

**Service sector innovation:
Measuring innovation performance
for 2004 and 2006 using
sector specific innovation indexes**

INNO Metrics Statistical Paper

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1. Introduction

As a follow-up to the 2007 Thematic Paper on “Innovation Statistics for the European Service Sector Service”, this short statistical paper provides an update of the Service Sector Innovation Index using more recent 2006 data from the Community Innovation Survey (CIS) using a selection of the indicators from the revised methodology of the European Innovation Scoreboard (EIS) introduced in 2008 (cf. the EIS 2008 Methodology Report) and implemented in the EIS 2008 (all reports are available from the INNO Metrics website: <http://www.proinno-europe.eu/metrics>).

2. Choice of indicators

In this statistical paper innovation performance in the Services sector is measured using a subset of the European Innovation Scoreboard (EIS) 2008 indicators (cf. Annex 1 for the full of indicators used in the EIS 2008). We only use the following indicators for which separate data for Industry and Services are available:

For Services and Industry:

- EIS indicator 2.1.1: Business R&D expenditures (% of GDP)
- EIS indicator 2.1.3: Non-R&D innovation expenditures (% of turnover)
- EIS indicator 2.2.1: SMEs innovating in-house (% of SMEs)
- EIS indicator 2.2.2: Innovative SMEs collaborating with others (% of SMEs)
- EIS indicator 2.2.3: Firm renewal (SME entries plus exits) (% of SMEs)
- EIS indicator 3.1.1: SMEs introducing product or process innovations (% of SMEs)
- EIS indicator 3.1.2: SMEs introducing marketing or organisational innovations (% of SMEs)
- EIS indicator 3.1.3: Resource efficiency innovators, unweighted average of: Share of innovators where innovation has significantly reduced labour costs (% of firms) and Share of innovators where innovation has significantly reduced the use of materials and energy (% of firms)
- EIS indicator 3.2.5: New-to-market sales (% of turnover)
- EIS indicator 3.2.6: New-to-firm sales (% of turnover)

For Services:

- EIS indicator 3.2.2: Employment in knowledge-intensive services (% of workforce)
- EIS indicator 3.2.4: Knowledge-intensive services exports (% of total services exports)

For Industry

- EIS indicator 3.2.1: Employment in medium-high & high-tech manufacturing (% of workforce)
- EIS indicator 3.2.3: Medium and high-tech manufacturing exports (% of total exports)

As the EIS indicators included under Enablers (cf. Annex 1) measure economy wide framework conditions which are not specific to individual industries, these indicators are not included in the calculation of the sector specific innovation indexes.

The EIS indicators measuring Throughputs are also not included as 1) the classification of these indicators ('Nice' for trademarks, 'Locarno' for designs) does not allow a straight-forward breakdown into Services and Industry and 2) the interpretation of throughputs is quite different between Services and Industry.

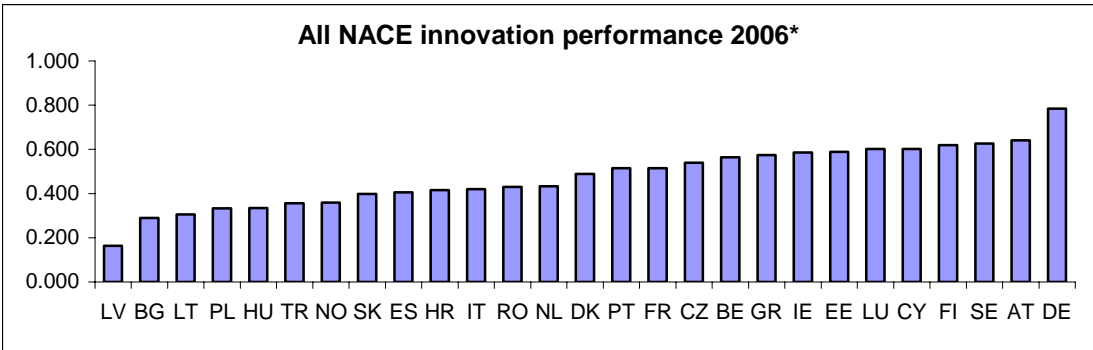
For each of the indicators for all NACE, Industry and Services the data are shown in Annexes 2 to 4. Indicators 2.1.3, 2.2.1, 2.2.2, 3.1.1, 3.1.2, 3.1.3, 3.2.5 and 3.2.6 use

data from the Community Innovation Survey (CIS). CIS results are not always directly comparable between countries, and the fact that 8 out of 12 indicators use CIS data might seriously hamper the comparability of values of the composite indexes between countries.

3. Static analysis

Using the data for the indicators identified above, sector specific composite indicators have been calculated using normalized scores (using a similar procedure as that in the EIS) for Services, Industry and All NACE. Composite indicators have only been calculated if data are available for at least 9 of the 12 indicators². The composite indicators are shown in Annex 5.

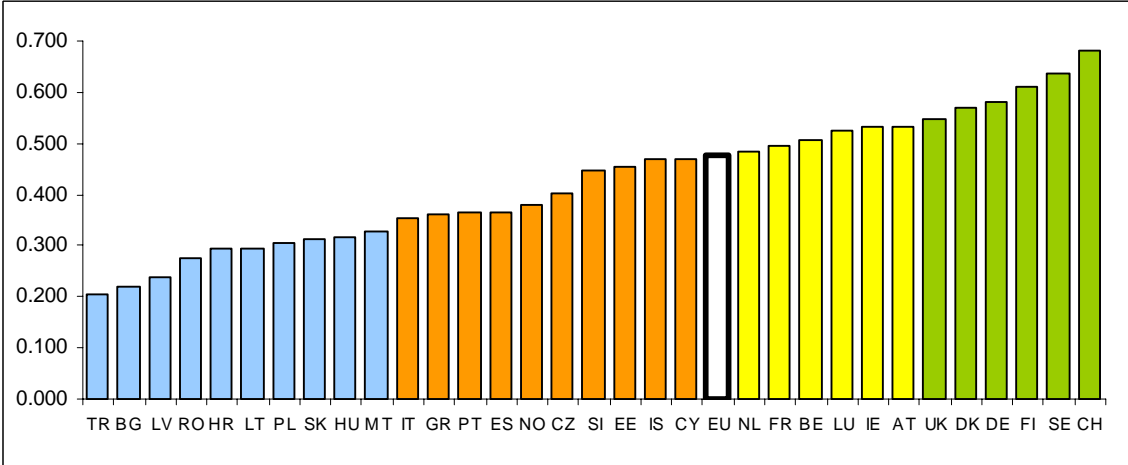
The following graphs show the ranking for innovation performance in 2006 for All NACE, Industry and Services:



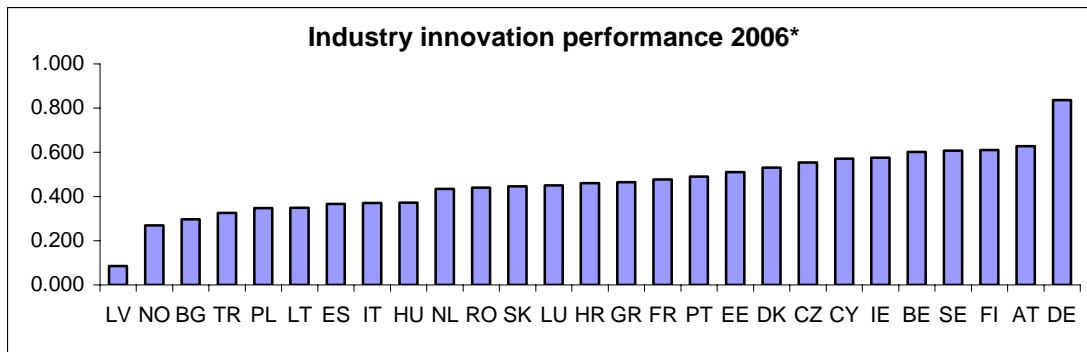
* Performance levels for France (FR), Italy (IT) and Sweden (SE) for 2004.

Overall best performer is Germany. Some of the New Member States perform better as in the EIS (cf. figure below showing the ranking from the EIS 2008), which shows that our small set of 12 indicators of which 8 use CIS data is not able to reproduce the ranking based on the full set of 29 indicators as used in the EIS. This of course will also have an impact on the reliability of the results for Services and Industry as shown below.

EIS INNOVATION PERFORMANCE AS MEASURED BY THE 2008 SUMMARY INNOVATION INDEX

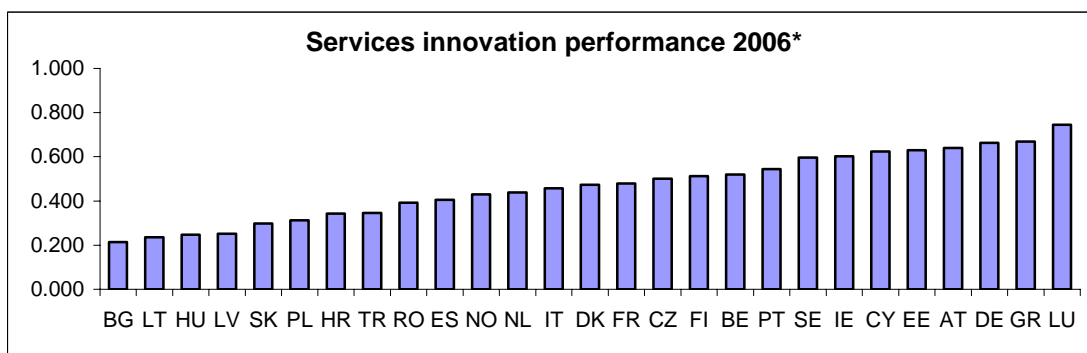


² For 2006 data availability was poor for France, Italy, Malta, Slovenia, Sweden, the United Kingdom and Iceland and for these countries composite indicators for 2006 could not be calculated. For France, Italy and Sweden composite indicator scores for 2004 have been used instead.



* Performance levels for France (FR), Italy (IT) and Sweden (SE) for 2004.

Overall best performer in Industry is Germany, followed by Austria, Finland, Sweden and Belgium.



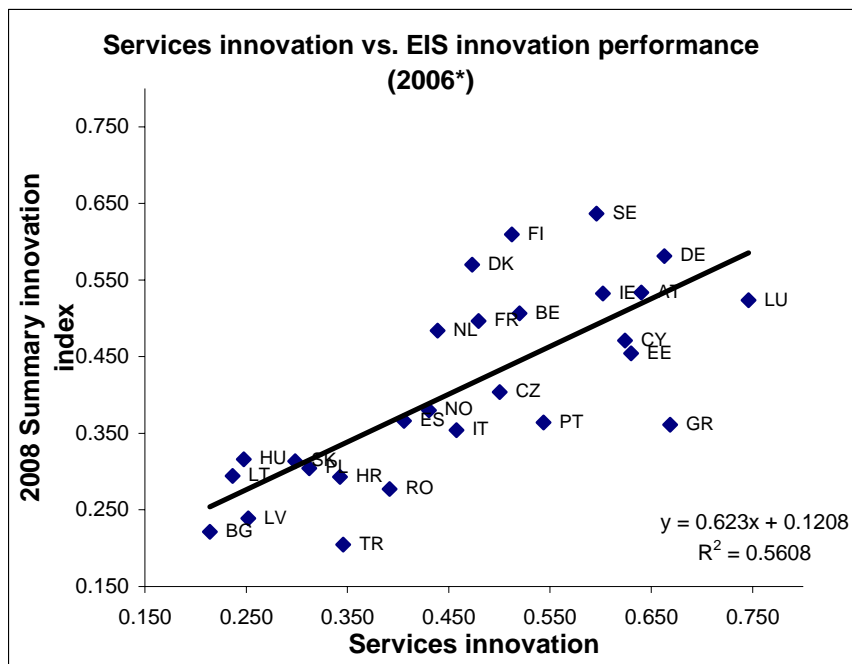
* Performance levels for France (FR), Italy (IT) and Sweden (SE) for 2004.

Overall best performer in Services is Luxembourg. Greece is performing quite well, but this result is in line with the results shown in our 2007 report where Greece was the best performing country in Knowledge-intensive business services (KIBS)³. It should be noted that despite improvements in the CIS survey, CIS data are not yet fully able to capture innovation performance in services. There seems a national bias in firms responding to the survey, limiting the international comparability of CIS data. The results shown here for Services innovation should therefore be interpreted with care.

Services innovation correlates quite well with overall innovation performance as measured in the EIS 2008 as shown in the graph below. Countries above the trend line show relatively better overall performance, countries below the trend line show relatively better performance in services. Most notable are Turkey, Romania, Portugal and Greece, with much better innovation performance in services.

³ Arundel, Anthony, Minna Kanerva, Adriana van Cruysen and Hugo Hollanders (2007), "Innovation Statistics for the European Service Sector", INNO Metrics Thematic Paper, European Commission, DG Enterprise and Industry, Brussels:

http://www.proinno-europe.eu/admin/uploaded_documents/Innovation_Indicators_for_the_European_Service_Sector.pdf



* Performance levels for Services innovation for France (FR), Italy (IT) and Sweden (SE) for 2004.

