Technology Balance of Payments flows (8.2%). Performance in Innovators has slightly worsened, due to a decrease in SMEs introducing product or process innovations (-0.7%).

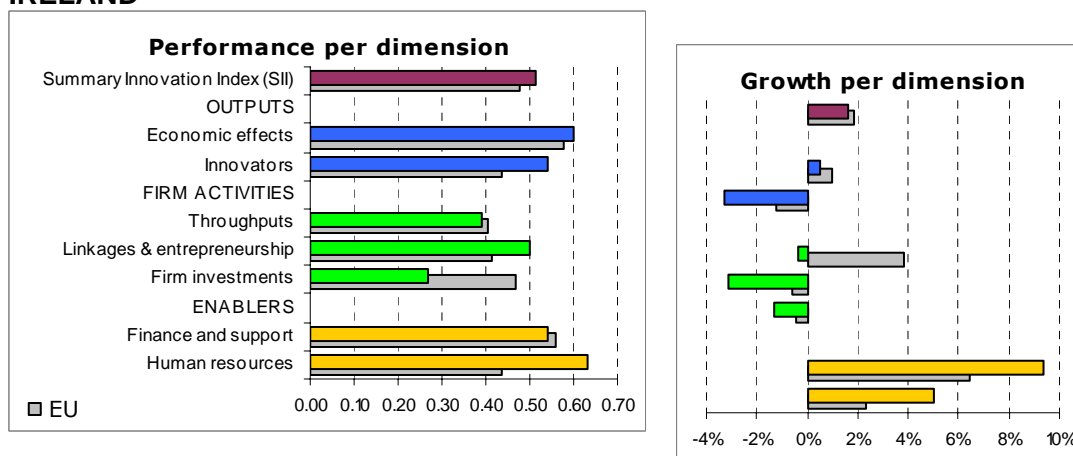
ESTONIA



For Estonia, one of the Innovation followers, innovation performance is just below the EU27 average but the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support, Firm investments, Linkages & entrepreneurship and Innovators and relative weaknesses are in Throughputs.

Over the past 5 years, Firm investments and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Business R&D expenditures (20.0%), Non-R&D innovation expenditures (29.3%), Community trademarks (14.5%) and Technology Balance of Payments flows (16.9%). Performance in Innovators has remained stable.

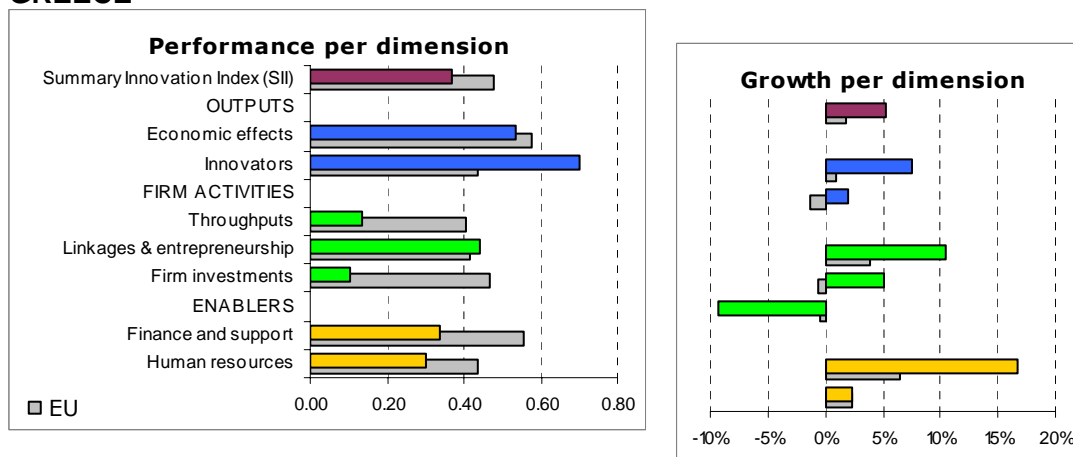
IRELAND



Ireland is in the group of Innovation followers, with an innovation performance above the EU27 average. It's rate of improvement just below that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources and Economic effects and relative weaknesses are in Firm investments and Throughputs.

Over the past 5 years, Human resources and Finance and support have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Lifelong learning (13.7%), Private credit (12.7%) and Broadband access by firms (26.9%). Performance in Firm investments, Linkages & entrepreneurship, Throughputs and Innovators has worsened, in particular due to a decrease in Non-R&D innovation expenditures (-5.7%), Innovative SMEs collaborating with others (-7.0%), Community designs (-7.2%) and SMEs introducing product or process innovations (-3.3%).

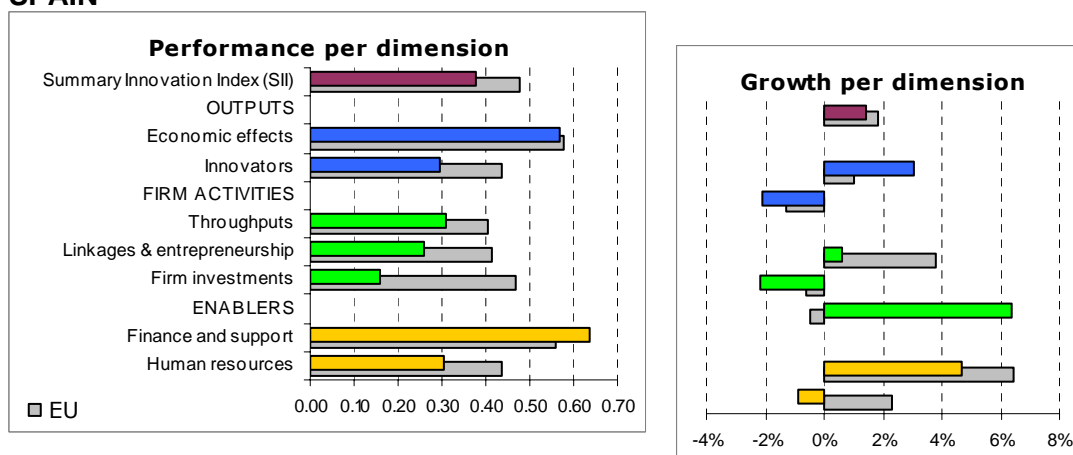
GREECE



For Greece, one of the Moderate innovators, innovation performance is below the EU27 average and the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Linkages & entrepreneurship, Innovators and Economic effects and relative weaknesses are in Firm investments and Throughputs.

Over the past 5 years, Finance and support, Throughputs and Economic effects have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Venture capital (24.1%), Broadband access by firms (35.4%), Community designs (34.2%) and New-to-market sales (32.8%). Performance in Firm investments has worsened, due to a decrease in Business R&D expenditures (-4.5%) and Non-R&D innovation expenditures (-22.7%).

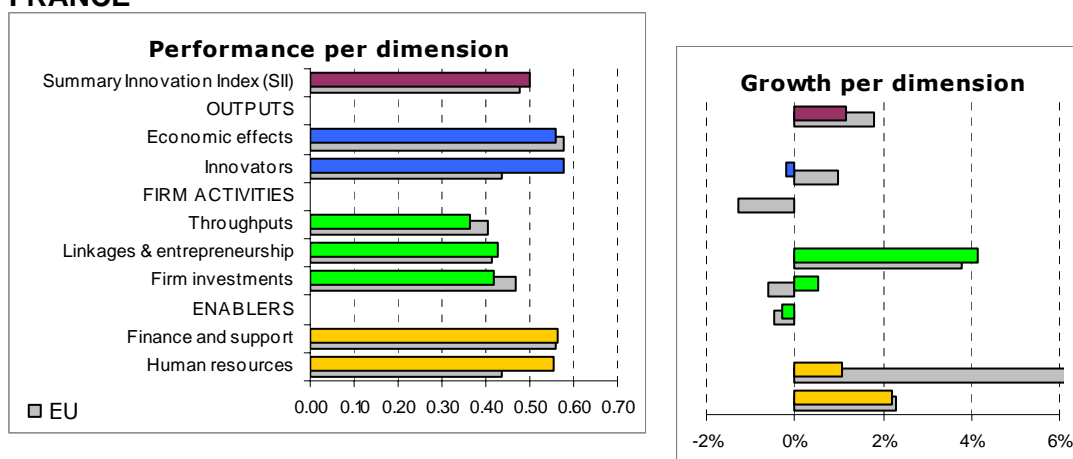
SPAIN



For Spain, one of the Moderate innovators, innovation performance is below the EU27 average and the rate of improvement is also below that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support and Economic effects and relative weaknesses are in Firm investments and Linkages & entrepreneurship.

