



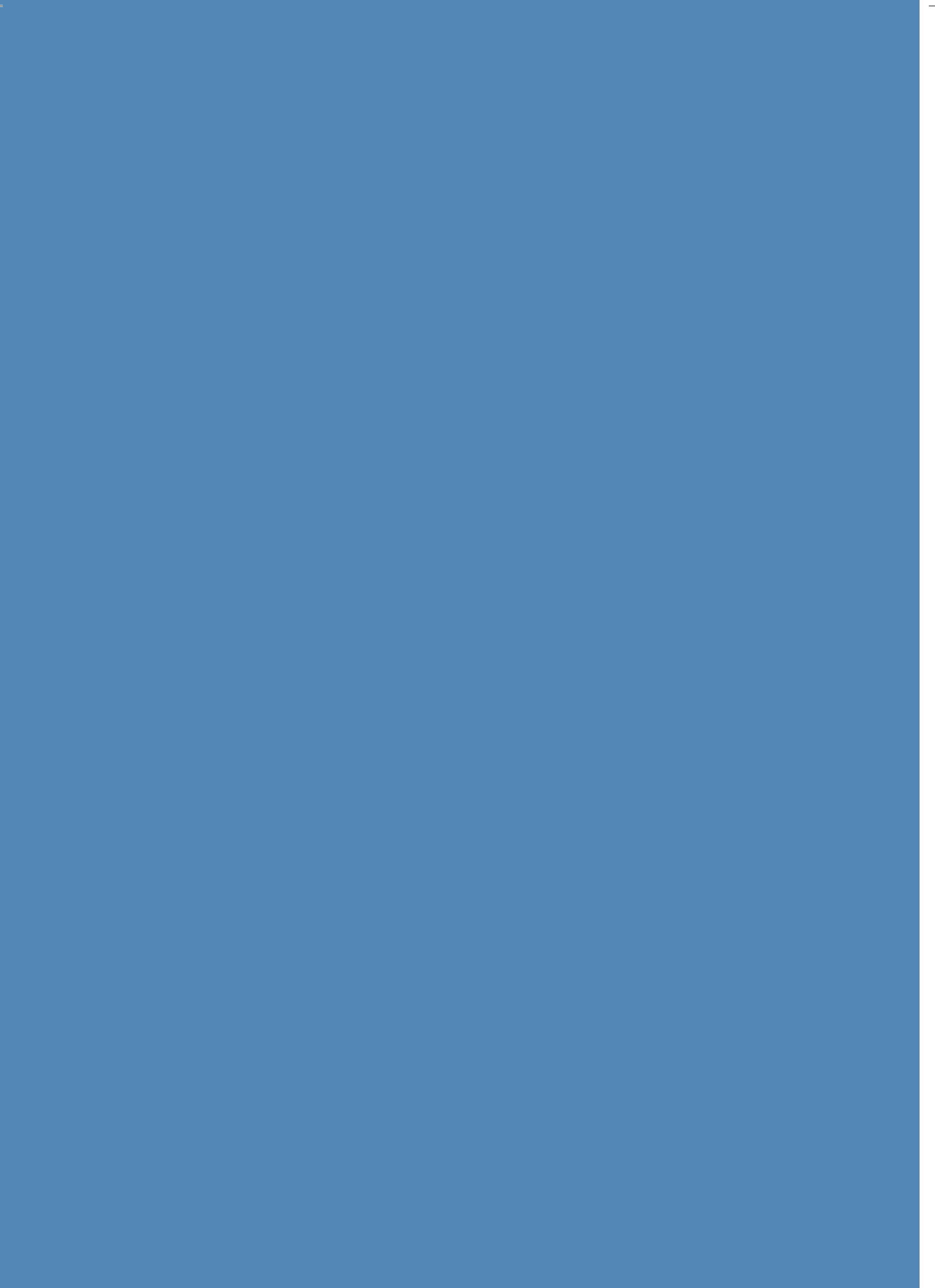
FLANDERS OUTLOOK 2011



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Studiedienst van de
Vlaamse Regering



FLANDERS OUTLOOK 2011

A BENCHMARKING OF FLANDERS AMONGST THE EUROPEAN REGIONS

February 2011



Research Centre of the
Flemish Government

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1 INTRODUCTION

In 2006 Flanders launched the plan 'Flanders in Action' which aims to strengthen Flanders' economic and innovative potential so that it will belong to the top of the European regions in 2020. Today, Flanders is a prosperous region. Yet, Flanders cannot afford to let things take their own course. The world around us is evolving at a high pace. We are confronted with challenges such as the economic and financial crisis, the energy and climate question, changing migration patterns, the ageing of the population and mobility problems. Each country and each region will have to respond to these challenges in its own way.

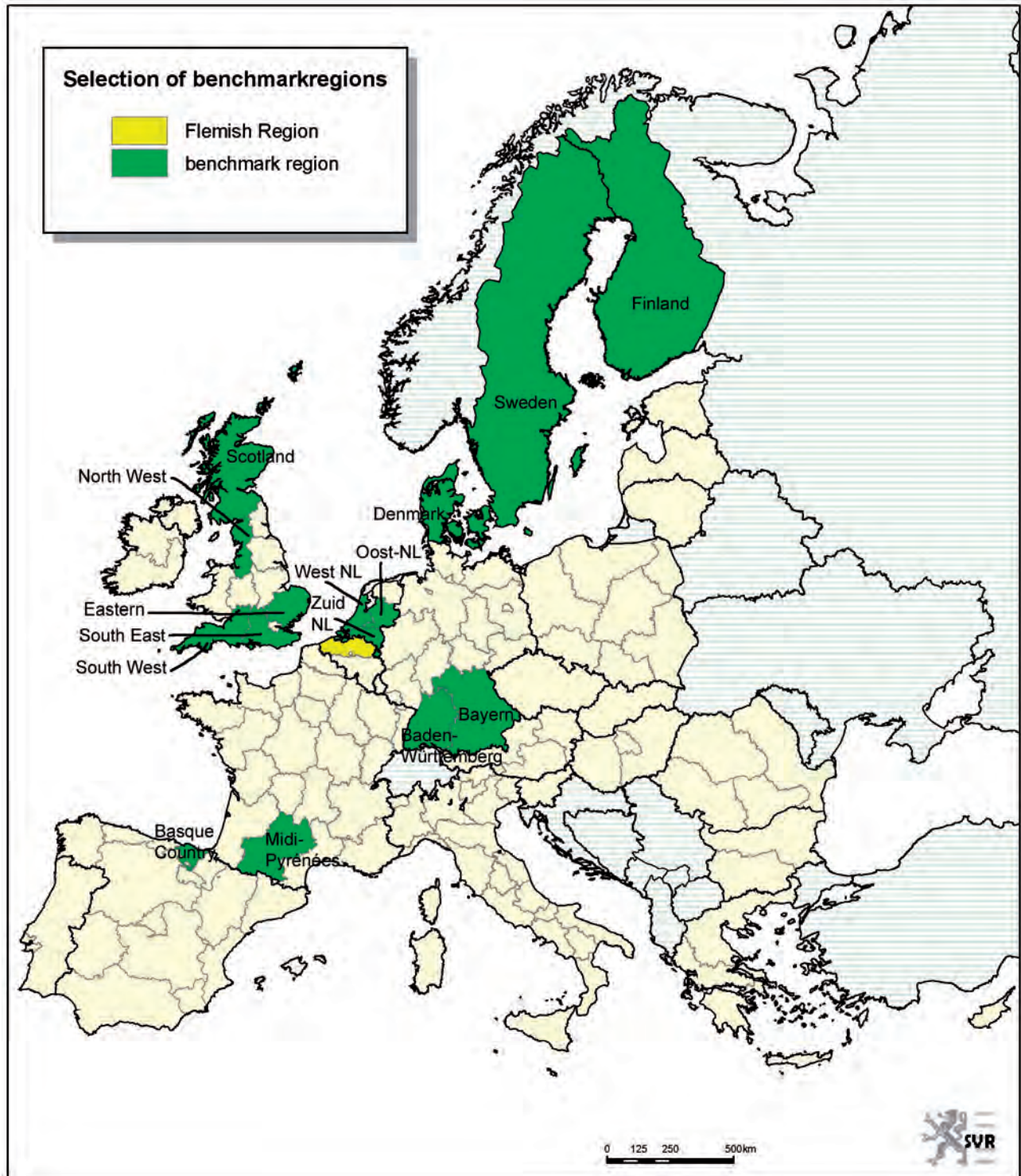
This analysis aims to detect regions that are already a step ahead of Flanders in developing into truly innovative regions. It wants to depict how Flanders is positioned in comparison to those 'excellent' regions. In the process of this exercise a database with statistics of 131 EU regions has also been developed. It is downloadable on the website www.vlaandereninactie.be. The analysis, however, concentrates on the socio-economic performance of Flanders and the set of benchmark regions.

In the recent past, the Research Centre of the Flemish Government already did such exercises¹. Last year, the set of benchmark regions was renewed. On the basis of innovative indicators, the benchmark list consists of:

Denmark
Baden-Württemberg
Bayern
The Basque Country
Midi-Pyrénées
Oost-Nederland
West-Nederland
Zuid-Nederland
Finland
Sweden
North West (UK)
Eastern (UK)
South East (UK)
South West (UK)
Scotland

1 'Flanders Outlook 2010– A renewed benchmarking of Flanders amongst the European regions', February 2010.

Map 0: Selection of benchmark regions



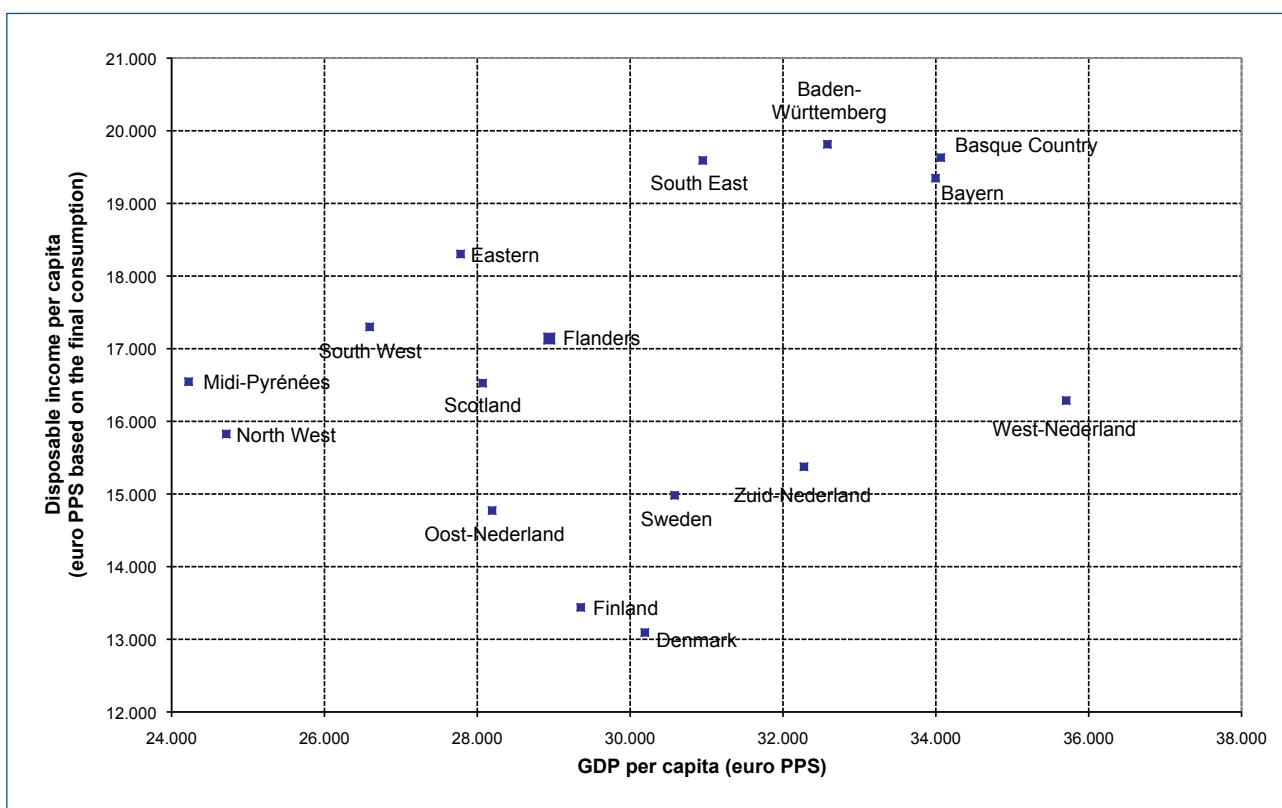
The broad picture is more important than focusing on which particular place Flanders can be found. Usually, the benchmark regions perform better than Flanders. Sometimes Flanders did relatively better a few years ago. This outcome results from the fact that the benchmarking was carried out on the basis of recent data. It is therefore not an analysis of how the benchmark regions have evolved, but rather an analysis of the Flemish socio-economic performance during the last years. The benchmarking will reveal whether Flanders can catch up with the benchmark regions in the (near) future.

2 ECONOMIC WELFARE

The gross domestic product (GDP) is a broad measure of welfare generated in a country or region. It essentially concerns the value of goods and services produced within an area. GDP data of regions or countries within the European Union are compared by means of purchasing power standards (PPS). By doing so, price differences in relation to income are accounted for.

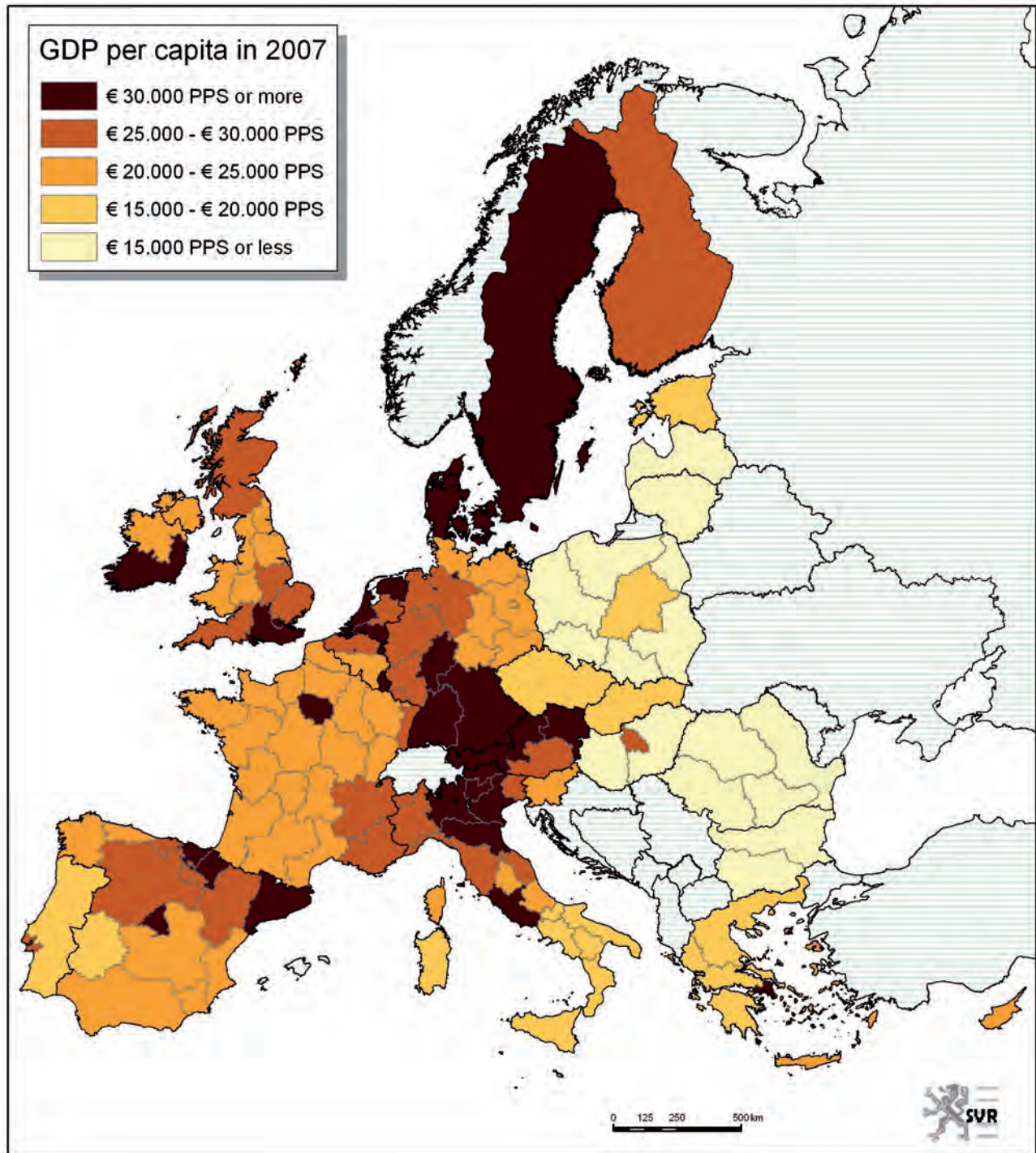
Flanders is one of the prosperous Western European regions. It is centrally located and thus benefits from intensive trade relations with its rich neighbouring regions. According to official Eurostat data, the gross domestic product of Flanders equals € 28,942 PPS per head in 2007. This corresponds to the 10th place among the 16 benchmark regions. Since the start of this GDP series, Flanders lost a few places, from the 5th place in 1995 to the 9th place in 2003. Until 2006, Flanders retained that 9th position. West-Nederland leads the ranking of the benchmark regions (€ 35,705 PPS), partly due to the presence of a capital city. The Basque Country is 2nd (€ 34,064 PPS). In three years time, it has overtaken the two German Länder. The majority of the British benchmark regions, Midi-Pyrénées and Oost-Nederland all have a lower GDP per head. Sweden and Finland were ranked behind Flanders in 1995, but are now ahead of it. It does not come as a surprise that Flanders lost some ground: the benchmark regions were delimited quite recently on the basis of their good economic and technological performance. The challenge for Flanders is to keep pace with those benchmark regions from now on.

Graph 1: GDP and disposable income per capita in 2007



Source: Eurostat, Research Centre of the Flemish Government

Map 1: GDP per capita in 2007



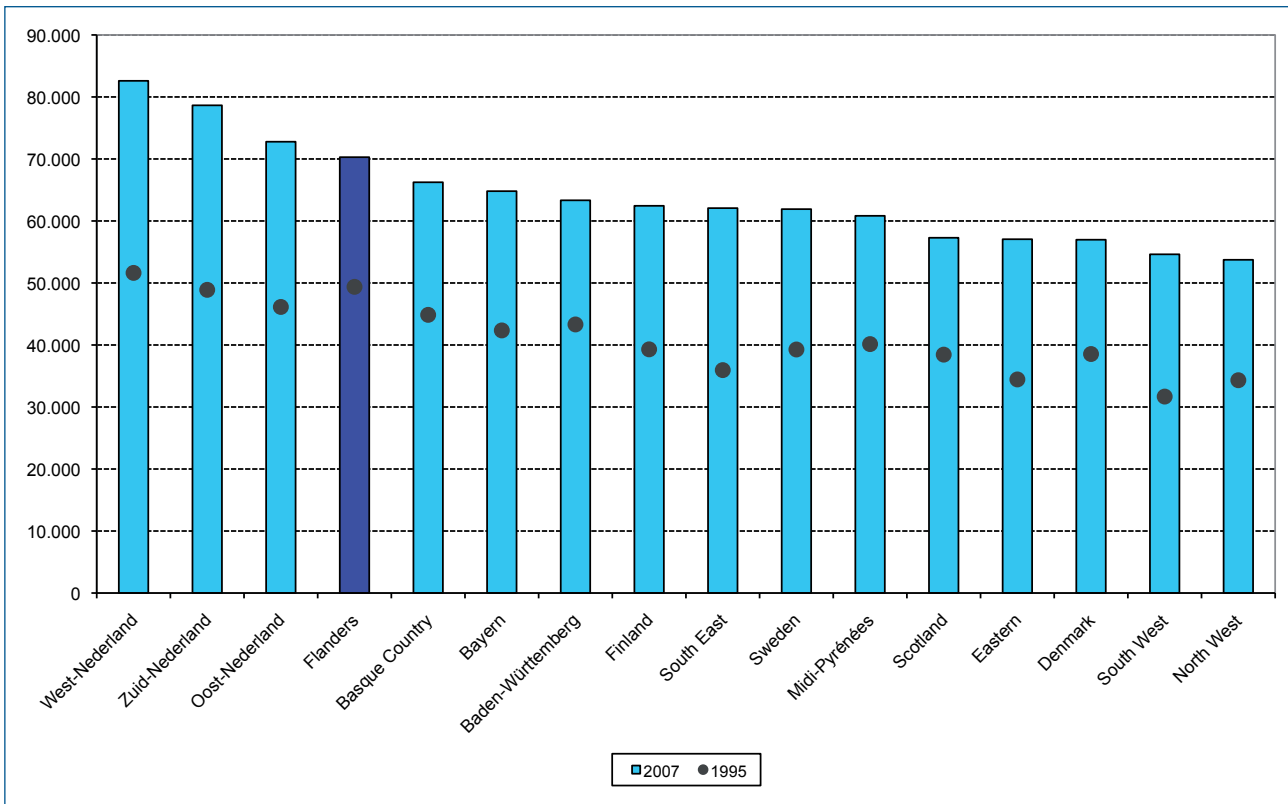
Source: Eurostat, Research Centre of the Flemish Government

One has to bear in mind that Brussels as a capital city is not a part of the geographic territory of Flanders. A great part of the Flemish administration is located in Brussels, as is the case for many of the bigger companies. Furthermore, a lot of Flemish people work in Brussels and in this way contribute to the Brussels GDP (instead of the Flemish). In an overall ranking which also contains capital cities, it is difficult for Flanders to claim a top position: on all 131 European regions, Flanders ranks 33rd in 2007, just outside the first quartile. The best performers are Luxemburg (€ 68,550 PPS), the Brussels Capital Region (€ 55,000 PPS) and London (€ 49,051 PPS), followed by more capital city regions. The position of Flanders gradually fell over time. In 1995, Flanders was 26th. In comparison with 2006, Flanders lost another two places.

The GDP per head consists of three factors: labour productivity, the number of jobs as a % of the population aged 15-64 years and the share of the population aged 15-64 years in total population. All three factors contribute to the creation of welfare.