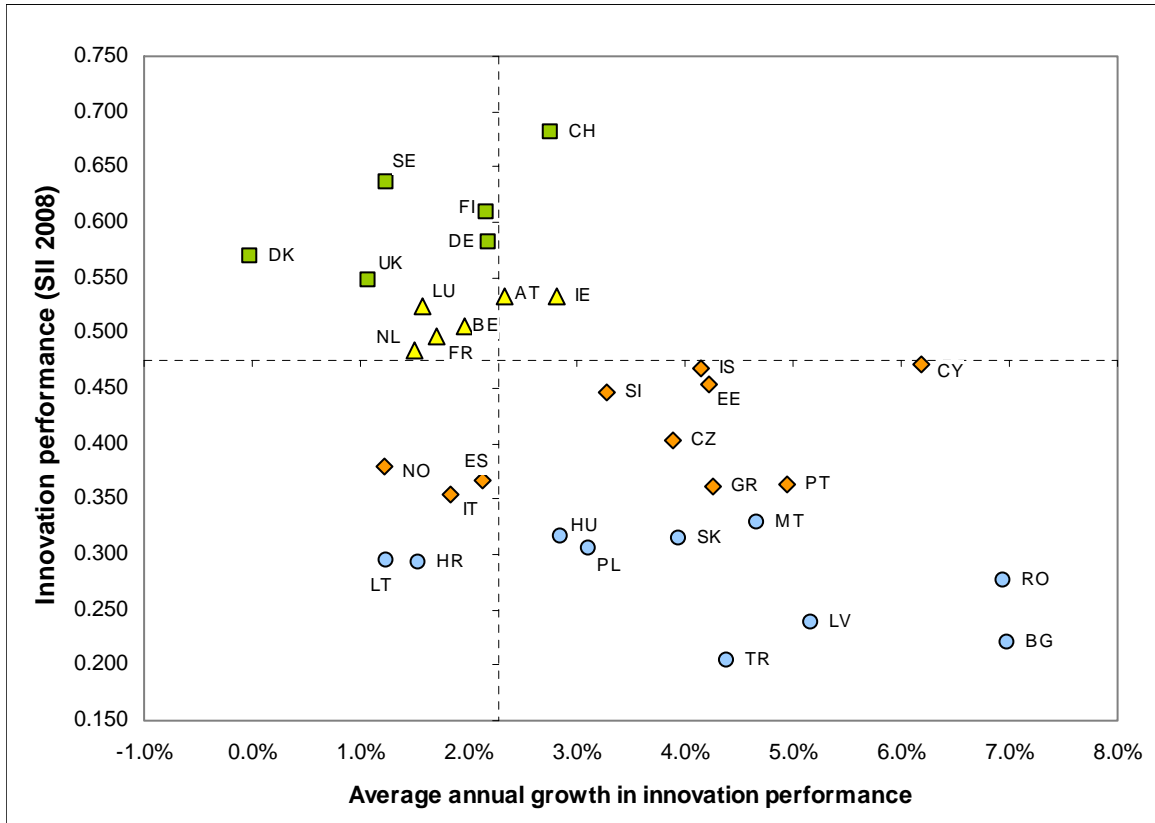
4. Trend analysis

The composite indicator results for 2006 use data for 2006 from CIS 2006. Using 2004 data from CIS-4, we can construct similar composite indicators for 2004 and use the results to measure increases in innovation performance between 2004 and 2006 (cf. Annexes 2 to 4 for the data for each of the indicators)⁴. The composite indicators are shown in Annex 5.

In the EIS 2008 report, the trend analysis (cf. the graph below) showed evidence for a convergence process, with countries with weaker innovation performance showing higher rates of improvement.

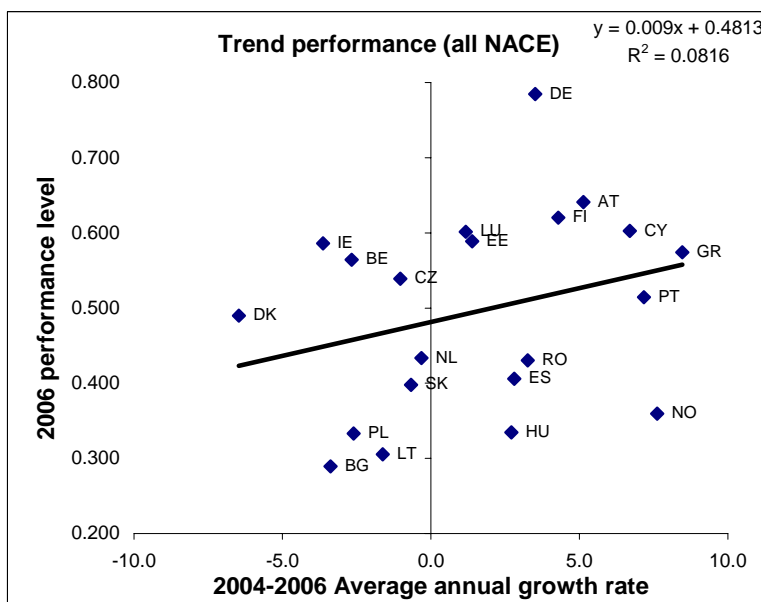
⁴ For 2004 data availability was poor for Latvia, Malta, Slovenia, the United Kingdom, Croatia, Turkey and Iceland and for these countries composite indicators could not be calculated.

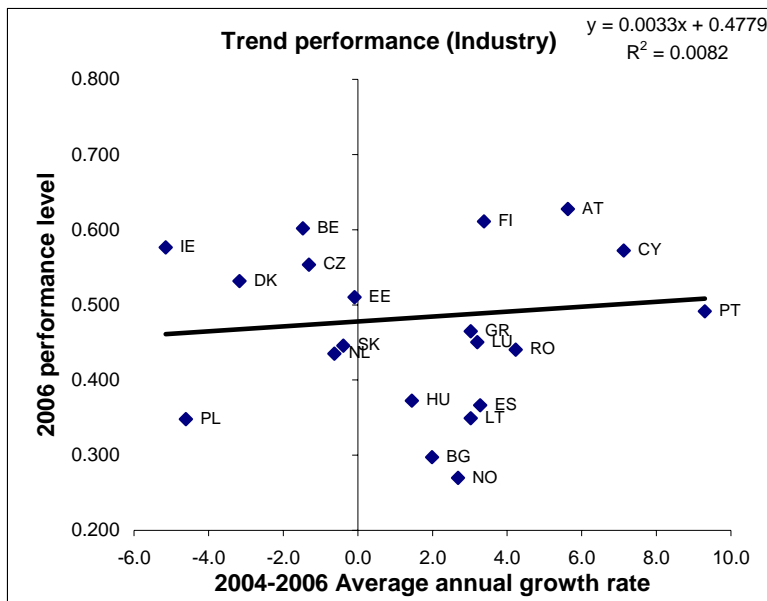
EIS 2008 CONVERGENCE IN INNOVATION PERFORMANCE