Over the past 5 years, Finance and support and Firm investments have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Private credit (12.2%) and Non-R&D innovation expenditures (13.4%). Performance in Human resources, Linkages & entrepreneurship and Innovators has worsened, in particular due to a decrease in S&E and SSH doctorate graduates (-3.2%) and the Firm renewal rate (-5.9%).

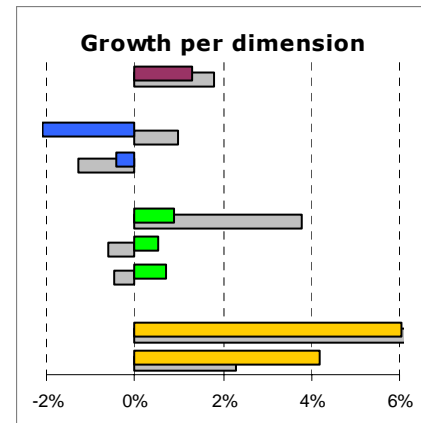
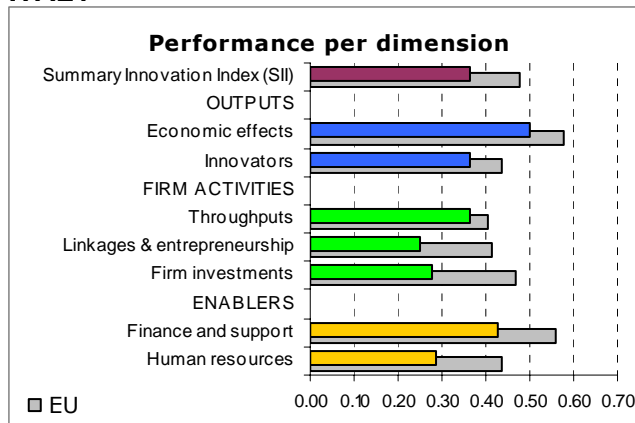
FRANCE



France is in the Innovation followers group of countries with an innovation performance above the EU27 average but the rate of improvement is below that of the EU27. Relative strengths, compared to the country's average performance, are in the Enablers (Human resources, Finance and support), and Outputs (Innovators and Economic effects) and relative weaknesses are in Firm activities (Firm investments, Linkages & entrepreneurship and Throughputs).

Over the past 5 years, Human resources, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from growth in S&E and SSH doctorate graduates (7.3%), Private credit (4.5%) and Technology Balance of Payments flows (7.1%). Performance in Economic effects has decreased, in particular due to a decrease in Employment in medium-high & high-tech manufacturing (-1.2%) and Medium-high & high-tech manufacturing exports (-1.2%).

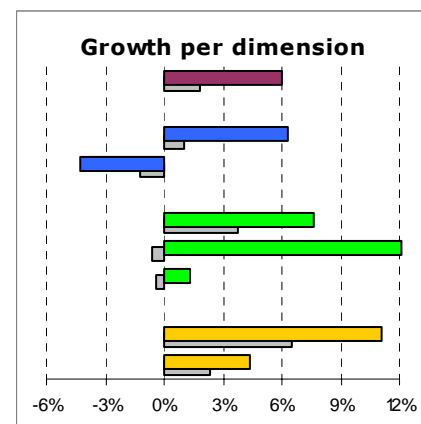
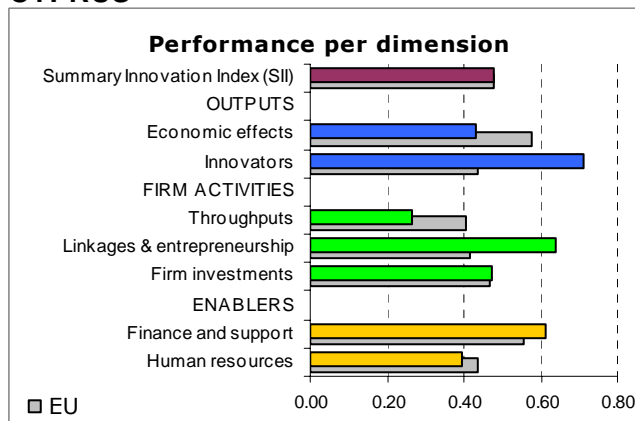
ITALY



For Italy, one of the Moderate innovators, innovation performance is below the EU27 average and the rate of improvement is also below that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support and Economic effects and relative weaknesses are in Human resources, Firm investments and Linkages & entrepreneurship.

Over the past 5 years, strong growth has come from Human resources and Finance and support which have been the drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH doctorate graduates (12.8%) and Broadband access by firms (29.8%). Performance in Firm investments has not improved and performance in Innovators and Economic effects has worsened, in particular due to a decrease in New-to-market sales (-7.8%) and New-to-firm sales (-5.3%).

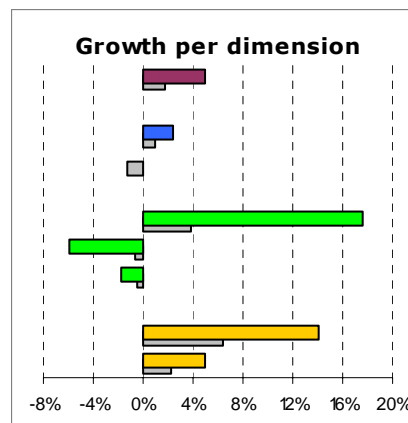
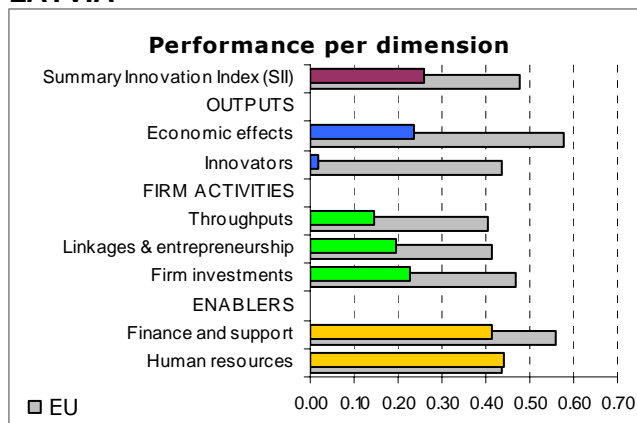
CYPRUS



Cyprus is a growth leader among the group of Innovation followers, with an innovation performance just above the EU27 average and a rapid rate of improvement. Relative strengths, compared to the country's average performance, are in Finance and support, Linkages & entrepreneurship and Innovators and relative weaknesses are in Human resources and Throughputs.

Over the past 5 years there has been strong growth in Finance and support, Linkages & entrepreneurship and Throughputs which have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH doctorate graduates Broadband access by firms (22.6%), Innovative SMEs collaborating with others (12.3%), Public-private co-publications (22.1%), EPO patents (13.1%) and Community designs (15.3%). Performance in Innovators has worsened (-4.3%).