Flanders owes its prosperity primarily to a high labour productivity. With a value of € 70,289 PPS per worker, Flanders ranks 4th on the 16 benchmark areas in 2007. Labour productivity is higher in the three Dutch benchmark regions. Throughout the years, labour productivity has always been relatively high in Flanders, although Flanders excelled a bit more in 1995 (2nd place). Labour productivity is relatively low in the British regions and in Denmark. In comparison to the whole set of 131 EU regions, Flanders is 12th, which is good, given the fact that Flanders has no capital region. High labour productivity is indeed a structural feature of the Flemish economy.

Graph 2: Labour productivity in 1995 and 2007 (in € per worker)

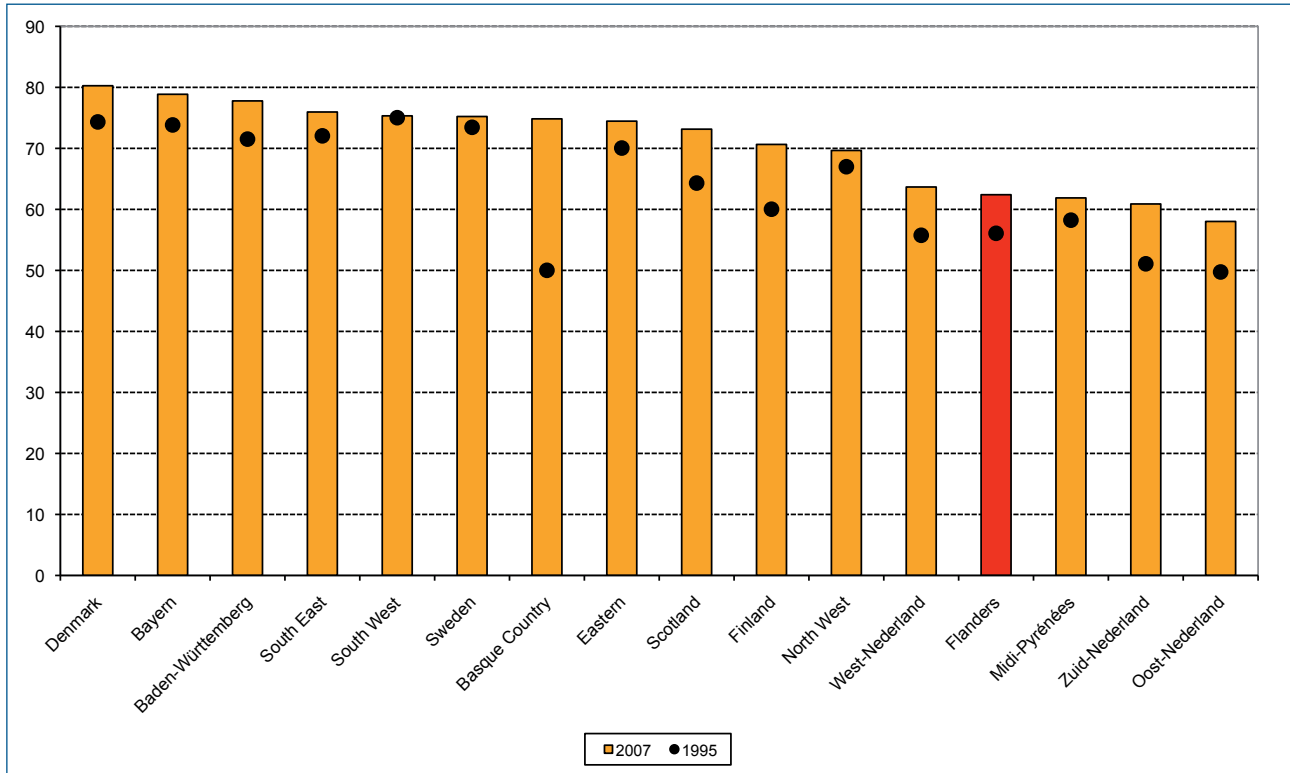


Source: Eurostat, Research Centre of the Flemish Government

There are 62.4 jobs per 100 people aged 15-64 in Flanders in 2007. Consequently, Flanders can be found on the 13th place amongst the 16 benchmark regions. That is not very good, but from 1999 until 2006 Flanders was 14th. During the years, the number of jobs with respect to people aged 15-64 years increased: it was 56.1% in 1995. The indicator is highest in Denmark and in the two German Länder. In 10 benchmark regions it has a value higher than 70%. Oost- en Zuid-Nederland and Midi-Pyrénées have a lower value than Flanders. In the broader EU ranking, Flanders is 84th in 2007. Throughout the years, Flanders improved its position (91th in 1995).

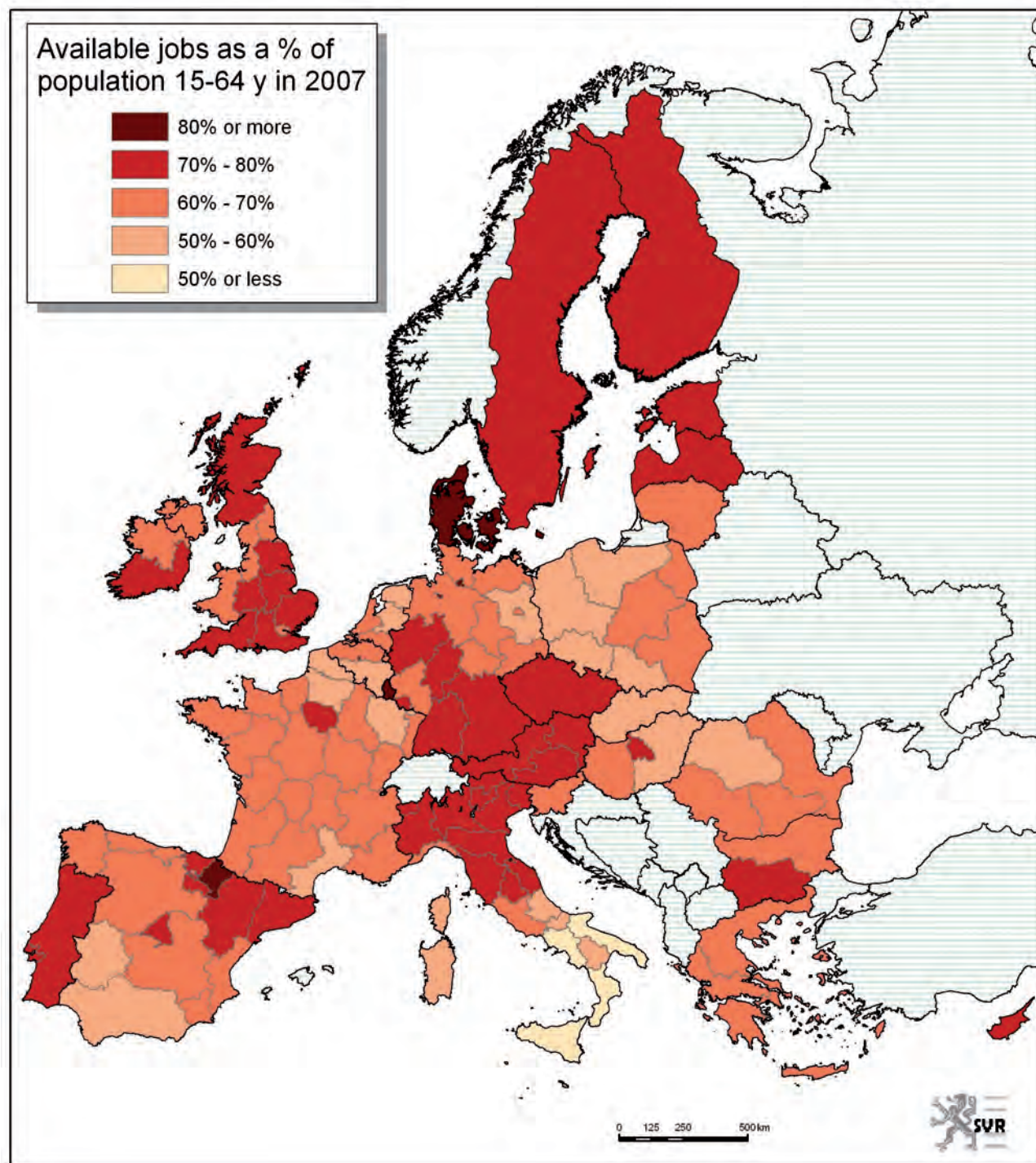
Part of the mediocre performance of Flanders is due to the fact that a lot of people commute to the Brussels region. Given the small geographic area of the Brussels Capital Region, the place where people live (income) and the place where people work (employment and GDP generation) are located in two different areas.

Graph 3: Available jobs / population 15-64 in 1995 and 2007 (in %)



Source: Eurostat, Research Centre of the Flemish Government

Map 2: Available jobs as a percentage of population 15-64 y in 2007



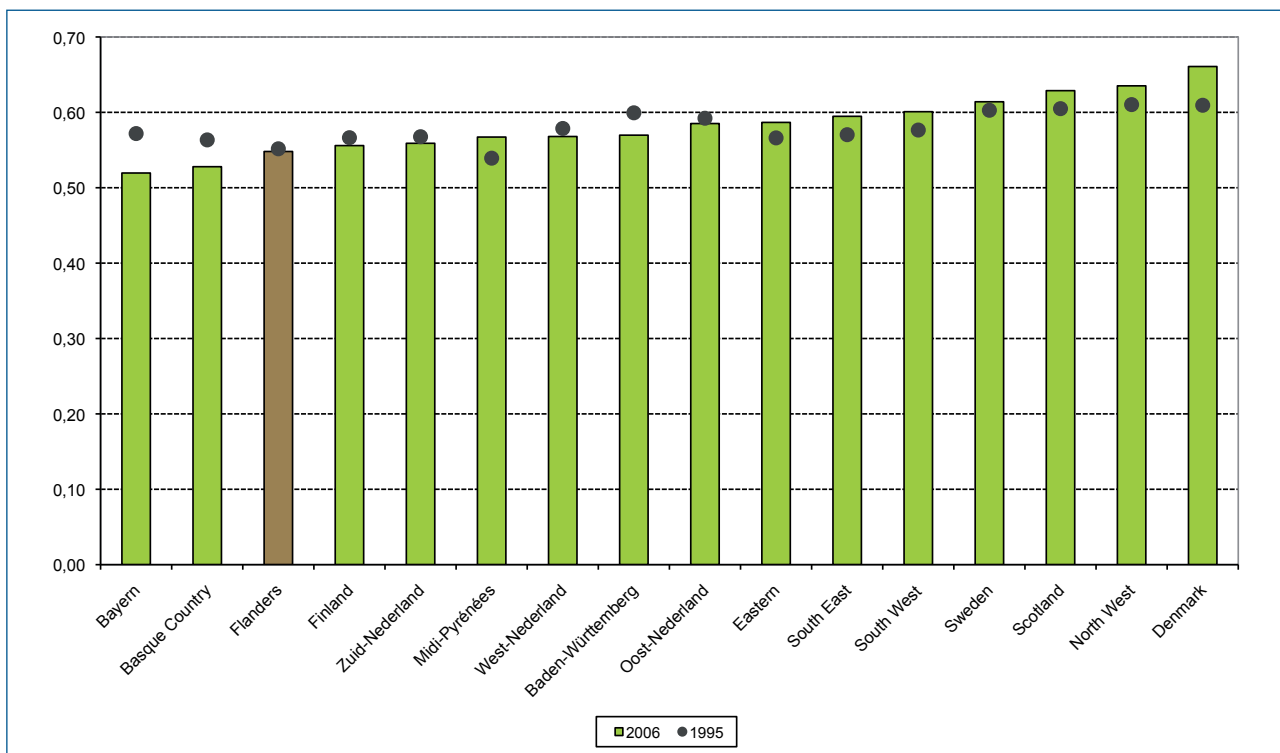
Source: Eurostat, Research Centre of the Flemish Government

The third factor that determines GDP/head is the share of people aged 15-64 years. With 66.0% in 2007 Flanders can be found on the 11th place out of 16 benchmark regions. The value of this indicator slightly decreased over the years (in 1995 it was 66.9%), although it marginally improved in 2006 and 2007. The Basque Country, West- en Zuid-Nederland score highest. On the other hand, Midi-Pyrénées and some British regions have a relatively low share of people aged 15-64 years. In comparison to the 131 EU regions Flanders is 86th in 2007, which is 20 places lower compared to 1995.

The unit labour cost or average wage cost per employee is relatively high in Flanders (12th place amongst the benchmark regions in 2006). But since 1995 (15th), Flanders' position improved. The Basque Country has by far the lowest average wage cost of the benchmark regions. Denmark and

the 3 Dutch areas have higher unit labour costs. In a European perspective, Flanders is 121st out of 131 areas, which is still 5 places better than in 1995. But the average wage cost per employee must be seen in relation to labour productivity. The ratio between them is the wage cost per unit of output. In Flanders, wages account for 55% of gross value added in 2006. Only Bayern and the Basque Country have lower (= better) ratios. The favourable figure for Flanders is due to a high labour productivity that compensates for a high labour cost. In 1995 Flanders was just behind one benchmark region: Midi-Pyrénées. Since then, Flanders' position first deteriorated until 2001, but then improved again. In the list of 131 EU regions, Flanders is 74th. The new member states generally have the lowest values.

Graph 4: Average wage cost per unit of output in 1995 and 2006



Source: Eurostat, Research Centre of the Flemish Government

A region produces welfare. This is not the same as the income generated in that region, because the residents may work elsewhere. Inversely, people living in other areas or abroad may work in that region and thus contribute to its welfare. But those people take their income home to where they live. For commuters, the place where they live and the place where they work are two different geographic locations. The net disposable income in Flanders was € 17,140 PPS per head (based on final consumption). This corresponds to the 7th place out of 16 benchmark regions, or one place higher compared to 2006. It also meant the end of Flanders' gradually deteriorating position since 1995. The two German Länder, the Basque country and 3 British regions have a higher disposable income per capita in 2007. As there are no data for the whole set of areas, it is not possible to rank Flanders amongst 131 regions.

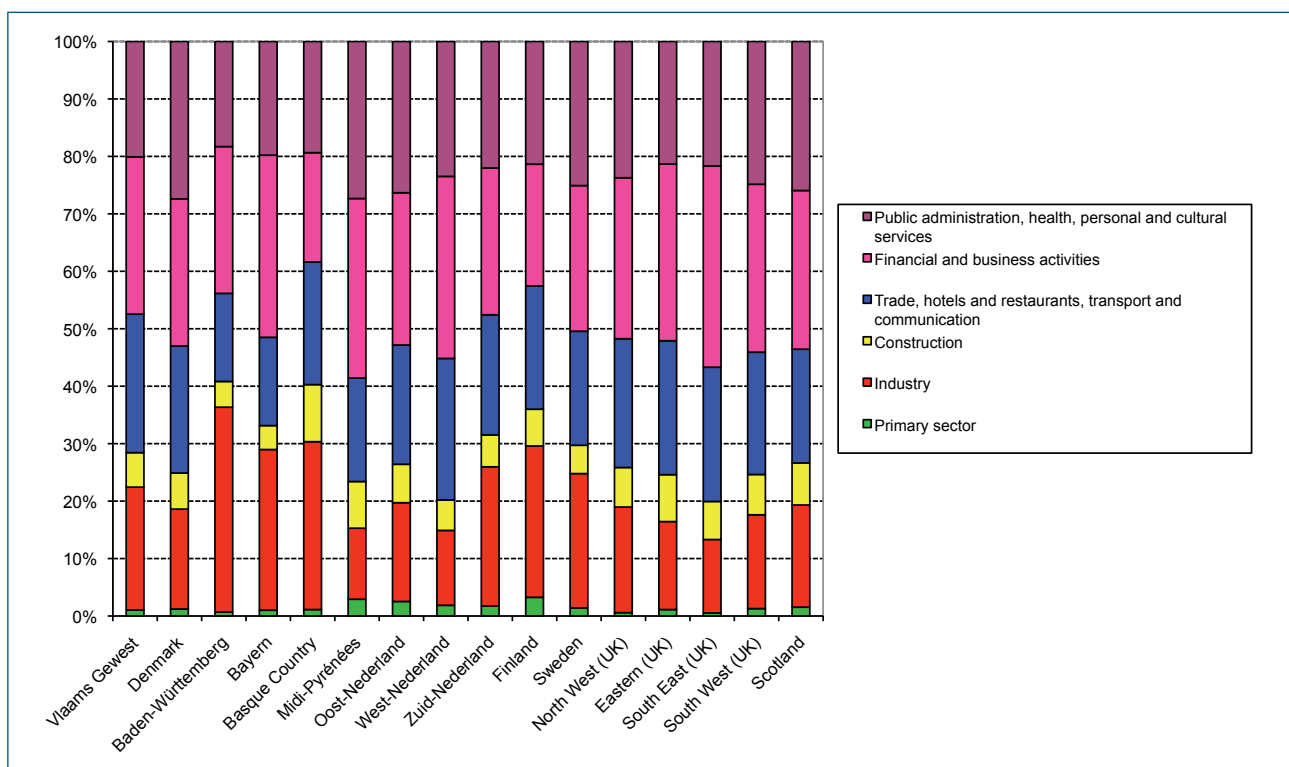
There is some difference in economic structure between the benchmark regions (based on gross value added in 2007): the primary sector is not really important anywhere. It is relatively well represented in Finland, Midi-Pyrénées and Oost-Nederland. Baden-Württemberg (35.7%), the Basque Country (29.2%), Bayern (28.0%) and Finland (26.3%) lead the ranking of the most industrialised regions. Industry is significantly less important in the value added of Midi-Pyrénées, South East (UK) and West-Nederland. The Basque Country is specialised in construction (9.9%). The share of this sector in that region is more than twice as important as in the German Länder or in Sweden. The branch of

'trade, hotels & restaurants, transport and communication' is well represented in Flanders (24.1%); only West-Nederland does better.

'Financial and business activities' constitute the most important activity in South East (UK), Bayern, West-Nederland, Midi-Pyrénées and Eastern (UK) (all over 30%). Finally, public administration, health and personal services are a specialty in Denmark (27.4%) and Midi-Pyrénées (27.3%). Flanders has a relatively low share, due to the presence of Brussels that performs such functions for a broader hinterland.

Between 2000 and 2007, the importance of industry in gross value added declined most strongly in the British regions, Midi-Pyrénées and Flanders. In the first two areas this resulted above all in an increase of the share of financial and business services. In Flanders it was mainly the branch of hotels and restaurants, transport and communication that became more important in total gross value added.

Graph 5: Share of the economic sectors in gross value added in 2007 (in %)

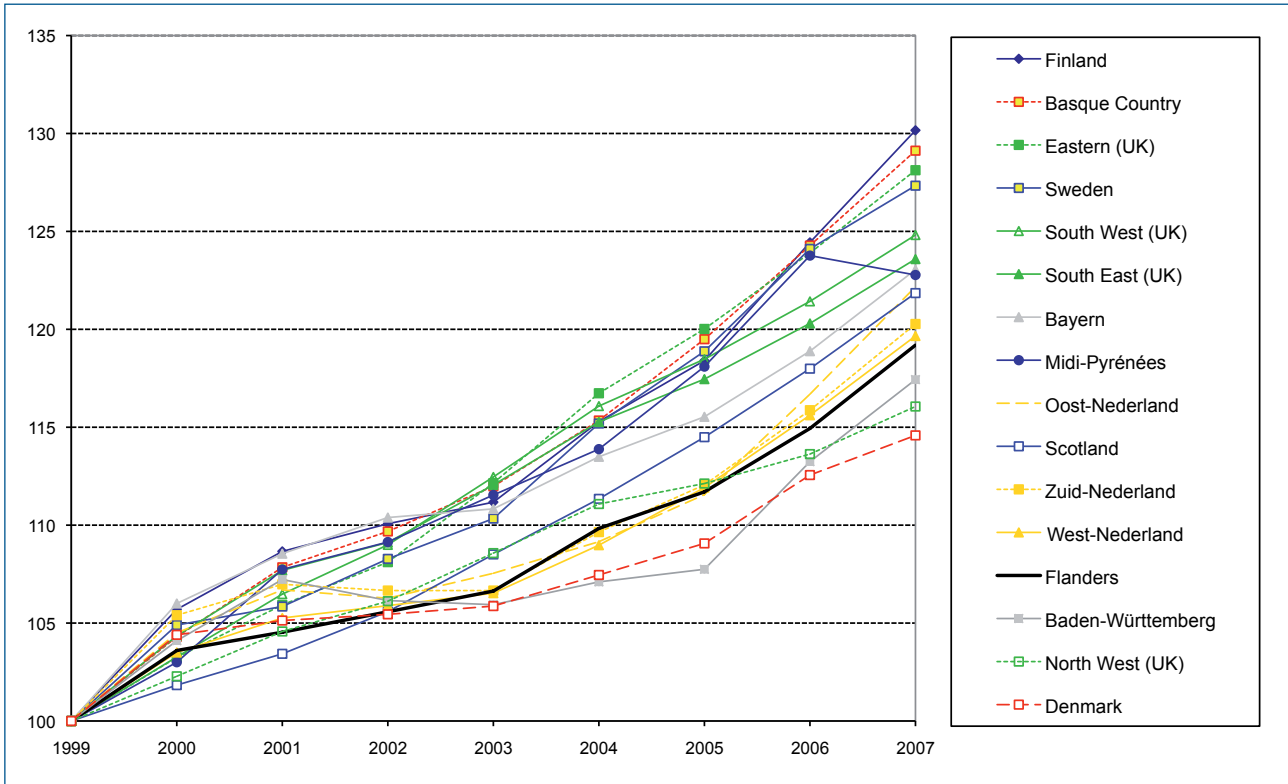


Source: Eurostat, Research Centre of the Flemish Government

To invest is to believe in the future. A high investment ratio is typical of the Flemish economy (22.9% in 2007). Not all the benchmark regions have recent data available. The Basque Country had a ratio of 24.0% in 2004. Oost-Nederland (22.4% in 2007), Denmark and Bayern (21.7% and 21.6% in 2007) also have high scores. In this respect, the British regions have relatively low investment ratios (between 15 and 20%, data of 2000).

According to Eurostat figures, real GDP growth in Flanders amounted to 2.2% per year during 2000-2007. This is an average of years of expanding economic activity (2000, 2004, 2006 and 2007) and years of rather sluggish growth (mainly between 2000 and 2004). The EU27 average is 2.4%. The greater part of the benchmark regions have higher growth rates. Finland, the Basque Country, Eastern (UK) and Sweden are the only benchmark regions with an average growth rate above 3% during 2000-2007. Baden-Württemberg, North West (UK) and Denmark had lower growth rates (2.0%, 1.9% and 1.7%).

