Commission staff working document

Industrial Performance Scoreboard

and

Member States' Competitiveness Performance and Policies

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A Europe 2020 Initiative

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1. INDUSTRIAL PERFORMANCE SCOREBOARD

1.1. Introduction

A diversified economy that combines well-performing industries and services sector with a favourable business environment is the best basis for sustainable growth and the creation of jobs. Although the share of industry in the EU economy has declined in the last decade, the importance of manufacturing has not diminished, owing to its growing interdependence with the services sectors. While services have become vital inputs in manufacturing processes, many services sectors depend on industries that produce the equipment and hardware they use. Increasingly complex value chains that combine products and services, and changing production methods that emphasise mass customisation and closeness to the market are creating new opportunities for European industry and services. European industry should be able to quickly seize these opportunities to achieve the Europe 2020 goal of smart, sustainable and inclusive growth.

However, the business environments of Member States need to be flexible and ready for change to benefit from these developments. Looking at the Member States through a series of indicators illustrates the variation in their industrial performance, and makes it clear that there is scope for improvement through structural reform at national level. To facilitate reform and policy learning, this scoreboard focuses on five areas: productivity in manufacturing; export performance; innovation and sustainability; business environment and infrastructure; and finance and investment.

Productivity and skills. Whilst total productivity is the function of different production inputs, the quality of human resources and the skill levels of the workforce have been a strong comparative advantage of the European economy relative to the rest of the world. A well-qualified and skilled workforce leads to high labour productivity, which in turn has been the key transmission mechanism for growth throughout industrialised countries. Hence increasing the level of skills is the key to increased labour productivity and the continued success of European industry. This holds especially true for the most advanced economies at the productivity frontiers. At the same time, in particular the catching-up countries can boost their productivity by the use of advanced technology based on foreign direct investment.

Export performance. Exports are a key source of growth and serve as an indicator of an economy's performance in price, technological or structural competitiveness. Some Member States are successful global exporters of manufactured goods, some are more specialised in intra-EU trade and others have economies dominated by services. The European value chains that have evolved due to the Single Market and enlargement have contributed to the success of EU exports.[1] The EU remains the largest exporter of goods and services in the world and has broadly managed to hold a share of 20% of global exports (excluding energy) – despite the rise of China. Some Member States are performing better than others. Price competitiveness and ongoing industrial restructuring help boost exports of the catching-up Member States. Mature economies tend to benefit from technological competitiveness and structural shifts toward knowledge-intensive sectors.

Innovation and sustainability. In the long run, innovation capacity is a key driver of growth. Successful investment in research and innovation can boost productivity and the competitiveness of European businesses. At the same time, improved innovation performance facilitates structural change in Member States' economies towards economic activity with high added value.

A transition towards a sustainable, resource-efficient economy is instrumental for maintaining the long-term competitiveness of Member States. Energy efficiency can reduce the impact on industrial competitiveness of volatile energy prices on the world market. Over the last decade, many Member States have significantly improved their energy efficiency and have been able to grow without consuming more energy. However, wide differences in energy intensity persist, indicating potential for improvement. Investment in the development, production and purchase of goods and services needed for the greening of the economy indicates how extensive such investments are in an economy.

Business environment and infrastructure. The business environment influences the decisions taken by enterprises. Lack of red tape, an efficient public administration and judicial system, transparent legislation, and good physical and digital infrastructure contribute to the productivity and growth of enterprises by allowing them to seize opportunities and by reducing costs. New business activity benefits from an easy start-up environment, competition-promoting regulation, easy access to finance, and open trade. Overall, a business-friendly environment helps to create growth and jobs by increasing firms' chances of success and by improving Member States' attractiveness for investment. Competitive energy markets facilitate cost-efficient production, as energy is an essential input for all firms. However, the internal market in

[1] Commission Staff Working Document 'External Sources of Growth: Progress Report on EU Trade and Investment Relationships with key Economic Partners', SWD(2012)219 final, 18.7.2012.

electricity is still incomplete. A well-performing transport infrastructure is also crucial to run any business efficiently.

Finance and investment. A crucial ingredient in allowing businesses to grow and create new jobs is easy access to finance. Whilst macroeconomic and banking sector stability plays a crucial role in the supply of credit, the viability and growth prospects of businesses affect their capability to attract venture capital and other investors. European enterprises tend to be under-capitalised and have traditionally been heavily dependent on bank loans. The recession and the turmoil in the banking sector have affected business investment in equipment.

The scoreboard indicators

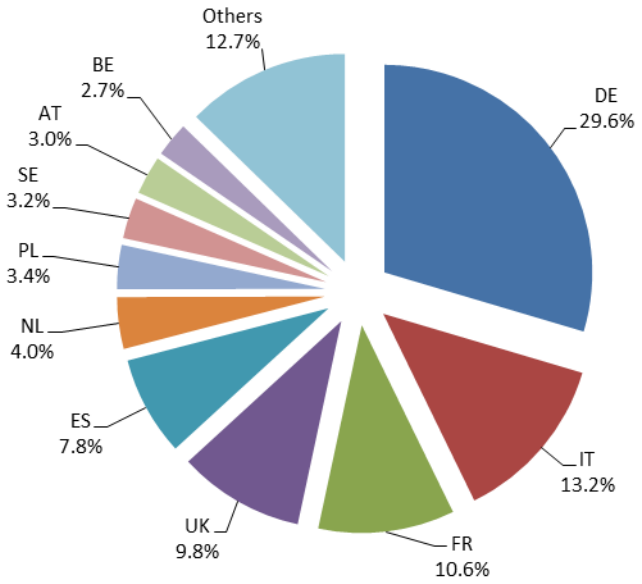
The industrial performance scoreboard has indicators in five areas: productivity and skills; export performance; innovation and sustainability; business environment and infrastructure; and finance and investment. Taking into account these areas, the basis for the scoreboard were the 30 or so indicators that are monitored in the report *Member States' Competitiveness Performance and Policies*, out of which **a representative set** of ten individual policy indicators was selected. The selection was based on the following criteria: (i) they are closely related to policy instruments and the economic reform agenda; (ii) they are available on a reasonably timely basis; (iii) there is (almost) full country coverage; (iv) there is a time series available for the last five or so years, so that a country can be compared with its own past performance.

1. Overall industry performance can be gauged through **manufacturing productivity.**
2. The quality of the workforce in the manufacturing sector is assessed by **educational attainment**.
3. The **share of exports** in GDP published by Eurostat is an indication of the openness of the economy, with high-tech exports and eco-innovation exports reflecting specific aspects of export performance.
4. For **innovation performance**, the main indicator is the innovation index published annually in the Innovation Union Scoreboard (IUS), drawing together the overall innovation performance.
5. For sustainability, **energy intensity** in industry and the energy sector is used.
6. For **business environment** and infrastructure, the goal is to measure improvements in the business environment and efforts towards better regulation. An overall business environment score has been calculated by the Commission, based on the annual survey data of the World Bank.
7. **Electricity prices** (excluding VAT) for small and medium-sized enterprises, published by Eurostat, represent one of the most significant costs of inputs and therefore directly affect industry competitiveness.
8. Enterprises need modern and efficient transport networks to operate. Business **satisfaction with infrastructure** (rail, road, port and airport) is recorded by an annual indicator published in the Global Competitiveness Report.
9. **Bank lending** is still by far the main source of access to finance for SMEs and, therefore, a score for access to bank lending has been calculated by the Commission.
10. Business **investment in equipment** is an indicator of how well businesses can keep up their manufacturing capability over a period of time.

1.2. Overall performance

As industrial structures vary considerably across the EU, the Member States have been following different paths towards a more knowledge-intensive economy. Accounting for more than 70 % of total manufacturing output, the five biggest economies markedly affect the EU's overall industrial performance (see figure 1.1).

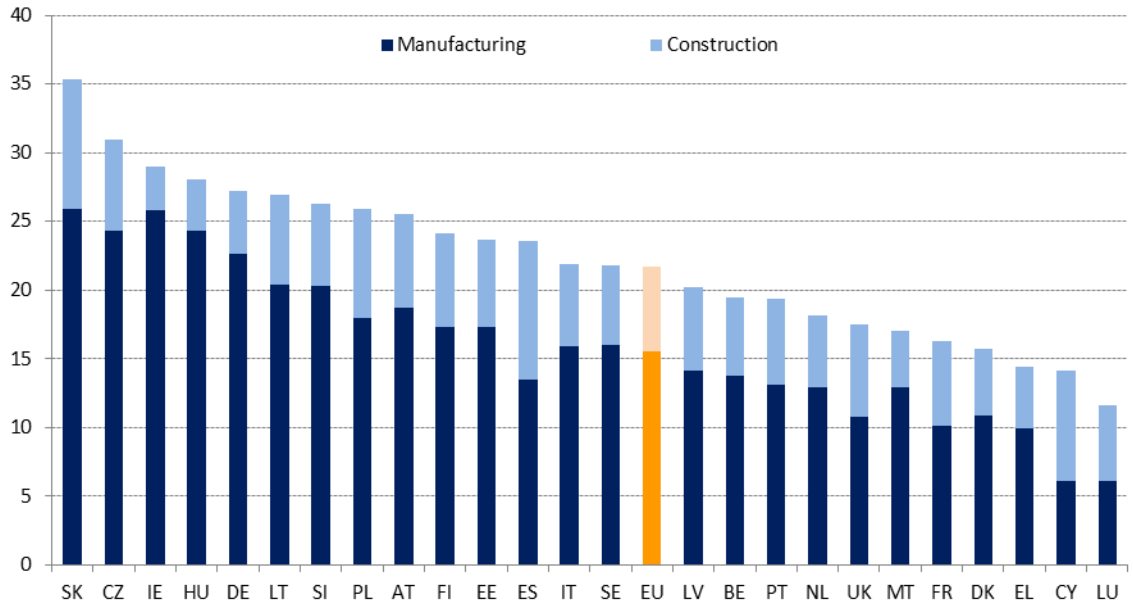
Figure 1.1: Country share in EU manufacturing (2011)



Source: Eurostat

Manufacturing is an important part of the Member State economies (see figure 1.2). It should be noted that in addition to manufacturing, mining and energy activities contribute more to value added in some Member States than in others. In Poland, Slovakia and the Czech Republic mining and energy account for over 6 % of total value added, whereas in Malta, Ireland, France and Italy this contribution is between 1 % and 2.5 %.

Figure 1.2: Manufacturing and construction in Member State economies (as % of GDP at factor cost; 2011)



Note: LU (2010)
Source: Eurostat; LU (STATEC)

Over one third of the inputs in manufacturing production are business-related services, which are therefore an important contributor to the competitiveness of industry. About one sixth of total output of the business-related service sector goes directly to manufacturing. Business services include network industries (energy, telecommunication, transport), distributive trade and others (including consulting, engineering, research and development, and information technology services).

Looking at the overall performance of the Member States, it is clear that policy decisions over long periods of time have created business environments that are specific to each country. Nevertheless, based on clustering the key characteristics of the Member States as identified by the indicators of the scoreboard, three main groups emerge.

The '*consistent performers*' are: Germany, Denmark, Finland, Sweden, Austria, Ireland, the Netherlands, the United Kingdom, Belgium and France. Their industries are dominated by technologically advanced firms and their workforces are highly skilled. Their research and innovation systems perform well over a number of indicators. For example, strong public-private collaboration helps the commercialisation of technological knowledge. Their innovation capacity, high labour productivity and moderate wage increases make high-value exports competitive in third-country markets. A mostly friendly business environment, access to finance and good infrastructure further enhance the productivity of enterprises. Moves towards high-value production have helped many of these countries to reduce their energy intensity and benefit from the opportunities presented by the greening of industries. Performing very well against all these competitiveness criteria, in particular Germany, Denmark, Finland, and Sweden appear to have the most competitive industrial economies in the EU. With a growing competitiveness gap, France appears at the lower end. Nevertheless, variations in their relative performance show that all economies in this group still have room for improvement.

The group of '*uneven performers*' comprises Estonia, Slovenia, Spain, Italy, Portugal and Greece, along with Malta, Cyprus and Luxembourg. These countries tend to show uneven performance, good against some criteria, but below the average on others. Manufacturing sectors in Spain, Italy and Greece benefit from relatively good levels of labour productivity. Italy's industry belongs among the most energy-efficient. In several aspects, for example Portugal has a friendly business environment. On the other hand, difficulties in accessing finance, further aggravated by bad payment behaviour of public authorities, pose a serious challenge for SMEs in these countries. Malta, Cyprus and Luxembourg are strong in exports of high-tech and environmental goods, have good domestic infrastructure, but businesses in particular in the first two are dragged down by high electricity prices. Most countries in this group also have in common weaker research and innovation systems and some severe constraints related to the business environment, although in each country there are examples of innovative internationally successful companies or even clusters. This uneven performance does not, however, enable the synergy of the essential competitiveness ingredients to be reaped, and as a result, hinders to lesser or greater extent the modernisation and growth prospects of their economies. Particularly worrying in this respect has been the continuous stagnation or deterioration in some measures of competitiveness in Spain, Italy, Portugal and Greece.