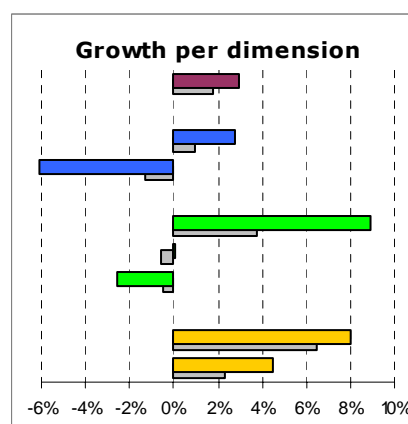
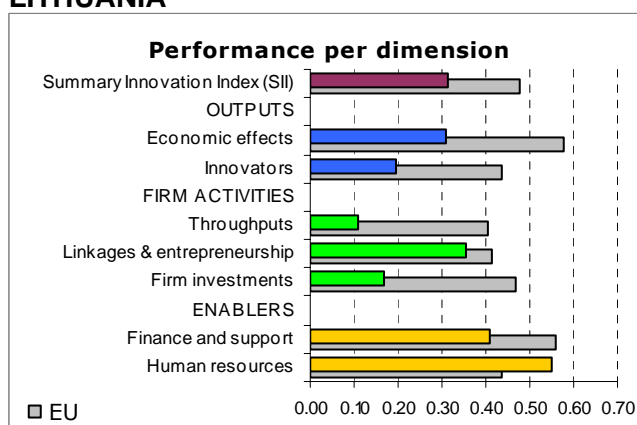
LATVIA



For Latvia, one of the Catching-up countries, innovation performance is well below the EU27 average but the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources and Finance and support and relative weaknesses are in Linkages & entrepreneurship, Throughputs and Innovators.

Over the past 5 years, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Public R&D expenditures (12.5%), Private credit (15.4%), EPO patents (17.8%), Community trademarks (35.9%) and Community designs (21.0%). Performance in Linkages & entrepreneurship has worsened, in particular due to a decrease in the Firm renewal rate (-17.2%).

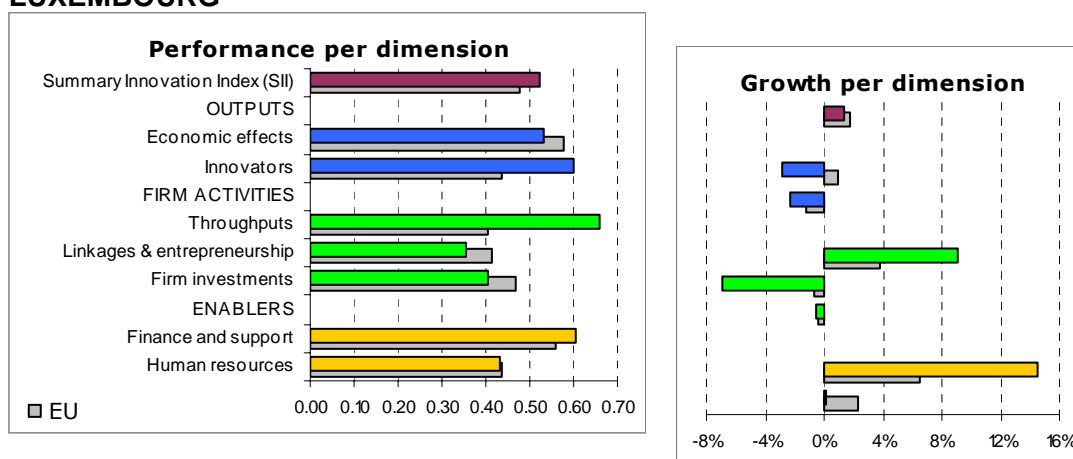
LITHUANIA



Lithuania is among the group of Moderate innovators, with an innovation performance well below the EU27 average and a rate of improvement above that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources, Finance and support and Linkages & entrepreneurship and relative weaknesses are in Firm investments, Throughputs and Innovators.

Over the past 5 years, Human resources, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH doctorate graduates (14.8%), Private credit (21.5%), EPO patents (15.5) and Community trademarks (26.8%). Performance in Innovators has worsened, in particular due to a decrease in SMEs introducing product or process innovations (-6.1%).

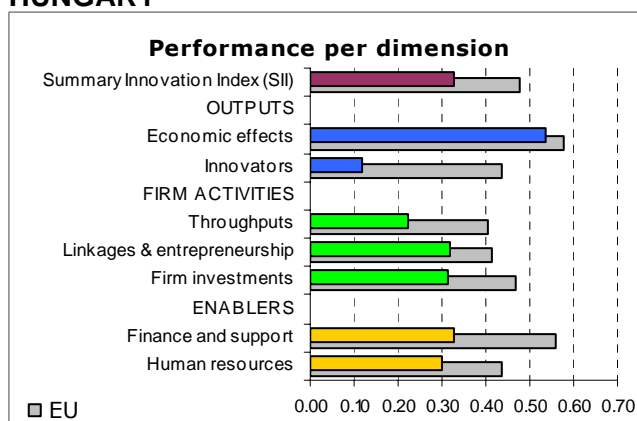
LUXEMBOURG

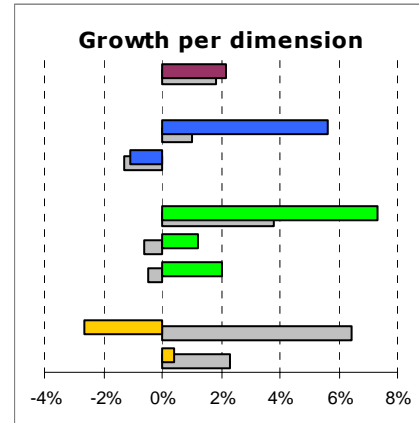


For Luxembourg, one of the Innovation followers, innovation performance is above the EU27 average but the rate of improvement is slightly below that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support, Throughputs and Innovators and relative weaknesses are in Human resources, Firm investments and Linkages & entrepreneurship.

Over the past 5 years, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Private credit (16.8%), Broadband access by firms (16.0%) and Community trademarks (10.3%). Performance in Linkages & entrepreneurship, Innovators and Economic effects has worsened, in particular due to a decrease in the Firm renewal rate (-10.7%), Public-private co-publications (-10.1%), Employment in medium-high & high-tech manufacturing (-6.9%) and New-to-firm sales (-8.0%).

HUNGARY

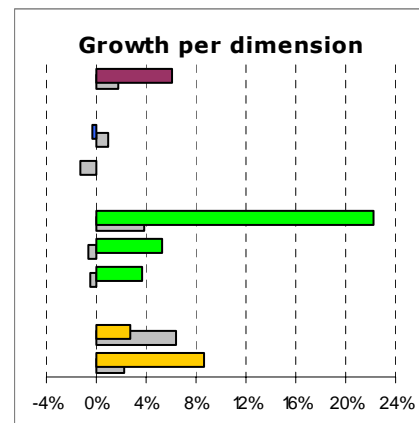
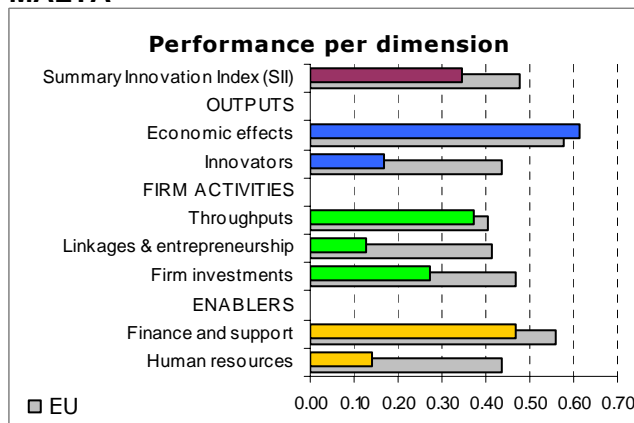




Hungary is in the group of Moderate innovators with an innovation performance well below the EU27 average but a rate of improvement above that of the EU27. Relative strengths, compared to the country's average performance, are in Economic effects and relative weaknesses are in Throughputs and Innovators.

Over the past 5 years, Throughputs and Economic effects have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Community trademarks (11.7%), Community designs (9.7%), Knowledge-intensive services exports (12.1%) and New-to-market sales (17.0%). Performance in Finance and support and Innovators has worsened, in particular due to a decrease in Venture capital (-26.1%).