Graph 6: Real value added evolution 1999 – 2007 (indices, 1999 = 100)*

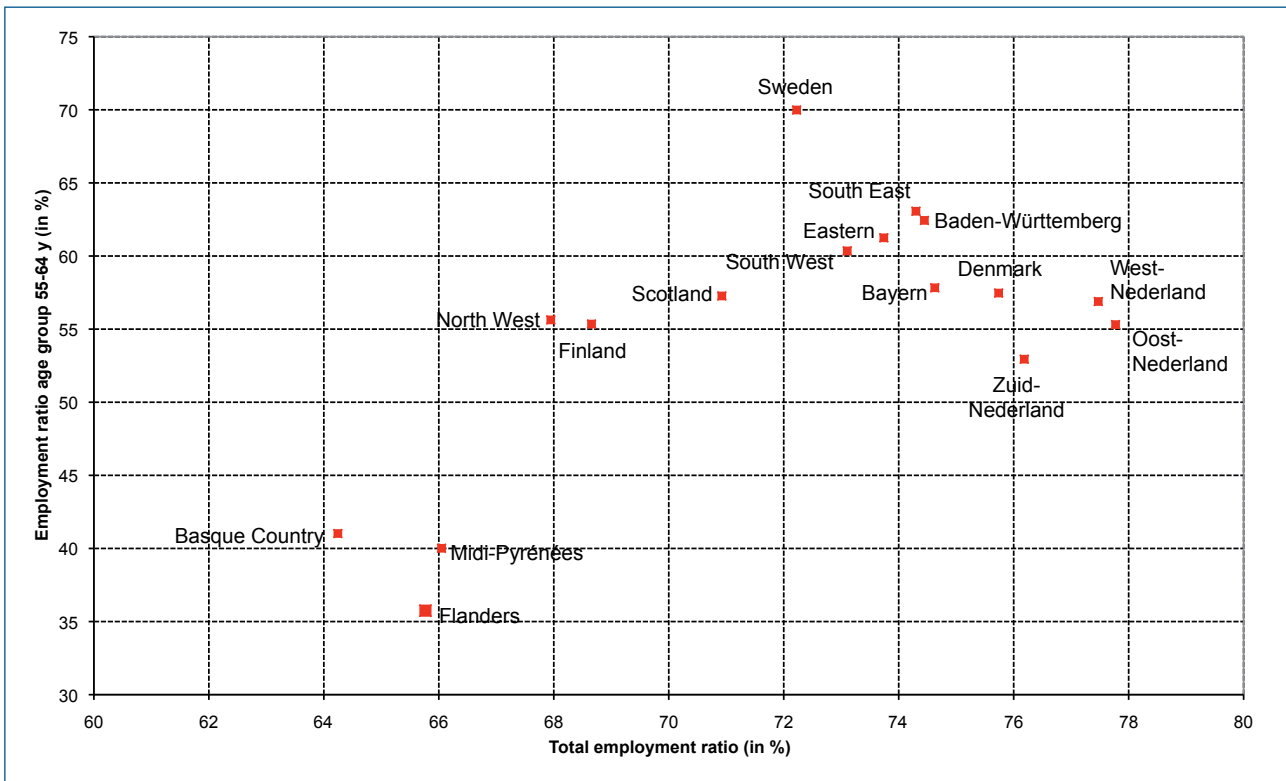


Source: Eurostat, Research Centre of the Flemish Government

3 LABOUR MARKET

The Flemish employment rate², according to Eurostat, amounted to 65.8% in 2009. Only the Basque Country has a lower rate amongst the 16 benchmark regions. The employment rate has always been low in Flanders. There has been some improvement however, since 1999 (62.6%). The employment rate in Flanders was higher in 2008 (66.5%). The decrease in 2009 is due to the financial and economic crisis that year. The top of the benchmark regions are Oost- and West-Nederland (77.8% and 77.5%). Denmark, the German benchmark Länder and some British benchmark regions also have high employment rates. Together with Flanders, the regions Midi-Pyrénées and the Basque Country need to improve their employment rate. The latter area faced the steepest decline of its rate in 2009, due to the crisis. Compared to the 131 EU regions, Flanders ranks 57th. This is mediocre, but it is nevertheless a marked improvement in comparison with 2008 (63th), which means that Flanders coped better with the worst effects of the slump than most other regions. But over a longer period, Flanders did worse: in 1999 it still ranked 46th.

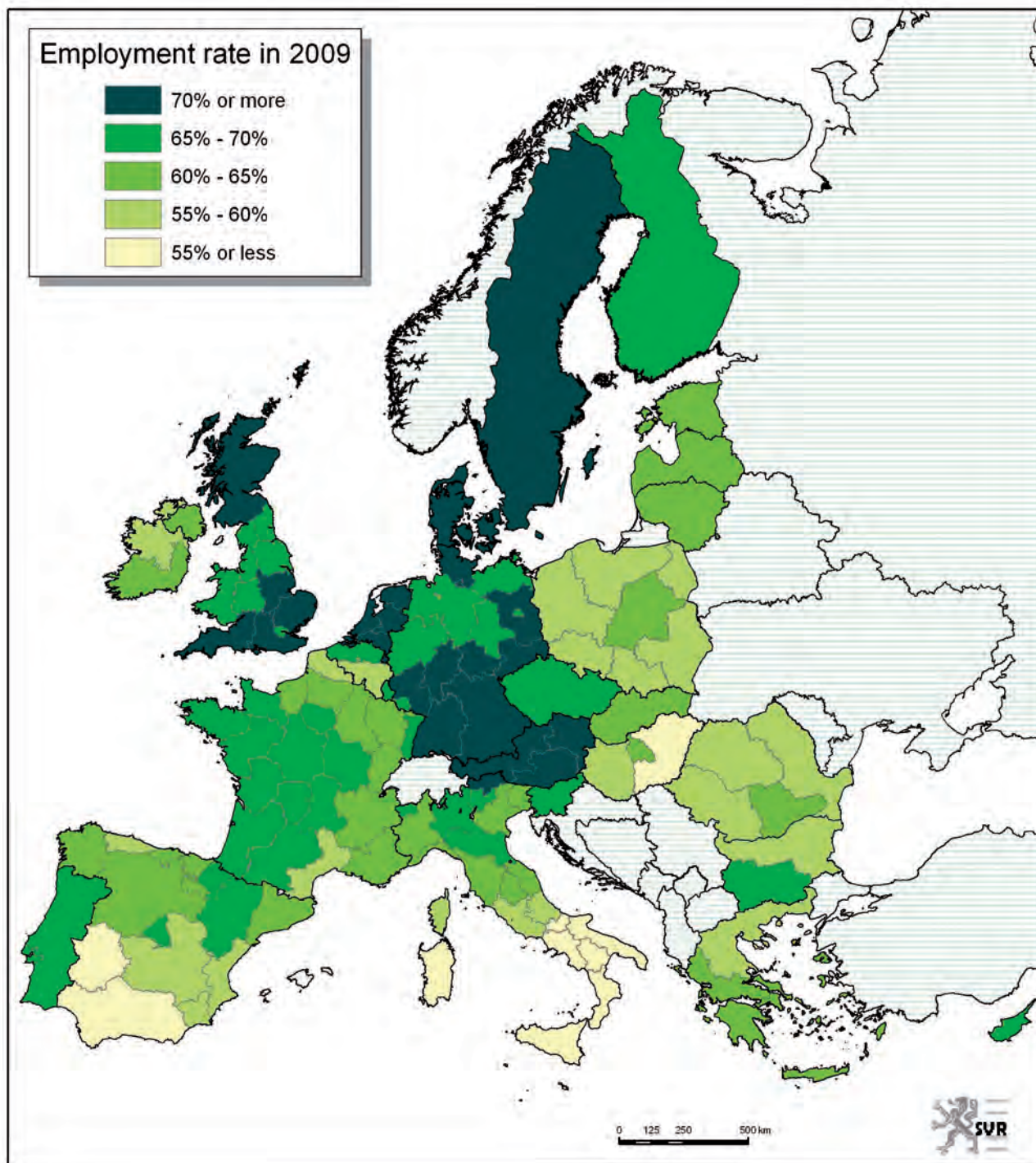
Graph 7: Employment rate



Source: Eurostat, Research Centre of the Flemish Government

² The number of workers living in a region as a % of people aged 15-64 y.

Map 3: Employment rate in 2009



Source: Eurostat, Research Centre of the Flemish Government

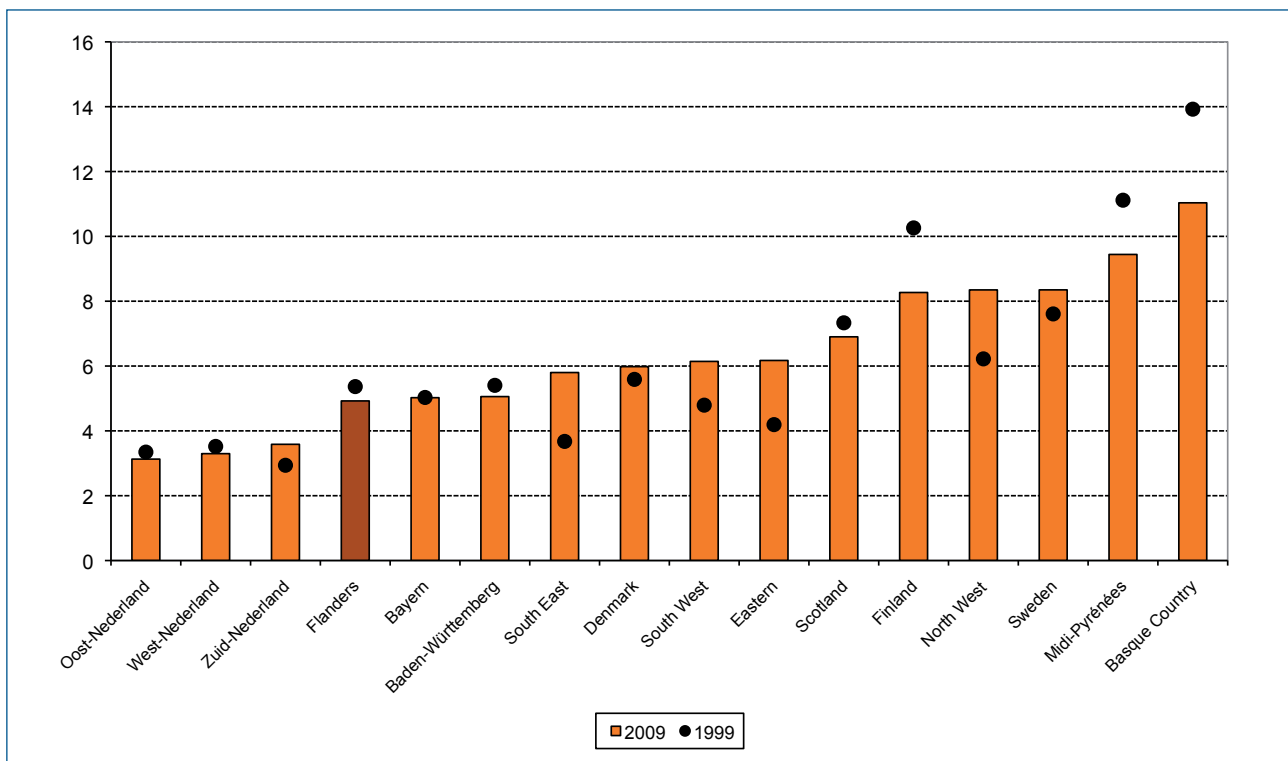
An important reason for the overall low employment rate in Flanders is the relatively low number of people at work aged 55-64 years. The employment rate of that age category is only 35.7%, which is one of the lowest of the 16 benchmark regions. In 10 years time there was nonetheless a clear improvement of the indicator (1999: 23.8%). But the other areas also did better, so the position of Flanders remained the same ever since the start of the series in 1999. The difference with the second lowest (Midi-Pyrénées: 40.0%) in 2009 is still remarkable. The employment rate in the age category of 55-64 year is especially high in Sweden (70.0%). It is striking that 13 out of the 16 benchmark regions have a rate higher than 50. Contrary to the overall indicator, the employment rate of the elderly workers was generally less affected by the crisis. In 2009 it only declined in the Basque Country, Midi-Pyrénées,

Finland and some British regions. In the broader context of all the EU regions, Flanders also performs worse (100th in 2009), although it did even worse in 1999 (117th).

The unemployment rate in Flanders is relatively low (4.9% in 2009 or 4th amongst the benchmark regions). In a few years time, Flanders improved its position (10th in 2005, 6th in 2008). Obviously, the economic downfall caused this indicator to rise everywhere in 2009. Only the three Dutch benchmark regions had lower unemployment rates than Flanders. The German benchmark Länder are also performing relatively well (about 5%). The unemployment rates are highest in the Basque Country and Midi-Pyrénées (11.0% and 9.4%). In comparison with 2008, those two areas saw the strongest percentage point increase of their rate. They now score above the EU-27 average. In the ranking of 131 EU regions, Flanders is 12th in 2009, improving its position of 2008 (16th). Once again, this shows that the Flemish labour market did better during the economic downturn of 2009.

In 2009, the male unemployment rate in Flanders is as high as the female (both 4.9%). The crisis struck harder amongst the male workforce and the male unemployment rate climbed faster. In the previous 10 years, the male rate was always lower than the female one. In most benchmark regions and in the EU-27 as a whole, the female unemployment rate is lower than the male.

Graph 8: Unemployment rate in 1999 and 2009 (in %)



Source: Eurostat, Research Centre of the Flemish Government

Flemish long term unemployment makes up 1.5% of the labour force in 2009 and ranks Flanders 10th in the list of benchmark regions, which is worse than in the overall unemployment ranking. There was some improvement during the last years however: in 2006 Flanders still ranked 14th. The Scandinavian areas generally score better in the field of long term unemployment, compared to general unemployment. Furthermore, the long term unemployment rate is rather low in the 3 Dutch benchmark regions and highest in the Basque Country and Midi-Pyrénées, analogous to their position in the ranking of the total unemployment rate.

The part-time employment rate is especially high in the Dutch benchmark regions (between 45 and 50% of total employment in 2009). Most benchmark regions generally have a share of 25 to 30%.

In Flanders it is 24.2%. The benchmark regions with a low share are Finland (13.9%), the Basque Country (14.2%) and Midi-Pyrénées (17.3%).

In 2009, 15.1% of the Flemish workforce was self-employed. Just like in 2008, only 3 benchmark regions have higher ratios: the Basque Country, Midi-Pyrénées and South West (UK). In the ranking of all 131 European regions Flanders ranks 65th, which is average. Mediterranean countries typically have a higher share of self-employed people.

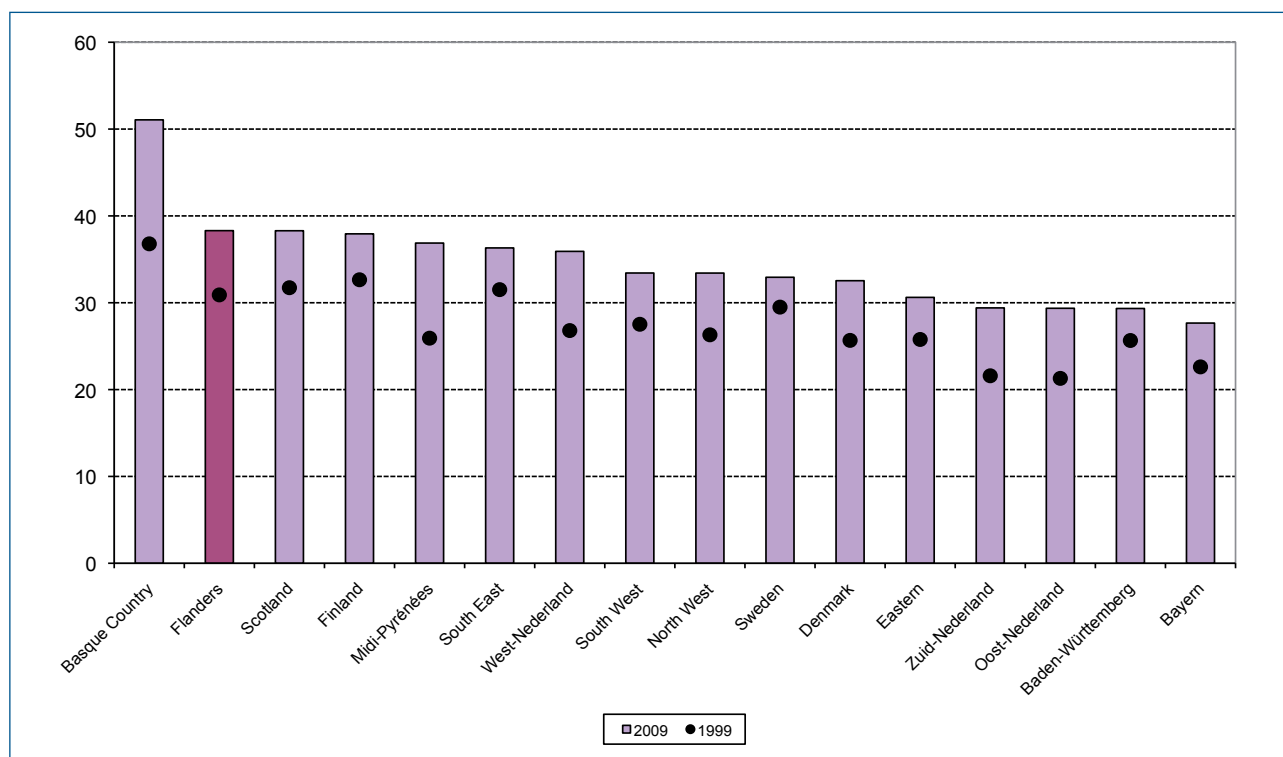
4 INNOVATION

The different innovation indicators are grouped into five broad categories. They are a reflection of the different stages of the innovation process³.

4.1 Prerequisites to innovation

An important feature of the Flemish economy is its highly educated workforce. The share of the workforce with tertiary education amounted to 38.2% in 2009. This ranks Flanders second amongst the benchmark areas. The indicator is very high in the Basque Country (51.1%). The two German Länder have remarkably low ratios (less than 30%). In 2008 Flanders was 3rd. In 10 years time, the share of the highly educated workforce increased everywhere. Flanders did relatively well, because in 1999 it was 5th. In the broader ranking, Flanders can be found on the 12th place, which is one place higher than in 2008. Some capital areas in particular have higher rates.

Graph 9: Share of the workforce with tertiary education in 1999 and 2009 (in %)



Source: Eurostat, Research Centre of the Flemish Government

There are no data available on lifelong learning as of yet. In 2008, 7.6% of the Flemish adult population participated in lifelong learning. Together with Bayern, Flanders is last in the benchmark ranking. Since 2005, this indicator gradually deteriorated. The British and Scandinavian regions have markedly higher scores (Denmark: 30.2%, Finland: 23.0%). The German Länder and Midi-Pyrénées also have ratios of less than 10%. In the ranking of all European regions, the Flemish result is mediocre (64th place). In this ranking too, the position of Flanders deteriorated over time. The Scandinavian and British regions take the lead in the broader ranking as well.

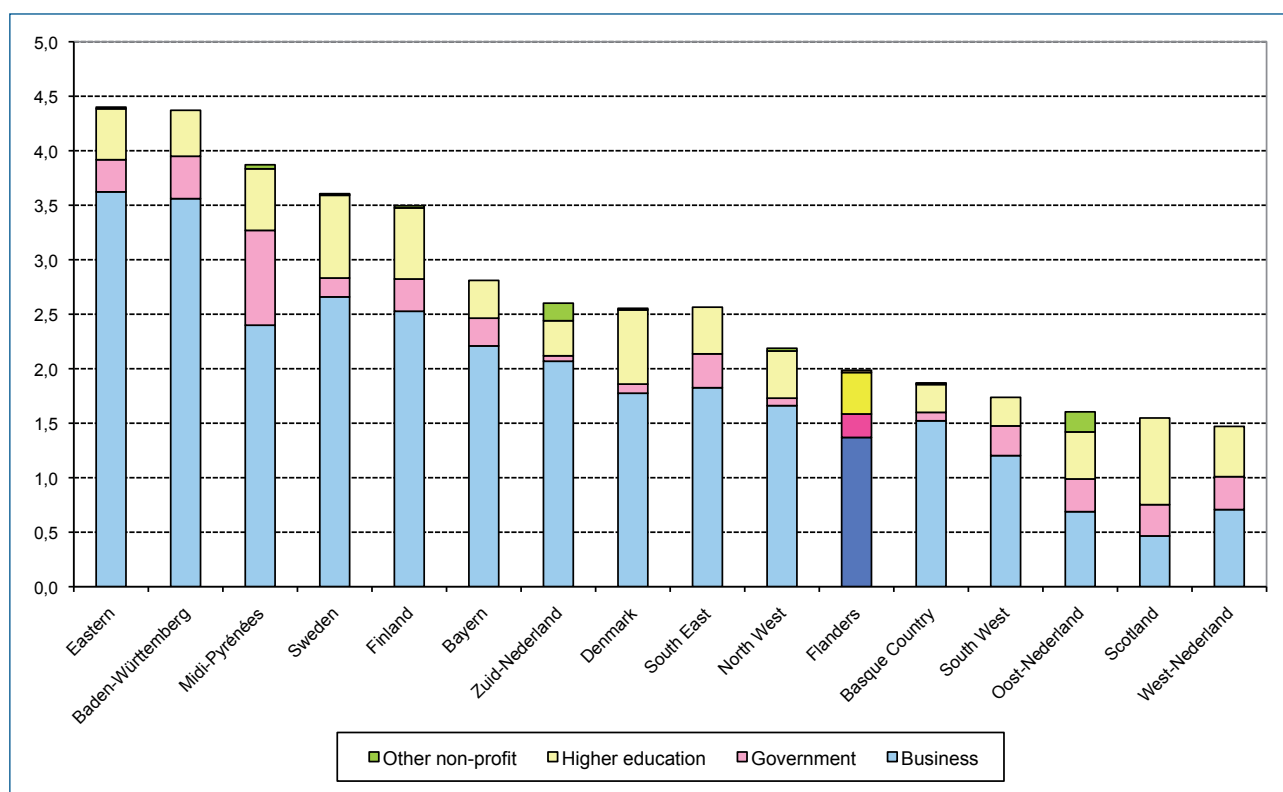
³ Inspired by the European Innovation Scoreboard and the reports on economic and social cohesion of the European Commission.

4.2. Creation of knowledge

According to Eurostat data, the Flemish expenditures for research and development (R&D) amounted to 1.99% of the GDP in 2007. This corresponds to the 11th place amongst the benchmark regions. Over the years, this position hardly changed, although Flanders ranked 10th in 2006. The top regions are Eastern (UK) (4.40%), Baden-Württemberg (4.37%), Midi-Pyrénées (3.87%), Sweden (3.61%) and Finland (3.50%). Total R&D expenditures are rather low in West-Nederland (1.39%) and Scotland (1.48%). But all the benchmark regions score higher than the median of the whole group of regions (1.17%). In the ranking of all 131 benchmark regions, Flanders is 23rd in 2007, which is rather good. But since 1999 (19th), its position slightly deteriorated.