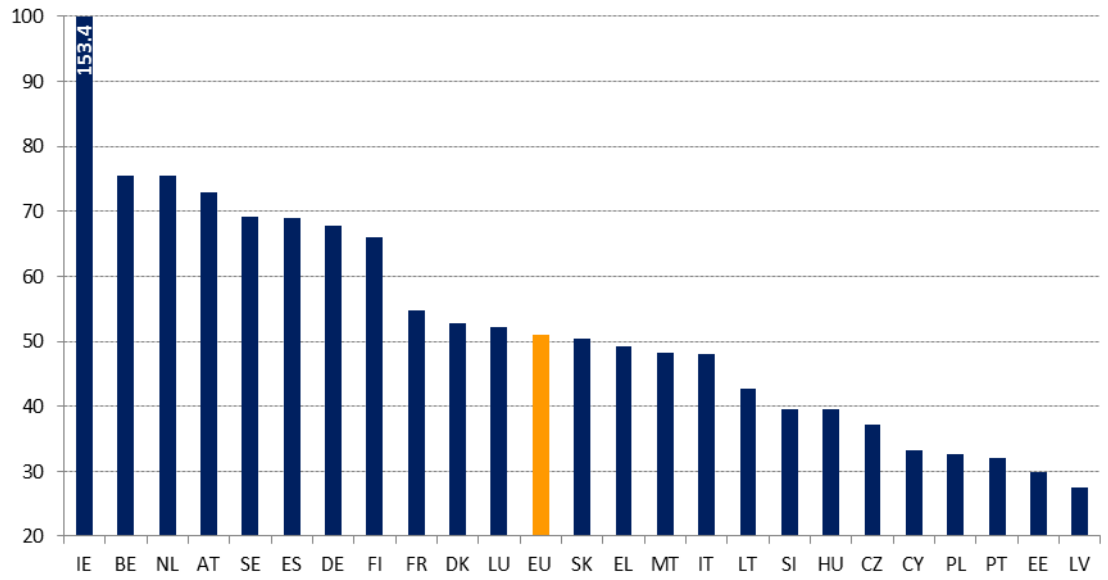
The '*catching-up*' group consists of Bulgaria, Romania, the Czech Republic, Poland, Hungary, Slovakia, Latvia and Lithuania. These countries face significant challenges, as their move towards more knowledge- and skills-oriented industries is hampered by weak innovation capacity and knowledge transfer. In spite of improvement, their resource efficiency is still low, in particular in the case of Bulgaria and Romania. The business environment is particularly difficult, with clear problems related to the transparency and efficiency of public administration, for instance when setting up a business, registering property, protecting investors, and dealing with insolvency. Businesses in these countries are also particularly unsatisfied with domestic infrastructure. Only Polish enterprises do not have significant problems in accessing finance. Although they have substantial relative strengths in several areas, each economy in this group has considerable scope for improvement. However, there are clear signs that the catch-up process in these countries has been fairly brisk on many competitiveness criteria, enabling them to further narrow down their gap with the most advanced economies.

1.3. Productivity and skills

1.3.1. Labour productivity

Total output depends on the quantity and quality of production factors and how efficiently they are combined. Almost all of the average growth in real output per capita in the past four decades has been determined by labour productivity growth. Productivity growth depends on innovation, research and development spending, and technology dynamism and diffusion, which in turn are influenced by institutional factors, such as regulations and preferences. Ultimately labour productivity captures the improvements in all the dimensions of competitiveness. However, for countries to fully benefit from investment in innovation and technological progress, structural reforms have to provide a fertile environment that allows firms to profit from these investments.

Figure 1.3: Labour productivity in manufacturing



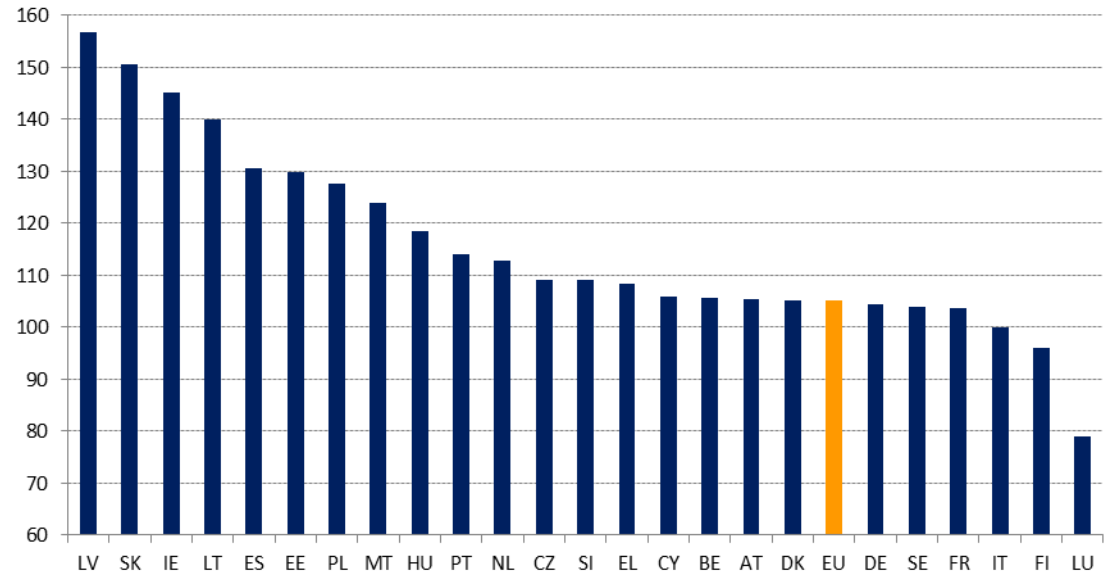
Note: Luxembourg, Ireland and EU average are for 2010; data for Bulgaria, Romania and the UK is not available.
Source: Eurostat (except for LU STATEC); expressed as gross value added, in 1 000 PPS/employee, 2011.

Labour productivity in manufacturing is very high in Belgium, the Netherlands, Austria, Sweden, Spain, Germany and Finland, reflecting their relative specialisation in highly knowledge-intensive manufacturing and their production systems equipped with modern technology (see figure 1.3). The high productivity of Ireland[2] is also affected by the operations of foreign multinationals and their activities undertaken outside the country. Manufacturing plays a smaller role in France's economy and its productivity is slightly lower than the best performers, reflecting an industrial structure that is less specialised in high innovation sectors. Italy has a large manufacturing sector, although with productivity only around the EU average, mainly due to its specialisation in less technology-intensive sectors, small firm size, and a backlog in implementing structural reforms in education systems, competition and product market regulations. This also holds for the Greek economy, which is dominated by services, and whose manufacturing is strongly specialised in food processing.

Between 2006 and 2011, labour productivity in manufacturing improved in most Member States (see figure 1.4). In contrast, Finland experienced an unprecedented drop in productivity, mainly due to the contraction in production and R&D activity of its large ICT sector. Overall, advanced economies tend to record smaller increases in productivity in line with long-term improvements in total-factor productivity. On the other hand, for countries that are more distant from the technology and productivity frontier, there is potential for major leaps forward. For instance Slovakia, with the highest productivity among the catching-up economies, had experienced major productivity gains that were driven by large FDI inflows and the related technology imports.

[2] Ireland's productivity level is to a significant extent inflated by the operations of foreign multinationals, in particular in the chemicals and pharmaceuticals sectors. The very high values are likely to be affected by R&D and marketing activities undertaken mainly outside Ireland, and by transfer pricing activities.

Figure 1.4: Change in manufacturing productivity (2011, 2006=100)

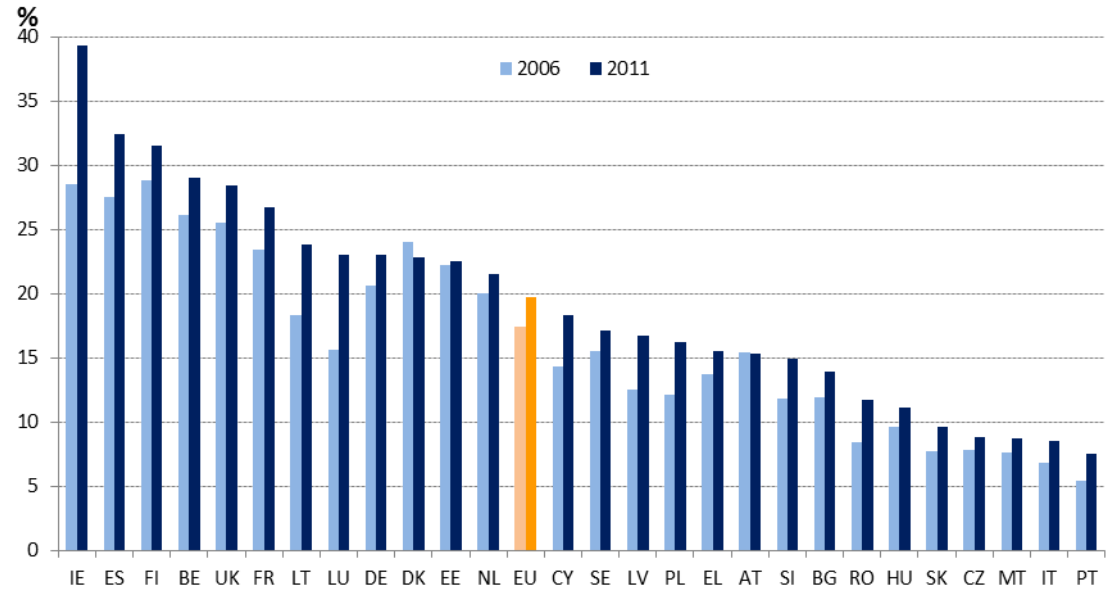


Note: Luxembourg, Ireland and EU average are for 2010; data for Bulgaria, Romania and the UK is not available.
Source: Eurostat (except for LU STATEC); using Nace Rev 1

1.3.2. Educational attainment

A structural shift towards a knowledge-based economy is possible only with simultaneous improvements in the level, quality and relevance of skills of the workforce. In developing new cutting-edge technologies, transforming them into advanced products and services, and commercialising them, companies need a workforce with appropriate educational background, training and skills that is capable of occupying high value-added jobs.

Figure 1.5: Percentage of people employed in manufacturing with high qualifications



Note: 'High qualifications' consists of employees with at least first or second stages of tertiary education.
Source: Eurostat, Labour Force Survey

The share of highly qualified labour force in Ireland, Spain, Finland and Belgium highlight the role of this production factor in overall labour productivity performance, as well as the importance of education and skills-related investments (figure 1.5). On the other hand, the examples of the Netherlands, Germany or Sweden show that investments in advanced technology and top-notch manufacturing equipment matter equally. This is confirmed by Slovakia and Lithuania, both catching-up economies with relatively high labour productivity, albeit each relying on different comparative advantages. The former benefited from FDI-induced imports of modern technologies,

whereas the latter benefited from the higher educational profile of people employed in manufacturing. The low share of highly-qualified employment in manufacturing in Portugal reflects the prevalence of low-skill, labour-intensive industries (e.g. textiles).

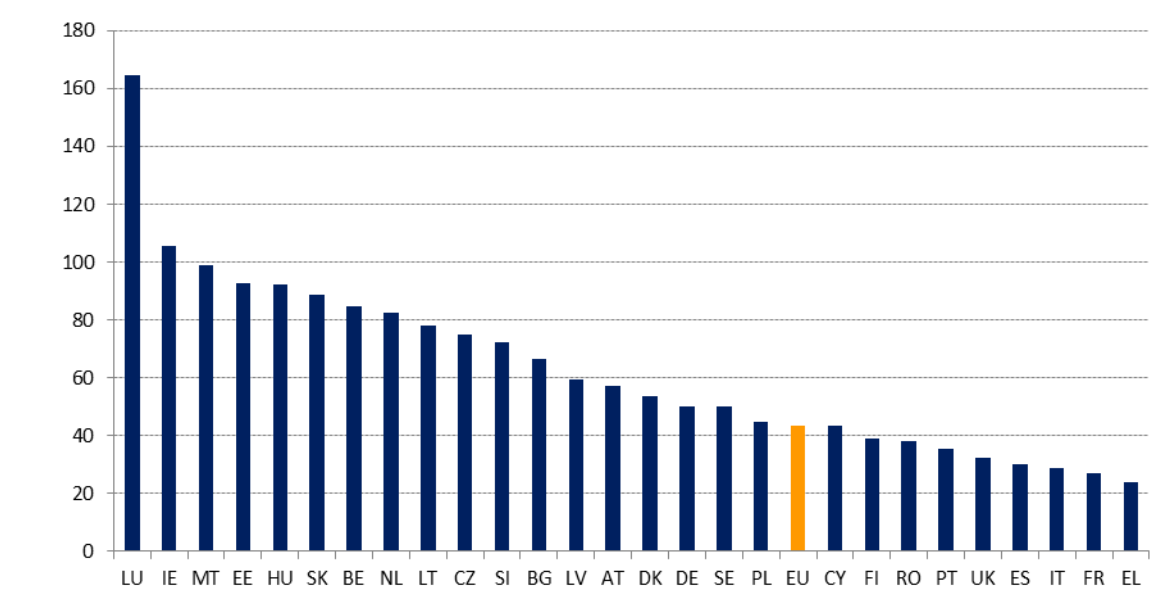
With all but two Member States showing an increasing share of highly-skilled labour force, the overall trend since 2006 has been encouraging, suggesting a continued shift to a more knowledge-based economy and the accompanying increase in medium and highly-qualified labour at the expense of low-skilled jobs. In particular Ireland seems to have experienced further structural changes towards high value-added sectors, such as pharmaceuticals and electronics. On the other hand, the apparent progress of Luxembourg is likely due to the effect of the partial closure of its iron and steel plants. Denmark's minor decline can be explained by its dual export specialisation in both highly innovative and less education-intensive sectors (e.g. food products).

1.4. Export performance

1.4.1. Total exports

Smaller economies naturally tend to be more open than large ones. Nevertheless, there are significant relative differences in how similarly sized economies benefit from international trade. Of the large economies, Germany stands out as the strongest exporter of manufactured goods, whereas Spain, Italy and France show considerably lower export orientation (see figure 1.6). When considering exports of both goods and commercial services, the United Kingdom was the second-largest exporter after Germany, reflecting the importance of services for some economies in the EU. The position of Greece at the lower end is due to its accumulated competitiveness losses, the fact that it is closed to FDI and the large share of services in GDP.