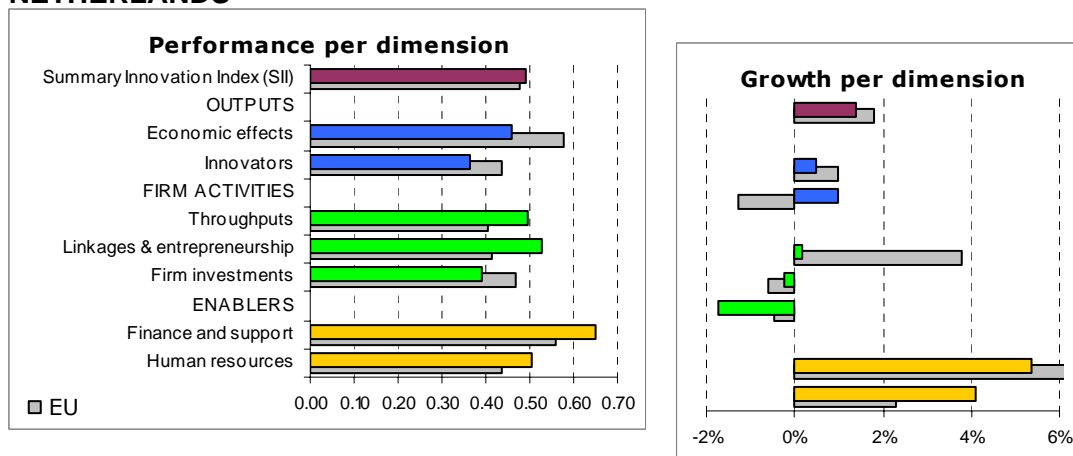
MALTA



For Malta, one of the Moderate innovators, innovation performance is below the EU27 average but the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support and Economic effects and relative weaknesses are in Human resources, Linkages & entrepreneurship and Innovators.

Over the past 5 years, Throughputs has been the main driver of the improvement in innovation performance, in particular as a result from strong growth in EPO patents (16.2%), Community trademarks (16.5%), Community designs (23.5%) and Technology Balance of Payments flows (33.6%). Performance in Economic effects has hardly grown, in particular due to a stronger decrease in New-to-firm sales (-18.4%) than the increase in New-to-market sales (16.3%)¹.

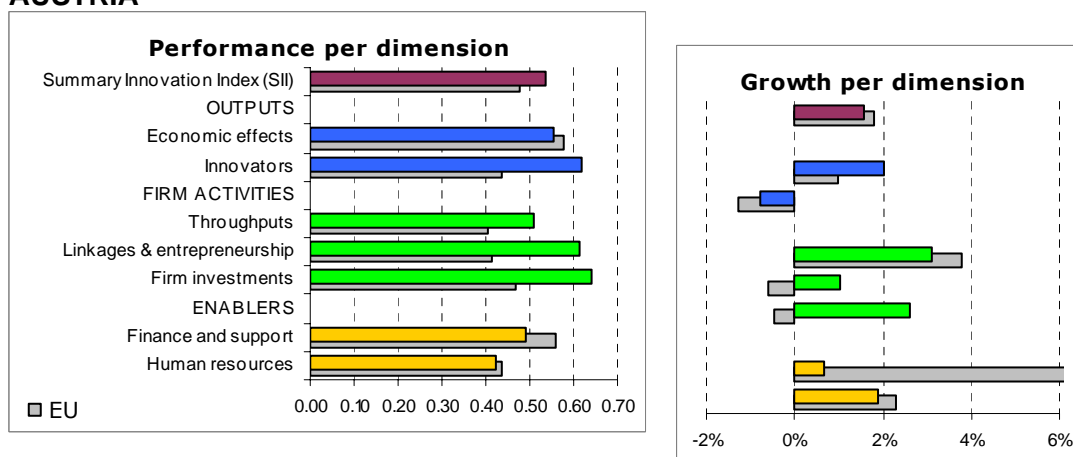
NETHERLANDS



The Netherlands is one of the Innovation followers. Its innovation performance is just above the EU27 average but the rate of improvement is below that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support and Linkages & entrepreneurship while relative weaknesses are in Firm investments and Innovators.

Over the past 5 years, Human resources and Finance and support have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH graduates (10.4%) and Broadband access by firms (12.3%). Performance in Firm investments and Linkages & entrepreneurship has worsened, in particular due to a decrease in Non-R&D innovation expenditures (-1.5%) and the Firm renewal rate (-4.4%).

AUSTRIA

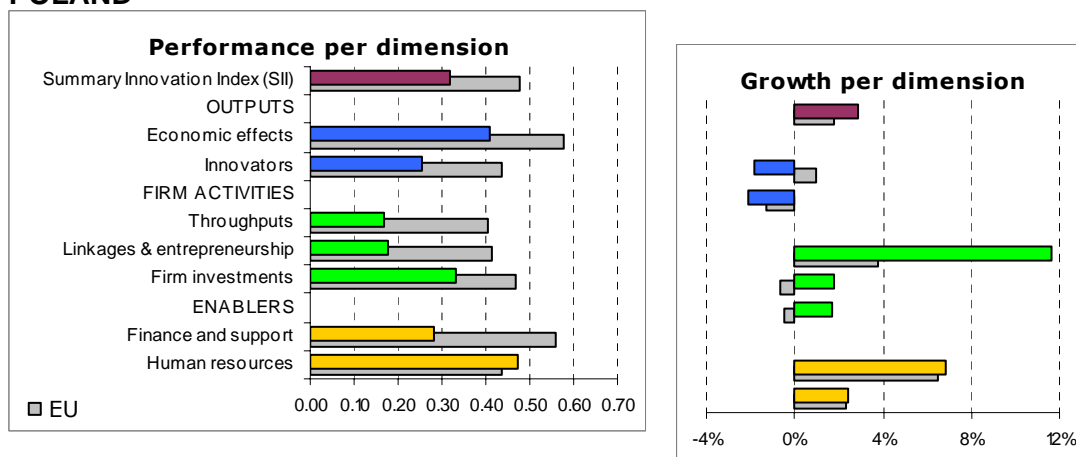


¹ The drop in sales new-to-firm products between the results for 2004 from CIS-4 and CIS-2006 is due to a change in the Maltese questionnaire such that the simple resale of new goods purchased from other enterprises is no longer considered as a product innovation.

For Austria, among the group of Innovation followers, innovation performance is above the EU27 average and the rate of improvement close to that of the EU27. Relative strengths, compared to the country's average performance, are in Firm investments, Linkages & entrepreneurship and Innovators and relative weaknesses are in Human resources and Finance and support.

Over the past 5 years, Throughputs and Economic effects have been the main drivers of the improvement in innovation performance, in particular as a result from growth in Community trademarks (5.4%), New-to-market sales (5.8%) and New-to-firm sales (7.1%). But also Human resources, Finance and support, Firm investments and Linkages & entrepreneurship have shown a steady and substantial improvement. Performance in Innovators however has slightly worsened.

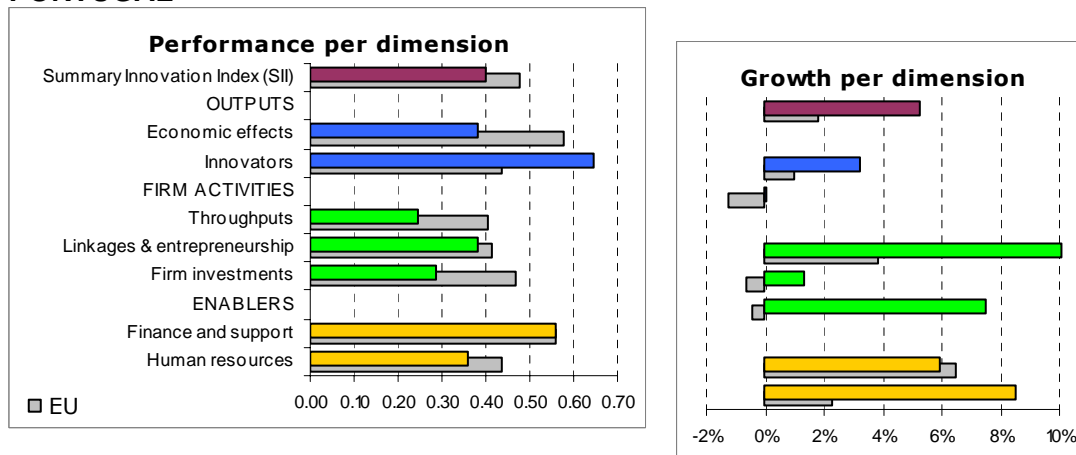
POLAND



Poland is among the group of Moderate innovators, with an innovation performance considerably below the EU27 average but an above average rate of improvement. Relative strengths, compared to the country's average performance, are in Human resources, Firm investments and Economic effects and relative weaknesses are in Linkages & entrepreneurship, Throughputs and Innovators.