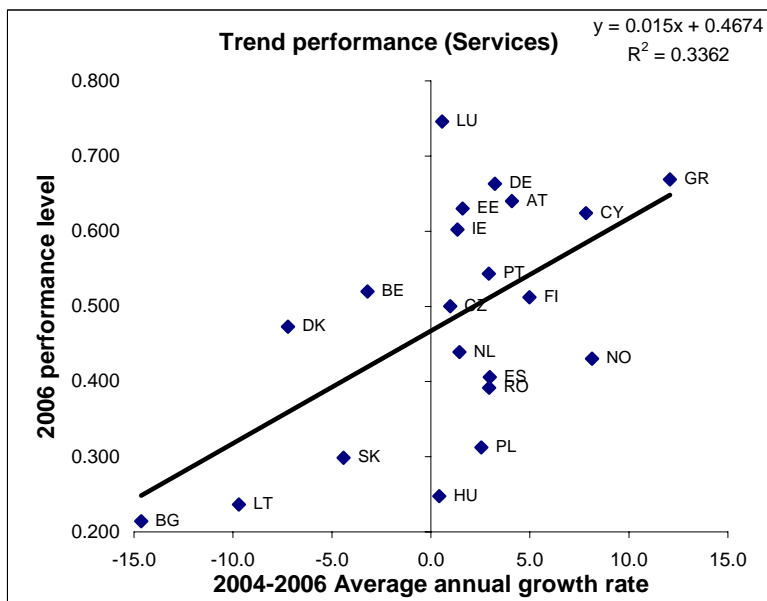
Colour coding matches the groups of countries identified in the EIS 2008: green are the innovation leaders, yellow are the innovation followers, orange are the moderate innovators, blue are the catching-up countries. Average annual growth rates as calculated over a five-year period. The dotted lines show EU performance and growth.

The convergence process is not confirmed for all NACE classes, Industry and Services using the composite indicators build on a more limited set of 12 indicators as shown in the graphs below. This result is partly due to the difficulties in comparing CIS results between different waves of this survey.

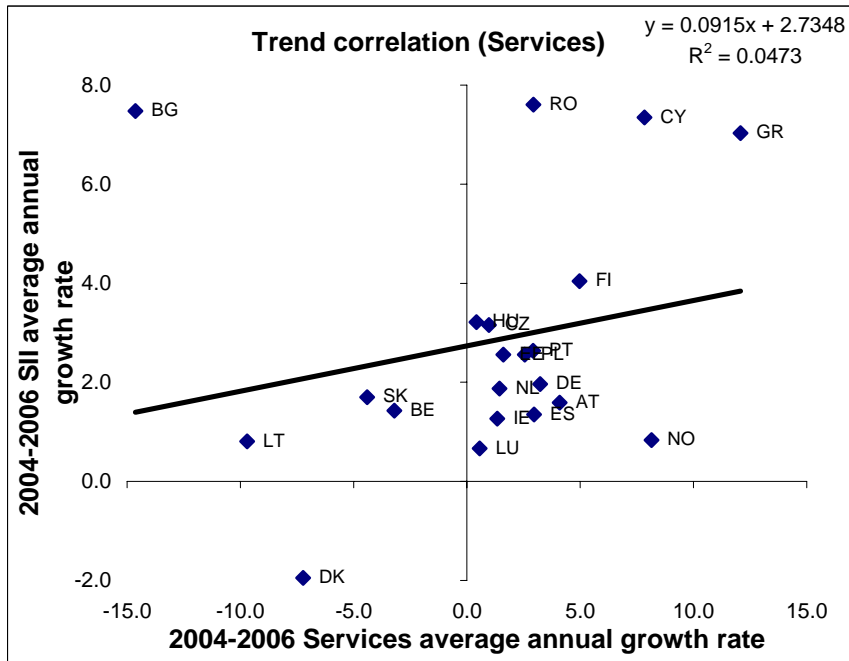
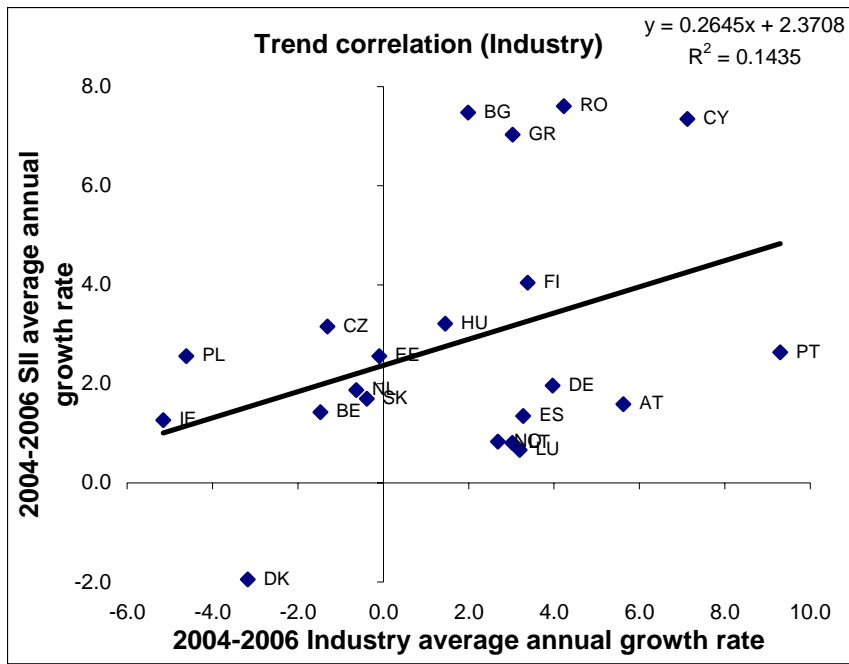




For Services innovation, as shown in the graph below, we even observe a process of divergence with the best performing countries improving at a faster rate than the lower performing countries, which is in clear contrast to the EIS results showing convergence in overall innovation performance, and which provides further 'evidence' for the relevance of good performance in services innovation for growth in overall innovation performance.



An important question is if strong growth in services innovation is driving overall innovation growth. As shown in the graphs below, simple regression results between the average annual growth rates between innovation performance for Industry and Services and the EIS 2008 Summary Innovation Index (SII) average annual growth rate do not provide any statistically significant results. However, it seems that for Services this weak result is due to the outlier position for Bulgaria. Excluding Bulgaria, we do find a significant positive correlation of 0.626 (significant at 1%) between Services innovation growth and SII growth whereas this is only 0.392 (significant at 10%) between Industry innovation growth and SII growth.



Note: FR, IT and SE are not included in this trend analysis as there are only 2004 results for these countries.

5. Conclusions

Using a selection of 12 indicators of the 29 innovation indicators used in the 2008 European Innovation Scoreboard (EIS), we have constructed separate composite indicators measuring innovation performance for Services and Industry for 2004 using CIS-4 data and 2006 using CIS-2006 data.

The benchmarking results show that Luxembourg would have the highest innovation performance in Services. Services innovation correlates quite well with overall innovation performance as measured in the EIS 2008. However, despite improvements in the CIS survey, CIS data are not yet fully able to capture innovation performance in services. There seems a national bias in firms responding to the survey, limiting the international comparability of CIS data. The results shown in this short statistical thematic report for Services innovation should therefore be interpreted with care.

The EIS 2008 report showed evidence for the existence of a convergence process in innovation, with weaker performing countries showing faster rates of improvement. Such a convergence process is not observed for Services or Industry innovation, a result which can be explained by the difficulties in comparing CIS results between different waves of this survey. For Services innovation we even observe a process of divergence with the best performing countries improving at a faster rate than the lower performing countries, a result which provides further 'evidence' for the relevance of good performance in services innovation for growth in overall innovation performance.