Figure 1.6: Total exports as a percentage of GDP (2011)



Source: Eurostat

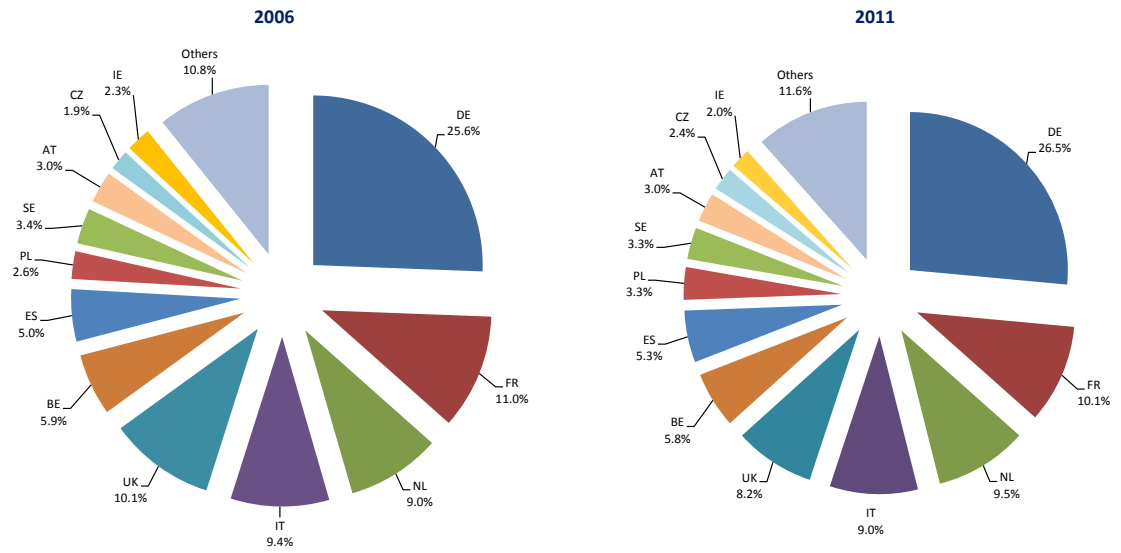
Despite the rise of emerging economies in Asia and elsewhere, the EU has broadly held to a 20% share of global exports (excluding energy)[3]. The relative share of individual Member States in total EU exports of goods reveals, however, that some economies are coping with global developments better than others. Overall, the mature economies tend to benefit from technological competitiveness and favourable structural developments toward knowledge-intensive sectors. On the other hand, price competitiveness and ongoing industrial restructuring induced by FDI help boost the export performance of the catching-up Member States.

Looking at the share of Member States of the total EU exports of goods (figure 1.7), it is clear that their fortunes have diverged since 2006. Germany, the Netherlands, Poland and Spain have been able to expand their share of EU goods exports, indicating an improvement in industrial competitiveness. Belgium, Sweden and Austria have largely maintained their relative positions. The shares of France, Italy, the United Kingdom and

[3] Commission Staff Working Document,'External Sources of Growth: Progress Report on EU Trade and Investment Relationbships with Key Economic Partners', SWD (2012) 219 final, 18.7.2012.

Ireland have declined. This development can be due to loss in price and technological competitiveness, but can also reflect a continued shift towards an economy dominated by services.

Figure 1.7: Country share of EU exports of goods

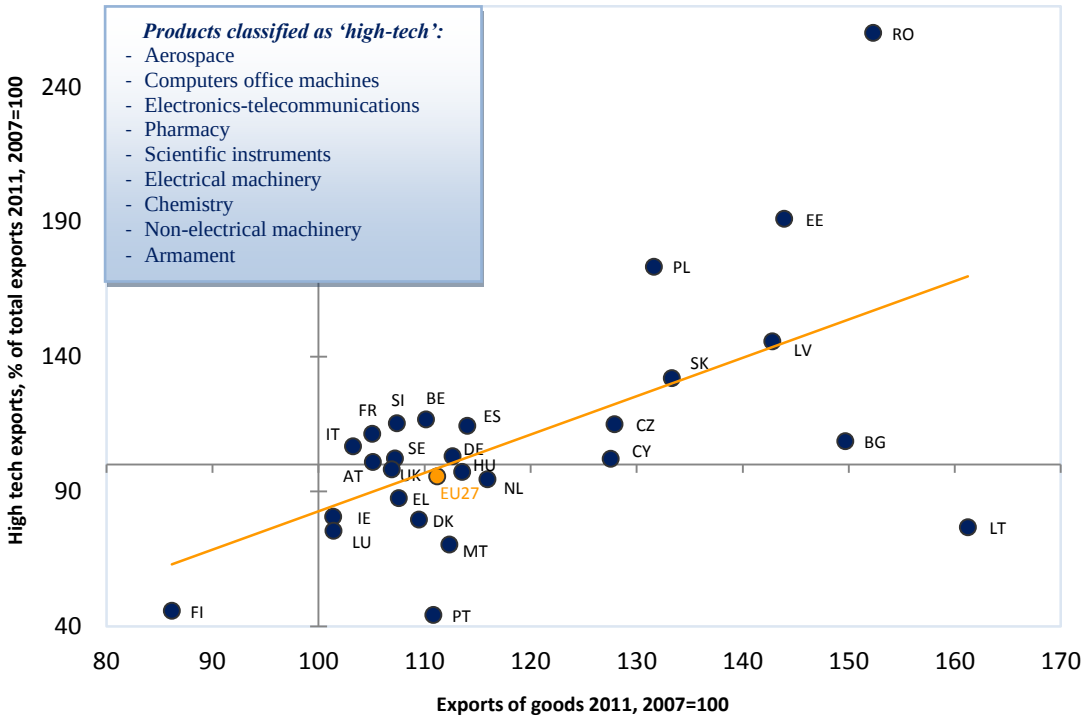


Note: The exports cover both intra-EU and extra-EU exports. The EU's export share in world trade in goods declined in 2006-2010 from 17.3% to 16.0%.
Source: Eurostat

1.4.2. High-tech exports

The share of high-tech products in total exports varies considerably between the Member States, ranging from 3.7% in Portugal, 5.7% in Poland, around 14% in Germany, Sweden and Finland, and 19.7% in France to 43.8% in Malta. As small countries tend to be more open, some economies are specialised in intra-EU trade whereas others are global exporters; these figures need to be read with care and alongside the change in total exports.

Figure 1.8: Change in high-tech exports and exports of goods



Note: The figure shows the change in the share of high-tech exports against the change in exports of goods, 2007 to 2011.
Source: Eurostat

A large share of high-tech exports normally reflects a shift in the industrial structure towards knowledge-intensive sectors that use advanced materials and technologies to produce internationally tradable goods with high added value.

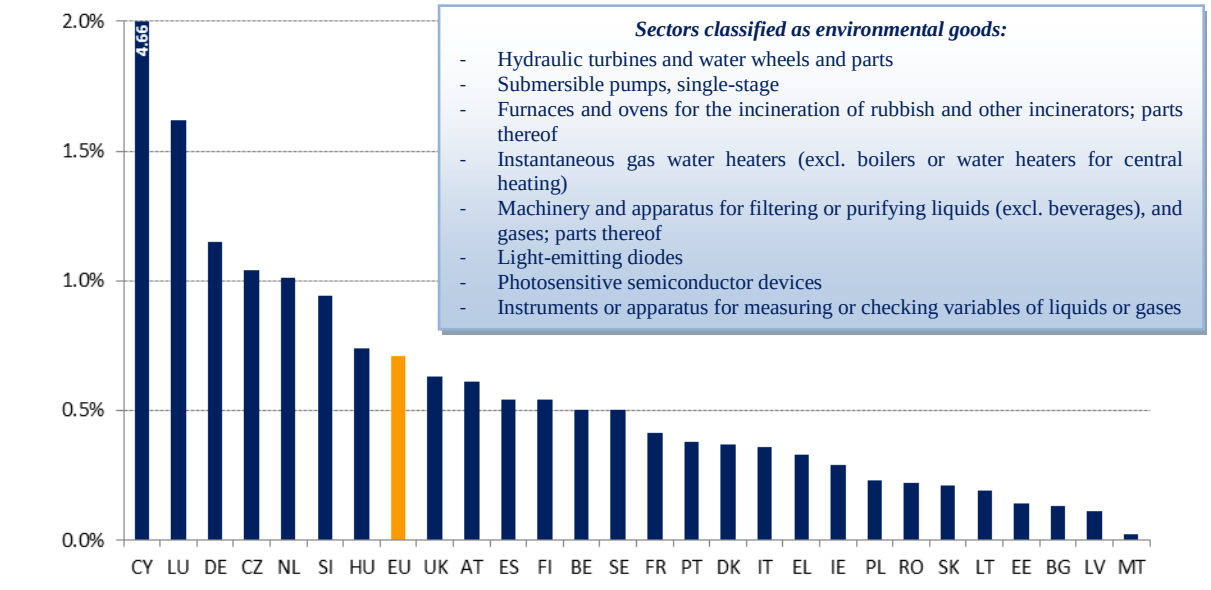
Comparing export performance in goods and the performance in high-tech exports over the crisis years gives a picture that is skewed by the recession (see figure 1.8). It is clear that many Member States have faced a difficult exporting environment during the years in question. In particular, in Finland both high-tech exports and total exports fell. In many Member States (those in the lower right-hand quarter), high-tech exports have not yet recovered to the relative level of 2007, even though their goods exports have grown. Many of the catching-up countries in the upper right hand quarter have improved their exports of goods, as well as their exports of high-tech goods (albeit from a relatively low level).

In many of the Member States that are catching up, in particular Poland, Estonia and Romania, both exports and the share of high-tech exports increased. This development seems to reflect the positive effects of large foreign direct investment inflows and the related imports of advanced investment goods that upgraded domestic production structures in these countries.

1.4.3. Exports of environmental goods

Thriving eco-industries can make a key contribution towards reaching EU climate change and environmental objectives. Development and production of the goods and services needed for greening the economy also fosters innovation capacity and sustains job creation within the EU. Cyprus, Luxembourg, Germany, the Czech Republic and the Netherlands have been most successful at seizing opportunities arising from the greening of economies, as they are the only Member States where the share of environmental goods exports exceeded 1% of total exports (see figure 1.9).

Figure 1.9: Exports of environmental goods as % of all exports of goods (2011)



Note: The outlying performance of Cyprus reflects the relative strength of its photovoltaic production.
Source: Eurostat, Commission calculations

Germany performs strongly in all sectors and is the largest supplier of environmental products and services in the EU. Although its exports account for a small proportion of its total production, it is the second largest global exporter (after the US), with a significant share of world trade in this sector. On the other hand, the eco-industry in the Netherlands is very export-oriented, exporting almost half of its production. Sweden and the UK are specialised in indoor air pollution control and cleaning technologies. France and Denmark are successful exporters of water processing and waste management technologies, whereas the latter in particular has ambitious policies targeting green technologies.

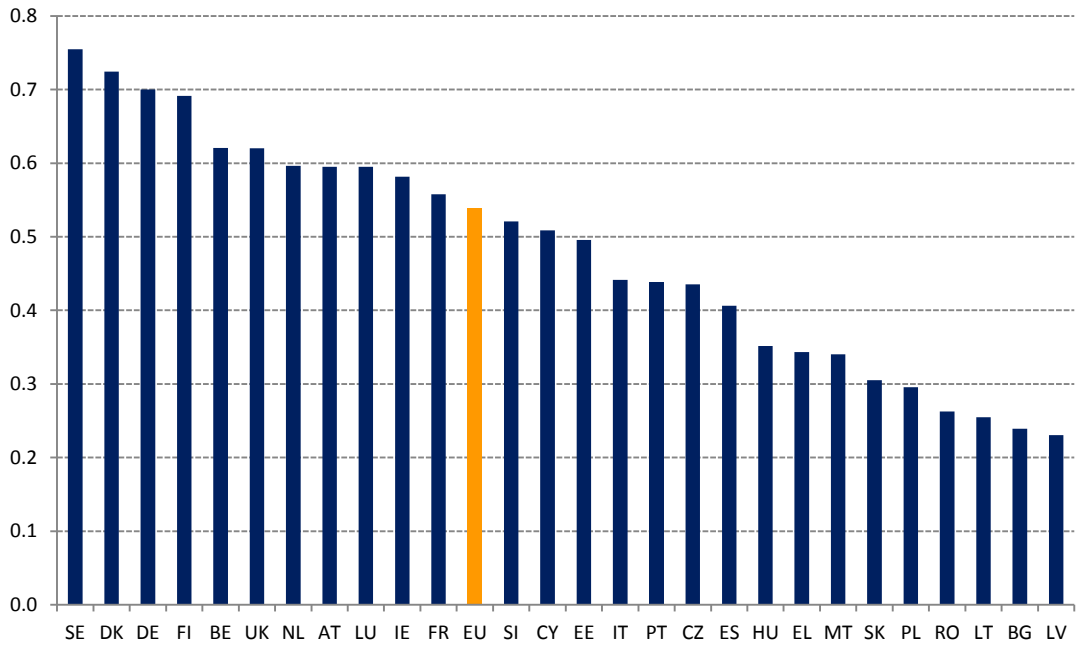
Although total trade in eco-goods still represents only a small percentage of GDP, it is encouraging that it increased in most Member States from 2006 to 2011.

1.5. Innovation and sustainability

1.5.1. Innovation performance

Based on the Innovation Union Scoreboard, the innovation leaders are Sweden, Denmark, Finland and Germany (see figure 1.10). The national research and innovation systems of these countries perform well on all innovation indicators, including human resources, excellence in research, intellectual assets, entrepreneurship, finance and firms' R&D investments. The performance of these systems is improved by close cooperation between research institutions and businesses.