Business is generally the most important component of R&D. Government and higher education are of less importance as a source of R&D. There is not much difference in the position of Flanders on the ranking according to these sources. With 1.37% of its GDP allocated to business R&D in 2007, Flanders performs significantly better than the median of the whole set of 131 benchmark regions (0.56%) and ranks 25th. With respect to that large set of EU regions, Flanders performs worse on the government (41th place) or higher education R&D lists (53rd place). Flanders is also losing some ground on the business (and higher education) ranking and the opposite is true on the government ranking. Of the benchmark regions, Midi-Pyrénées is the number one region of government R&D as a % of GDP and the Scandinavian regions and Scotland are spending the most on higher education R&D.

Graph 10: R&D spending as a proportion of GDP in 2006 (in %)



Source: Eurostat, Research Centre of the Flemish Government

4.3 Innovation and entrepreneurship

The Global Entrepreneurship Monitor (GEM) is an international survey set up to measure new entrepreneurship. One of the most renowned indicators resulting from that survey is the Total Entrepreneurial Activity (TEA) rate. This is the share of the adult population that is currently setting up a business or running a young business.

Table 1: Total Entrepreneurial Activity (TEA) rate in the benchmark regions (in %)

	2006	2007	2008	2009
Flanders	3.0	3.4	3.0	3.3
Denmark	5.3	5.4	4.4	3.6
Baden-Württemberg*	4.6*	n.a.	n.a.	n.a.
Bayern*	5.5*	n.a.	n.a.	n.a.
Basque Country	5.4	6.4	6.9	3.0
Netherlands**	5.4	5.2	5.2	7.2
France***	4.4	3.2	5.6	4.3
Finland	5.0	6.9	7.3	5.2
Sweden	3.5	4.2	n.a.	n.a.
North West (UK)	4.9	5.3	5.5	4.9
Eastern (UK)	5.7	6.1	7.3	6.9
South East (UK)	6.2	5.3	5.5	6.2
South West (UK)	7.6	6.5	5.9	5.8
Scotland	4.2	4.6	4.5	3.6

Source: Global entrepreneurship Monitor.

* average for 2005/2006

** no data for the Dutch regions

*** no data for the French regions

According to this source, and as far as the data are available, Flanders has a TEA rate of 3.3% in 2009, just better than the Basque Country. Top performers in 2009 are the Netherlands and the British Eastern and South East regions. Flanders, however, was able to improve its TEA in 2009 with respect to 2008 (3.0%). This is especially good because most of the regions concerned were confronted with a lower TEA due to the crisis that struck hard in 2009. The Netherlands, and to a lesser degree South East (UK) were other regions with an improving entrepreneurial activity in 2009. The deterioration of the Basque Country and Finland in 2009 is remarkable.

Bear in mind that the TEA is a measure for new entrepreneurship. The intra-family take-over of businesses, which is a common practice in Flanders, is not taken into account.

4.4 Application of innovation

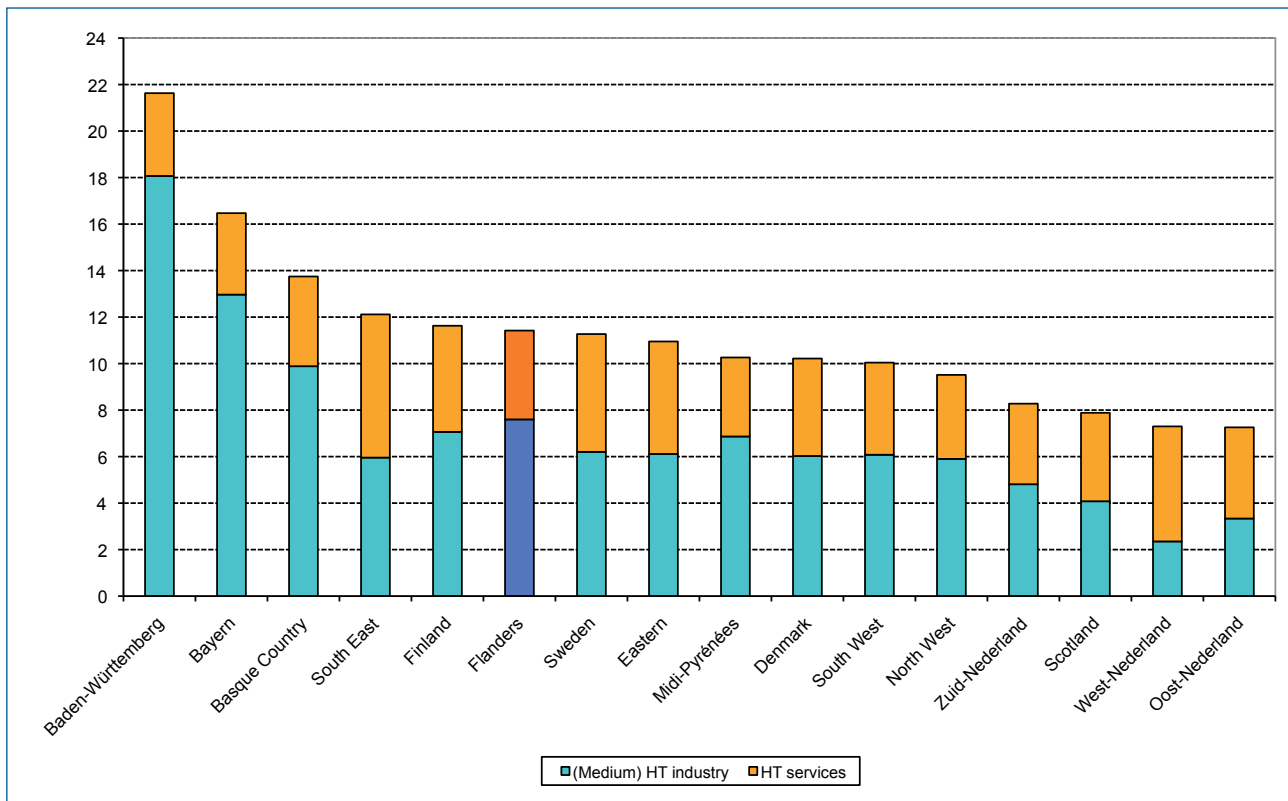
In an innovative economy, a sufficient number of people must be working in knowledge-intensive companies or branches. They have a high R&D percentage with respect to turnover. This concerns companies in the medium-high-tech or high-tech industry or high-tech services (e.g. construction of telecommunication equipment, chemistry, computers, electrical appliances, research,...). In 2007, 11.4% of all Flemish employees were working in such sectors, ranking Flanders 6th among the benchmark regions. Baden-Württemberg (21.6%) outranks every other area. Bayern also has a high share of branches with a high knowledge intensity (16.5%). The Basque country, South East (UK) and Finland are also quoted higher than Flanders. The performance of the Basque Country is remarkable, because in 1995 it ranked lower than Flanders. The 3 Dutch areas and Scotland hold the last positions. Over the years, the share of knowledge-intensive branches in Flanders did not change much; in 1995 it was already 12.0%. In the whole EU ranking Flanders ranks 28th. Baden-Württemberg is also taking the lead in the broader ranking.

In the subcategory of the medium-high-tech and high-tech industry, Flanders performs better in the benchmark comparison (7.6% in 2007 or 4th). The two German benchmark Länder also rank first here, followed by the Basque Country. Over the years, Flanders' position remained for the most part the same. But the evolution amongst the benchmark regions was heterogeneous: the two German leading regions were also top performers in 1995. Together with the Basque Country, the share of workers in the medium-high-tech and high-tech industry of the Midi-Pyrénées and Finland remained constant or increased even. This was not the case in Flanders, which faced a decline of 1.8 percentage point in this type of industry. Denmark, Sweden and the Dutch and British benchmark regions also faced a decline of their share. In the ranking of all the EU regions, Flanders ranks 34th. This is because the industrial sector takes up a substantial part in the economies of quite a lot of the new member states.

The knowledge-intensive services comprise high-tech, market and financial services. In the whole set of knowledge-intensive services, the outline is different: Flanders ranks 12th in 2007 (15.1%), maintaining its position from 1995. South East (UK) and West-Nederland take the lead (between 21 and 22%). The leading regions on the industrial subranking are performing worse on knowledge intensive services. The evolution in Finland is remarkable: it ranked last of the benchmark regions in 1995, but rose to the 7th place in 2007.

In the subsector of the high-tech services, Flanders (3.8% in 2007) ranks 10th. The British South East (6.2%) and Sweden (5.1%) are the top regions. In the broader EU ranking Flanders ranks 27th. Capital regions usually perform well with regard to this indicator, e.g. West-Nederland (12.7%). Furthermore, knowledge-intensive market services are not a Flemish speciality (15th in 2007). Those kinds of activities are more present in Brussels. In the list of knowledge-intensive financial services, Flanders ranks 7th in 2008 (3.7%), which is not bad given the importance of those activities in neighbouring Brussels. The British benchmark regions excel in this domain. In the broader ranking Luxemburg (10.5%) is the top region, with no real challengers.

Graph 11: Share of knowledge-intensive workers in 2007 (in %)



Source: Eurostat, Research Centre of the Flemish Government

Employment in creative industries deserves special attention. An economy certainly needs entrepreneurs and workers who elaborate ideas and who turn them into practical appliances, either material (e.g. designers) or non-material (e.g. artists). In 2009, 43.9% of the Flemish labour force was working in creative industries. Just like in 2008, this corresponds to the 9th place amongst the benchmark regions. Nevertheless, the indicator is increasing once more, after a three year decline.

The Dutch and Scandinavian regions score higher. Flanders does rather good in the ranking of 131 EU regions (21st place). The top positions are taken by capital regions that are real hubs for creative industries.

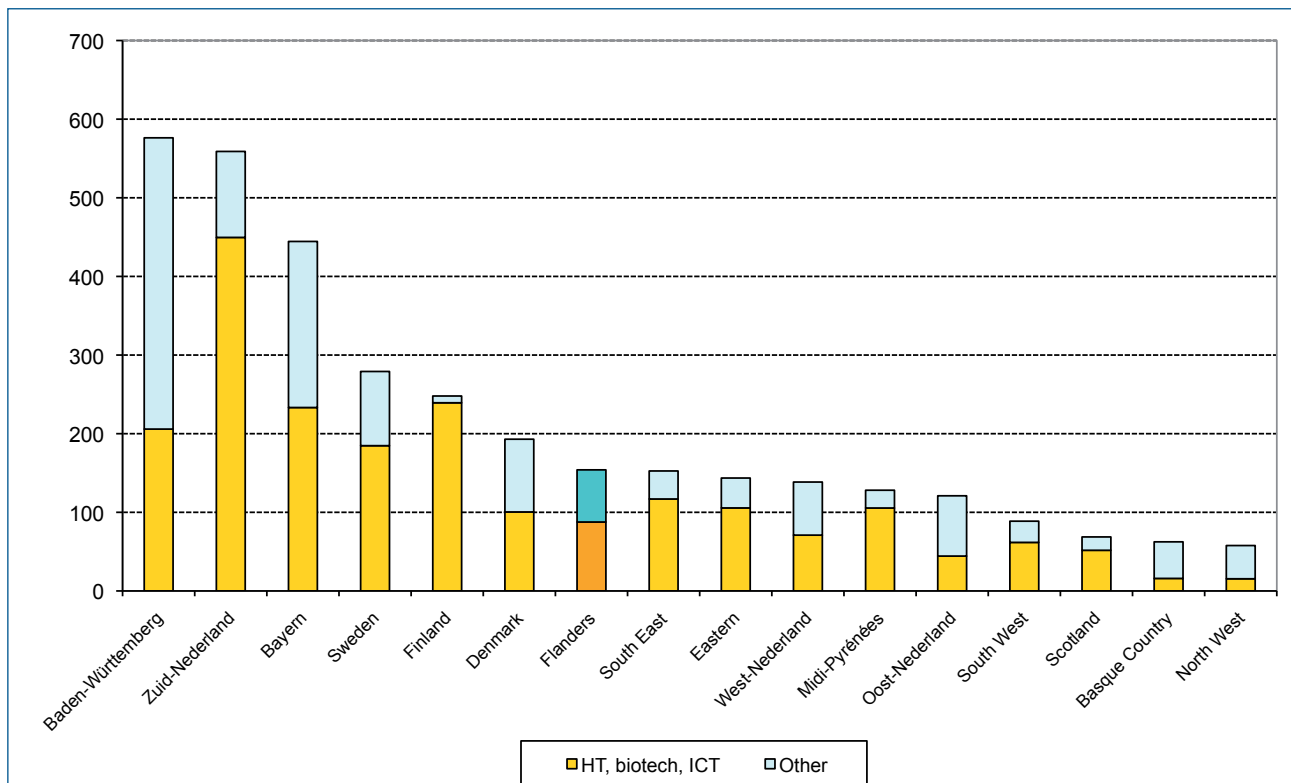
4.5 Intellectual property

The final step in the innovation process is the patent application. But not all research automatically results in a patent application. Therefore some caution is needed in interpreting these data.

Flanders counted 154 patent applications per million inhabitants in 2006. This corresponds to the 7th place in the benchmark listing. There are huge differences among the benchmark regions. Baden-Württemberg (576), Zuid-Nederland (559) and, to a lesser extent, Bayern (444) are clearly areas with an intensive patent application. This contrasts with the Basque Country and some British regions that have less than 100 patent applications per million inhabitants. In 1995, Flanders ranked 6th. Shortly afterwards, its position deteriorated to the 9th place in 1998, where it remained until 2005 and 2006, before it improved again. In the set of all European regions, Flanders can be found on the 21st position.

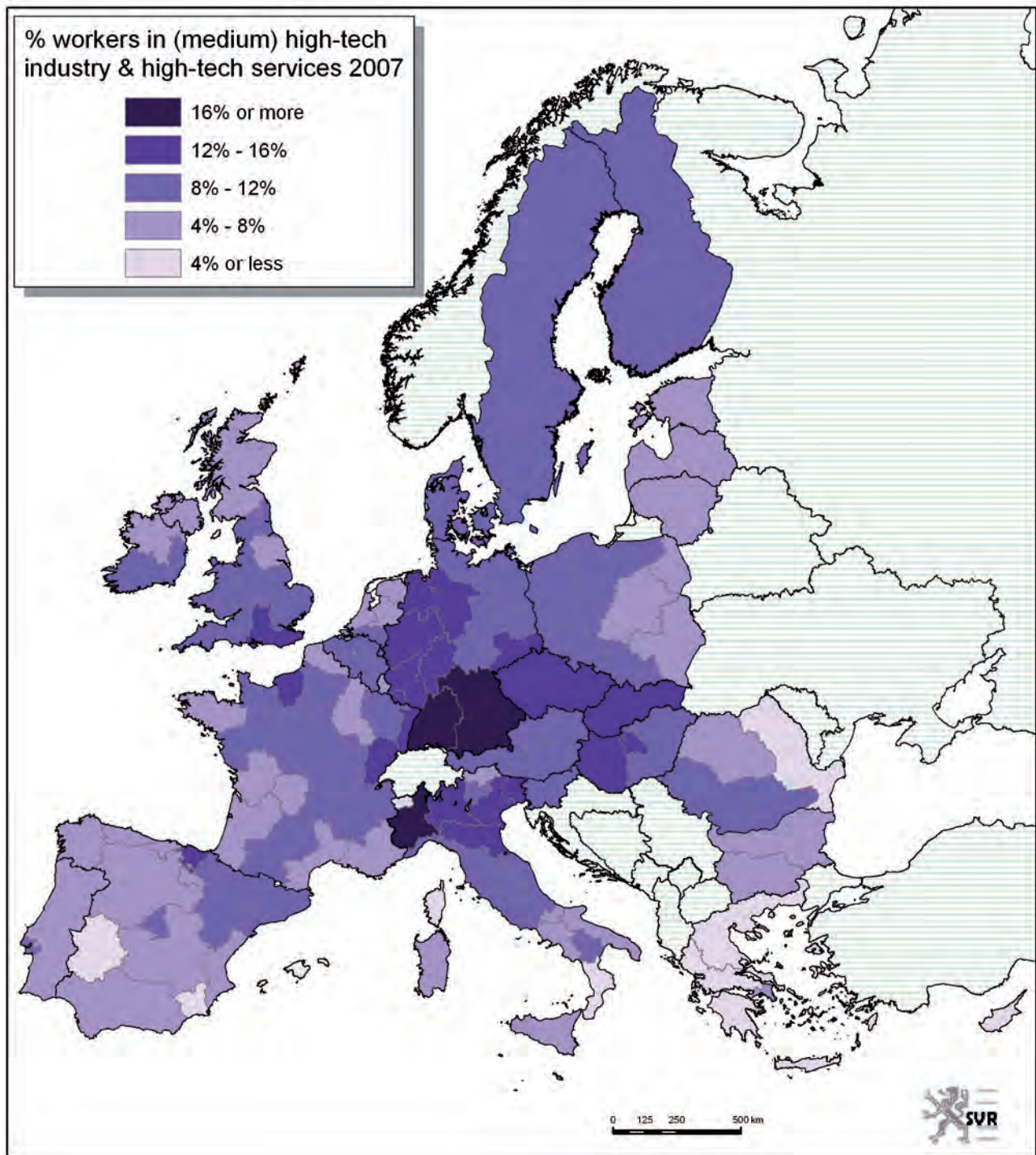
In the subcategory of high-tech, biotech and ICT patent applications, Flanders does worse (10th place in 2006, 88 per million inhabitants). Zuid-Nederland is by far the best performing region (444 applications). The German regions and Finland are also doing well (more than 200 applications). This lesser performance of Flanders is mainly due to ICT and high-tech activity (10th and 9th place). In biotech applications, the Flemish position is somewhat better (6th in 2006).

Graph 12: Number of patent applications per million inhabitants (high tech, biotech and ICT and other) in 2006



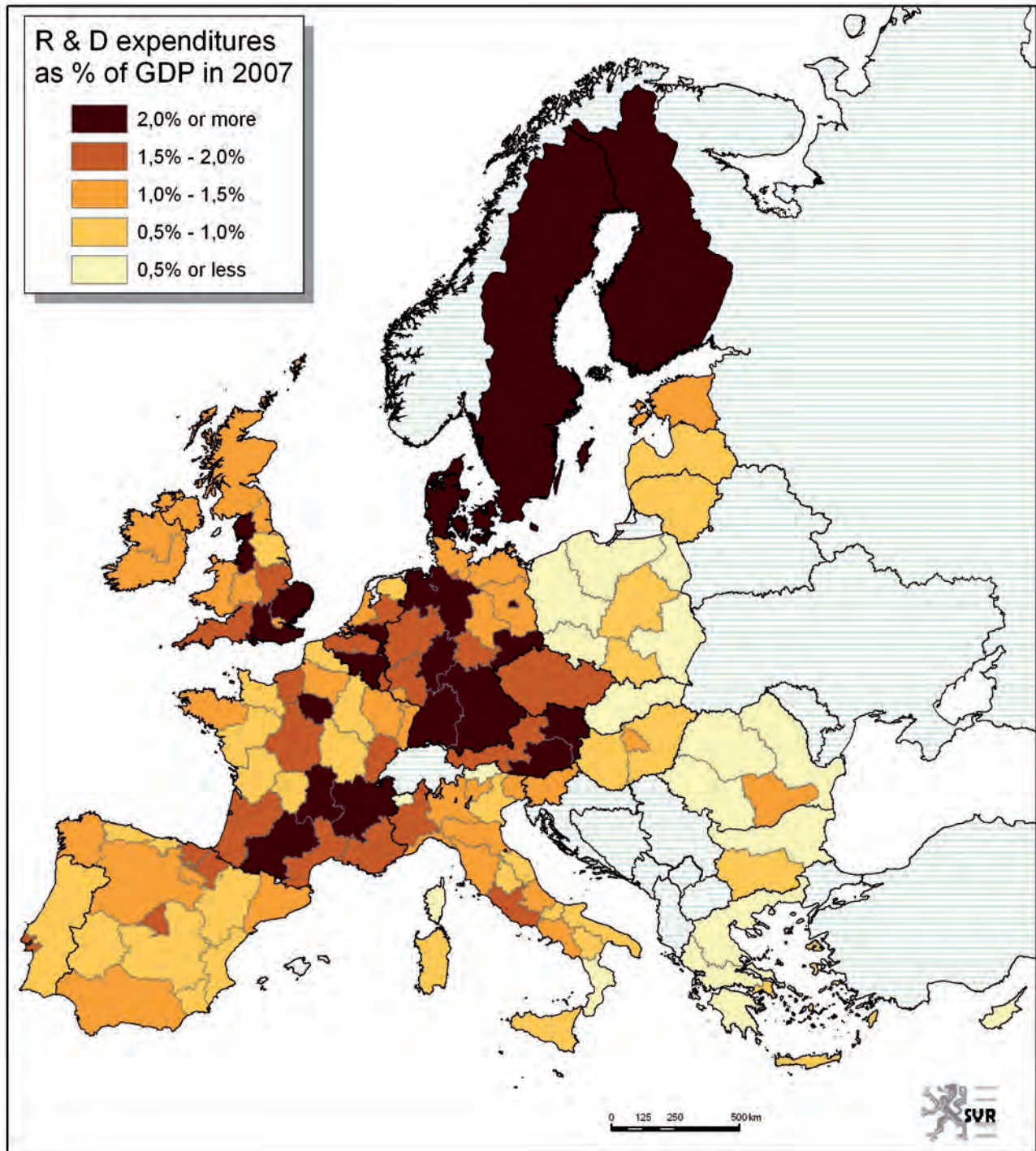
Source: Eurostat, Research Centre of the Flemish Government

Map 4: % of workers in (medium) high-tech industry and high-tech services in 2007



Source: Eurostat, Research Centre of the Flemish Government

Map 5: R&D expenditure as a % of GDP in 2007



Source: Eurostat, Research Centre of the Flemish Government

5 TOPIC: ENVIRONMENTAL BENCHMARKING

Given the availability of data, the benchmarking of regions or even countries is usually connected to economic, social or technological statistics. However, thanks to research from the Environment, Nature and Energy Department of the Flemish administration ⁴, some environmental indicators of Flanders can be compared to other benchmark regions in the EU. These benchmark regions are determined on the basis of comparability according to population density, industrialisation and transport intensity ⁵. They more or less correspond to the ones used in Flanders outlook; the Netherlands are comprised as a whole and Midi-Pyrénées is left out.