Over the past 5 years, Finance and support and Throughputs have been a strong driver of improved performance, in particular as a result from strong growth in Private credit (15.4%), Broadband access by firms (20.5%), Community trademarks (14.4%) and Community designs (28.7%). Performance in Innovators and Economic effects has worsened, in particular due to a decrease in New-to-market sales (-13.4%).

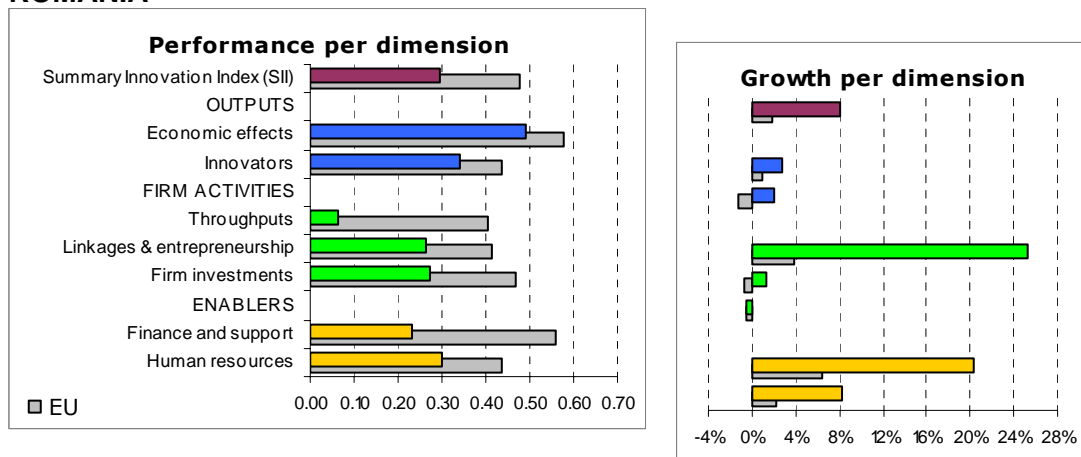
PORTUGAL



For Portugal, one of the Moderate innovators, innovation performance is below the EU27 average but the rate of improvement is three times that of the EU27 making it a growth leader within the group of Moderate innovators. Relative strengths, compared to the country's average performance, are in Finance and support and Innovators while relative weaknesses are in Firm investments and Throughputs.

Over the past 5 years, Human resources, Firm investments and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH graduates (15.8%), S&E and SSH doctorate graduates (16.9%), Business R&D expenditures (26.3%) and EPO patents (16.4%). Performance in the other dimensions has increased at a slower pace, except in Innovators where there has been almost no improvement.

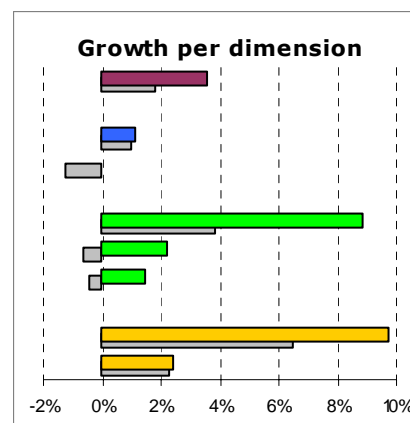
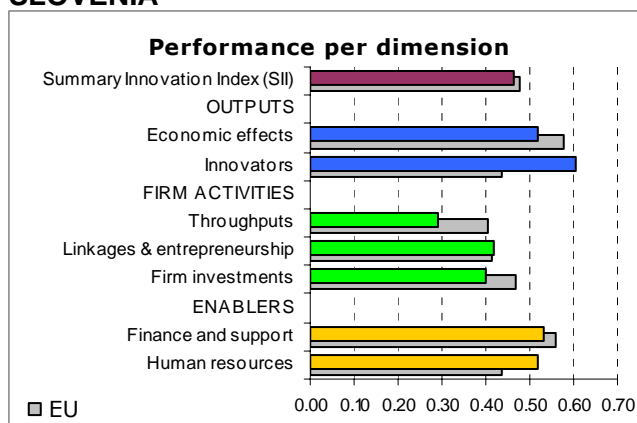
ROMANIA



Romania is one of the growth leaders among the Catching-up countries, with an innovation performance well below the EU27 average but a rate of improvement that is one of the highest of all countries. Relative strengths, compared to the country's average performance, are in Innovators and Economic effects and relative weaknesses are in Finance and support and Throughputs.

Over the past 5 years, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Public R&D expenditures (18.0%), Private credit (25.8%), Broadband access by firms (46.7%), Community trademarks (34.5%) and Community designs (37.3%). Performance in Firm investments, Linkages & entrepreneurship, Innovators and Economic effects has increased at a slower pace.

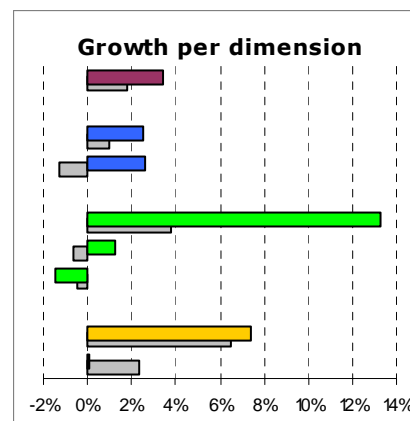
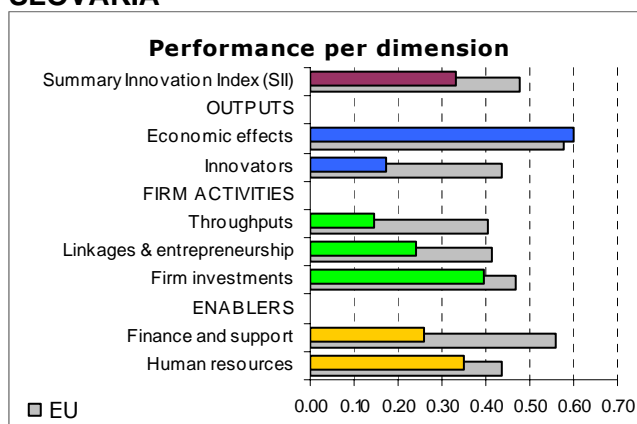
SLOVENIA



For Slovenia, one of the Innovation followers, innovation performance is just below the EU27 average but the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources, Finance and support, Innovators and Economic effects and relative weaknesses are in Firm investments and Throughputs.

Over the past 5 years, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Private credit (15.5%) and Community trademarks (13.1%). Performance in Human resources, Firm investments, Linkages & entrepreneurship and Economic effects has increased at a slower pace.