Figure 1.10: Innovation Union Scoreboard (0=worst possible performance / 1=best possible performance)



Source: Innovation Union Scoreboard 2011[4]

Components of the Innovation Union Scoreboard	*Components of the Innovation Union Scoreboard*
Human resources - New doctoral graduates - Population aged 30-34 with tertiary education - Youth with at least upper secondary education **Open research systems** - International scientific co-publications - Top 10% most cited scientific publications - Non-EU doctoral students **Finance and support** - Public sector R&D expenditure - Venture capital **Firm investments** - Business sector R&D expenditure - Non-R&D innovation expenditure **Linkages and entrepreneurship** - SMEs innovating in-house - Innovative SMEs collaborating with others - Public-private co-publications	**Intellectual assets** - PCT patent applications - PCT patent applications in societal challenges - Community trademarks - Community designs **Innovators** - SMEs with product or process innovations - SMEs with marketing or organisational innovations - High-growth innovative firms **Economic effects** - Employment in knowledge-intensive activities - Medium- and high-tech product exports - Knowledge-intensive services exports - Licence and patent revenues from abroad

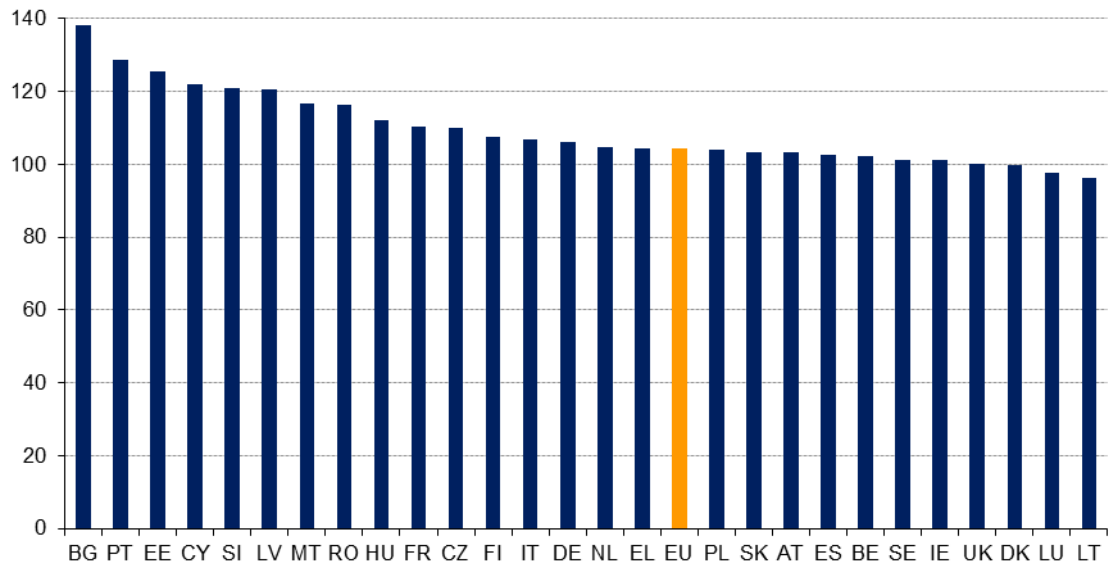
[4] The Innovation Union Scoreboard 2011 is based on three types of measures: 'enablers', or inputs to the innovation process (human resources, research systems, finance and support), 'firm activities' (investments, linkages and entrepreneurship, intellectual assets) and 'outputs' (SMEs introducing product, process, marketing or organisational innovations, and high-growth innovative firms). Data for 2011 reflect performance in 2009/2010 due to a lag in data availability. On a scale ranging from 0 (worst possible performance) to 1 (best possible performance), the score of Member States varies between 0.2 for Latvia and 0.8 for Sweden. For details of the calculation method, see 'Innovation Union Scoreboard 2011', http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm

Moderate innovators, such as Spain, Greece, Hungary, Poland, Bulgaria and Latvia, are characterised by uneven research and innovation systems. An example would be the very low share of SMEs introducing product, process or organisation innovations in these countries.

Whilst innovation performance varies significantly among Member States, almost all have improved their performance since 2007. There has also been convergence as less innovative Member States have improved faster than the already more innovative ones. In particular, Bulgaria and Portugal have achieved considerable improvement due to increased private R&D investment. Slovenia and Estonia also have significantly improved their performance, mainly by boosting the creation of intellectual assets (patent applications and trademarks). The differences separating the innovation leaders have also narrowed down, with Germany and Finland moving closer to Sweden at the top. On the other hand, Lithuania appears to have lost ground and progress in Poland and Slovakia has been slow.

With an EU average innovation score higher than in 2007, the overall picture is one of improvement (see figure 1.11). However, the convergence process appears to have been slowing down in recent years. Moreover, the innovation gap between Member States risks widening again due to the diverging way in which countries have responded to the economic crisis. The leading Member States have responded with proactive innovation policies, recognising innovation capacity as a key driver of future growth. On the other hand, the innovation followers and the less innovative countries are reducing their funding and support for R&D. A positive sign, however, is that with political will governments can embark on ambitious policies and improve the innovation performance of their economies.

Figure 1.11: Innovation performance — Change (2007=100)

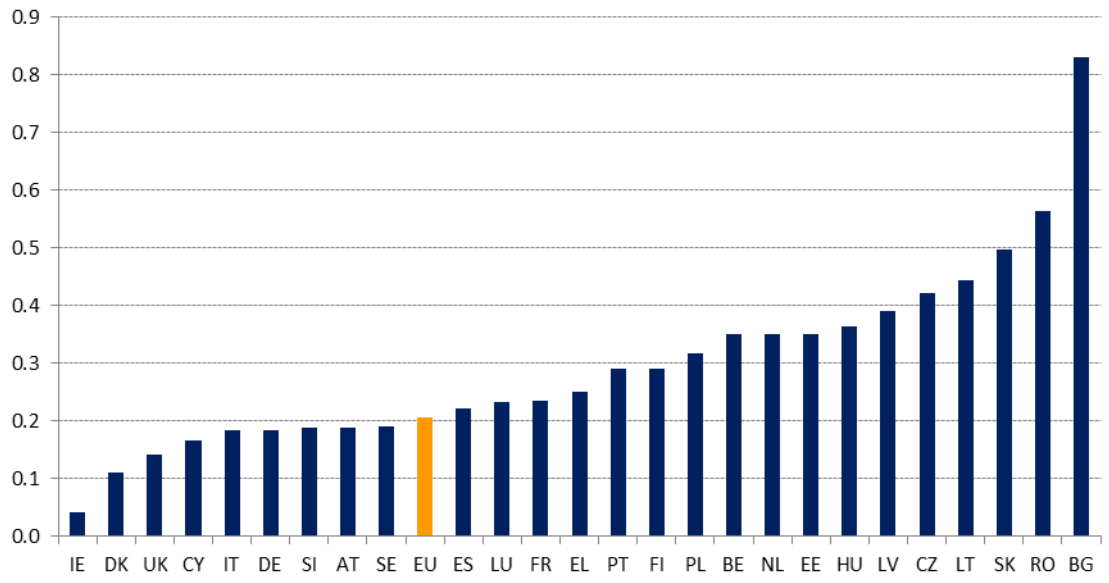


Note: Progress in innovation performance in the Member States in 2011 compared to 2007. The data is further analysed in the Innovation Union Scoreboard report.
Source: Own calculations based on the Innovation Union Scoreboard 2007 and 2011

1.5.2. Energy intensity

The least efficient Member State consumes nearly 20 times more energy to produce the same value of output as the most efficient one (see figure 1.12). Ireland, the best performer in 2009, has substantially improved its energy intensity due to a structural shift from traditional manufacturing industries to high value-added sectors such as pharmaceuticals and electronics.

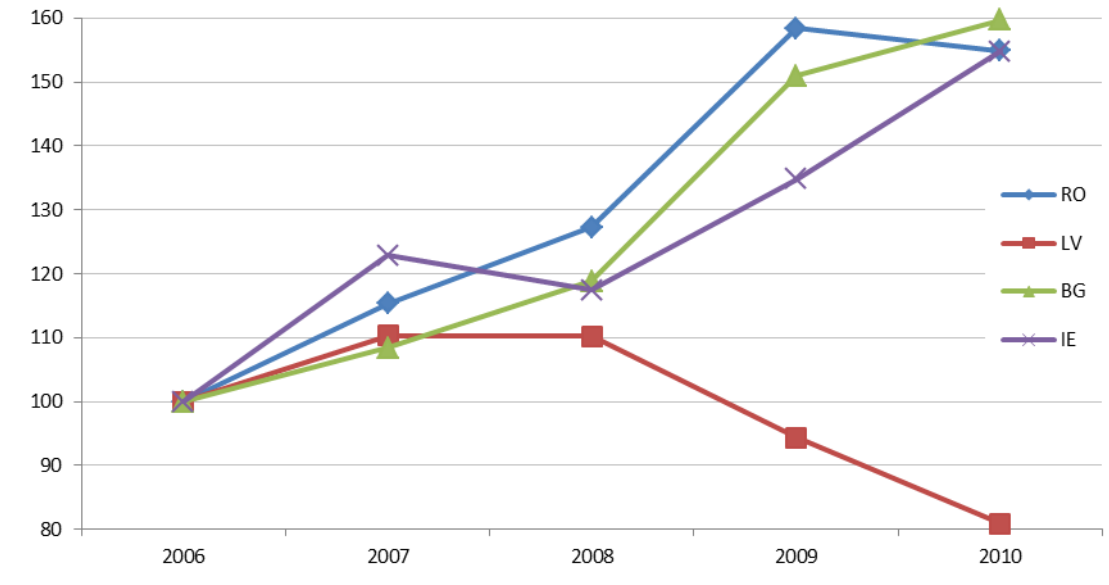
Figure 1.12: Energy intensity in industry and the energy sector



Note: No data for Malta.
Source: Eurostat, expressed as kg oil equivalent/euro GVA; ref. year 2000, 2010

A number of Member States, where energy intensity was still relatively high in 2009 have, however, improved their efficiency significantly from 2006 to 2009 as can be seen from figure 1.13. This was evident in particular in those Member States that have been catching up, as they have benefited not only from improved efficiency but also from structural change towards less energy-intensive sectors. Energy efficiency also deteriorated in several Member States, most likely because the economic crisis caused a drop in industrial production while energy consumption did not decrease proportionally. This effect was particularly pronounced in Latvia, which saw its GDP fall by 25 % between 2008 and 2010. In any event, many Member States have considerable potential to further reduce their energy intensity by facilitating structural change towards high-value industrial activities.

Figure 1.13: Changes in energy intensity (countries with the biggest change, 2006=100)



Note: Values above 100 indicate improvement.
Source: Eurostat

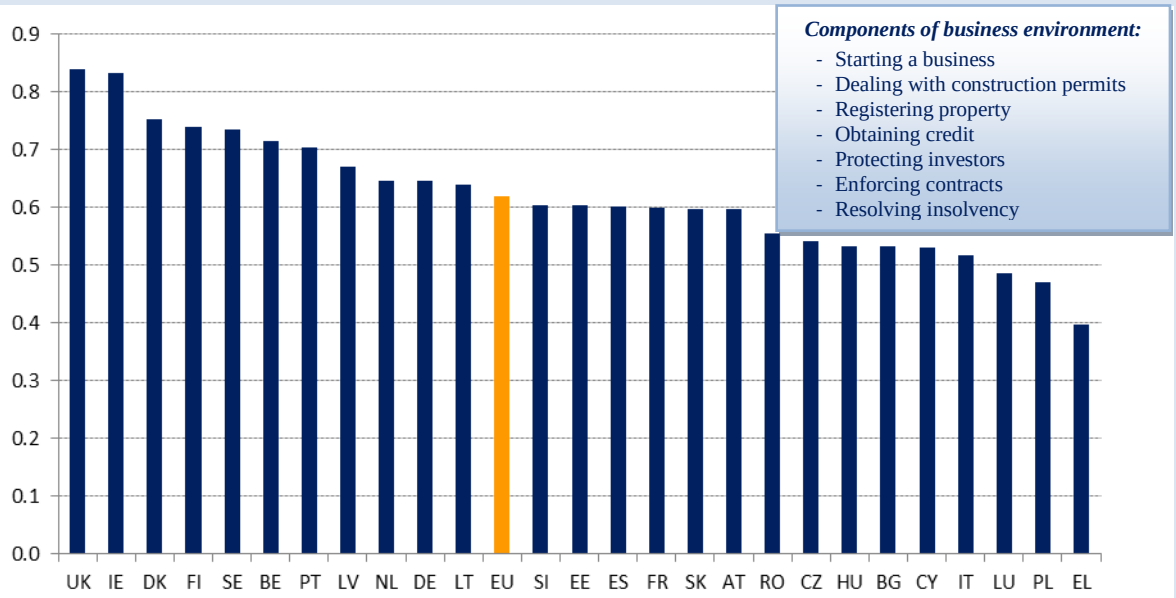
1.6. Business environment and infrastructure

1.6.1. Business environment

The World Bank composite indicator on the business environment puts the United Kingdom and Ireland at the top in the EU, followed by the Nordic countries (figure 1.14). These countries rank well in most of the component indicators.

The business environment scores are much lower in most of the new Member States. In Italy, very slow legal procedures drag down the overall score. The business environments in Poland and Greece are ranked as the most difficult, with severe problems when starting a business, registering property, protecting investors, and dealing with insolvency.

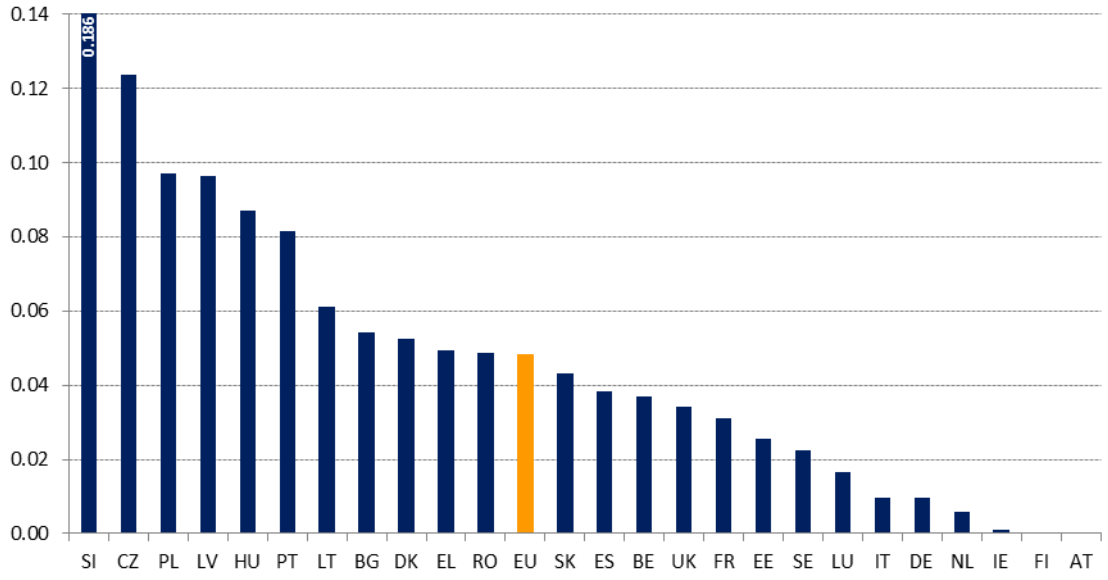
Figure 1.14: Business environment (0=least attractive / 1=most attractive, 2011)



Note: No data for Malta.
Each of the seven components of the indicator has been normalised to values between 1 (best) and 0 (worst). These components are then averaged for each Member State and for each year to obtain a score which reflects the position of the Member State with regard to the best and worst practices measured over 2011. Best practice can be defined in the same way but normalising values to 1 for the best performance over 2006-2011 and zero for the worst performance.
Source: World Bank Doing Business, Commission calculations

However, many Member States have improved their business environment noticeably in recent years (figure 1.15). The UK has shown that even the best can improve further. The biggest improvements have been achieved by the Member States with a low starting point in 2006, in particular Slovenia, the Czech Republic, Poland and Hungary. Slovenia has significantly streamlined the conditions for starting a business and registering property; the Czech Republic has considerably simplified insolvency procedures and the payment of taxes. In spite of the overall progress achieved, all Member States have continuing weaknesses in some components, leaving substantial room for further improvement. Figure 1.16 ranks Member States by progress towards best practice.