However, if we exclude some outlier observations, we do observe a strong positive correlation between Services innovation growth and innovation growth as measured in the EIS. This correlation is much stronger than that between Industry innovation growth and EIS innovation growth. An optimistic observer might conclude from this that Services innovation is a more important driver of overall innovation growth than Industry innovation.

But if there is one conclusion which could and should be derived from the statistical analyses in this report is that, despite improvement to the survey, the CIS is still not able to fully capture Services innovation. All results reported here should thus be interpreted with extreme care.

ANNEX 1: EIS 2008 INDICATORS FOR MEASURING INNOVATION

	EIS dimension / indicator	Data source (reference year)
ENABLERS		
HUMAN RESOURCES		
1.1.1	S&E and SSH graduates per 1000 population aged 20-29 (first stage of tertiary education)	Eurostat (2006)
1.1.2	S&E and SSH doctorate graduates per 1000 population aged 25-34 (second stage of tertiary education)	Eurostat (2006)
1.1.3	Population with tertiary education per 100 population aged 25-64	Eurostat (2007)
1.1.4	Participation in life-long learning per 100 population aged 25-64	Eurostat (2007)
1.1.5	Youth education attainment level	Eurostat (2007)
1.2.1	Public R&D expenditures (% of GDP)	Eurostat (2007)
1.2.2	Venture capital (% of GDP)	EVCA / Eurostat (2007)
1.2.3	Private credit (relative to GDP)	IMF (2007)
1.2.4	Broadband access by firms (% of firms)	Eurostat (2007)
FIRM ACTIVITIES		
FIRM INVESTMENTS		
2.1.1	Business R&D expenditures (% of GDP)	Eurostat (2007)
2.1.2	IT expenditures (% of GDP)	EITO / Eurostat (2006)
2.1.3	Non-R&D innovation expenditures (% of turnover)	Eurostat (2006), CIS
LINKAGES & ENTREPRENEURSHIP		
2.2.1	SMEs innovating in-house (% of SMEs)	Eurostat (2006), CIS
2.2.2	Innovative SMEs collaborating with others (% of SMEs)	Eurostat (2006), CIS
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 (2006)
THROUGHPUTS		
2.3.1	EPO patents per million population	Eurostat (2005)
2.3.2	Community trademarks per million population	OHIM / Eurostat (2007)
2.3.3	Community designs per million population	OHIM / Eurostat (2007)
2.3.4	Technology Balance of Payments flows (% of GDP)	World Bank (2006)
OUTPUTS		
INNOVATORS		
3.1.1	SMEs introducing product or process innovations (% of SMEs)	Eurostat (2006), CIS
3.1.2	SMEs introducing marketing or organisational innovations (% of SMEs)	Eurostat (2006), CIS
3.1.3	Resource efficiency innovators, unweighted average of:	
	• Share of innovators where innovation has significantly reduced labour costs (% of firms)	Eurostat (2006), CIS
	• Share of innovators where innovation has significantly reduced the use of materials and energy (% of firms)	Eurostat (2006), CIS
ECONOMIC EFFECTS		
3.2.1	Employment in medium-high & high-tech manufacturing (% of workforce)	Eurostat (2007)
3.2.2	Employment in knowledge-intensive services (% of workforce)	Eurostat (2007)
3.2.3	Medium and high-tech manufacturing exports (% of total exports)	Eurostat (2006)
3.2.4	Knowledge-intensive services exports (% of total services exports)	Eurostat (2006)
3.2.5	New-to-market sales (% of turnover)	Eurostat (2006), CIS
3.2.6	New-to-firm sales (% of turnover)	Eurostat (2006), CIS

Annex 2: Indicator values 2004 and 2006 for all NACE

2006	2.1.1	2.1.3	2.2.1	2.2.2	2.2.3	3.1.1	3.1.2	3.1.3	3.2.1-2	3.2.3-4	3.2.5	3.2.6
BE	1.30	0.53	29.59	16.58	--	45.42	--	--	--	--	4.26	5.00
BG	0.12	0.79	10.80	3.83	22.18	--	15.72	15.70	--	--	6.70	3.59
CZ	1.03	0.88	21.02	11.71	22.84	31.97	36.21	--	--	--	9.93	4.72
DK	1.65	0.38	22.94	14.89	--	35.69	45.44	9.41	--	--	3.79	4.05
DE	1.77	--	33.92	8.95	--	52.81	68.06	--	--	--	9.12	10.11
EE	0.51	3.36	27.87	18.05	21.65	45.84	48.37	11.07	--	--	4.43	9.27
IE	0.82	0.96	27.15	11.68	--	43.78	--	--	--	--	7.19	5.43
GR	0.18	0.74	25.02	13.31	--	37.31	51.29	23.46	--	--	16.60	9.04
ES	0.67	0.55	16.00	5.04	17.31	29.50	--	10.73	--	--	7.37	8.48
FR	--	--	--	--	--	--	--	--	--	--	--	--
IT	--	--	--	--	--	--	--	--	--	--	--	--
CY	0.10	2.12	32.56	26.25	--	--	50.91	24.54	--	--	5.29	7.04
LV	0.35	--	--	5.57	15.31	14.42	--	5.80	--	--	2.10	1.25
LT	0.22	0.64	11.98	10.28	19.15	19.70	28.48	9.61	--	--	6.04	6.39
LU	1.35	0.90	31.03	15.12	18.99	44.69	60.25	9.86	--	--	5.91	6.54
HU	0.48	0.72	9.52	6.53	20.76	16.78	26.37	6.70	--	--	7.82	2.70
MT	--	--	--	--	--	--	--	--	--	--	--	--
NL	1.01	0.29	18.90	12.52	17.32	32.93	29.00	13.56	--	--	6.02	4.87
AT	1.73	--	30.78	18.05	--	47.84	54.89	10.79	--	--	6.56	7.08
PL	0.18	1.03	12.69	9.35	--	20.41	29.05	12.70	--	--	4.56	5.55
PT	0.31	0.95	24.11	6.71	26.53	38.70	53.45	18.69	--	--	7.17	6.12
RO	0.22	1.08	15.30	2.90	27.85	19.39	35.38	16.52	--	--	4.85	13.69
SI	--	--	--	--	--	--	--	--	--	--	--	--
SK	0.21	1.51	12.26	7.23	15.72	21.45	--	9.36	--	--	7.79	8.95
FI	2.46	--	29.75	27.52	14.92	44.68	--	7.97	--	--	10.84	4.83
SE	--	--	--	--	--	--	--	--	--	--	--	--
UK	--	--	--	--	--	--	--	--	--	--	--	--
HR	0.32	0.85	18.83	9.63	--	28.27	38.05	17.52	--	--	4.58	8.45
TR	0.21	0.16	20.94	5.28	--	29.52	50.31	14.14	--	--	4.65	11.17
IS	--	--	--	--	--	--	--	--	--	--	--	--
NO	0.82	--	17.79	9.77	17.52	29.83	--	--	--	--	1.61	3.17