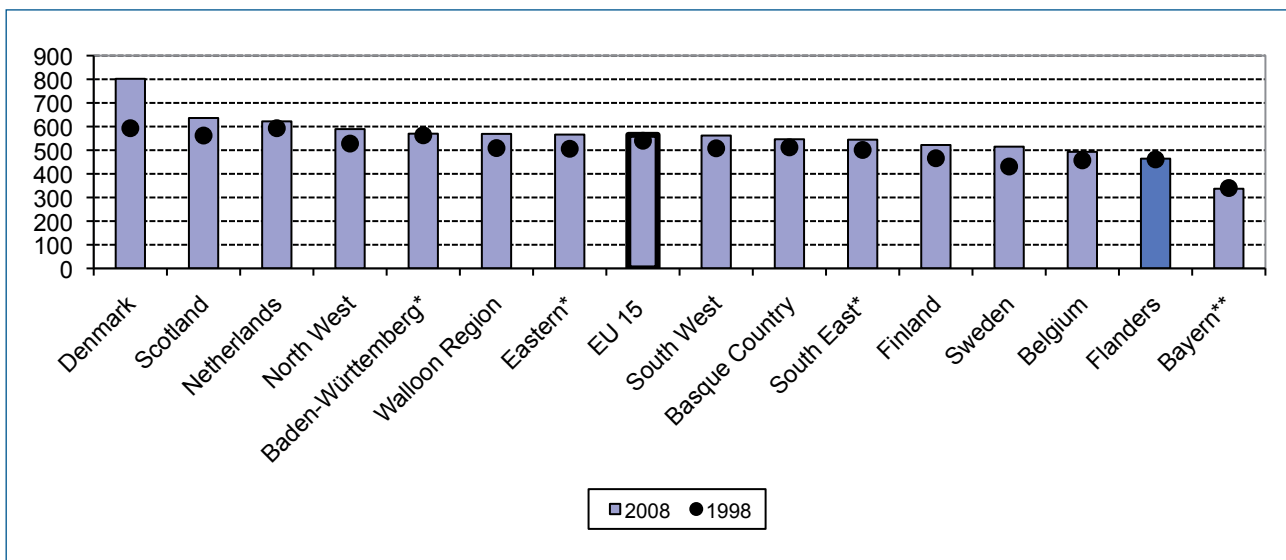
Seven indicators will be analysed. They deal with waste, emissions and air quality, renewable energy and water. Not all data are available for all years. But it is worthwhile to give a first overview of the situation based on these data.

The extent to which regions are populated is very important for environmental benchmarking. Populous regions have a greater chance of pollution. There are huge differences amongst the benchmark regions in regard of population density. In 2009, West-Nederland was the densest populated region (650 inhabitants per km²). However, Flanders, Zuid-Nederland and the British North West and South East also had a high density (400-500 inh./km²). Baden-Württemberg, Oost-Nederland, Eastern (UK) and the Basque Country were fairly densely populated (about 300 to 400 inh./km²). The British South West is moderately populated (219 inh./km²). The other regions have a low population density: Bayern, Midi-Pyrénées, Scotland and the three Scandinavian benchmark areas. Finland and Sweden are particularly lowly-populated (21 and 16 inh./km²).

5.1 Waste

The generated municipal waste consists of waste collected by or on behalf of municipal authorities and disposed of through the waste management system. The bulk of this stream is from households, though similar waste material from sources such as commerce, offices and public institutions are included.

Graph 13: Generated municipal waste (kg / person) in 1998 and 2008



Source: Different statistical institutes, Environmental Unit Flemish Administration.

* data 2007 instead of 2008

** data 2005 instead of 2008

⁴ In collaboration with the Flanders' Environment Report (Flemish Environment Agency), www.environmentflanders.be.

⁵ Environment, Nature and Energy Department, "Comparison of the condition of the environment and nature", Flemish Government, 2010, 112 pp.

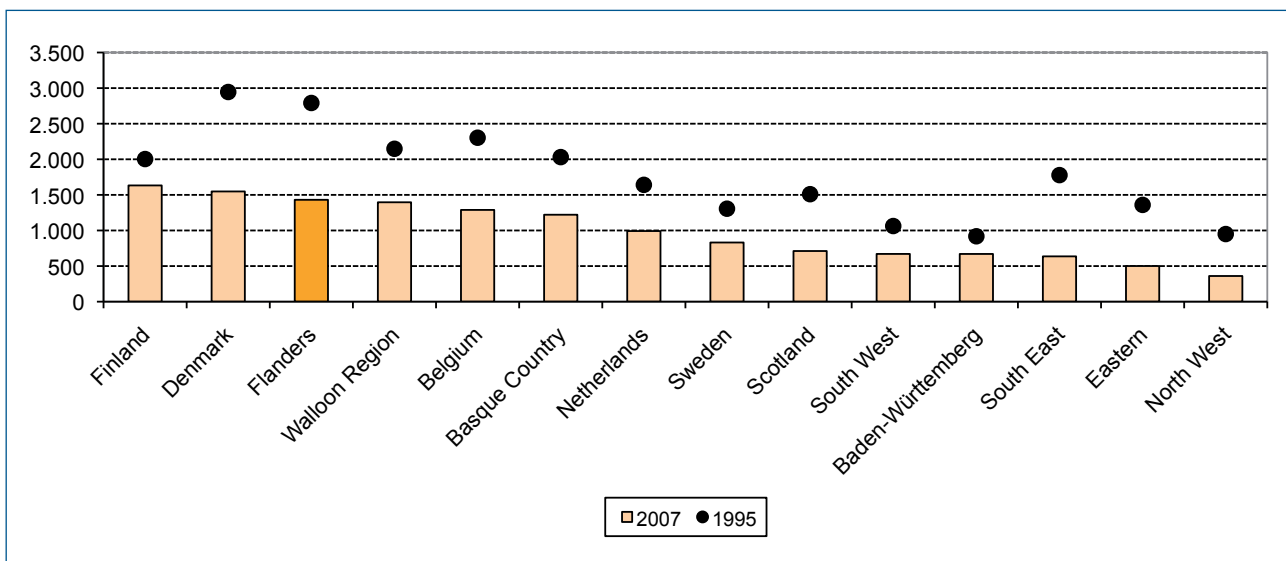
Flanders performs well on this indicator: in 2008 it generated 464 kg of municipal waste per person. Only Bayern does better (337 kg per person), but this result is based on data from 2005. The majority of the benchmark regions score between 500 and 600 kg, which is the EU-15 average. Denmark is an outlier in this comparison (about 800 kg). Since 1997, there are data for all the benchmark regions. In Flanders, generated municipal waste per capita reached the same level in 2008 as it did in 1997. Only Bayern performs as well (but for the period 1997-2005). In the other regions, the amount of generated waste per capita increased to a stronger or lesser degree, in Denmark and Sweden even by 36% and 24%.

5.2 Emissions and air quality

Emissions of acidifying substances consist of nitrogen oxides, sulphur dioxide and ammonia. In Flanders, nitrogen oxides have the greatest share in acidifying emissions (42%), the other two components each causing around 30% or less. Agriculture, transport and energy production are the main causes for emission of acidifying substances.

In 2008, Flanders caused an emission of acidifying substances of 1,268 Aeq per inhabitant. There are only enough figures for 2007 to compare them internationally. Finland and Denmark are the regions with the highest emissions. But Flanders ranks third. Belgium as a whole, Wallonia and the Basque Country all score more than 1,000 Aeq per capita. The other regions have (far) lower emissions; in the North West (UK) it is only 361 Aeq per inhabitant. In 2008, the Flemish emissions of all acidifying substances amounted to 7,837 mio Aeq. According to the national emission ceilings of the European directive (NEC), the Flemish emissions should reduce to 6,937 mio Aeq in 2010. Flanders did, however, make an effort in reducing these emissions: in 1995 they amounted to 16,392 mio Aeq. The other benchmark regions were successful too, as can be derived from the following graph. Throughout the years, Flanders was especially successful in reducing its emissions of sulphur dioxide. This is due to the lower sulphuric content in fuels.

Graph 14: Emissions of acidifying substances in 1995 and 2007 (in Aeq per inhabitant)*



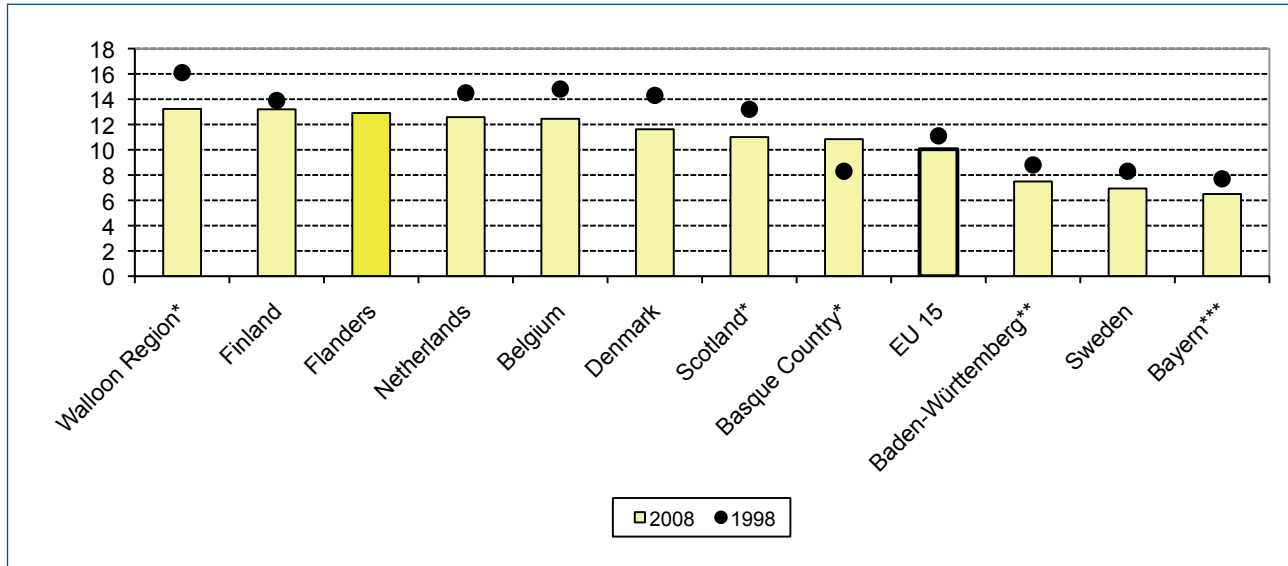
Source: Different statistical institutes, Environmental Unit Flemish Administration.

* there are no data for Bayern.

The reduction of greenhouse gases is a well-known policy objective. Increasing amounts of greenhouse gases are responsible for global warming. In the Kyoto protocol, the reduction of 6 of those gases (CO₂, N₂O, CH₄, HFCs, PFCs and SF₆) is agreed upon and Belgium and other member countries have been given a target. It has been determined that every region has to contribute in order to achieve the Belgian goal. Flanders had a total emission of 79.8 mio T CO₂ equivalents in 2008, which

is 6.7% less than in its Kyoto base year. At the moment, Flanders complies with its Kyoto goal (an average reduction of 5.2% in the period 2008-2012 compared to the Kyoto base year). Renewables, softer climatologic circumstances and cleaner nitric acid production are all responsible for this reduction. Climatologic circumstances may also have influenced the emission of greenhouse gases.

Graph 15: Emission of greenhouse gases (ton CO₂ equivalent per capita) in 1998 and 2008



Source: Different statistical institutes, Environmental Unit Flemish Administration.

* data 2007 instead of 2008

** data 2007 instead of 2008, only CO₂, CH₄ and N₂O

*** data 2005 instead of 2008, only CO₂

Flanders has a rather high emission of greenhouses gases (12.9 ton CO₂ equivalent per capita), although there are no data for 4 British benchmark regions. The German regions⁶ and Sweden are the top performers in this ranking (below 8 ton CO₂ equivalent per capita). The EU-15 average is 10.0 ton CO₂ equivalent per inhabitant. But since 1995, Flanders was able to reduce its emission of greenhouse gases by 2.4 ton CO₂ equivalent per capita. This is better than the majority of the benchmark regions.

Another indicator is the exposition to concentrations of particulate matter (PM10) in excess of the EU limit value set for the protection of human health. Being exposed to PM10 enhances the risk of heart and respiratory diseases. The agricultural, industrial and transport sector are mainly responsible for PM10 emissions. A daily average concentration of 50 µg/m³ may not be exceeded more than 35 times a year. The indicator shows the 36th highest daily PM10 concentration averaged through available urban and suburban background stations.

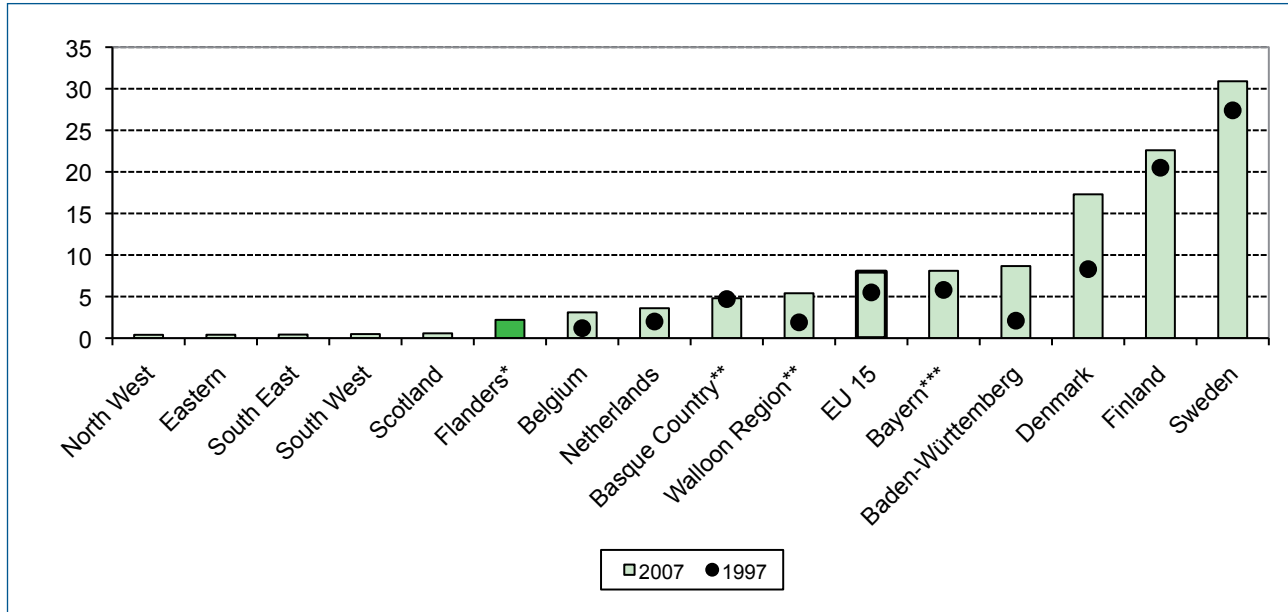
In Flanders this was 40.5 µg/m³ in 2007, considerably less than in 2006 (55.0 µg/m³). Not all the data are available for the whole set of benchmark areas (notably the Netherlands, Denmark and Baden-Württemberg). The Basque Country is scoring higher (47.0 µg/m³) than Flanders and the EU-15 (45.6 µg/m³). On the other hand, the indicator is lowest in Finland (23.0 µg/m³) and Sweden (25.6 µg/m³). The other benchmark regions (for which data are available) have a value roughly between 30 µg/m³ and 40 µg/m³.

⁶ Though the German regions partially reported on the 6 gases.

5.3 Renewable energy

Renewable energy consumption is the ratio between gross inland energy consumption from renewable sources and total gross inland energy consumption. Renewable energy sources comprise non-fossil energy sources such as wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases. According to a European directive, Belgium should have a share of at least 13% in 2020.

Graph 16: Share of renewable energy in total energy consumption in 1997 and 2007 (as a %)



Source: Different statistical institutes, Environmental Unit Flemish Administration.

* data 2009 instead of 2007

** data 2008 instead of 2007

*** data 2005 instead of 2007

In 2009, Flanders had a share of renewable energy of 2.2%⁷. This is rather low in comparison to the benchmark areas. Only the British regions perform worse. Renewable energy is clearly more widespread in the Scandinavian countries, where it amounts to more than 15% in Denmark and even to more than 30% in Sweden in 2008. The EU-15 average is 8.0%. It will not come as a surprise that the share of renewables is increasing over time; in Flanders it was only 0.9% in 2005.

5.4 Water

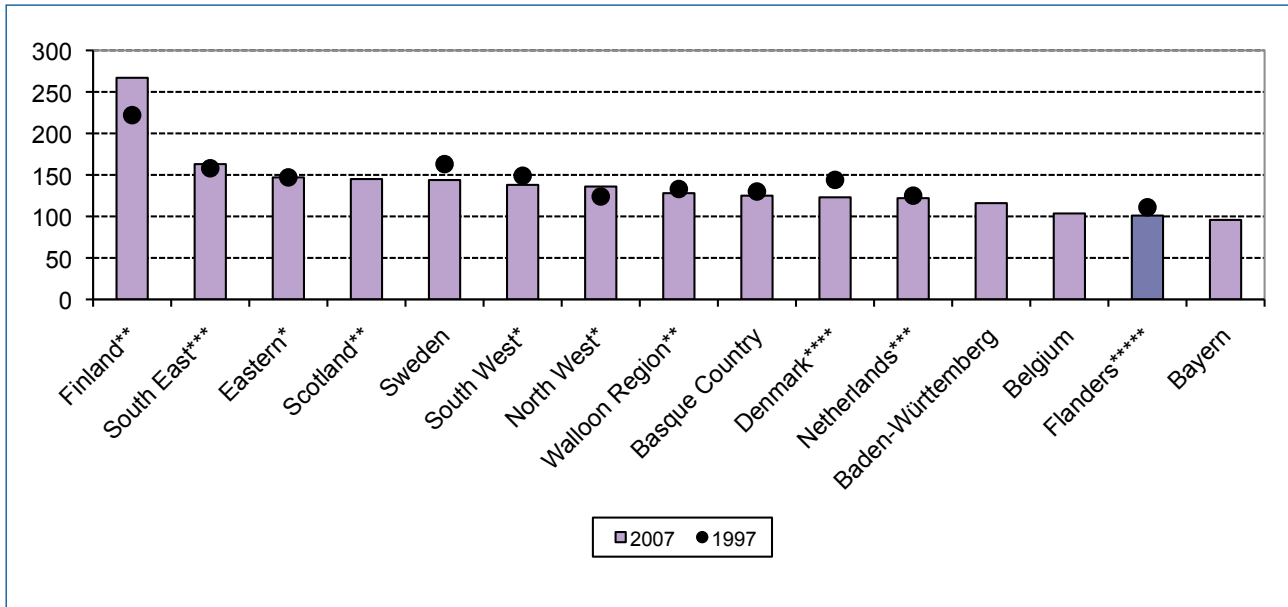
The water system is an interdependent set of surface water, soil water, water banks with life systems, chemical, physical and biological processes and technical infrastructure. The supply of water, together with its life function for animals and economic and recreational value, make the water system valuable, but fragile.

Wastewater treatment is defined as the percentage of national population connected to wastewater treatment plants. In Flanders this was 73% in 2008, which is below the EU-15 average of 84% (in 2006). The target value for wastewater treatment in Flanders is set to 80% in 2010. Not all households are intended to connect to the public wastewater treatment plants. Scattered buildings will be treated individually. The German benchmark Länder, the Netherlands and Scotland all have a connection percentage of 90% or more. But throughout the years, Flanders clearly made progress; in 1995 the percentage of the population connected to wastewater treatment installations was only 37%.

⁷ For Flanders, the share of renewable energy is calculated as the share of renewable electricity production + renewable heat production + use of biofuel in transport in final energy consumption. In the near future, a dataset for 'share of renewable energy' will become available as defined by the new Directive on Renewable Energy.

Household water consumption in Flanders amounted to 101 litres per person a day in 2003. This is rather low in comparison with the benchmark regions. Only Bayern has a lower consumption (96 litres in 2007). Water consumption is very high in Finland (267 litres in 2008). The British regions and Sweden also score relatively high (roughly around 150 litres per person per day).

Graph 17: Household water consumption in 1997 and 2007 (litres per capita per day)



Source: Different statistical institutes, Environmental Unit Flemish Administration.

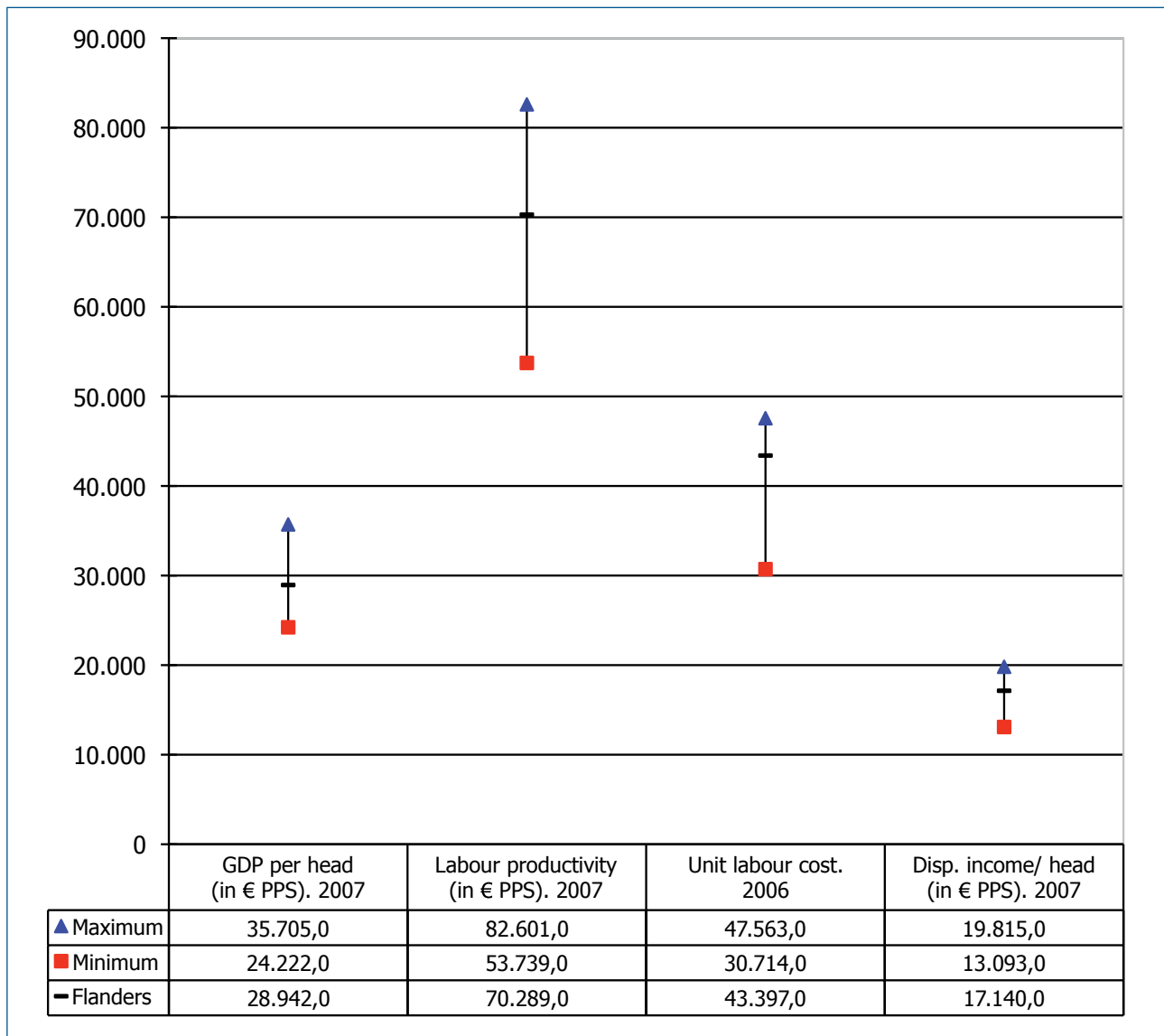
- * data 2009 instead of 2007
- ** data 2008 instead of 2007
- *** data 2006 instead of 2007
- **** data 2004 instead of 2007
- ***** data 2003 instead of 2007

6 CONCLUSION

Flanders is a prosperous region. In order to guarantee our future welfare, Flanders must evolve into an innovation-oriented economy, capable of generating and selling products and services with high value added. On the basis of technological and innovative indicators, it has been determined that 15 regions have an advantage over Flanders. Consequently, these regions are used as benchmark areas.