Figure 1.15: Business environment, improvement 2006-2011

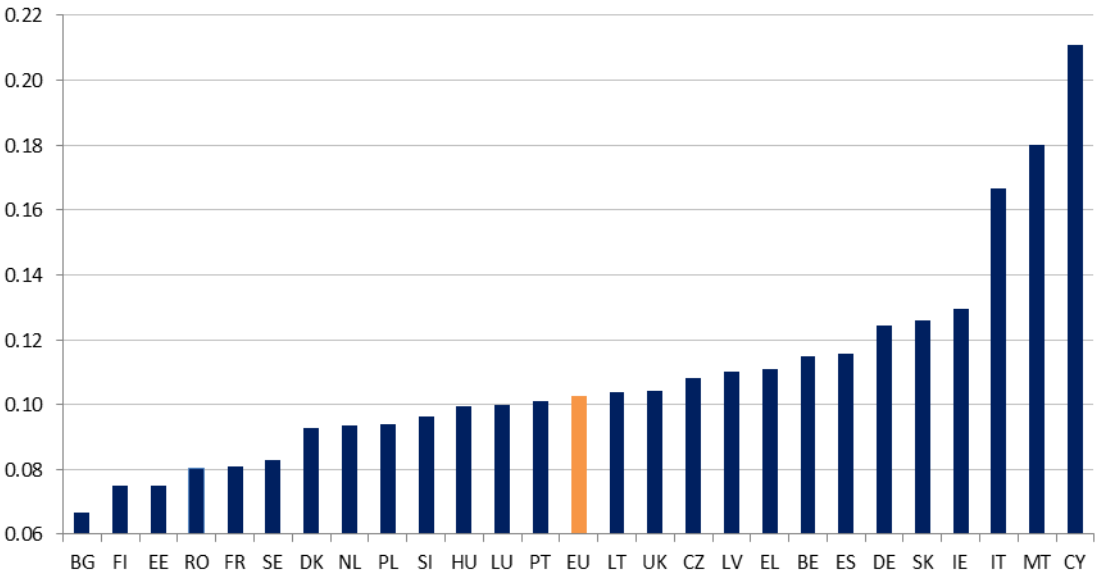


Note: Data for Malta and for Cyprus are missing.
Source: World Bank Doing Business, Commission calculations

1.6.2. Electricity prices

Electricity prices for medium-sized enterprises vary considerably across the EU (see figure 1.16). The prices in France are relatively low due to the country's reliance on cost-competitive nuclear energy. In Sweden, Finland and Denmark, enterprises also enjoy affordable electricity, benefiting from the competition on the common Nordic electricity market, which shows how countries can liberalise markets across national borders.

Figure 1.16: Electricity prices for medium-sized enterprises, 2011



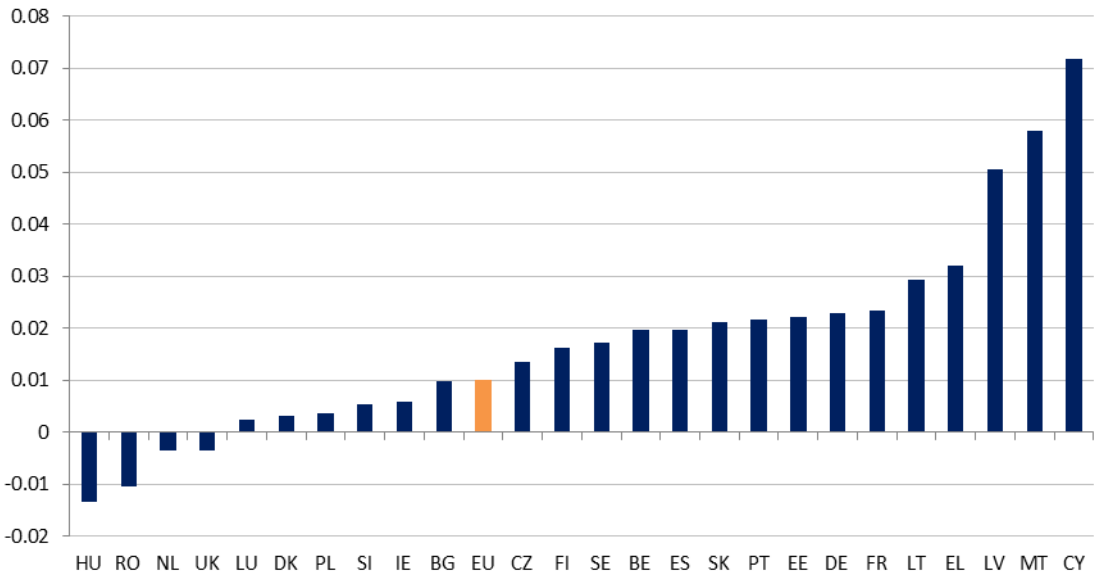
Note: No data for Austria.
Source: Eurostat, data refer to prices in the second half-year; including tax, except VAT; expressed in euro/KWh

The energy market functions efficiently also in the Netherlands, where unbundling has worked well, changing suppliers is relatively easy, concentration in electricity production is relatively low, and transmission networks are well connected to neighbouring countries. In Germany, competition in

the electricity sector has increased due to initiatives launched in recent years, including transposition of the Third Energy Package in 2011, although better interconnections and higher cross-border transmission capacity would enable it to function even better. Estonia has direct access to the Russian gas network; the future of its low electricity prices depend on price agreements and increases are anticipated from 2013 onwards.

Most Member States have seen their electricity prices go up between 2007 and 2011 as can be seen from figure 1.17. Whilst the high prices in Malta and Cyprus reflect the dominance of incumbent energy providers and the costs of importing energy to a small island economy, in Slovakia they reveal high transmission and distribution fees. In Italy, the high prices reflect a concentrated market structure, dependency on energy imports (mainly gas) and an energy mix that makes it more difficult to produce electricity at competitive prices. On the other hand, relatively high prices in Italy, Germany, Cyprus and Ireland show that they act also as a major incentive for improving the energy efficiency of industrial processes.

Figure 1.17: Change in electricity prices for medium-sized enterprises, 2011-2007

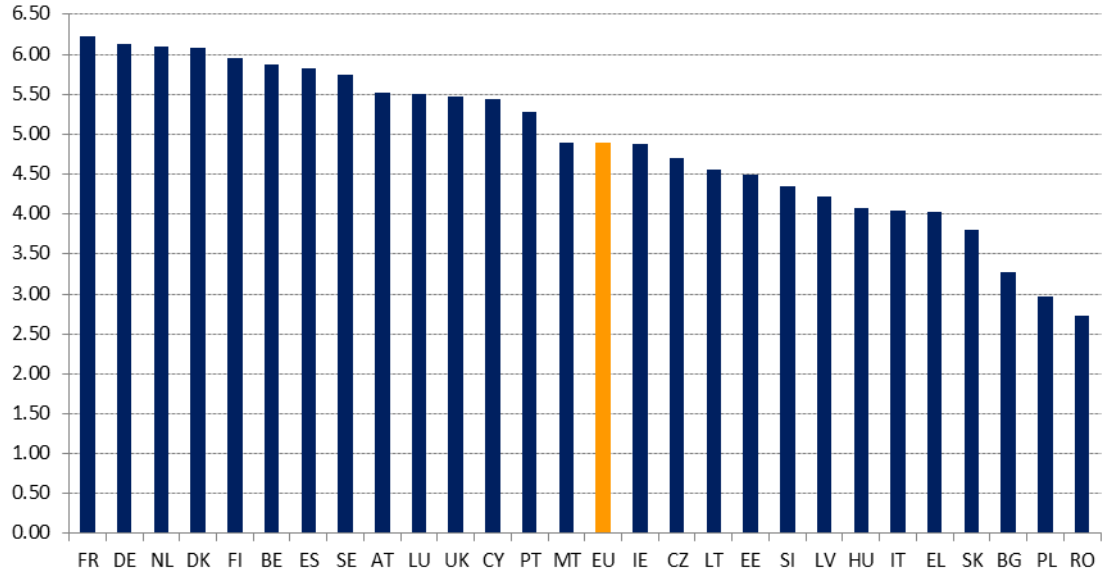


Note: No data for AT, IT.
Figures for Cyprus also reflect the explosion at the Vassiliko power station in July 2011, which forced it to use its old and less efficient generators to avoid power shortages.
Source: Eurostat

1.6.3. Satisfaction with the quality of infrastructure

The Global Competitiveness Report surveys the satisfaction of users of physical infrastructure. The replies differ among the Member States, but improvements have been seen in most of them. Satisfaction is highest in France, closely followed by Germany, the Netherlands and Denmark (figure 1.18).

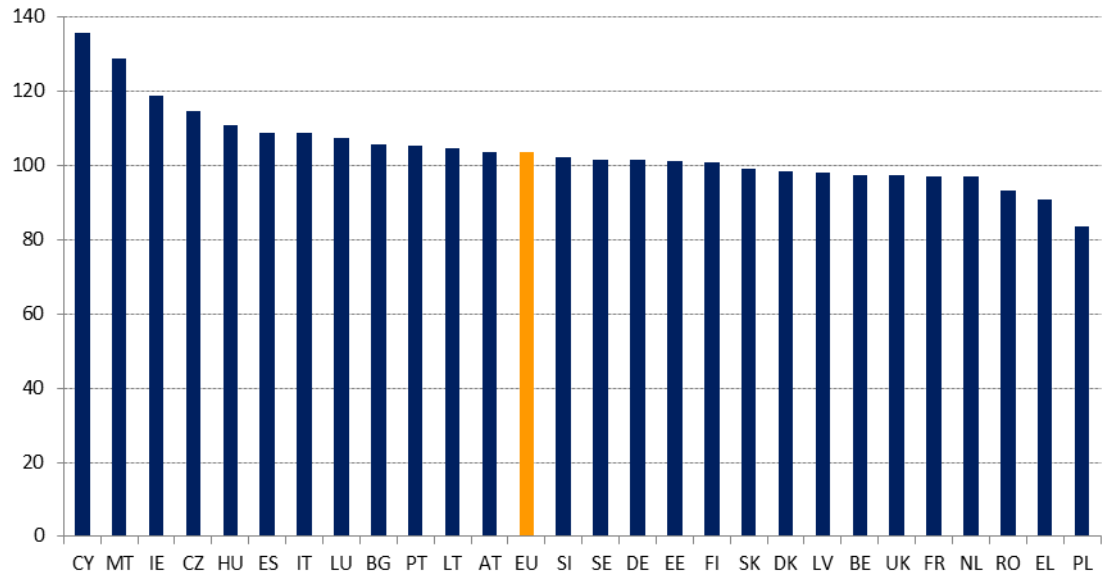
Figure 1.18: Satisfaction with the quality of infrastructure, 2011



Source: Global Competitiveness Report 2012-2013, World Economic Forum, Commission calculations; refers to rail, road, port and airport infrastructure, 1=underdeveloped / 7=extensive and efficient by international standards.
http://reports.weforum.org/global-competitiveness-report-2012-2013/#

Since 2006, Italy, Spain and Ireland appear to have enhanced their infrastructure to the satisfaction of their citizens (figure 1.19). Improvements have been noted likewise in Cyprus, Malta, Hungary and the Czech Republic, no doubt partially as a result of the use of EU Structural Funds for investments in transport infrastructure. Progress has been slower in Poland and Romania, which suffer from underdeveloped road infrastructure and delays in construction projects. Among the mature economies, satisfaction seems lowest in Italy and Greece, also partially due to the complexities of preparing and implementing infrastructure investments.

Figure 1.19: Change in satisfaction with the quality of infrastructure, 2006-2011



Source: Global Competitiveness Report, Commission calculations; 2006=100

1.7. Finance and investment

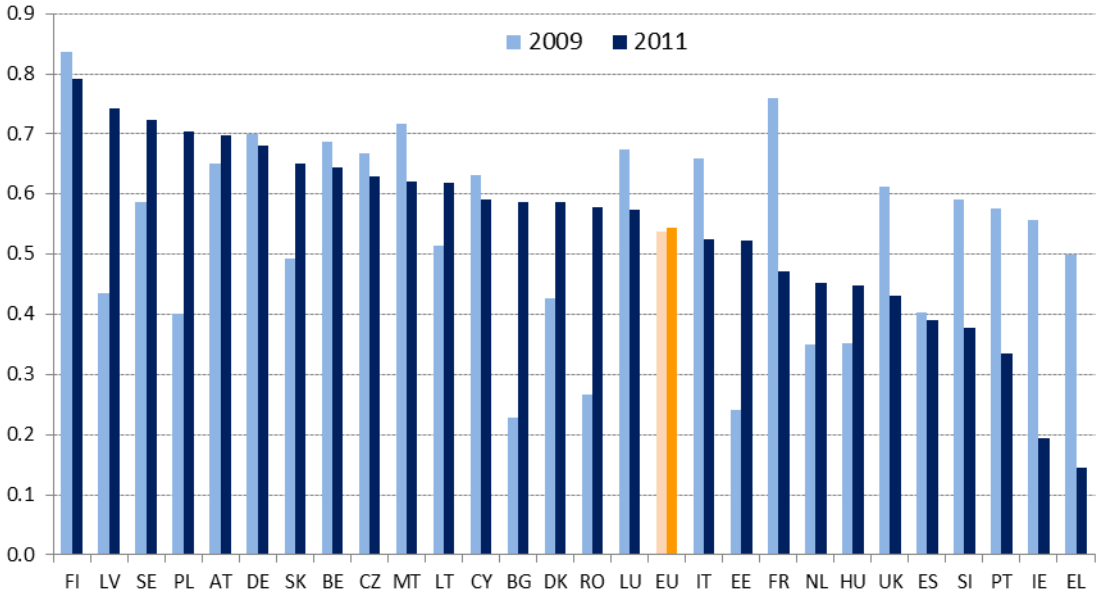
1.7.1. Access to bank loans

The ongoing stresses in the financial markets continue to be reflected in access to bank loans. Since 2009, the situation has deteriorated in more than half of the Member States. This deterioration has been caused mainly by the general tightening of credit standards due to the greater risk aversion of banks, as well as by problems in financial sector stability. The supply of credit has been further restricted by the deleveraging process that has started or continued in some Member States where the private sector had accumulated large levels of debt during previous credit expansions and where financial institutions have been unwinding their excessively leveraged positions.