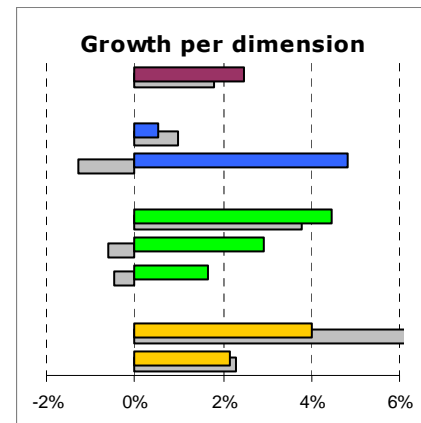
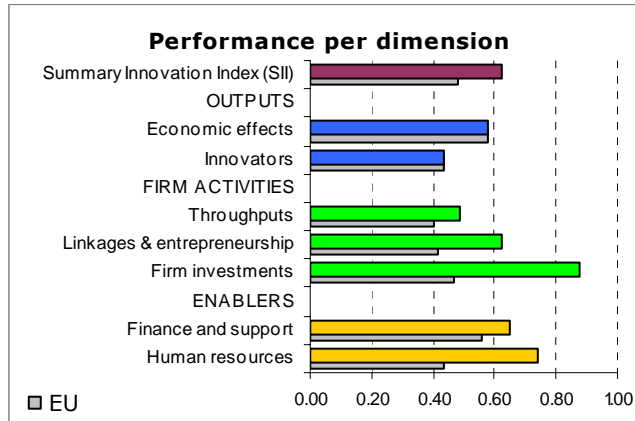
SLOVAKIA



For Slovakia, one of the Catching-up countries, innovation performance is well below the EU27 average but the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Firm investments and Economic effects and relative weaknesses are in Finance and support, Linkages & entrepreneurship, Throughputs and Innovators.

Over the past 5 years, Finance and support and notably Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Broadband access by firms (33.3%), Community trademarks (34.1%) and Community designs (19.1%). Performance in Human resources has hardly improved and that in Firm investments has worsened, in particular due to a decreases in S&E and SSH doctorate graduates (-5.9%), Life-long learning (-6.4%) and Business R&D expenditures (-13.4%).

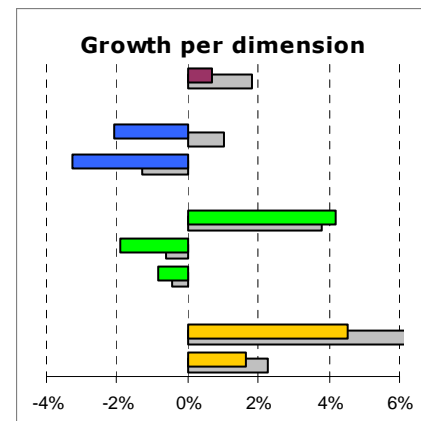
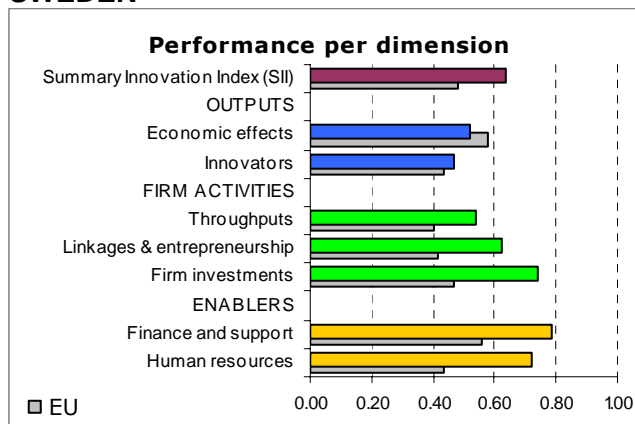
FINLAND



For Finland, one of the Innovation leaders, innovation performance is well above the EU27 average and the rate of improvement is also above that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources and Firm investments and relative weaknesses are in Throughputs and Innovators.

Over the past 5 years, Finance and support, Throughputs and Innovators have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Innovative SMEs collaborating with others (12.4%) and Community trademarks (7.0%). Performance in both Firm investments and Economic effects has increased at a slower pace.

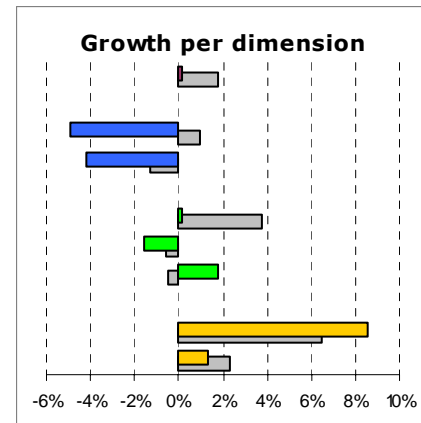
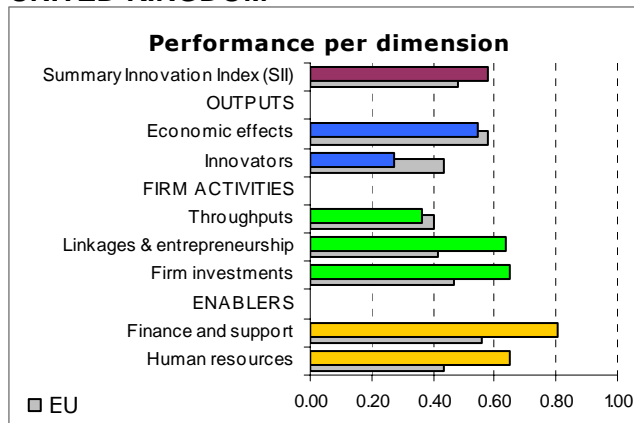
SWEDEN



Sweden is one of the Innovation leaders and the best performing EU Member State, although its rate of improvement is below that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources, Finance and support and Firm investments and relative weaknesses are in Throughputs and Innovators.

Over the past 5 years, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from relatively strong growth in Venture capital (10.6%) and Community designs (7.3%). Performance in Firm investments, Linkages & entrepreneurship, Innovators and Economic effects has worsened, in particular due to a decrease in Innovative SMEs collaborating with others (-4.5%), the Firm renewal rate (-4.2%) and Knowledge-intensive services exports (-5.0%).

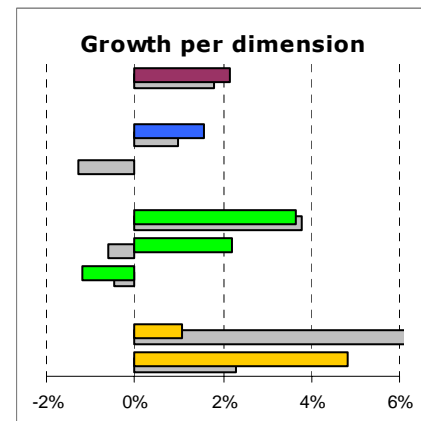
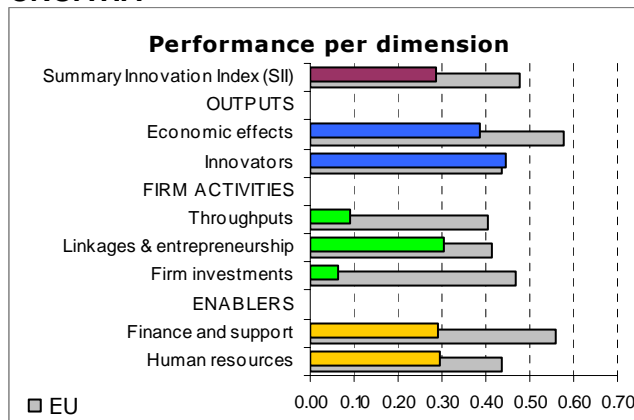
UNITED KINGDOM



For the UK, one of the Innovation leaders, innovation performance is above the EU27 average but the rate of improvement is negative and below that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources, Finance and support, Firm investments and Linkages & entrepreneurship and relative weaknesses are in Throughputs, Innovators and Economic effects.

Over the past 5 years, Finance and support has been the main driver of the improvement in innovation performance, in particular as a result from strong growth in Broadband access by firms (14.9%). Performance in Linkages & entrepreneurship, Innovators and Economic effects has worsened, in particular due to a decrease in New-to-market sales (-12.7%) and New-to-firm sales (-10.7%). Performance in Firm investments and Throughputs has hardly improved.