2004	2.1.1	2.1.3	2.2.1	2.2.2	2.2.3	3.1.1	3.1.2	3.1.3	3.2.1-2	3.2.3-4	3.2.5	3.2.6
BE	1.29	1.04	31.39	16.62	--	46.92	45.35	12.70	--	--	4.77	8.17
BG	0.12	0.65	--	3.15	22.18	--	14.21	17.97	--	--	8.46	4.08
CZ	0.79	1.40	24.00	12.95	18.91	35.50	39.05	15.32	--	--	7.65	7.83
DK	1.69	0.59	28.48	20.77	--	--	62.63	10.62	--	--	5.22	5.79
DE	1.74	1.41	31.99	8.61	--	54.37	59.52	12.29	--	--	7.55	10.03
EE	0.33	1.20	29.50	15.97	26.44	46.40	46.84	13.72	--	--	4.36	7.57
IE	0.79	1.22	37.32	15.61	--	50.05	53.76	14.71	--	--	5.63	4.50
GR	0.18	2.06	27.03	8.41	--	34.55	45.57	11.51	--	--	4.76	6.20
ES	0.58	0.41	18.44	5.70	15.96	32.13	29.50	9.86	--	--	3.84	9.99
FR	1.36	0.33	19.70	11.55	--	29.86	41.33	25.41	--	--	6.16	5.56
IT	0.52	1.10	18.88	4.33	14.51	34.75	37.46	11.25	--	--	6.28	5.61
CY	0.08	2.62	24.04	16.52	--	45.18	55.60	17.55	--	--	1.90	3.67
LV	--	--	--	--	--	--	--	--	--	--	--	--
LT	0.16	1.25	14.56	14.77	18.72	25.32	28.62	7.61	--	--	4.37	5.33
LU	1.47	0.87	--	14.78	20.29	--	--	11.92	--	--	6.44	9.14
HU	0.36	0.91	9.32	6.58	23.84	17.55	25.29	5.15	--	--	4.34	2.60
MT	--	--	--	--	--	--	--	--	--	--	--	--
NL	1.03	0.31	18.56	12.29	18.20	31.67	30.45	16.83	--	--	4.02	4.35
AT	1.53	--	32.44	7.72	--	49.35	53.26	5.94	--	--	5.23	5.37
PL	0.16	1.38	13.76	9.06	--	22.21	25.49	13.48	--	--	8.09	5.39
PT	0.24	1.09	24.00	7.41	10.04	38.62	45.27	21.86	--	--	4.40	5.63
RO	0.21	1.29	13.42	2.83	28.61	--	28.27	7.74	--	--	7.14	9.50
SI	--	--	--	--	--	--	--	--	--	--	--	--
SK	0.25	1.73	11.56	6.84	25.34	19.33	21.51	7.77	--	--	12.77	6.42
FI	2.42	--	24.65	17.25	14.10	37.00	--	9.46	--	--	9.71	5.14
SE	2.81	--	30.02	19.97	11.22	46.50	--	12.46	--	--	8.29	5.10
UK	--	--	--	--	--	--	--	--	--	--	--	--
HR	--	--	--	--	--	--	--	--	--	--	--	--
TR	--	--	--	--	--	--	--	--	--	--	--	--
IS	--	--	--	--	--	--	--	--	--	--	--	--
NO	0.13	0.17	19.38	11.30	--	30.79	34.68	7.11	--	--	2.11	5.07

Annex 3: Indicator values 2004 and 2006 for Industry (NACE C-E)

2006	2.1.1	2.1.3	2.2.1	2.2.2	2.2.3	3.1.1	3.1.2	3.1.3	3.2.1-2	3.2.3-4	3.2.5	3.2.6
BE	1.09	0.95	35.46	21.58	--	52.19	--	--	6.33	48.66	5.48	6.31
BG	0.05	1.28	13.10	3.89	16.47	--	17.70	18.38	4.90	21.23	11.15	2.77
CZ	0.70	0.92	21.70	12.78	19.10	32.57	33.29	--	10.39	61.31	12.37	4.86
DK	1.10	0.65	28.76	19.30	--	44.37	47.11	13.19	6.01	41.25	8.38	7.51
DE	1.60	--	38.48	12.11	--	58.65	74.53	--	10.44	65.49	12.93	14.13
EE	0.17	3.24	30.81	20.59	15.68	52.02	48.07	11.14	3.75	36.23	3.91	8.45
IE	0.54	1.18	34.67	14.22	--	51.97	--	--	5.66	51.77	10.12	5.38
GR	0.10	0.76	25.61	11.88	--	34.08	49.48	23.32	2.27	28.30	23.34	7.28
ES	0.37	0.55	18.29	5.95	12.41	32.17	--	12.43	4.48	--	8.47	10.49
FR	--	--	--	--	--	--	--	--	--	--	--	--
IT	--	--	--	--	--	--	--	--	--	--	--	--
CY	0.03	2.70	38.95	30.70	--	--	52.11	31.30	1.03	45.94	5.85	7.90
LV	0.12	--	--	3.23	9.97	12.95	--	6.20	1.73	23.84	3.23	1.14
LT	0.06	0.90	15.13	9.58	19.38	23.27	30.63	12.22	2.48	33.07	9.15	9.93
LU	0.60	0.91	30.34	15.25	11.13	45.42	54.92	22.26	1.26	32.69	6.15	4.27
HU	0.38	0.95	10.11	6.60	14.16	17.51	25.52	9.03	8.46	69.26	9.67	3.44
MT	--	--	--	--	--	--	--	--	--	--	--	--
NL	0.79	0.51	23.19	16.72	12.27	38.79	29.62	18.16	3.13	48.33	8.48	5.88
AT	1.25	--	32.25	17.31	--	48.74	53.27	15.35	6.96	53.17	8.90	7.80
PL	0.09	1.32	13.80	8.81	--	20.56	27.52	14.95	5.13	48.91	5.91	7.18
PT	0.17	1.22	24.70	6.17	23.97	38.11	49.37	20.93	3.33	38.68	9.76	7.61
RO	0.17	1.64	16.40	3.12	24.75	20.23	33.47	18.69	5.45	37.48	4.41	17.53
SI	--	--	--	--	--	--	--	--	--	--	--	--
SK	0.10	1.68	12.63	7.31	12.67	22.38	--	11.43	9.56	57.24	10.25	11.94
FI	2.00	--	32.59	31.23	10.42	48.21	--	9.32	6.81	51.52	15.85	5.58
SE	--	--	--	--	--	--	--	--	--	--	--	--
UK	--	--	--	--	--	--	--	--	--	--	--	--
HR	0.16	1.13	24.57	11.76	--	34.31	39.77	21.42	4.70	39.50	6.03	11.23
TR	0.16	0.28	23.90	5.69	--	33.66	51.19	15.08	3.63	37.95	3.75	4.06
IS	--	--	--	--	--	--	--	--	--	--	--	--
NO	0.41	--	20.90	12.54	10.64	33.02	--	--	4.50	11.44	1.62	3.23