Flanders has a GDP of € 28,942 PPS per head in 2007. It ranks 10th in the list of benchmark regions. Since the beginning of this decade, Flanders lost some places. High labour productivity is the main determinant of Flemish welfare, although Flanders is also doing a bit worse on the ranking in this respect. The number of jobs is relatively moderate, due to the economic hub of neighbouring Brussels. As a result, many Flemish workers commute to the Brussels capital region, contribute to the Brussels GDP, but take their income home to where they live. Anyway, Flanders did improve its position in 2007, compared to 2006. The share of people aged 15-64 years is not really an asset for Flanders either.

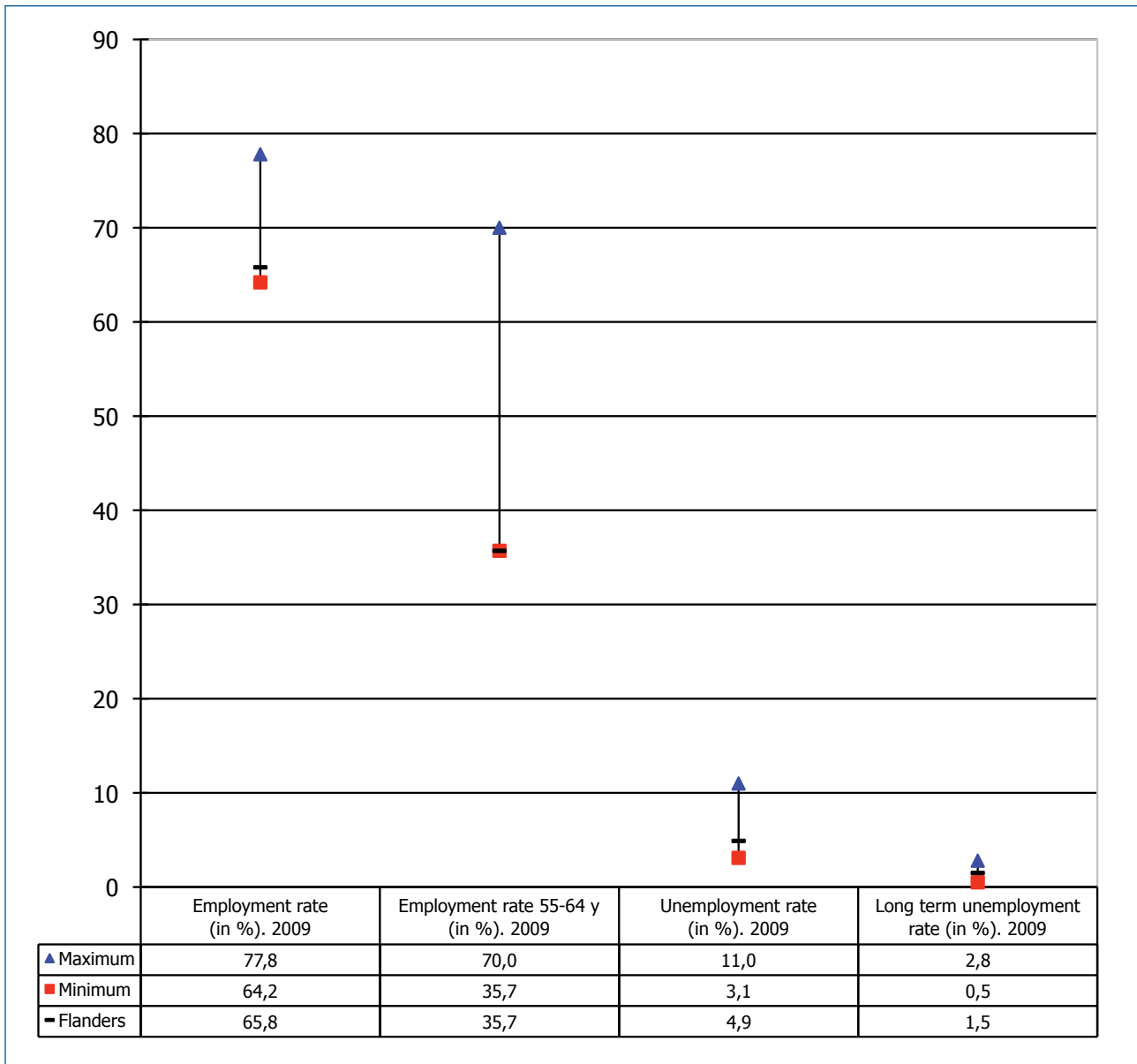
Graph 18a: Summary of economic indicators



Source: Eurostat, Research Centre of the Flemish Government

The employment rate is relatively low in Flanders, especially in the older age classes. However, Flanders gained a place on the total employment list. On the other hand, the unemployment rate is rather low in Flanders, and what is more, Flanders is gradually improving its position in the benchmark list.

Graph 18b: Summary of labour market indicators

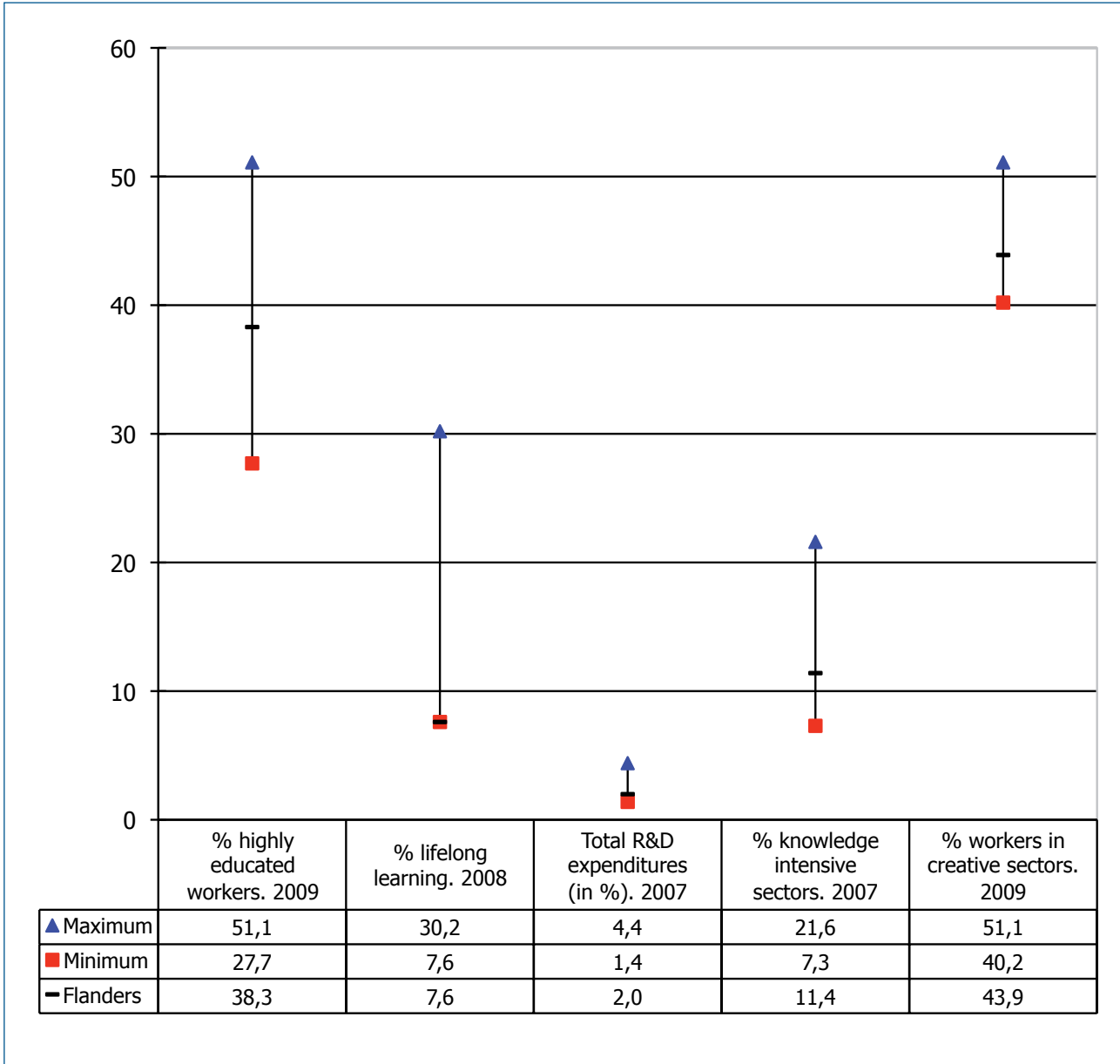


Source: Eurostat, Research Centre of the Flemish Government

The position of Flanders in the innovation process is ambiguous: a well educated workforce is clearly an asset and Flanders did a bit better in 2009 compared to 2008. On the other hand, Flemish workers are still not sufficiently engaged in lifelong learning (according to the Eurostat data). Most benchmark regions have a higher R&D percentage, but that does not come as a surprise, given the fact that this was one of the indicators used to determine better performing regions. In 2007, Flanders lost one place on the benchmark list, compared to 2006. In the broader list comprising all the EU-27 regions, Flanders is positioned in the first quartile of best regions in 2007, which is quite good. New entrepreneurship is less common spread in Flanders, certainly in comparison with the benchmark areas. However, this is an important prerequisite in order to apply the results of the innovation process in the economy. Given the fact that these data are recent (2009), the effect of the crisis can be revealed, and Flanders was less affected than most benchmark areas! Flanders achieves average

results with regard to the number of workers in knowledge-intensive sectors. The same goes for the number of patent applications, but Flanders has been performing better during the last years. Nevertheless, in order to enhance our future capability of generating welfare, we must continue to tackle some of those aspects. This must be our most urgent concern, because many countries and regions are aware of the importance of innovation as a motive for welfare.

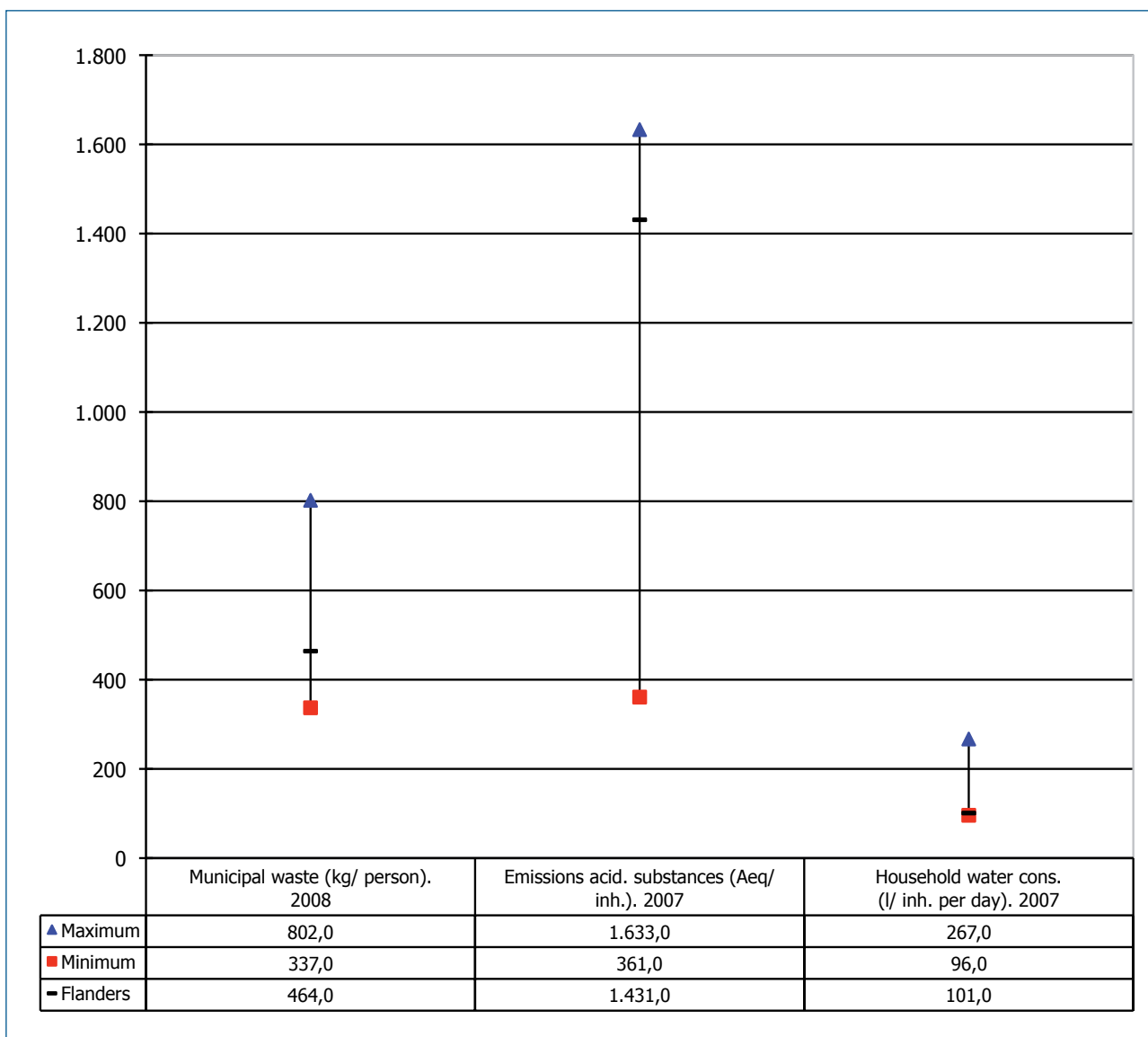
Graph 18c: Summary of innovative indicators



Source: Eurostat, Research Centre of the Flemish Government

The performance of Flanders on the environmental indicators is also ambiguous. With regard to emissions and renewable energy, Flanders does not perform very well, compared to the benchmark regions (notwithstanding reduced emissions). On the other hand, the relatively low household consumption of water and low amount of generated municipal waste constitute strengths for Flanders.

Graph 18d: Summary of environmental indicators



Source: Different statistical institutes, Environmental Unit Flemish Administration

Annex: Key indicators for Flanders and the benchmark regions

	Population	Population density (inhabitants / km ²)	Employment rate (in %)	Employment rate 55-64 y (in %)	Unemployment rate (in %)	Long term unemployment rate (in %)
	1/1/2009	1/01/2009	2009	2009	2009	2009
EU27	499,691,750	114	64.6	46.0	8.9	3.0
EU25	470,586,583	116	64.9	46.1	9.1	3.0
EU15	396,345,509	120	65.8	47.9	9.1	3.0
<i>be</i> Belgium	10,741,572	352	61.6	35.2	7.9	3.5
<i>cz</i> Czech Republic	10,467,542	133	65.4	46.8	6.7	2.0
<i>dk</i> Denmark	5,511,451	128	75.7	57.5	6.0	0.5
<i>de</i> Germany	82,002,356	230	70.9	56.2	7.7	3.5
<i>ee</i> Estonia	1,340,415	31	63.5	60.5	13.8	3.8
<i>gr</i> Greece	11,260,402	85	61.2	42.2	9.5	3.9
<i>es</i> Spain	45,828,172	91	59.8	44.1	18.0	4.3
<i>fr</i> France	64,367,000	102	63.7	38.9	9.5	3.5
<i>ie</i> Ireland	4,450,030	64	61.8	51.0	11.7	3.4
<i>it</i> Italy	60,045,068	199	57.5	35.7	7.8	3.5
<i>cy</i> Cyprus	796,875	140	69.9	55.9	5.3	0.5
<i>lv</i> Latvia	2,261,294	35	61.0	53.2	17.1	4.6
<i>lt</i> Lithuania	3,349,872	51	60.1	51.6	13.7	3.2
<i>lu</i> Luxembourg (Grand-Duché)	493,500	191	65.2	38.1	5.1	1.2
<i>hu</i> Hungary	10,030,975	108	55.4	32.8	10.0	4.2
<i>mt</i> Malta	413,609	1,311	54.9	28.0	6.9	3.1
<i>nl</i> Netherlands	16,485,787	397	77.0	55.1	3.4	0.8
<i>at</i> Austria	8,355,260	100	71.6	41.1	4.8	1.0
<i>pl</i> Poland	38,135,876	122	59.3	32.3	8.2	2.5
<i>pt</i> Portugal	10,627,250	116	66.3	49.7	9.5	4.2
<i>si</i> Slovenia	2,032,362	100	67.5	35.6	5.9	1.8
<i>sk</i> Slovakia	5,412,254	110	60.2	39.5	12.0	6.5
<i>fi</i> Finland	5,326,314	16	68.7	55.5	8.3	1.4
<i>se</i> Sweden	9,256,347	21	72.2	70.0	8.3	1.1

<i>uk</i> United Kingdom	61,595,000	253	69.9	57.5	7.6	1.9
<i>bg</i> Bulgaria	7,606,551	69	62.6	46.1	6.8	3.0
<i>ro</i> Romania	21,498,616	90	58.6	42.6	6.9	2.2
<i>be1</i> Brussels Hoofdstedelijk Gewest	1,062,253	6,598	55.1	42.3	15.7	8.3
<i>be2</i> Vlaams Gewest	6,199,571	458	65.8	35.7	4.9	1.5
<i>be3</i> Région Wallonne	3,479,749	207	56.2	32.7	11.2	5.8
<i>cz0</i> Czech Republic	10,467,542	133	65.4	46.8	6.7	2.0
<i>dk0</i> Denmark	5,511,451	128	75.7	57.5	6.0	0.5
<i>de1</i> Baden-Württemberg	10,749,506	301	74.4	62.4	5.1	1.7
<i>de2</i> Bayern	12,519,728	177	74.6	57.8	5.0	1.7
<i>de3</i> Berlin	3,431,675	3,848	65.2	51.9	13.7	7.8
<i>de4</i> Brandenburg	2,522,493	86	72.2	56.4	11.3	6.3
<i>de5</i> Bremen	661,866	1,637	64.6	50.6	9.1	3.8
<i>de6</i> Hamburg	1,772,100	2,347	71.6	58.3	7.1	3.0
<i>de7</i> Hessen	6,064,953	287	71.6	56.8	6.3	2.6
<i>de8</i> Mecklenburg-Vorpommern	1,664,356	72	69.5	53.7	13.9	7.3
<i>de9</i> Niedersachsen	7,947,244	167	69.8	55.3	6.8	3.2
<i>dea</i> Nordrhein-Westfalen	17,933,064	526	67.8	52.9	7.8	3.5
<i>deb</i> Rheinland-Pfalz	4,028,351	203	71.7	57.1	5.9	2.6
<i>dec</i> Saarland	1,030,324	401	67.0	52.4	8.2	3.4
<i>ded</i> Sachsen	4,192,801	227	70.8	55.8	12.4	6.6
<i>dee</i> Sachsen-Anhalt	2,381,872	116	69.5	53.3	13.7	7.9
<i>def</i> Schleswig-Holstein	2,834,260	180	71.2	59.0	7.2	2.9
<i>deg</i> Thüringen	2,267,763	140	71.6	55.1	10.6	5.0
<i>ee0</i> Estonia	1,340,415	31	63.5	60.5	13.8	3.8
<i>gr1</i> Voreia Ellada	3,580,472	63	59.6	41.6	10.1	4.6
<i>gr2</i> Kentriki Ellada	2,475,170	46	61.0	47.6	9.6	4.5
<i>gr3</i> Attiki	4,088,447	1,074	62.5	38.4	8.8	3.3
<i>gr4</i> Nisia Aigaiou, Kriti	1,116,313	64	62.3	47.2	9.3	2.4
<i>es11</i> Galicia	2,738,930	93	62.4	45.4	12.6	3.2
<i>es12</i> Principado de Asturias	1,058,923	100	58.4	39.8	13.4	4.0
<i>es13</i> Cantabria	576,418	108	61.9	40.8	12.0	2.3
<i>es21</i> Pais Vasco	2,136,061	295	64.2	41.0	11.0	2.7

es22 Comunidad Foral de Navarra	614,526	59	66.5	47.5	10.9	1.7
es23 La Rioja	315,718	63	64.9	49.0	12.8	2.8
es24 Aragón	1,313,735	28	65.3	50.8	12.8	2.1
es30 Comunidad de Madrid	6,295,011	784	66.0	48.7	14.0	3.3
es41 Castilla y León	2,510,545	27	61.4	43.8	13.8	3.5
es42 Castilla-la Mancha	2,022,647	25	57.8	42.0	18.8	4.2
es43 Extremadura	1,080,439	26	53.4	34.9	20.5	5.1
es51 Cataluña	7,290,292	227	63.9	50.1	16.2	3.9
es52 Comunidad Valenciana	4,991,789	215	58.2	44.6	21.2	4.5
es61 Andalucía	8,150,467	93	51.6	35.7	25.4	6.3
es62 Región de Murcia	1,443,383	128	57.3	46.0	20.7	4.2
fr10 Île de France	11,746,000	981	66.7	49.3	8.4	3.1
fr21 Champagne-Ardenne	1,336,000	52	63.2	39.8	9.6	3.8
fr22 Picardie	1,906,000	98	62.3	32.5	10.7	4.2
fr23 Haute-Normandie	1,822,000	148	62.2	37.1	10.4	3.9
fr24 Centre	2,544,000	65	66.7	37.4	7.0	2.4
fr25 Basse-Normandie	1,467,000	83	67.8	40.2	7.3	2.3
fr26 Bourgogne	1,637,000	52	65.9	41.9	8.2	2.7
fr30 Nord - Pas-de-Calais	4,022,000	324	56.3	32.9	13.5	5.8
fr41 Lorraine	2,342,000	100	61.5	34.6	11.6	4.0
fr42 Alsace	1,847,000	224	66.7	38.3	8.5	2.7
fr43 Franche-Comté	1,168,000	72	64.2	36.3	9.2	2.4
fr51 Pays de la Loire	3,538,000	111	66.2	35.6	8.0	2.1
fr52 Bretagne	3,163,000	117	66.5	35.5	5.9	1.5
fr53 Poitou-Charentes	1,759,000	68	65.5	35.3	8.7	3.0
fr61 Aquitaine	3,200,000	78	65.1	38.3	8.7	2.7
fr62 Midi-Pyrénées	2,865,000	64	66.0	40.0	9.4	2.8
fr63 Limousin	741,000	44	67.2	36.2	6.5	2.1
fr71 Rhône-Alpes	6,160,000	142	64.8	39.4	8.7	2.7
fr72 Auvergne	1,343,000	52	66.3	37.3	7.7	3.1
fr81 Languedoc-Roussillon	2,616,000	96	56.4	30.1	13.9	5.9
fr82 Provence-Alpes-Côte d'Azur	4,940,000	158	61.7	39.2	9.5	3.4