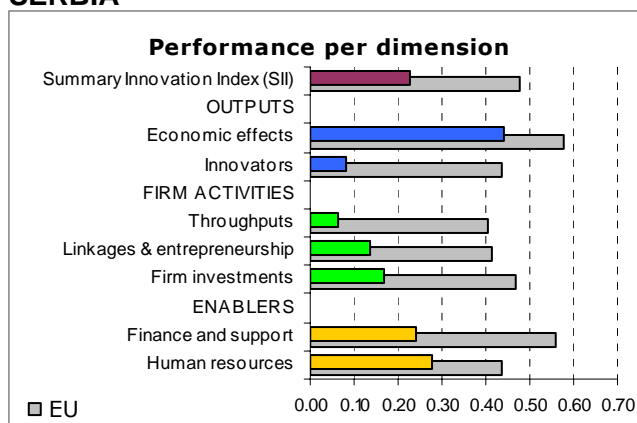
CROATIA



For Croatia, one of the Catching-up countries, innovation performance is well below the EU27 average and its rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Innovators and Economic effects and relative weaknesses are in Firm investments and Throughputs.

Over the past 5 years, Human resources and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from S&E and SSH doctorate graduates (10.7%) and Community designs (11.8%). Performance in Firm investments has worsened, in particular due to a decrease in Business R&D expenditures (-3.5%).

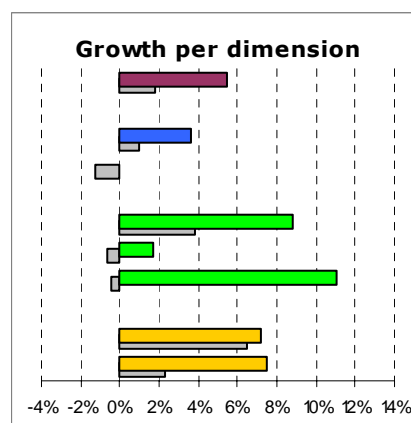
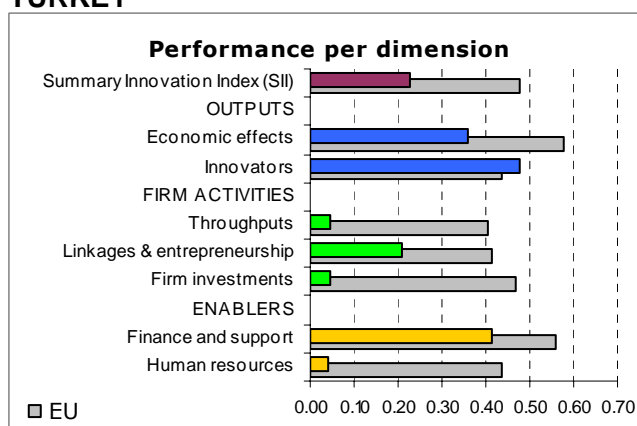
SERBIA



For Serbia, one of the Catching-up countries, innovation performance is well below the EU27 average. Relative strengths, compared to the country's average performance, are in Economic effects and relative weaknesses are in Linkages & entrepreneurship, Throughputs and Innovators.

Available time series data is too limited to analyse the change in Serbia's innovation performance over time.

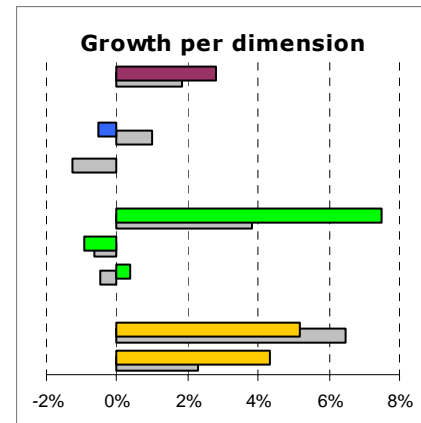
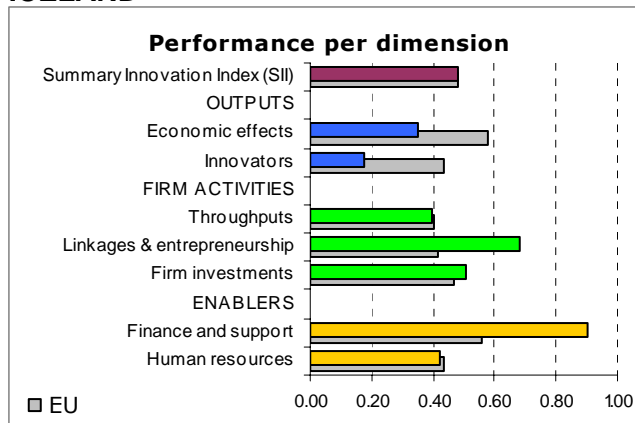
TURKEY



For Turkey, one of the Catching-up countries, innovation performance is well below the EU27 average and the rate of improvement is more than three times that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support, Innovators and Economic effects and relative weaknesses are in Human resources, Firm investments and Throughputs.

Over the past 5 years, Human resources, Finance and support, Firm investments and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in S&E and SSH graduates (17.2%), Life-long learning (13.1%), Private credit (17.3%), Business R&D expenditures (28.5%) and EPO patents (15.0%). Performance in the other dimensions has increased at a lower pace.

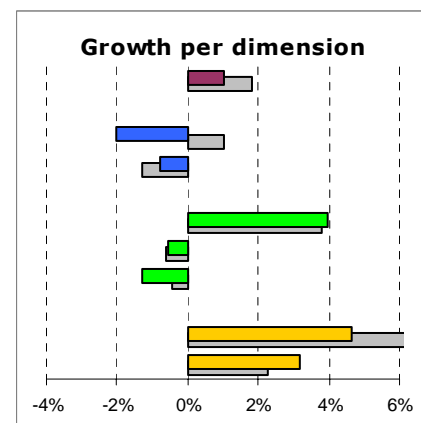
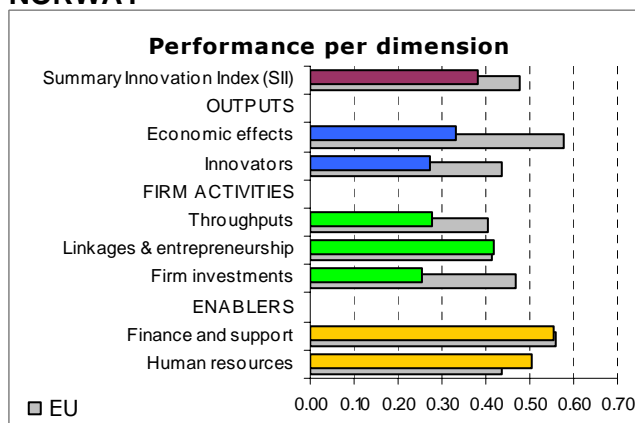
ICELAND



Iceland is among the Innovation followers, with an innovation performance just below the EU27 average but the rate of improvement is above that of the EU27. Relative strengths, compared to the country's average performance, are in Finance and support and Linkages & entrepreneurship and relative weaknesses are in Human resources, Throughputs, Innovators and Economic effects.

Over the past 5 years, Human resources, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from growth in S&E and SSH doctorate graduates (10.2%), Private credit (18.0%), Community trademarks (21.1%) and Community designs (14.4%). Performance in Linkages & entrepreneurship and Economic effects has worsened, in particular due to a decrease in Employment in medium-high & high-tech manufacturing (-5.0%) and Knowledge-intensive services exports (-5.4%).