2004	2.1.1	2.1.3	2.2.1	2.2.2	2.2.3	3.1.1	3.1.2	3.1.3	3.2.1-2	3.2.3-4	3.2.5	3.2.6
BE	1.07	2.30	36.43	19.70	--	52.24	45.96	13.20	6.40	49.85	6.32	10.68
BG	0.06	0.82	--	3.05	16.47	--	15.88	18.80	4.62	21.28	8.17	2.69
CZ	0.50	1.81	26.43	13.54	15.56	38.02	38.52	17.81	9.02	60.08	9.22	9.15
DK	1.13	0.73	33.06	22.33	--	--	59.37	14.81	5.97	41.92	8.66	9.13
DE	1.59	2.03	38.00	11.00	--	62.45	61.07	12.76	10.46	64.79	9.97	13.31
EE	0.15	2.33	29.80	13.50	18.12	44.18	43.53	17.51	5.12	38.57	3.16	10.83
IE	0.49	1.27	44.61	18.17	--	57.24	59.87	21.20	6.51	55.04	9.84	7.95
GR	0.12	4.08	27.25	7.23	--	33.62	46.24	15.73	2.23	29.25	5.55	7.92
ES	0.35	0.58	20.16	6.05	11.17	33.51	27.74	11.40	4.86	--	6.02	9.36
FR	1.25	0.38	21.65	12.21	11.40	32.50	39.23	28.60	6.38	--	8.07	8.28
IT	0.38	1.22	20.12	3.81	11.17	35.82	36.52	12.05	7.47	--	5.93	5.53
CY	0.03	3.20	27.68	18.55	--	52.03	56.52	21.39	1.18	52.14	2.40	1.92
LV	--	--	--	--	--	--	--	--	--	--	--	--
LT	0.13	1.24	17.64	13.03	15.75	27.67	28.54	7.73	2.80	31.11	3.74	7.83
LU	0.69	0.59	--	14.93	12.93	--	--	20.78	1.21	34.07	4.06	9.38
HU	0.30	1.20	10.12	6.22	18.31	18.08	23.93	6.30	8.31	70.99	4.67	3.18
MT	--	--	--	--	--	--	--	--	--	--	--	--
NL	0.83	0.53	22.24	16.56	12.47	37.75	31.12	19.80	3.57	50.78	6.27	6.64
AT	1.11	--	35.90	8.54	--	53.27	51.13	7.11	6.25	--	7.20	7.32
PL	0.08	1.83	15.84	9.80	--	23.52	25.47	16.44	4.91	47.30	11.86	8.18
PT	0.11	1.04	23.79	6.30	11.05	36.82	39.55	22.80	3.57	42.02	4.60	5.77
RO	0.19	1.35	14.54	2.71	24.39	--	26.19	8.27	5.69	31.16	9.56	10.43
SI	--	--	--	--	--	--	--	--	--	--	--	--
SK	0.10	1.74	12.81	7.89	24.47	22.24	22.15	9.20	8.58	53.49	14.19	7.96
FI	1.96	--	26.76	20.44	10.39	41.38	--	10.45	6.79	50.46	14.42	5.90
SE	2.11	--	32.45	23.61	9.06	49.46	--	16.99	7.07	56.67	11.83	4.61
UK	--	--	--	--	--	--	--	--	--	--	--	--
HR	--	--	--	--	--	--	--	--	--	--	--	--
TR	--	--	--	--	--	--	--	--	--	--	--	--
IS	--	--	--	--	--	--	--	--	--	--	--	--
NO	0.11	0.22	22.44	14.11	--	34.90	35.61	8.74	3.88	12.67	2.04	4.61

Annex 4: Indicator values 2004 and 2006 for Services (NACE G-K)

2006	2.1.1	2.1.3	2.2.1	2.2.2	2.2.3	3.1.1	3.1.2	3.1.3	3.2.1-2	3.2.3-4	3.2.5	3.2.6
BE	0.21	0.24	24.89	12.59	--	40.04	--	--	15.75	43.93	3.45	4.11
BG	0.07	0.25	7.25	3.73	20.76	--	12.65	11.02	8.16	18.19	1.73	4.52
CZ	0.33	0.82	20.09	10.27	23.86	31.17	40.14	--	10.33	35.47	5.89	4.47
DK	0.55	0.25	18.76	11.73	--	29.44	44.23	5.47	16.02	67.25	1.66	2.45
DE	0.17	--	30.16	6.35	--	47.99	62.73	--	15.43	53.84	5.56	6.37
EE	0.34	3.46	24.49	15.22	23.85	38.72	48.76	10.90	10.71	38.46	4.84	9.91
IE	0.28	0.75	22.58	10.13	--	38.81	--	--	15.78	70.53	4.32	5.47
GR	0.08	0.71	24.32	15.04	--	41.18	53.44	23.60	11.05	51.85	8.99	11.03
ES	0.30	0.55	12.91	3.83	16.84	25.91	--	7.84	13.64	--	6.24	6.43
FR	--	--	--	--	--	--	--	--	--	--	--	--
IT	--	--	--	--	--	--	--	--	--	--	--	--
CY	0.07	1.93	26.81	22.24	--	--	49.84	16.13	14.95	35.36	5.10	6.76
LV	0.23	--	--	7.86	17.86	15.80	--	5.37	10.21	37.64	1.39	1.32
LT	0.16	0.34	8.62	11.02	20.01	15.83	26.17	5.03	7.94	13.75	2.44	2.29
LU	0.75	0.90	31.27	15.17	21.75	44.59	61.61	6.11	21.15	73.17	5.81	7.42
HU	0.10	0.31	8.63	6.43	22.77	15.69	27.62	2.57	11.34	25.60	4.45	1.35
MT	--	--	--	--	--	--	--	--	--	--	--	--
NL	0.22	0.16	16.39	10.06	20.20	29.48	28.63	9.85	17.54	39.91	4.52	4.26
AT	0.48	--	29.54	18.68	--	47.10	56.25	6.37	14.10	31.29	4.51	6.45
PL	0.09	0.70	10.88	10.22	--	20.15	31.56	8.48	9.63	27.93	2.96	3.63
PT	0.14	0.73	23.04	7.68	31.03	39.75	60.85	14.78	9.17	27.54	4.91	4.82
RO	0.05	0.55	13.68	2.55	30.31	18.14	38.23	12.54	5.19	46.60	5.28	10.04
SI	--	--	--	--	--	--	--	--	--	--	--	--
SK	0.11	1.25	11.75	7.11	16.49	20.05	--	5.60	9.52	20.83	3.80	4.11
FI	0.46	--	26.84	23.70	14.43	41.05	--	6.30	16.40	26.72	1.95	3.51
SE	--	--	--	--	--	--	--	--	--	--	--	--
UK	--	--	--	--	--	--	--	--	--	--	--	--
HR	0.16	0.52	14.14	7.89	--	23.27	36.68	12.42	9.71	14.84	2.84	5.09
TR	0.05	0.04	15.94	4.59	--	22.52	48.83	11.79	5.30	12.89	5.58	18.50
IS	--	--	--	--	--	--	--	--	--	--	--	--
NO	0.41	--	15.18	7.45	20.45	27.15	--	--	15.87	54.77	1.61	3.10