Alongside supply-side effects, however, the impact of falling demand for loans has been equally important for some countries. Credit condition surveys have revealed that the demand for loans has fallen in particular among small businesses. As their profit situation has deteriorated, many businesses have postponed investments and stepped up efforts to find alternative sources of financing, including longer commercial credit and stronger internal cash reserves. While there were few quarterly improvements coinciding with the revival of industrial output in 2010 and the first half of 2011, the rejection rate when applying for a loan has remained historically high. Falling returns and prospects of further uncertainty have adversely affected SMEs' capability to attract venture capital and other risk investors.

Access to bank lending remained easiest in Finland, followed by Latvia, Sweden, Poland and Austria (figure 1.20). Since 2009, access to bank loans in Denmark, Romania, Bulgaria and Estonia has become easier, the last two countries having seen the largest relative improvement. The situation remained relatively difficult or worsened in Italy, France, Luxembourg, Hungary, the United Kingdom, the Netherlands and Spain. For instance, in the United Kingdom, loan demand from small businesses has dropped significantly — in contrast to large and medium-sized companies — with many small businesses not even approaching their bank about further funding. In the case of Hungary, Ireland and Luxembourg, the supply of credit has been adversely affected by the ongoing deleveraging of bank balance sheets. The stress in the banking sector has also been reflected in the difficulties encountered by firms in Ireland, Slovenia, Spain, Portugal and Greece.

Figure 1.20: SME access to bank lending



Note: Responses to six key questions in the above ECB-Commission survey have been used to construct the composite indicator 'SME access to bank lending'. Data are based on the percentage of respondents who experienced one of the following situations, whereas the normalised values range from zero (worst) to 1 (best possible situation).

Source: ECB/Commission, Commission calculations; (0=worst possible / 1=best possible)

See also: http://ec.europa.eu/enterprise/policies/finance/data/enterprise-finance-index/access-to-finance-indicators/loans/index_en.htm

Components of access to bank lending

- Net increase in the need for bank loans in the past six months
- Not applying for a loan in the past six months for fear of rejection
- Applying for a loan in the past six months but being rejected, or rejecting the offer because the costs were too high
- Net improvement in the availability of loans in the past six months
- Net increase in the size of bank loans in the past six months
- Net improved willingness of banks to provide a loan in the past six months

In Spain, Portugal and Greece businesses are also disadvantaged by the very long waiting times for payments by public authorities, which further deteriorated in 2011. On the other hand, Ireland has been able to shorten public sector payment times, demonstrating that this is possible even in a country undergoing intensive fiscal consolidation.

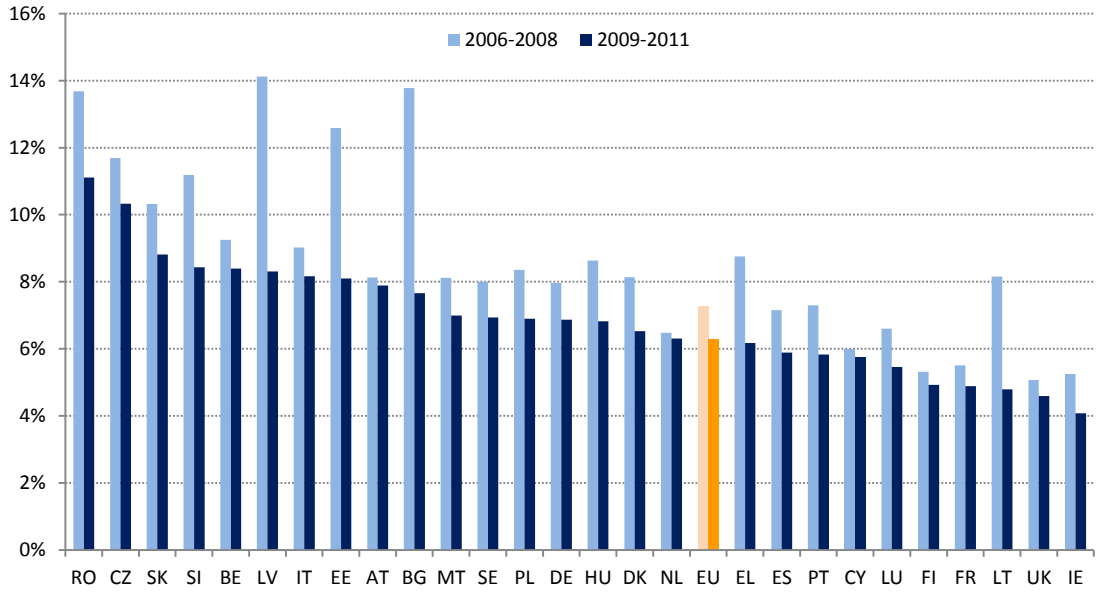
Although under normal circumstances most businesses consider that access to loans is more important than their interest rate, the turmoil in the banking sector has led to considerable interest rate differentials between countries. For the first quarter of 2012, the average interest rates for business loans up to EUR 1 million were highest in Hungary, Bulgaria, Romania, Portugal, Cyprus and Greece, averaging over 9 %, well above the EU average of 5.3 %. Austria, Belgium Luxembourg, France and Finland had the lowest average interest rates, ranging between 2 % and 3.5 %.

1.7.2. Investment in equipment

Weak business investment holds back economic recovery. Despite structural reforms that have improved the business environment, uncertainty and balance sheet cleaning mean that firms are keeping investment low and hoarding cash. The difficulties in accessing loans and working capital from banks are contributing to this by forcing firms to build up their cash reserves. Firms will only invest when they are confident about the economic outlook and the recovery of consumer demand.

The figures show that business investment in equipment has suffered throughout Europe during the crisis (figure 1.21). Bulgaria, Latvia and Estonia have seen the largest drops from 2006-2008 to 2009-2010/11 averages. Equipment investment continues to be above the EU average in many of the catching-up countries, but investment levels in Belgium, Italy and Austria have also held up well. Investment levels in Finland, France, Lithuania, the UK and Ireland are below the EU average.

Figure 1.21: Investment in equipment, % of GDP, averages

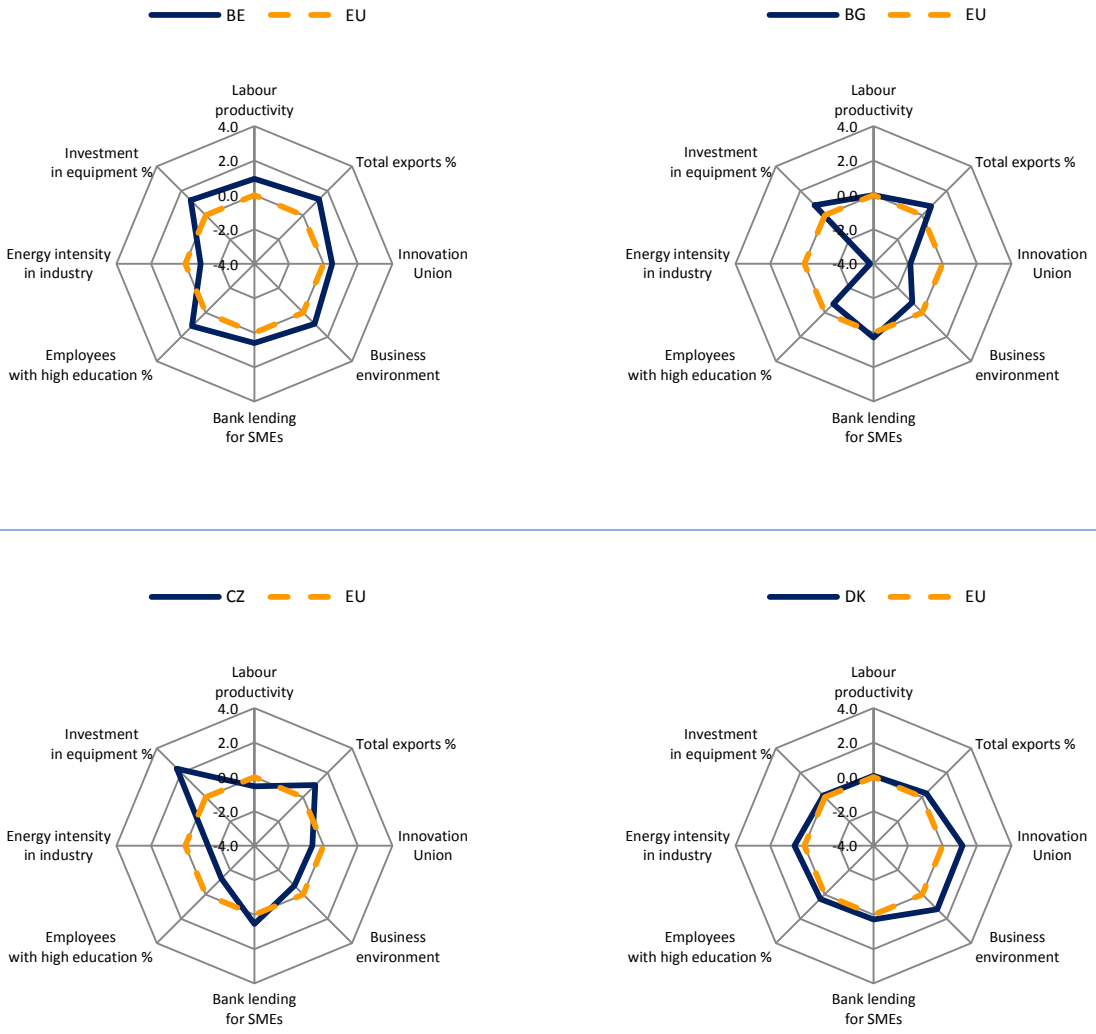


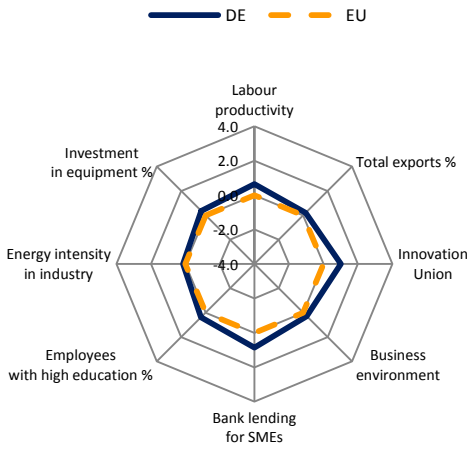
Note: Latest EU and Bulgaria data are for 2009-2010.
Source: Eurostat

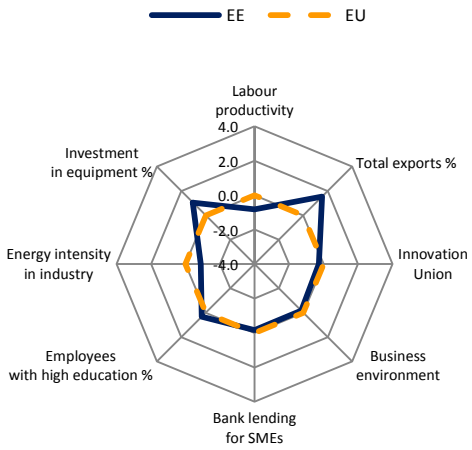
1.8. Annex: Performance of Member States

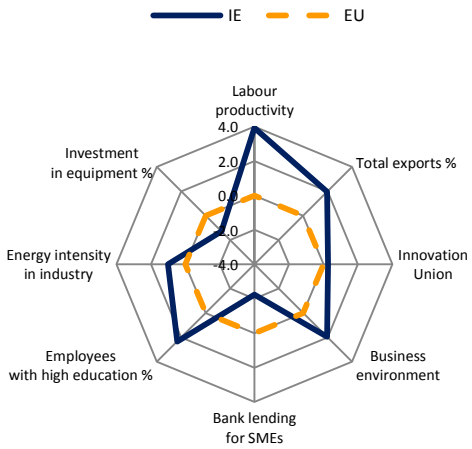
The spider graphs below present, for each indicator, the distance of the respective Member State from the EU average. This distance is expressed in terms of standard deviations, which is a common measure of the spread of observations in a distribution (in this case, a measure of the variation of Member State performance around the EU average). This enhances the comparability of the presentation of indicators with different measurement units and distributions across Member States. The same method is used in the country-specific bar charts of this report.