<i>fr83</i> Corse	307,000	36	56.9	33.6	6.9	4.2
<i>ie01</i> Border, Midlands and Western	1,199,297	36	59.2	49.0	13.0	3.9
<i>ie02</i> Southern and Eastern	3,250,733	89	62.8	51.8	11.3	3.2
<i>itc1</i> Piemonte	4,432,571	174	64.0	32.7	6.8	2.9
<i>itc2</i> Valle d'Aosta/ Vallée d'Aoste	127,065	39	66.9	36.5	4.6	1.6
<i>itc3</i> Liguria	1,615,064	298	63.5	37.4	5.7	2.3
<i>itc4</i> Lombardia	9,742,676	408	65.8	35.0	5.4	1.8
<i>itd1</i> Provincia Autonoma Bolzano-Bozen	498,857	67	70.5	41.4	2.9	0.6
<i>itd2</i> Provincia Autonoma Trento	519,800	84	66.6	34.8	3.5	0.9
<i>itd3</i> Veneto	4,885,548	266	64.6	34.3	4.8	1.3
<i>itd4</i> Friuli-Venezia Giulia	1,230,936	157	63.4	30.6	5.3	1.5
<i>itd5</i> Emilia-Romagna	4,337,979	196	68.5	39.5	4.8	1.3
<i>ite1</i> Toscana	3,707,818	161	64.8	39.2	5.8	2.0
<i>ite2</i> Umbria	894,222	106	63.0	36.6	6.7	2.3
<i>ite3</i> Marche	1,569,578	162	63.8	38.6	6.6	2.1
<i>ite4</i> Lazio	5,626,710	326	59.4	40.1	8.5	4.3
<i>itf1</i> Abruzzo	1,334,675	124	55.7	35.1	8.1	3.4
<i>itf2</i> Molise	320,795	72	52.3	37.2	9.0	4.5
<i>itf3</i> Campania	5,812,962	428	40.8	34.8	12.9	7.4
<i>itf4</i> Puglia	4,079,702	211	44.9	31.9	12.6	6.1
<i>itf5</i> Basilicata	590,601	59	48.5	38.3	11.2	6.2
<i>itf6</i> Calabria	2,008,709	133	43.1	36.6	11.3	5.9
<i>itg1</i> Sicilia	5,037,799	196	43.5	34.8	13.9	8.3
<i>itg2</i> Sardegna	1,671,001	69	50.8	32.6	13.3	5.9
<i>cy0</i> Cyprus	796,875	140	69.9	55.9	5.3	0.5
<i>lv0</i> Latvia	2,261,294	35	61.0	53.2	17.1	4.6
<i>lt0</i> Lithuania	3,349,872	51	60.1	51.6	13.7	3.2
<i>lu0</i> Luxembourg (Grand-Duché)	493,500	191	65.2	38.1	5.1	1.2
<i>hu1</i> Közép-Magyarország	2,925,500	423	61.6	40.7	6.6	2.5
<i>hu2</i> Dunántúl	3,054,301	83	56.6	31.5	9.6	3.7
<i>hu3</i> Alföld és Észak	4,051,174	82	49.9	27.8	13.3	5.9
<i>mt0</i> Malta	413,609	1,311	54.9	28.0	6.9	3.1
<i>nl1</i> Noord-Nederland	1,708,821	150	74.7	51.7	4.2	1.1
<i>nl2</i> Oost-Nederland	3,499,946	319	77.8	55.3	3.1	0.8

<i>n</i> 3 West-Nederland	7,719,856	650	77.5	56.9	3.3	0.8
<i>n</i> 4 Zuid-Nederland	3,557,164	488	76.2	52.9	3.6	0.9
<i>at</i> 1 Ostösterreich	3,575,511	152	70.3	41.6	5.9	1.6
<i>at</i> 2 Südösterreich	1,768,084	68	70.2	36.5	4.5	0.7
<i>at</i> 3 Westösterreich	3,011,665	88	74.1	43.2	3.7	0.5
<i>p</i> 1 Centralny	7,753,356	144	63.3	34.0	6.5	1.8
<i>p</i> 2 Poludniowy	7,932,801	288	58.6	30.3	7.2	2.4
<i>p</i> 3 Wschodni	6,725,581	90	59.1	35.7	9.6	3.1
<i>p</i> 4 Północno-Zachodni	6,099,536	91	58.0	30.1	8.6	3.0
<i>p</i> 5 Poludniowo-Zachodni	3,910,099	133	57.9	33.0	10.0	2.5
<i>p</i> 6 Północny	5,714,503	95	57.1	30.2	8.5	2.4
<i>pt</i> 17 Lisboa	2,819,433	972	66.3	49.7	9.8	15.8
<i>ptx</i> Rest van Portugal - vasteland	7,315,876	85	66.3	51.7	9.5	4.2
<i>si</i> 0 Slovenia	2,032,362	100	67.5	35.6	5.9	1.8
<i>sk</i> 0 Slovakia	5,412,254	110	60.2	39.5	12.0	6.5
<i>fi</i> 1 Manner-Suomi	5,298,858	16	68.7	55.3	8.3	1.4
<i>se</i> 0 Sverige	9,256,347	21	72.2	70.0	8.3	1.1
<i>ukc</i> North East	2,587,463	302	65.4	49.0	9.2	2.9
<i>ukd</i> North West (including Merseyside)	6,916,579	490	67.9	55.6	8.3	2.3
<i>uke</i> Yorkshire and The Humber	5,230,500	339	68.1	53.4	8.5	2.1
<i>ukf</i> East Midlands	4,446,308	285	71.7	58.3	7.1	1.8
<i>ukg</i> West Midlands	5,433,168	418	67.6	56.7	9.7	2.6
<i>ukh</i> Eastern	5,733,596	300	73.7	61.2	6.2	1.4
<i>uki</i> London	7,639,962	4,860	67.5	58.5	8.9	2.2
<i>ukj</i> South East	8,400,998	441	74.3	63.1	5.8	1.1
<i>ukk</i> South West	5,228,889	219	73.1	60.4	6.1	1.1
<i>ukl</i> Wales	3,006,994	145	66.6	53.4	8.1	2.1
<i>ukm</i> Scotland	5,191,537	67	70.9	57.3	6.9	1.7
<i>ukn</i> Northern Ireland	1,779,107	126	63.8	45.9	6.5	2.2
<i>bg</i> 3 Severna i iztochna Bulgaria	3,953,367	58	59.1	42.6	8.3	4.0
<i>bg</i> 4 Yugozapadna i yuzhna centralna Bulgaria	3,653,184	86	66.2	50.1	5.4	1.9
<i>ro</i> 1 Macroregiunea unu	5,247,530	77	55.2	36.3	8.1	2.7
<i>ro</i> 2 Macroregiunea doi	6,535,967	90	58.3	48.2	6.6	2.2

ro3 Macroregiunea trei	5,532,879	153	61.7	40.0	6.4	1.8
ro4 Macroregiunea patru	4,182,240	68	59.3	45.9	6.5	2.0

	GDP per head (in € PPS)	Labour productivity (in € PPS per worker)	Number of jobs / people 15-64 y	Share of people 15-64 y (in %)	Unit labour cost	Disposable income per head (in € PPS based on the final consumption)
	2007	2007	2007	2007	2006	2007
EU27	24,907	55,694	66.5	67.3	30,589	n.d.
EU25	25,833	57,768	66.6	67.1	31,903	n.d.
EU15	27,789	61,593	67.9	66.5	35,432	n.d.
<i>be</i> Belgium	28,810	70,132	62.3	66.0	44,020	16,175
<i>cz</i> Czech Republic	19,926	39,420	71.0	71.2	11,799	9,754
<i>dk</i> Denmark	30,192	56,899	80.4	66.0	44,122	13,093
<i>de</i> Germany	28,888	59,647	73.0	66.4	33,138	18,093
<i>ee</i> Estonia	17,152	34,731	72.6	68.0	9,744	7,861
<i>gr</i> Greece	23,107	55,006	62.6	67.1	23,806	14,817
<i>es</i> Spain	26,160	56,916	66.8	68.8	27,004	14,792
<i>fr</i> France	26,987	66,044	62.7	65.1	39,923	17,307
<i>ie</i> Ireland	36,899	76,008	70.7	68.7	42,431	15,708
<i>it</i> Italy	25,765	60,746	64.3	66.0	32,399	16,055
<i>cy</i> Cyprus	23,310	47,492	70.2	69.9	14,034	n.d.
<i>lv</i> Latvia	13,872	28,392	70.8	69.0	7,441	7,736
<i>lt</i> Lithuania	14,770	32,613	66.0	68.7	8,208	8,092
<i>lu</i> Luxembourg (Grand-Duché)	68,550	98,781	102.4	67.7	59,339	n.d.
<i>hu</i> Hungary	15,599	37,521	60.4	68.8	11,693	8,052
<i>mt</i> Malta	19,088	46,760	58.6	69.7	15,541	n.d.
<i>nl</i> Netherlands	32,910	80,088	61.0	67.4	45,862	15,566
<i>at</i> Austria	30,574	61,100	74.3	67.4	36,705	19,022
<i>pl</i> Poland	13,560	34,064	56.1	70.9	8,816	8,094
<i>pt</i> Portugal	18,821	38,961	71.8	67.3	18,643	11,215
<i>si</i> Slovenia	22,087	46,319	68.4	69.7	20,297	12,294
<i>sk</i> Slovakia	16,850	41,774	55.9	72.1	8,811	8,904
<i>fi</i> Finland	29,386	62,331	70.9	66.5	37,491	13,454
<i>se</i> Sweden	30,582	61,909	75.2	65.7	40,352	14,982
<i>uk</i> United Kingdom	29,060	62,791	69.8	66.3	39,958	17,438

<i>bg</i> Bulgaria	9,372	19,328	70.0	69.3	3,103	4,217
<i>ro</i> Romania	10,368	23,856	62.3	69.8	5,848	5,197
<i>be1</i> Brussels Hoofdstedelijk Gewest	55,000	86,084	95.7	66.8	52,351	15,432
<i>be2</i> Vlaams Gewest	28,942	70,289	62.4	66.0	43,397	17,140
<i>be3</i> Région Wallonne	20,671	60,884	51.6	65.8	40,109	14,656
<i>cz0</i> Czech Republic	19,926	39,420	71.0	71.2	11,799	9,754
<i>dk0</i> Denmark	30,192	56,978	80.3	66.0	44,189	13,093
<i>de1</i> Baden-Württemberg	32,582	63,333	77.8	66.1	36,087	19,815
<i>de2</i> Bayern	33,997	64,807	78.9	66.5	34,549	19,348
<i>de3</i> Berlin	24,333	51,732	67.2	70.0	32,913	15,038
<i>de4</i> Brandenburg	20,480	50,316	59.7	68.2	27,189	15,248
<i>de5</i> Bremen	39,492	67,395	88.4	66.3	33,891	20,247
<i>de6</i> Hamburg	47,808	77,306	90.1	68.6	38,353	22,911
<i>de7</i> Hessen	34,684	68,216	76.7	66.3	36,697	18,658
<i>de8</i> Mecklenburg-Vorpommern	20,189	46,775	62.9	68.6	25,500	14,331
<i>de9</i> Niedersachsen	25,438	56,163	69.9	64.8	31,738	17,356
<i>dea</i> Nordrhein-Westfalen	28,519	59,858	72.7	65.6	33,903	18,922
<i>deb</i> Rheinland-Pfalz	25,284	55,868	69.1	65.5	32,132	17,515
<i>dec</i> Saarland	28,523	58,342	74.7	65.5	32,658	17,766
<i>ded</i> Sachsen	21,440	46,717	69.3	66.2	26,690	14,998
<i>dee</i> Sachsen-Anhalt	20,820	49,958	62.1	67.1	26,335	14,358
<i>def</i> Schleswig-Holstein	24,776	56,171	68.2	64.7	30,423	17,436
<i>deg</i> Thüringen	21,796	46,454	65.6	71.5	26,308	15,412
<i>ee0</i> Estonia	17,152	34,731	72.6	68.0	9,744	7,861
<i>gr1</i> Voreia Ellada	17,457	43,253	61.3	65.8	23,483	13,020
<i>gr2</i> Kentriki Ellada	17,822	43,092	63.4	65.3	22,962	12,146
<i>gr3</i> Attiki	31,905	73,075	62.7	69.6	24,494	18,251
<i>gr4</i> Nisia Aigaiou, Kriti	20,936	49,004	64.3	66.4	23,056	14,005
<i>es11</i> Galicia	22,108	51,927	63.3	67.3	25,164	13,747
<i>es12</i> Principado de Asturias	24,147	58,201	60.9	68.1	27,630	15,837
<i>es13</i> Cantabria	26,246	57,224	66.3	69.2	26,424	15,593
<i>es21</i> Pais Vasco	34,064	66,242	74.8	68.7	30,714	19,630
<i>es22</i> Comunidad Foral de Navarra	32,898	58,222	83.3	67.8	29,035	19,389

es23 La Rioja	27,922	56,614	72.2	68.3	26,419	15,614
es24 Aragón	28,475	56,568	75.4	66.8	27,404	16,266
es30 Comunidad de Madrid	34,035	63,779	76.1	70.1	29,969	17,612
es41 Castilla y León	25,234	56,437	67.7	66.0	26,432	15,254
es42 Castilla-la Mancha	20,272	48,717	62.2	66.9	25,272	12,183
es43 Extremadura	18,026	48,030	56.5	66.4	23,869	11,723
es51 Cataluña	30,716	59,687	74.9	68.7	27,958	16,660
es52 Comunidad Valenciana	23,720	53,376	64.1	69.4	25,389	13,335
es61 Andalucía	20,242	52,477	55.8	69.1	24,573	11,780
es62 Región de Murcia	21,655	51,710	60.5	69.2	23,779	11,863
fr10 Île de France	41,991	87,187	70.8	68.1	52,591	21,050
fr21 Champagne-Ardenne	24,830	62,980	60.5	65.2	36,856	16,389
fr22 Picardie	21,339	60,339	53.9	65.6	36,051	16,551
fr23 Haute-Normandie	24,497	61,962	60.6	65.3	37,266	16,868
fr24 Centre	23,722	60,125	61.9	63.7	36,232	17,406
fr25 Basse-Normandie	21,993	55,694	62.4	63.3	34,503	16,513
fr26 Bourgogne	23,522	58,828	63.1	63.4	35,405	17,311
fr30 Nord - Pas-de-Calais	21,954	60,409	55.4	65.7	37,068	14,923
fr41 Lorraine	22,087	61,320	54.6	65.9	36,800	16,632
fr42 Alsace	25,441	63,271	60.3	66.7	39,620	17,499
fr43 Franche-Comté	22,428	57,283	60.5	64.7	35,436	16,860
fr51 Pays de la Loire	24,335	58,539	65.0	64.0	35,400	16,474
fr52 Bretagne	23,587	58,754	63.3	63.4	36,213	16,432
fr53 Poitou-Charentes	22,499	58,348	61.2	63.0	34,923	16,497
fr61 Aquitaine	24,445	62,676	60.8	64.2	37,292	16,941
fr62 Midi-Pyrénées	24,222	60,831	61.9	64.3	38,031	16,546
fr63 Limousin	21,835	55,546	63.0	62.4	34,863	17,303
fr71 Rhône-Alpes	27,255	65,706	63.6	65.3	39,774	17,611
fr72 Auvergne	22,768	57,592	61.9	63.9	35,246	17,407
fr81 Languedoc-Roussillon	21,324	61,071	54.9	63.6	35,264	15,609
fr82 Provence-Alpes-Côte d'Azur	25,452	66,464	60.1	63.7	39,032	17,009
fr83 Corse	21,040	58,387	55.6	64.8	36,703	14,973
ie01 Border, Midlands and Western	24,700	54,219	68.1	66.9	38,128	14,109

<i>ie02</i> Southern and Eastern	41,359	83,319	71.6	69.3	43,769	16,293
<i>itc1</i> Piemonte	28,294	60,834	71.8	64.8	33,400	18,480
<i>itc2</i> Valle d'Aosta/ Vallée d'Aoste	29,530	61,820	72.4	66.0	34,722	18,935
<i>itc3</i> Liguria	26,598	63,014	68.0	62.1	32,723	17,985
<i>itc4</i> Lombardia	33,578	69,030	73.3	66.4	34,652	19,365
<i>itd1</i> Provincia Auto- noma Bolzano-Bozen	33,511	63,971	79.3	66.1	34,189	19,575
<i>itd2</i> Provincia Autonoma Trento	30,376	65,420	70.7	65.7	33,254	17,082
<i>itd3</i> Veneto	30,298	62,497	72.9	66.5	32,148	17,538
<i>itd4</i> Friuli-Venezia Giulia	29,050	60,017	74.6	64.9	32,992	18,142
<i>itd5</i> Emilia-Romagna	31,870	62,267	79.3	64.6	32,497	20,114
<i>ite1</i> Toscana	28,096	60,591	72.0	64.4	31,975	17,979
<i>ite2</i> Umbria	24,140	53,715	70.1	64.1	29,732	16,123
<i>ite3</i> Marche	26,277	55,243	73.9	64.3	30,656	16,680
<i>ite4</i> Lazio	30,460	66,430	68.8	66.6	34,899	17,115
<i>itf1</i> Abruzzo	21,236	54,493	59.5	65.5	31,088	13,577
<i>itf2</i> Molise	19,401	50,759	58.8	65.0	30,122	12,742
<i>itf3</i> Campania	16,404	52,344	46.6	67.3	29,347	11,344
<i>itf4</i> Puglia	16,647	50,743	49.0	67.0	29,822	11,745
<i>itf5</i> Basilicata	18,691	51,805	54.7	65.9	30,243	12,538
<i>itf6</i> Calabria	16,393	51,255	48.0	66.6	28,101	11,435
<i>itg1</i> Sicilia	16,447	54,337	45.9	66.0	30,726	11,365
<i>itg2</i> Sardegna	19,536	52,352	53.9	69.2	29,841	12,901
<i>cy0</i> Cyprus	23,310	47,492	70.2	69.9	14,034	n.d.
<i>lv0</i> Latvia	13,872	28,392	70.8	69.0	7,441	7,736
<i>lt0</i> Lithuania	14,770	32,613	66.0	68.7	8,208	8,092
<i>lu0</i> Luxembourg (Grand-Duché)	68,550	98,781	102.4	67.7	59,339	n.d.
<i>hu1</i> Közép- Magyarország	25,641	52,153	70.9	69.3	16,240	10,506
<i>hu2</i> Dunántúl	13,550	32,140	60.7	69.4	9,652	7,491
<i>hu3</i> Alföld és Észak	10,070	28,129	52.6	68.1	9,061	6,408
<i>mt0</i> Malta	19,088	46,760	58.6	69.7	15,512	n.d.
<i>n11</i> Noord-Nederland	31,299	86,691	54.2	66.6	43,594	14,156
<i>n12</i> Oost-Nederland	28,194	72,781	58.0	66.8	43,610	14,773
<i>n13</i> West-Nederland	35,705	82,601	63.7	67.9	47,563	16,287
<i>n14</i> Zuid-Nederland	32,274	78,650	60.9	67.4	44,810	15,375
<i>at1</i> Ostösterreich	31,953	65,484	72.2	67.6	38,717	19,432

at2 Südösterreich	26,306	53,941	72.9	66.9	34,801	18,277
at3 Westösterreich	31,455	60,228	77.5	67.4	35,470	18,976
pl1 Centralny	18,643	40,931	64.8	70.3	10,728	9,588
pl2 Poludniowy	13,248	34,679	53.7	71.2	8,677	8,327
pl3 Wschodni	9,564	22,819	60.2	69.6	7,467	6,630
pl4 Północno-Zachodni	13,258	35,355	52.2	71.9	8,166	8,152
pl5 Poludniowo-Zachodni	13,815	36,638	52.4	72.0	8,450	7,955
pl6 Północny	11,959	33,542	50.1	71.2	8,404	7,506
pt17 Lisboa	26,072	53,194	72.7	67.4	23,374	14,374
ptx Rest van Portugal - vasteland	15,938	33,154	71.6	67.1	16,435	10,000
si0 Slovenia	22,087	46,319	68.4	69.7	20,297	12,294
sk0 Slovakia	16,850	41,774	55.9	72.1	8,811	8,904
fi1 Manner-Suomi	29,354	62,445	70.6	66.5	37,523	13,440
se0 Sverige	30,582	61,909	75.2	65.7	40,352	14,982
ukc North East	22,516	49,917	68.1	66.3	35,255	14,881
ukd North West (including Merseyside)	24,715	53,739	69.7	66.0	34,546	15,827
uke Yorkshire and The Humber	24,282	51,865	70.5	66.4	34,663	15,657
ukf East Midlands	25,662	52,727	73.3	66.4	37,399	16,143
ukg West Midlands	24,811	54,250	70.0	65.3	34,575	15,718
ukh Eastern	27,782	57,057	74.5	65.4	37,150	18,303
uki London	49,051	102,459	68.2	70.2	54,451	21,889
ukj South East	30,951	62,072	76.0	65.6	40,164	19,592
ukk South West	26,592	54,623	75.3	64.6	35,962	17,300
ukl Wales	21,638	48,808	68.4	64.8	33,330	15,230
ukm Scotland	28,070	57,292	73.1	67.0	36,660	16,526
ukn Northern Ireland	23,101	55,180	63.4	66.0	31,107	15,188
bg3 Severna i iztočna Bulgaria	7,197	15,918	66.2	68.3	2,795	3,761
bg4 Yugozapadna i yuzhna centralna Bulgaria	11,741	22,556	74.0	70.4	3,371	4,715
ro1 Macroregiunea unu	10,247	25,074	57.9	70.5	5,271	5,006
ro2 Macroregiunea doi	7,398	17,093	63.1	68.6	4,932	4,324
ro3 Macroregiunea trei	14,346	30,966	65.7	70.5	7,281	6,423
ro4 Macroregiunea patru	9,913	22,942	61.9	69.8	5,558	5,185