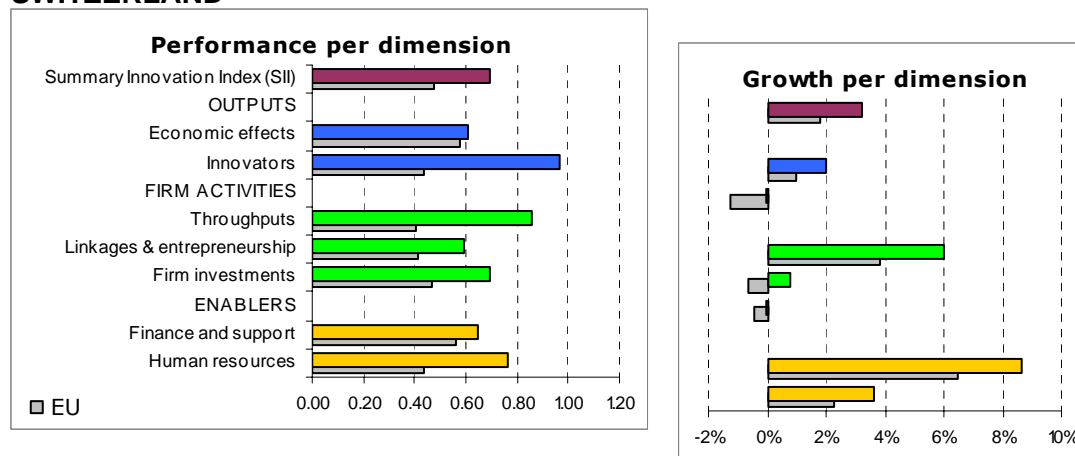
NORWAY



For Norway, one of the Moderate innovators, innovation performance is below the EU27 average and the rate of improvement is also below that of the EU27. Relative strengths, compared to the country's average performance, are in Human resources and Finance and support and relative weaknesses are in Firm investments, Throughputs and Innovators.

Over the past 5 years, Human resources, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Broadband access by firms (9.4%) and Community trademarks (12.1%). Performance in Firm investments, Linkages & entrepreneurship, Innovators and Economic effects has worsened, in particular due to a decrease in IT expenditures (-3.8%), New-to-market sales (-6.5%) and New-to-firm sales (-11.0%).

SWITZERLAND



Switzerland has the highest overall level of innovation performance and its rate of improvement is also above that of the EU27. Relative strengths, compared to the country's average performance, are in Throughputs and Innovators and relative weaknesses are in Linkages & entrepreneurship and Economic effects.

Over the past 5 years, Finance and support and Throughputs have been the main drivers of the improvement in innovation performance, in particular as a result from strong growth in Venture capital (37.8%) and Community trademarks (9.4%). Performance in Firm investments and Innovators has not improved.

Table 1: Indicators for the EIS 2008-2010

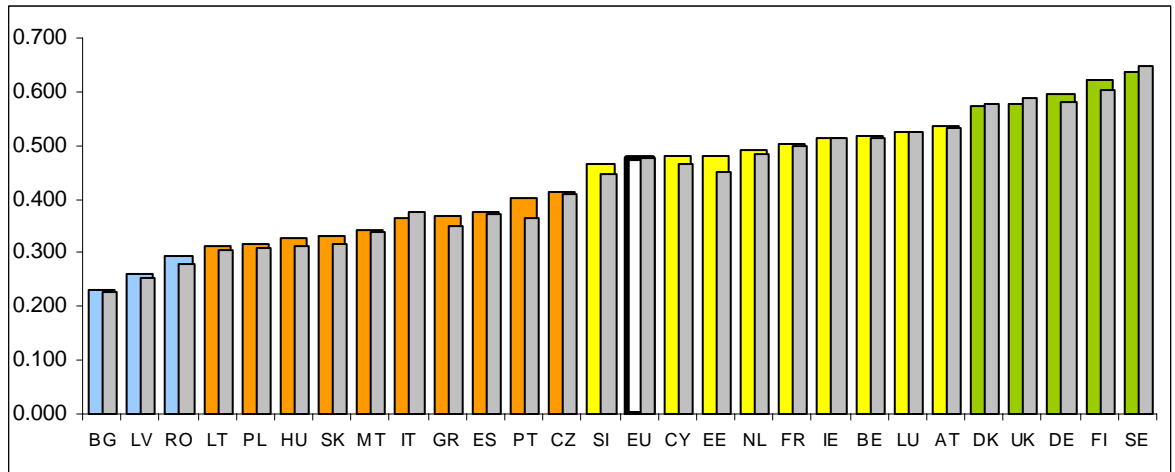
	EIS dimension / indicator	Data source (reference year)²
ENABLERS		
Human resources		
1.1.1	S&E and SSH graduates per 1000 population aged 20-29 (first stage of tertiary education)	Eurostat (2007)
1.1.2	S&E and SSH doctorate graduates per 1000 population aged 25-34 (second stage of tertiary education)	Eurostat (2007)
1.1.3	Population with tertiary education per 100 population aged 25-64	Eurostat (2008)
1.1.4	Participation in life-long learning per 100 population aged 25-64	Eurostat (2008)
1.1.5	Youth education attainment level	Eurostat (2008)
Finance and support		
1.2.1	Public R&D expenditures (% of GDP)	Eurostat (2008)
1.2.2	Venture capital (% of GDP)	EVCA / Eurostat (2008)
1.2.3	Private credit (relative to GDP)	IMF (2008)
1.2.4	Broadband access by firms (% of firms)	Eurostat (2008)
FIRM ACTIVITIES		
Firm investments		
2.1.1	Business R&D expenditures (% of GDP)	Eurostat (2008)
2.1.2	IT expenditures (% of GDP)	EITO / Eurostat (2006)
2.1.3	Non-R&D innovation expenditures (% of turnover)	Eurostat (2006)
Linkages & entrepreneurship		
2.2.1	SMEs innovating in-house (% of SMEs)	Eurostat (2006)
2.2.2	Innovative SMEs collaborating with others (% of SMEs)	Eurostat (2006)
2.2.3	Firm renewal (SME entries plus exits) (% of SMEs)	Eurostat (2005)
2.2.4	Public-private co-publications per million population	Thomson Reuters / CWTS (2007)
Throughputs		
2.3.1	EPO patents per million population	Eurostat (2006)
2.3.2	Community trademarks per million population	OHIM / Eurostat (2008)
2.3.3	Community designs per million population	OHIM / Eurostat (2008)
2.3.4	Technology Balance of Payments flows (% of GDP)	World Bank (2008)
OUTPUTS		
Innovators		
3.1.1	SMEs introducing product or process innovations (% of SMEs)	Eurostat (2006)
3.1.2	SMEs introducing marketing or organisational innovations (% of SMEs)	Eurostat (2006)
3.1.3	Resource efficiency innovators, calculated as the average of:	
	<ul style="list-style-type: none"> • Share of innovators where innovation has significantly reduced labour costs (% of firms) 	Eurostat (2006)

² Exceptions to the reference years are shown in Annex C. For some indicators weighted averages have been used, more details are available in Annex C.

	EIS dimension / indicator	Data source (reference year)²
	<ul style="list-style-type: none"> • Share of innovators where innovation has significantly reduced the use of materials and energy (% of firms) 	Eurostat (2006)
	Economic effects	
3.2.1	Employment in medium-high & high-tech manufacturing (% of workforce)	Eurostat (2008)
3.2.2	Employment in knowledge-intensive services (% of workforce)	Eurostat (2008)
3.2.3	Medium and high-tech manufacturing exports (% of total exports)	UN (2008)
3.2.4	Knowledge-intensive services exports (% of total services exports)	UN / Eurostat (2007)
3.2.5	New-to-market sales (% of turnover)	Eurostat (2006)
3.2.6	New-to-firm sales (% of turnover)	Eurostat (2006)

Table 2 Overall innovation performance: the EIS Summary Innovation Index

Summary innovation performance EU27 Member States (2009 SII)



Note: The Summary Innovation Index (SII) is a composite of 29 indicators going from a lowest possible performance of 0 to a maximum possible performance of 1. The 2009 SII reflects performance in 2007/2008 due to a lag in data availability. The grey coloured columns show 2008 performance as calculated backward from 2009 using the next-to-last data for each of the indicators. This 2008 performance is not identical to that shown in the EIS 2008 as not for all indicators data could be updated with one year. The difference between the columns for 2008 and 2009 show the most recent changes in innovation performance. The SII scores are shown in Annex E of the main report.