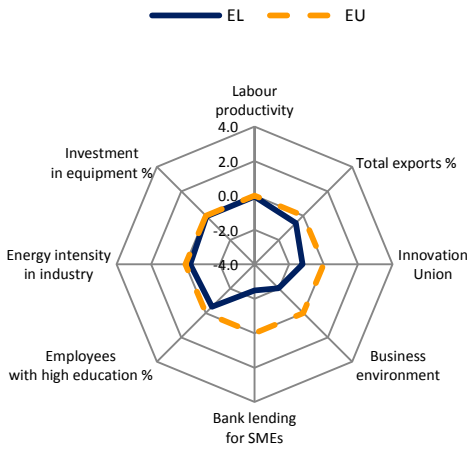
Figure 1.22: Performance of each Member State against the EU average on eight main indicators

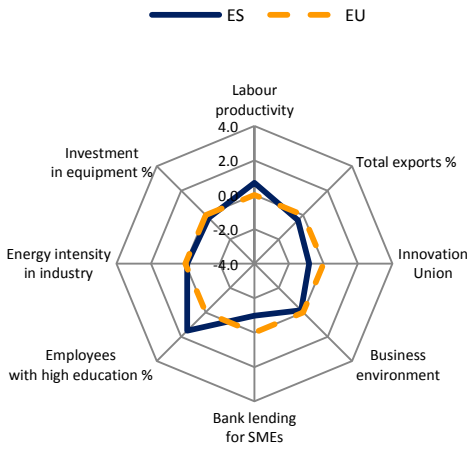


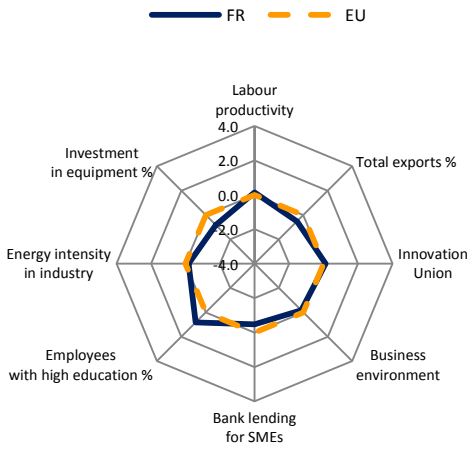

DE
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0

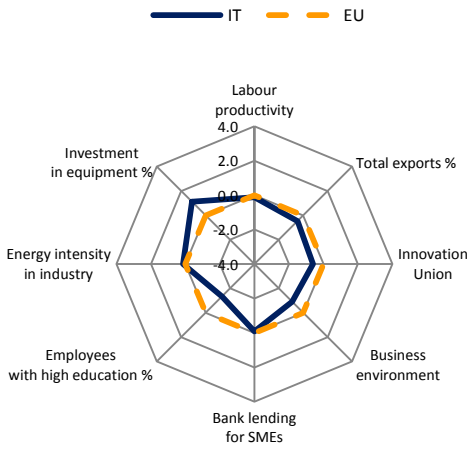

EE
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0

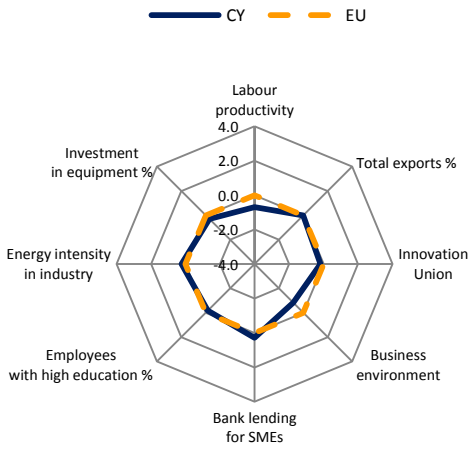

IE
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


EL
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


ES
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


FR
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


IT
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


CY
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
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-2.0
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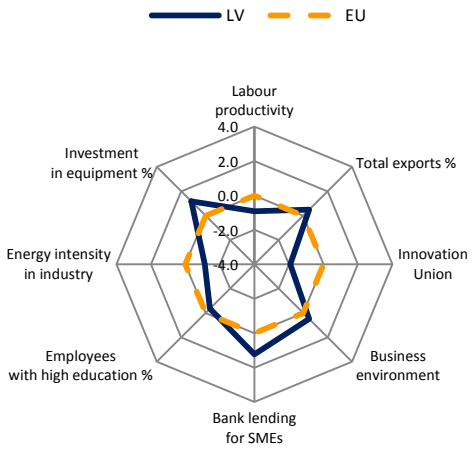
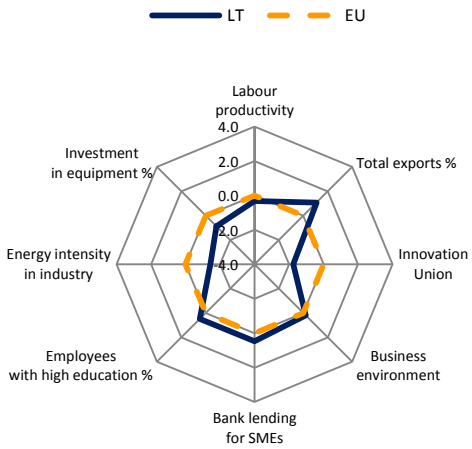
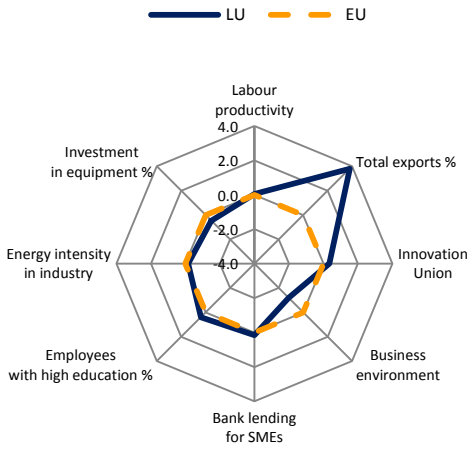

LV
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


LT
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


LU
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
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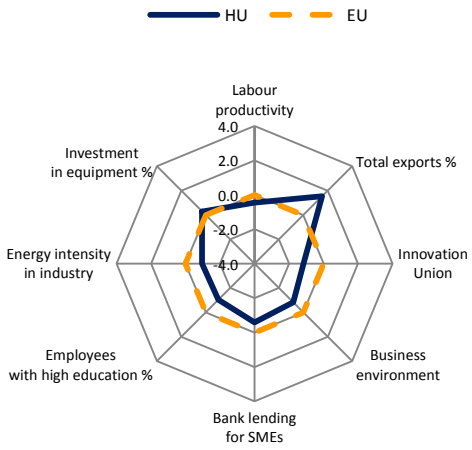
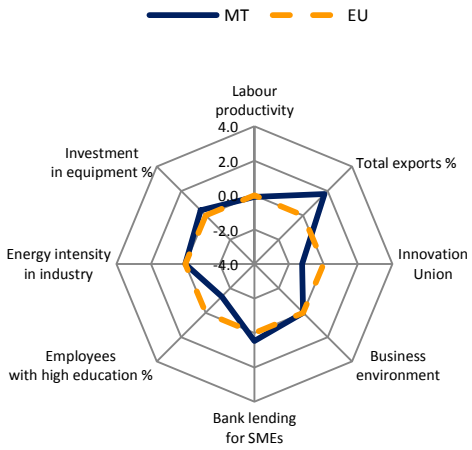
-2.0
-4.0


HU
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


MT
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
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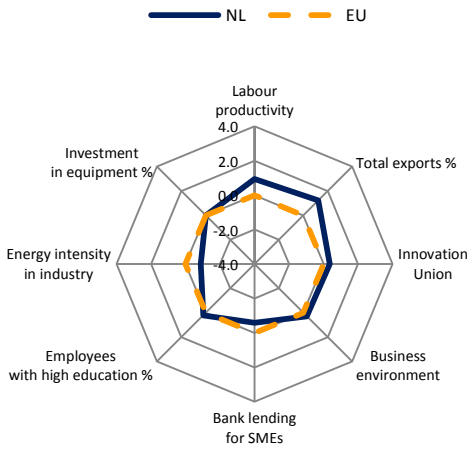
-2.0
-4.0


NL
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
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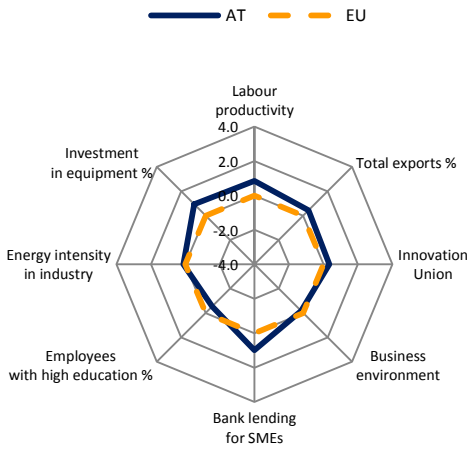
-2.0
-4.0


AT
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
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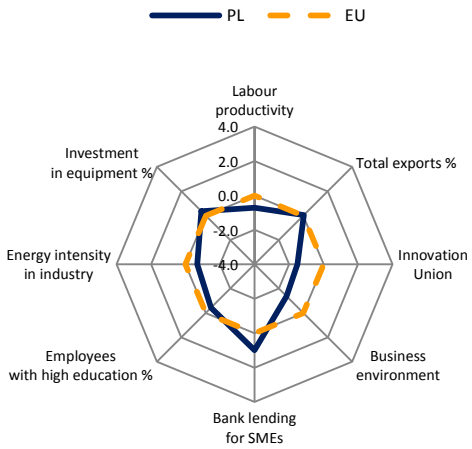
-2.0
-4.0


PL
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
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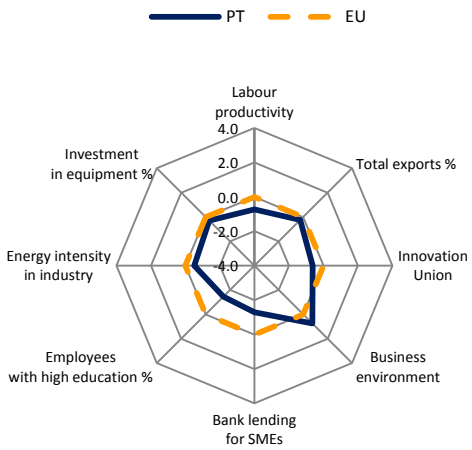
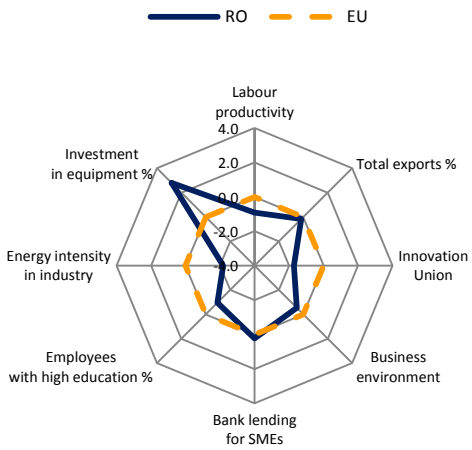
-2.0
-4.0


PT
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
2.0
0.0
-2.0
-4.0


RO
EU
Labour productivity
Total exports %
Innovation Union
Business environment
Bank lending for SMEs
Employees with high education %
Energy intensity in industry
Investment in equipment %
4.0
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-2.0
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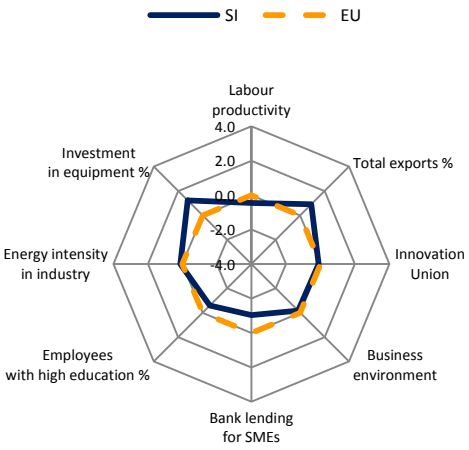
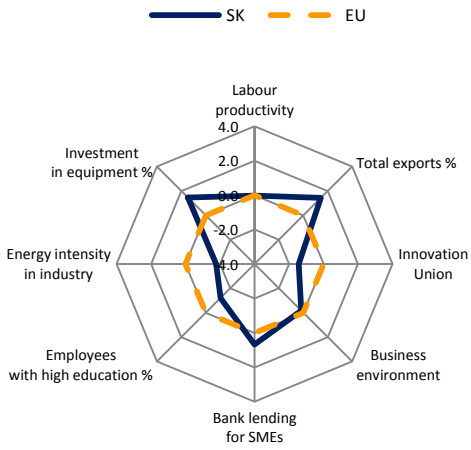
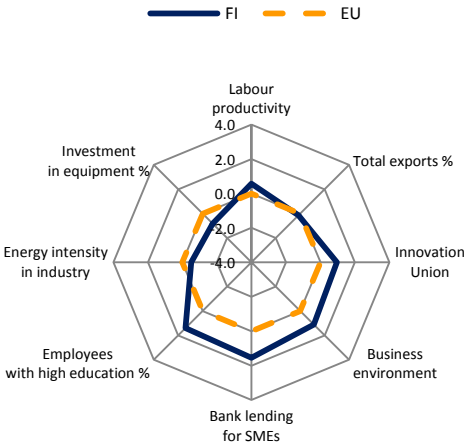
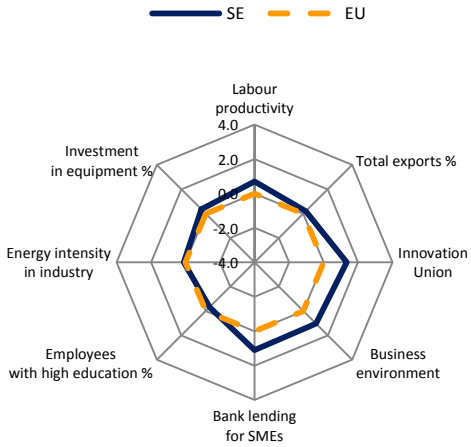
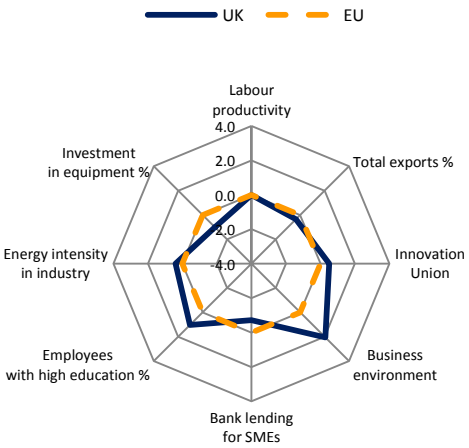










Note:

1. Labour productivity = Labour productivity per person employed in manufacturing (1000 PPS; 2011)
2. Total exports % = Total Exports as a % of GDP (2011)
3. Innovation Union = Innovation Union Scoreboard (2011)
4. Business environment = Business environment score (1= best 0 = worst; 2010/11)
5. Bank lending for SMEs = Access to bank lending for SMEs (1 = best 0 = worst; 2011)
6. Employees with high education % = % of employees in manufacturing with high educational attainment (2011)
7. Energy intensity in industry = Energy intensity in industry and the energy sector (kg oil eq. / euro GVA; reference year 2000; 2010)
8. Investment in equipment % = Investment in equipment as % of GDP

Source: Eurostat; Ameco

2. OVERVIEW OF PROGRESS BY BROAD POLICY AREA

2.1. Introduction

This report focuses on the measures Member States have taken to improve their competitiveness, and assesses their performance with respect to a number of key framework conditions. The main policy areas covered are innovative industrial policy, sustainability of industry, the business environment, and public administration.