	Share of highly educated workers (in %)	Share of adult population involved in lifelong learning (in %)	Total R&D expenditures / GDP (in %)	Business R&D expenditures / GDP (in %)	Government R&D expenditures / GDP (in %)	Share of workers in knowledge intensive sectors (in %)	Share of workers in (medium) HT industry (in %)	Share of workers in HT services (in %)	Share of workers in creative sectors (in %)	Number of patent applications per million inhabitants
	2009	2008	2007	2007	2007	2007	2007	2007	2009	2006
EU27	28.1	9.3	1.77	1.12	0.23	10.0	6.7	3.3	39.0	114
EU25	28.7	9.8	1.80	1.15	0.24	10.1	6.8	3.4	39.9	121
EU15	29.5	10.7	1.90	1.23	0.24	10.2	6.7	3.5	40.6	142
be Belgium	39.2	6.8	1.90	1.32	0.15	10.2	6.3	3.9	44.8	136
cz Czech Republic	17.1	7.7	1.54	0.95	0.32	13.8	10.9	3.0	41.6	15
dk Denmark	32.5	30.2	2.55	1.78	0.08	10.2	6.0	4.2	45.7	194
de Germany	27.5	7.9	2.53	1.77	0.35	14.2	10.7	3.4	42.5	284
ee Estonia	35.6	9.8	1.11	0.52	0.10	6.4	3.9	2.5	37.8	8
gr Greece	26.4	2.9	0.58	0.16	0.12	4.3	2.4	1.9	33.7	9
es Spain	35.4	10.4	1.27	0.71	0.22	7.4	4.5	2.9	33.9	30
fr France	32.4	7.1	2.04	1.29	0.32	9.7	6.3	3.4	40.6	130
ie Ireland	40.7	7.3	1.28	0.84	0.09	9.0	5.3	3.7	41.9	63
it Italy	17.2	6.3	1.18	0.61	0.17	10.7	7.6	3.1	38.7	83
cy Cyprus	36.6	8.5	0.44	0.10	0.11	3.2	0.9	2.3	31.4	9
lv Latvia	29.5	6.8	0.59	0.19	0.14	4.3	1.9	2.5	41.7	5
lt Lithuania	36.6	4.9	0.81	0.23	0.17	4.5	2.4	2.1	40.5	3
lu Luxembourg (Grand-Duché)	31.4	8.5	1.58	1.32	0.21	4.4	1.1	3.4	58.2	218
hu Hungary	24.0	3.1	0.97	0.49	0.23	12.1	8.8	3.3	35.8	16
mt Malta	18.3	6.2	0.58	0.38	0.01	9.3	6.0	3.2	36.9	19
nl Netherlands	32.3	17.0	1.71	0.97	0.22	7.4	3.2	4.3	48.5	220
at Austria	19.4	13.2	2.54	1.79	0.14	9.2	6.7	2.6	37.8	204
pl Poland	25.5	4.7	0.57	0.17	0.20	8.1	5.5	2.6	33.9	4
pt Portugal	15.8	4.9	1.21	0.62	0.11	5.2	3.5	1.7	25.5	10
si Slovenia	25.2	13.9	1.45	0.87	0.35	11.9	9.1	2.8	40.1	48
sk Slovakia	18.1	3.3	0.46	0.18	0.16	12.8	9.9	2.9	35.8	7
fi Finland	37.9	23.0	3.47	2.51	0.29	11.6	7.0	4.6	45.6	248
se Sweden	32.9	22.1	3.61	2.66	0.17	11.3	6.2	5.1	45.8	279
uk United Kingdom	35.3	19.9	1.82	1.15	0.16	9.8	5.4	4.4	43.2	90

bg Bulgaria	26.4	1.4	0.48	0.15	0.28	7.7	5.1	2.5	29.5	4
ro Romania	15.4	1.4	0.52	0.22	0.18	7.2	5.7	1.5	21.9	1
be1 Brussels Hoofdstedelijk Gewest	50.5	9.6	1.38	0.79	0.13	7.0	2.3	4.7	50.0	113
be2 Vlaams Gewest	38.3	7.6	1.99	1.37	0.22	11.4	7.6	3.8	43.9	154
be3 Région Wallonne	37.4	4.6	2.10	1.62	0.02	8.6	4.8	3.8	45.2	110
cz0 Czech Republic	17.1	7.7	1.54	0.95	0.32	13.8	10.9	3.0	41.6	14
dk0 Denmark	32.5	30.2	2.55	1.78	0.08	10.2	6.0	4.2	45.7	193
de1 Baden-Württemberg	29.3	8.8	4.37	3.56	0.39	21.6	18.1	3.6	43.3	576
de2 Bayern	27.7	7.6	2.81	2.21	0.25	16.5	13.0	3.5	42.0	444
de3 Berlin	38.9	10.2	3.36	1.39	1.12	10.3	4.9	5.3	53.4	207
de4 Brandenburg	31.8	7.7	1.22	0.32	0.64	8.3	5.7	2.6	40.7	107
de5 Bremen	26.0	9.6	2.18	0.87	0.73	12.2	9.3	2.9	40.2	116
de6 Hamburg	30.4	9.6	1.93	1.15	0.42	10.4	5.3	5.1	51.6	206
de7 Hessen	28.2	9.0	2.63	2.14	0.16	15.2	10.6	4.6	45.3	308
de8 Mecklenburg-Vorpommern	27.1	7.8	1.30	0.38	0.54	8.1	4.3	3.9	35.2	56
de9 Niedersachsen	23.2	6.9	2.48	1.72	0.34	14.1	11.3	2.9	39.9	167
dea Nordrhein-Westfalen	24.9	7.3	1.80	1.13	0.27	12.4	8.8	3.5	42.6	241
deb Rheinland-Pfalz	24.2	7.5	1.86	1.38	0.15	12.6	10.4	2.2	41.2	275
dec Saarland	21.2	8.0	1.08	0.43	0.29	14.7	10.1	4.5	39.0	152
ded Sachsen	33.9	7.5	2.58	1.34	0.66	12.2	9.0	3.3	40.7	97
dee Sachsen-Anhalt	25.8	7.0	1.13	0.34	0.40	9.4	7.2	2.2	37.3	48
def Schleswig-Holstein	23.3	8.2	1.18	0.53	0.31	9.9	7.4	2.6	42.2	146
deg Thüringen	29.1	7.7	1.80	0.92	0.42	11.4	8.7	2.6	38.0	114
ee0 Estonia	35.6	9.8	1.11	0.52	0.10	6.4	3.9	2.5	37.8	8
gr1 Voreia Ellada	26.1	3.2	0.46	0.07	0.07	2.8	1.7	1.0	32.4	7
gr2 Kentriki Ellada	18.5	1.8	0.42	0.08	0.03	2.3	1.4	1.0	26.6	3
gr3 Attiki	33.1	3.8	0.68	0.24	0.16	7.5	3.9	3.5	39.8	14
gr4 Nisia Aigaiou, Kriti	19.1	1.5	0.60	0.04	0.24	1.7	0.7	1.0	30.1	10
es11 Galicia	34.8	11.3	1.03	0.57	0.13	7.2	5.1	2.0	34.3	12
es12 Principado de Asturias	39.2	9.9	0.92	0.42	0.18	5.1	2.7	2.4	35.4	14
es13 Cantabria	39.3	7.9	0.88	0.30	0.16	6.7	4.5	2.2	32.4	23
es21 Pais Vasco	51.1	13.5	1.87	1.52	0.08	13.7	9.9	3.9	41.3	62
es22 Comunidad Foral de Navarra	40.7	12.6	1.88	1.24	0.20	10.3	8.7	1.6	34.0	75

es23 La Rioja	39.6	9.5	1.17	0.74	0.21	7.1	5.1	2.0	32.9	25
es24 Aragón	35.8	11.0	0.90	0.50	0.20	9.7	6.8	2.9	34.1	38
es30 Comunidad de Madrid	42.9	11.7	1.92	1.13	0.48	10.8	4.1	6.7	43.9	41
es41 Castilla y León	36.1	11.1	1.10	0.65	0.10	7.3	4.9	2.4	31.7	15
es42 Castilla-la Mancha	28.7	9.4	0.60	0.30	0.11	4.6	2.7	1.8	27.4	10
es43 Extremadura	28.2	10.9	0.74	0.12	0.25	2.6	0.8	1.8	28.9	3
es51 Cataluña	35.6	8.8	1.47	0.93	0.20	10.4	7.5	2.9	33.1	73
es52 Comunidad Valenciana	31.1	11.1	0.95	0.38	0.13	6.1	4.1	2.0	30.8	19
es61 Andalucía	31.1	9.5	1.02	0.38	0.23	4.1	2.1	2.0	31.8	9
es62 Región de Murcia	29.0	10.0	0.92	0.47	0.15	3.6	2.4	1.2	28.2	12
fr10 Île de France	43.3	7.4	2.93	1.98	0.40	11.7	6.1	5.6	54.8	264
fr21 Champagne-Ardenne	23.1	7.3	0.71	0.52	0.01	5.3	3.6	1.7	31.8	73
fr22 Picardie	25.6	6.7	1.08	0.89	0.03	10.3	8.3	2.0	32.8	69
fr23 Haute-Normandie	23.0	6.9	1.52	1.30	0.02	12.4	9.4	2.9	36.4	130
fr24 Centre	27.4	6.6	1.50	1.16	0.13	10.2	8.3	1.9	40.1	97
fr25 Basse-Normandie	28.1	6.4	0.94	0.62	0.05	8.8	6.8	2.0	36.6	53
fr26 Bourgogne	27.7	7.4	0.90	0.62	0.06	10.8	7.1	3.7	35.4	59
fr30 Nord - Pas-de-Calais	32.0	7.0	0.64	0.28	0.04	7.0	4.9	2.1	39.5	42
fr41 Lorraine	26.5	6.7	1.07	0.51	0.09	9.7	8.3	1.4	33.9	67
fr42 Alsace	32.4	10.0	1.49	0.82	0.05	14.1	11.7	2.4	40.7	177
fr43 Franche-Comté	27.5	7.2	1.90	1.62	0.01	15.4	13.4	2.0	35.9	149
fr51 Pays de la Loire	29.4	8.1	0.84	0.52	0.09	8.8	6.0	2.8	36.3	70
fr52 Bretagne	31.4	8.9	1.50	0.95	0.20	6.9	4.0	2.8	37.2	130
fr53 Poitou-Charentes	24.4	5.7	0.74	0.40	0.05	7.2	5.3	1.9	32.3	48
fr61 Aquitaine	30.3	6.7	1.52	1.09	0.08	7.5	4.7	2.8	42.4	51
fr62 Midi-Pyrénées	36.9	7.7	3.87	2.40	0.87	10.3	6.9	3.4	42.6	128
fr63 Limousin	30.8	8.6	0.76	0.46	0.01	7.1	4.1	3.0	36.1	69
fr71 Rhône-Alpes	31.7	7.4	2.34	1.58	0.24	11.3	8.4	2.9	40.2	238
fr72 Auvergne	32.4	8.7	2.33	1.88	0.16	10.5	4.4	6.1	38.9	99
fr81 Languedoc-Roussillon	31.0	5.7	1.94	0.65	0.69	6.4	1.8	4.6	38.1	56
fr82 Provence-Alpes-Côte d'Azur	30.4	6.0	1.79	1.04	0.35	7.7	4.0	3.7	38.1	101
fr83 Corse	18.0	2.8	0.20	0.13	0.06	0.0	0.0	0.0	32.4	28
ie01 Border, Midlands and Western	36.5	6.0	1.29	0.88	0.12	7.8	5.4	2.3	39.8	75

ie02 Southern and Eastern	42.1	7.7	1.28	0.84	0.08	9.4	5.2	4.2	42.6	55
itc1 Piemonte	15.5	5.1	1.87	1.54	0.06	16.0	12.0	4.0	38.0	137
itc2 Valle d'Aosta/ Vallée d'Aoste	12.4	4.9	0.38	0.26	0.03	0.0	0.0	0.0	34.7	64
itc3 Liguria	21.5	7.0	1.33	0.75	0.22	8.7	6.2	2.5	44.1	71
itc4 Lombardia	17.6	6.0	1.20	0.89	0.06	14.5	10.8	3.7	40.9	150
itd1 Provincia Auto- noma Bolzano-Bozen	11.7	7.2	0.36	0.22	0.04	4.7	2.8	1.9	39.8	64
itd2 Provincia Autonoma Trento	16.9	9.0	1.18	0.25	0.44	8.1	4.7	3.3	39.0	50
itd3 Veneto	14.4	6.5	0.62	0.32	0.06	13.3	10.7	2.6	35.7	126
itd4 Friuli-Venezia Giulia	14.4	7.4	1.24	0.59	0.15	12.8	9.7	3.1	36.3	144
itd5 Emilia-Romagna	17.8	6.7	1.24	0.78	0.08	13.2	11.0	2.2	41.1	187
ite1 Toscana	16.6	6.8	1.18	0.39	0.17	8.2	5.5	2.7	38.9	76
ite2 Umbria	17.2	7.6	0.83	0.21	0.07	9.8	7.1	2.7	35.9	44
ite3 Marche	15.6	5.5	0.60	0.27	0.03	11.0	9.2	1.8	34.1	69
ite4 Lazio	22.1	8.1	1.93	0.56	0.79	10.5	4.4	6.1	40.2	41
itf1 Abruzzo	18.4	7.0	1.10	0.54	0.16	9.4	7.3	2.2	39.2	40
itf2 Molise	16.3	7.3	0.50	0.04	0.06	7.6	7.6	0.0	37.0	0
itf3 Campania	18.0	5.2	1.24	0.48	0.13	7.8	5.3	2.4	38.2	16
itf4 Puglia	15.0	5.7	0.73	0.18	0.08	5.7	3.7	2.0	35.0	12
itf5 Basilicata	15.7	6.9	0.57	0.22	0.09	8.3	6.0	2.3	37.3	8
itf6 Calabria	17.8	6.3	0.42	0.03	0.05	3.9	1.7	2.2	38.9	5
itg1 Sicilia	17.1	5.2	0.88	0.24	0.11	4.7	2.4	2.4	37.7	13
itg2 Sardegna	15.0	7.5	0.63	0.04	0.12	4.6	2.2	2.4	34.8	9
cy0 Cyprus	36.6	8.5	0.44	0.10	0.11	3.2	0.9	2.3	31.4	9
lv0 Latvia	29.5	6.8	0.59	0.19	0.14	4.3	1.9	2.5	41.7	5
lt0 Lithuania	36.6	4.9	0.81	0.23	0.17	4.5	2.4	2.1	40.5	3
lu0 Luxembourg (Grand-Duché)	31.4	8.5	1.58	1.32	0.21	4.4	1.1	3.4	58.2	218
hu1 Közép- Magyarország	32.5	4.3	1.33	0.70	0.39	12.3	6.2	6.2	46.1	35
hu2 Dunántúl	18.8	2.3	0.50	0.26	0.07	14.7	12.7	2.1	29.4	6
hu3 Alföld és Észak	20.8	2.8	0.71	0.33	0.12	9.7	7.8	1.8	32.0	8
mt0 Malta	18.3	6.2	0.58	0.38	0.01	9.3	6.0	3.2	36.9	19
nl1 Noord-Nederland	27.5	16.3	0.96	0.43	0.03	6.4	3.0	3.4	45.4	73
nl2 Oost-Nederland	29.4	16.0	1.60	0.69	0.30	7.3	3.3	3.9	46.9	121
nl3 West-Nederland	35.9	18.1	1.39	0.71	0.30	7.3	2.4	4.9	51.1	139
nl4 Zuid-Nederland	29.4	15.8	2.60	2.07	0.05	8.3	4.8	3.5	45.7	559
at1 Ostösterreich	22.2	14.0	2.63	1.69	0.20	8.9	5.5	3.4	41.4	187

at2 Südösterreich	17.4	11.7	3.43	2.56	0.14	9.8	7.7	2.1	34.7	176
at3 Westösterreich	17.4	13.0	1.99	1.52	0.06	9.4	7.4	2.0	35.6	237
pl1 Centralny	30.6	5.7	0.95	0.26	0.47	7.8	4.1	3.7	39.0	5
pl2 Poludniowy	25.3	4.3	0.58	0.18	0.14	8.7	6.1	2.5	35.9	5
pl3 Wschodni	24.2	4.0	0.34	0.10	0.10	5.6	3.9	1.7	29.8	2
pl4 Północno-Zachodni	22.3	4.4	0.38	0.11	0.09	8.5	6.3	2.2	30.6	3
pl5 Poludniowo-Zachodni	23.3	5.0	0.35	0.12	0.04	11.2	8.5	2.8	33.1	4
pl6 Północny	23.7	4.4	0.35	0.16	0.07	8.1	6.0	2.1	31.8	1
pt17 Lisboa	16.0	5.1	1.76	0.96	0.24	8.2	4.4	3.8	10.0	10
ptx Rest van Portugal - vasteland	12.9	4.9	0.94	0.45	0.04	4.3	3.3	1.0	21.5	7
si0 Slovenia	25.2	13.9	1.45	0.87	0.35	11.9	9.1	2.8	40.1	46
sk0 Slovakia	18.1	3.3	0.46	0.18	0.16	12.8	9.9	2.9	35.8	7
fi1 Manner-Suomi	37.9	23.0	3.50	2.53	0.30	11.6	7.1	4.6	45.6	248
se0 Sverige	32.9	22.1	3.61	2.66	0.17	11.3	6.2	5.1	45.8	279
ukc North East	30.6	18.8	1.17	0.70	0.00	10.3	6.0	4.3	38.1	55
ukd North West (including Merseyside)	33.4	18.1	2.19	1.66	0.07	9.5	5.9	3.6	40.4	58
uke Yorkshire and The Humber	32.2	17.8	0.93	0.43	0.05	7.9	4.5	3.4	39.8	47
ukf East Midlands	30.5	19.4	1.67	1.22	0.10	9.9	6.9	3.0	39.4	78
ukg West Midlands	30.8	18.8	1.28	0.96	0.02	11.6	7.5	4.1	40.4	60
ukh Eastern	30.6	19.8	4.40	3.62	0.30	11.0	6.1	4.8	44.6	144
uki London	48.2	23.2	1.05	0.39	0.10	8.3	2.3	6.0	54.1	56
ukj South East	36.3	21.4	2.55	1.83	0.31	12.1	6.0	6.2	46.8	153
ukk South West	33.4	21.3	1.73	1.20	0.27	10.0	6.1	4.0	42.5	89
ukl Wales	35.1	19.2	1.09	0.46	0.09	8.5	6.0	2.5	39.1	31
ukm Scotland	38.3	20.7	1.48	0.47	0.29	7.9	4.1	3.8	40.2	69
ukn Northern Ireland	32.9	11.1	1.09	0.57	0.06	7.5	5.0	2.6	35.2	37
bg3 Severna i iztochna Bulgaria	22.6	0.8	0.16	0.06	0.09	7.8	6.2	1.6	25.8	1
bg4 Yugozapadna i yuzhna centralna Bulgaria	30.0	2.0	0.70	0.21	0.41	7.5	4.1	3.4	32.9	6
ro1 Macroregiunea unu	15.1	1.4	0.27	0.09	0.04	6.6	5.3	1.3	22.9	1
ro2 Macroregiunea doi	11.7	1.5	0.27	0.09	0.07	3.9	3.0	0.9	18.1	1
ro3 Macroregiunea trei	20.0	1.4	1.00	0.45	0.39	8.9	6.2	2.7	26.6	1
ro4 Macroregiunea patru	15.4	1.3	0.23	0.09	0.07	10.7	9.4	1.2	20.3	0

WEBSITE 'FLANDERS IN ACTION'

On the website www.flandersinaction.be data and maps of the benchmarking can be consulted.

It is possible to obtain maps of the EU 131 regions based on 10 basis indicators (data concerning economy, labour market, innovation and demography). Furthermore graphs of these indicators are also available. Finally a spreadsheet with the whole set of indicators and a pdf of this report can be downloaded.

The screenshot displays the website interface for 'Flanders In Action Pact 2020'. At the top left is the logo with the text 'Flanders In Action Pact 2020'. To the right are navigation buttons for 'Breakthrough', 'Pact 2020', and 'About ViA', along with a search bar and language options (en | fr | de | es | nl). The main content area is titled 'Benchmarking Flanders' and is divided into four colored boxes representing different indicators:

- Economy** (orange header):
 - GDP per capita
- Labour market** (red header):
 - Employment rate
 - Activity rate
 - Number of people employed with higher level of education
 - Unemployment rate
 - Labour productivity
- Innovation** (green header):
 - R&D-expenditure in % of GDP
 - Number of people employed in knowledge intensive sectors
 - Participation in lifelong learning
- Demography** (blue header):
 - Share of population aged 15-64 years

At the bottom of the main content area, there are two download links: 'Download all figures (Dutch, 2010)' and 'Download the report (2010)'. The footer contains the logo of 'Vlaamse overheid' and a navigation menu with links to 'Homepage', 'Breakthroughs', 'Pact 2020', 'About ViA', 'Contact us', and 'Privacy & disclaimer'. A Facebook icon and the text 'Vind ons op Facebook' are also present.



Coordination

Research Centre of the Flemish Government

Graphic design

Department of the Services for the General Policy
Communication Division
Patricia Vandichel

Responsible publisher

Josée Lemaître
Research Centre of the Flemish Government
Boudewijnlaan 30, 1000 Brussel

Printing

Claes Printing - Sint-Pieters-Leeuw

Filing number

D/2010/3241/493

Edition

February 2011