2004	2.1.1	2.1.3	2.2.1	2.2.2	2.2.3	3.1.1	3.1.2	3.1.3	3.2.1-2	3.2.3-4	3.2.5	3.2.6
BE	0.22	0.27	27.00	13.95	--	42.30	44.82	12.12	15.51	43.54	3.80	6.61
BG	0.06	0.45	--	3.32	20.76	--	11.35	15.89	8.06	15.21	8.82	5.73
CZ	0.29	0.80	20.34	12.04	19.97	31.72	39.85	10.51	10.04	30.09	5.33	5.88
DK	0.56	0.49	23.80	19.19	--	--	66.03	5.17	14.37	65.31	2.65	3.30
DE	0.15	0.78	26.29	6.35	--	46.71	58.05	11.70	14.61	51.80	5.11	6.72
EE	0.18	0.39	29.09	18.90	29.05	48.94	50.71	9.51	10.38	33.24	5.22	5.23
IE	0.30	1.17	30.46	13.20	--	43.27	48.09	6.05	15.34	72.74	1.77	1.33
GR	0.06	0.61	26.75	9.83	--	35.68	44.77	6.56	11.01	47.63	4.19	4.98
ES	0.23	0.27	15.92	5.20	15.69	30.10	32.09	7.29	12.78	--	1.87	10.55
FR	0.11	0.29	17.78	10.90	--	27.25	43.41	21.41	15.20	--	4.40	3.07
IT	0.14	0.91	15.71	5.65	16.29	32.01	39.87	8.96	14.88	--	6.84	5.73
CY	0.05	2.41	19.71	14.16	--	36.86	54.61	11.40	13.55	34.91	1.73	4.27
LV	--	--	--	--	--	--	--	--	--	--	--	--
LT	0.03	1.25	11.39	16.53	20.46	22.94	28.71	7.51	6.42	16.38	5.15	2.25
LU	0.78	0.95	--	14.74	23.24	--	--	9.48	20.72	72.74	7.08	9.08
HU	0.06	0.40	8.04	7.16	25.62	16.70	27.48	3.16	10.93	17.72	3.79	1.63
MT	--	--	--	--	--	--	--	--	--	--	--	--
NL	0.20	0.15	16.10	9.44	21.80	27.58	30.02	13.92	18.08	40.05	2.47	2.77
AT	0.42	--	29.37	6.99	--	45.88	55.17	4.64	14.84	--	3.63	3.79
PL	0.08	0.89	10.73	7.98	--	20.28	25.50	8.09	9.28	24.97	4.07	2.41
PT	0.13	1.15	24.39	9.52	11.72	42.07	56.18	20.27	9.08	23.49	4.14	5.46
RO	0.02	1.20	11.66	3.01	33.93	--	31.53	6.54	4.89	42.53	3.55	8.11
SI	--	--	--	--	--	--	--	--	--	--	--	--
SK	0.15	1.69	9.87	5.39	24.91	15.20	20.63	4.21	9.20	16.95	10.44	3.90
FI	0.46	--	22.46	13.93	14.23	32.43	--	8.03	15.92	23.32	2.27	3.95
SE	0.70	--	27.80	16.64	11.19	43.78	--	7.46	17.19	50.83	4.16	5.66
UK	--	--	--	--	--	--	--	--	--	--	--	--
HR	--	--	--	--	--	--	--	--	--	--	--	--
TR	--	--	--	--	--	--	--	--	--	--	--	--
IS	--	--	--	--	--	--	--	--	--	--	--	--
NO	0.02	0.09	16.79	8.94	--	27.29	33.88	5.23	15.20	52.68	2.20	5.63

Annex 5: Composite indicator values 2004 and 2006

	All NACE 2006	INDUSTRY 2006	SERVICES 2006	"SII 2008"
be	0.564	0.602	0.520	0.507
bg	0.289	0.297	0.214	0.221
cz	0.539	0.554	0.500	0.404
dk	0.490	0.532	0.473	0.570
de	0.785	0.837	0.663	0.581
ee	0.589	0.510	0.630	0.454
ie	0.586	0.576	0.602	0.533
gr	0.574	0.465	0.669	0.361
es	0.406	0.366	0.406	0.366
fr	0.515	0.478	0.479	0.497
it	0.419	0.370	0.458	0.354
cy	0.603	0.572	0.624	0.471
lv	0.163	0.086	0.252	0.239
lt	0.305	0.349	0.237	0.294
lu	0.601	0.450	0.746	0.524
hu	0.335	0.373	0.248	0.316
mt				0.329
nl	0.433	0.435	0.439	0.484
at	0.641	0.627	0.640	0.534
pl	0.333	0.348	0.312	0.305
pt	0.514	0.491	0.543	0.364
ro	0.430	0.440	0.392	0.277
si				0.446
sk	0.398	0.446	0.299	0.314
fi	0.620	0.611	0.512	0.610
se	0.627	0.608	0.596	0.637
uk				0.547
hr	0.415	0.461	0.343	0.293
tr	0.356	0.326	0.346	0.205
is				0.467
no	0.360	0.270	0.431	0.380

For FR, IT and SE the composite indicator values are identical to the 2004 values.

	All NACE 2004	INDUSTRY 2004	SERVICES 2004	"SII 2006"
be	0.612	0.629	0.573	0.486
bg	0.321	0.280	0.344	0.178
cz	0.556	0.576	0.486	0.368
dk	0.599	0.586	0.592	0.605
de	0.707	0.745	0.603	0.548
ee	0.565	0.512	0.601	0.421
ie	0.655	0.675	0.579	0.513
gr	0.450	0.425	0.475	0.295
es	0.373	0.333	0.372	0.352
fr	0.515	0.478	0.479	0.465
it	0.419	0.370	0.458	0.343
cy	0.496	0.465	0.498	0.381
lv				0.215
lt	0.321	0.319	0.321	0.287
lu	0.581	0.410	0.733	0.513
hu	0.309	0.357	0.245	0.287
mt				0.292
nl	0.438	0.443	0.421	0.458
at	0.551	0.532	0.568	0.509
pl	0.361	0.401	0.290	0.282
pt	0.418	0.376	0.498	0.337
ro	0.391	0.389	0.359	0.223
si				0.412
sk	0.406	0.451	0.342	0.298
fi	0.547	0.553	0.443	0.541
se	0.627	0.608	0.596	0.637
uk				0.550
hr				0.282
tr				0.202
is				0.415
no	0.288	0.249	0.340	0.371