The report is drafted on the basis of Article 173 of the Treaty and comes under the Europe 2020 Strategy, specifically the flagship initiative '*An Industrial Policy for the Globalisation Era*'. The policy areas which are covered in this report are also ingredients in the European Semester process, which calls for Europe to restore its competitiveness, among other things by investing in key technologies and reducing delays in payments by public administrations.

This report looks at competitiveness both horizontally, with an overview of progress by broad policy area, and by country, with chapters presenting national performance and policy developments in the same policy areas. The annex provides details on the indicators and industry classifications adopted and the data used in the preparation of the various graphs.

2.2. Innovative industrial policy

2.2.1. Global competition

Research and development (R&D) and innovation are key sources of economic and productivity growth in the medium term and the EU has confirmed its objective of spending 3% of its GDP on research and development by 2020. Successful investment in research and innovation can boost productivity and the competitiveness of European businesses. At the same time, improved innovation performance facilitates structural changes in Member States' economies towards economic activity with high added value.

Meanwhile, our competitors too are pursuing very ambitious innovation policies.[5] Japan has set itself the target of increasing its R&D expenditure to 4% of its GDP by 2020. South Korea is aiming at an R&D intensity of 5%, Singapore 3.5%, and China 2.5% which means that it is likely to overtake the EU by 2014 in terms of R&D intensity.[6]

For R&D expenditure in the business sector, the US, Japan and South Korea outperform the EU, with the US and South Korea increasing their lead in this field. This is in particular due to the lesser ability of the EU to translating knowledge into advanced and commercially successful goods and services. In particular in the US, young innovative firms can grow rapidly into world leaders[7]. Finally, the skills base in the EU is eroding due to the decline in the working population and the lack of highly qualified immigrant workers.

Under the current economic conditions, public R&D expenditure is under pressure and measures are needed to promote private R&D expenditure. These include facilitating access to capital, encouraging closer cooperation between academia and enterprises and creating a business environment conducive to private investment. The trend whereby multinationals are shifting R&D across borders within their global value chain offers new opportunities for Member States to attract foreign direct investment (FDI) and enlarge their knowledge base.

To reap the benefits of technological progress, a stronger focus is needed on promoting the diffusion of technological development into marketable products and services. An effective strategy is needed to ensure that the necessary skills are available to consolidate a technology-driven competitive advantage. National systems for evaluating innovation policy can foster good governance, including the administration of public R&D budgets, which should aim for maximum impact. This chapter focuses on recent innovation policy developments in the Member States, paying particular attention to the business sector.[8]

[5] Innovation Policy Trends in the EU and Beyond, December 2011, available at http://www.proinno-europe.eu/inno-policy-trendchart/page/innovation-policy-trends.

[6] *Innovation Union Competitiveness Report 2011*, http://ec.europa.eu/research/innovation-union/pdf/competitiveness-report/2011/iuc2011-full-report.pdf.

[7] See e.g. Veugelers R. and Cincera M (2010) 'Europe's Missing Yollies', Bruegel Policy Brief.

[8] The country reports of the *Innovation Trendchart* available at http://www.proinno-europe.eu/inno-policy-trendchart/repository/country-specific-trends provide detailed

2.2.2. Fostering private research

Many Member States have enacted measures to promote business sector research, in particular tax incentives, grants and tax credits. France is providing a Research Tax Credit that reduces the cost of R&D expenditure for businesses, focusing on technological innovation. Finland has also recently introduced R&D tax incentives. The Netherlands has cut subsidies and transformed them into generic tax deductions; especially for R&D wages and R&D-based profits, with the goal of making it easier to apply for these instruments. Belgium allows similar tax deductions to be combined with a generic allowance for corporate equity and R&D grants. Greece has recently shifted its R&D support from grants to loans, guarantees and tax incentives.

However, tax incentives can be expensive instruments and need to be well targeted. Several Member States have therefore revised their systems to make them more suitable for SMEs. For instance, the Czech Republic has redesigned its previous tax incentive for in-house research so that smaller companies which outsource research to external institutes or enterprises can also benefit from it. Measures in Portugal follow a similar line. Austria has turned its tax allowance into a tax credit that will better suit SMEs which may make few profits; and France has a scheme targeting young innovative firms with tax advantages. The United Kingdom is slightly adapting its R&D tax credit scheme based on a recent evaluation.[9]

Some countries are not convinced about the value of tax allowances in promoting R&D. In Germany, it is assumed that large enterprises would benefit from such a system more than SMEs. For SMEs, the system of direct grants and project-related support is still perceived as being more efficient.

Another avenue to enhance growth based on research and innovation is to increase the availability of venture capital, an area where Europe lags considerably behind the United States. Recent developments include initiatives in the Netherlands, Poland and France to set up new venture capital schemes. Many of these initiatives focus on fund-of-fund schemes, investing public funds in venture capital funds, aiming to attract more private institutional investors to the field.

All Member States are encouraging closer cooperation between academia and enterprises. Estonia has set up further competence centres to bridge the gap between firms and academic research. In Slovenia, one selection criterion for public research grants is whether the researcher cooperates with businesses.

Innovation vouchers for enterprises to buy services from R&D providers remain a popular policy measure. For example, Estonia, Latvia and Lithuania all have such schemes and Slovakia is considering a similar system.

Policy example: Slovenia's call to strengthen companies' research departments

As part of the Research and Innovation Strategy of Slovenia 2011-2020, the former Ministry of Higher Education, Science and Technology and the Ministry of Economic Affairs launched, in July 2011, a call for proposals aimed at 'strengthening companies' research departments'. Its objectives are to ensure effective interinstitutional mobility of researchers, to support the employment of researchers or developers in the economy, to increase the number of PhDs and 'young researchers' in companies and to increase the number of interdisciplinary research departments in the business sector. The funding available for the call amounts to EUR 20 million. More than 60 companies and more than 500 researchers (100 PhD students) will be financed until mid-2014.

Knowledge transfer has also been a focus of policy measures, including measures such as *Knowledge Transfer Partnerships* (UK) for using effective intermediaries; *INNCORPORA* (Spain), providing support for hiring highly qualified workers; and *Sociétés d'acceleration de transfert de technologies* (France) providing wide support for technology transfer.

Policy example: the UK's Knowledge Transfer Partnerships (KTPs)

This programme is led by the *Technology Strategy Board*, and includes three-way partnerships between a business (the company partner), one or more recent graduates (associates) and a senior academic acting as a supervisor (knowledge base partner). The aim of these partnerships is to increase interactions between the knowledge base (a university or research organisation) and companies through the mediation of the associate who during the period he or she stays in the

information about the Member States' innovation policies. Analysis based on performance indicators regarding innovation and research per Member State can be found in the *Innovation Union Scoreboard 2011*, http://ec.europa.eu/enterprise/policies/innovation/files/ius-2011_en.pdf, and the *Innovation Union Competitiveness Report 2011*, http://ec.europa.eu/research/innovation-union/pdf/competitiveness-report/2011/iuc2011-full-report.pdf.

9 http://www.hmrc.gov.uk/research/report107.pdf.

company will work on a project developed in collaboration with the partners for a year or more.

2.2.3. Internationalisation of R&D

A large share of business R&D in the world is performed by a small group of multinational firms. Some of them have begun shifting R&D investments outside their home base, which may present some risks, but also provides new opportunities for Member States trying to catch up with innovation leaders in Europe.[10] R&D activities abroad help firms to enter new markets and expand and are not a substitute for R&D in the home country.[11]

In some Member States (Ireland, Belgium, Hungary, Czech Republic, Austria) the majority of business R&D is performed by foreign-owned firms. Ireland benefits from considerable process innovation in multinationals as they aim to preserve their cost competitiveness. In the Czech Republic, the public investment agency 'Czech Invest' continues to make a significant effort to attract foreign companies and has set up a web portal trying to link businesses with partners all over the world such as in the US and China. In Austria, German firms are prominent in the research and innovation system. While some American and Chinese enterprises have bought successful Austrian companies, their manufacturing and R&D activities are usually kept in Austria as long as the productivity stays high. The strategy of Malta for attracting FDI targets life sciences. In Finland too, attracting FDI is seen as an increasingly important topic since tangible investments in manufacturing have contracted more than in other EU countries.

Policy example: Finland's R&D internationalisation strategy

The strategy focuses on broad-based innovation policy, and the changes and reforms necessary for its implementation. It focuses on global competence and value networks; demand and user orientation; innovative individuals and communities; and a systemic approach. In practical terms foreign companies are eligible for funding by the Agency for Technology and Innovation (Tekes); a strategy for the internationalisation of education, research and innovation has been adopted by the national Research and Innovation Council; the Finland Distinguished Programme (FiDiPro) enables international researchers to work with the best in Finnish academic researchers; and the legal status of universities has been changed to encourage them to internationalise.

2.2.4. Promoting key enabling technologies

The capacity of European industry to deploy key enabling technologies (KETs[12]) is vital for preserving its global competitiveness.[13] KETs are a key source of innovation, providing indispensable technology building blocks that enable a wide range of product applications. Due to their cross-cutting nature and systemic relevance, KETs are instrumental in modernising Europe's industrial base and in driving the development of entirely new industries.

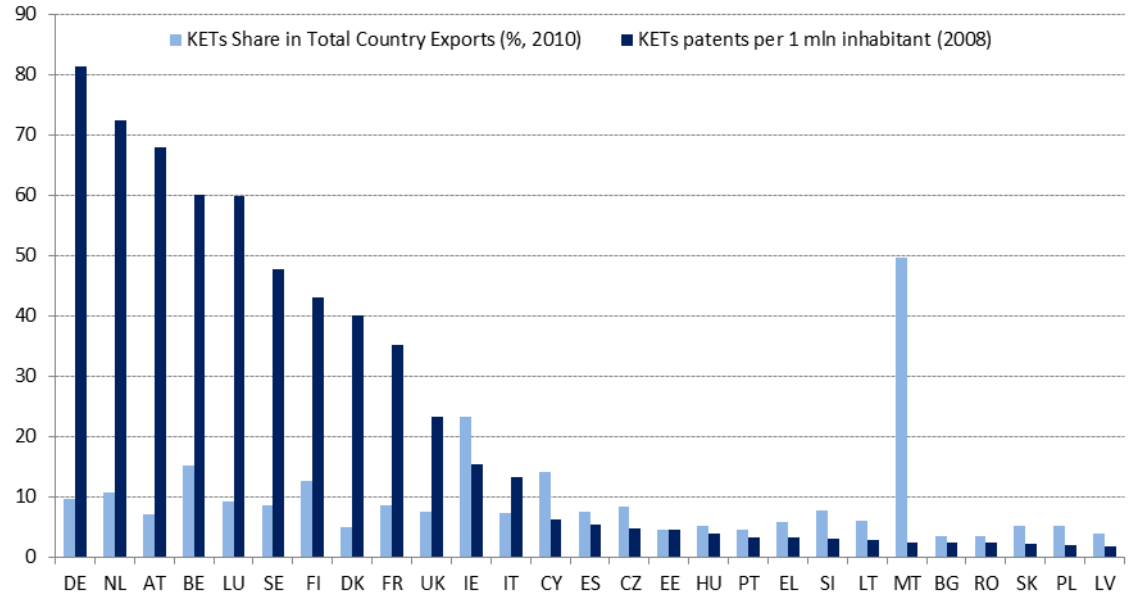
[10] See *Innovation Union Competitiveness Report 2011*, pages 116-117, available at: http://ec.europa.eu/research/innovation-union/pdf/competitiveness-report/2011/iuc2011-full-report.pdf.

[11] 'Internationalisation of Business Investments and an Analysis of their Economic Impact', European Commission (2012). http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=other-studies

[12] KETs are composed of six core technologies: micro-/nanoelectronics, nanotechnology, photonics, advanced materials, industrial biotechnology and advanced manufacturing technologies.

[13] See the report of the High Level Expert Group on Key Enabling Technologies and its policy recommendations at http://ec.europa.eu/enterprise/sectors/ict/files/kets/hlg_report_final_en.pdf.

Figure 2.1: Competitiveness in KETs



Note: Figure for Malta reflects exports by a single large microelectronics company.
Source: Calculations by Commission/ZEW/NIW based on Patstat and UN Comtrade data

A recent study[14] found that most Member States have policy initiatives supporting basic and technological research on key enabling technologies. However, in many of them there are no specific measures covering the later stages of technology and product development and commercialisation.

Policy example: Innovation Alliances in Germany

Innovation Alliances are created around specific application areas or future markets. They combine several stages of technology, aiming at ground-breaking industrial innovation and comprise several strands that are mutually reinforcing in bringing new technologies to the market. The scheme provides funding for strategic cooperation between industry and public research in key technology areas that demand a large amount of resources and a long time horizon, but promise considerable innovation and economic impact. The funding premise is that every euro of Federal money should be matched by five euros from industry. This investment policy is also important for small and medium-sized enterprises since knowledge of future technological developments together with the commitment from large companies enables SMEs to remove some of the uncertainty from the high level of risk involved in R&D investment decisions.

In order to successfully deploy key enabling technologies, it is important to combine several actors across the value chain. In larger Member States programmes can fund projects that focus on the complete value chain, but smaller Member States often do not cover the whole of it.

SMEs are important for the deployment of key enabling technologies but they are often too small to make a difference in a particular industry. To make an impact on a global scale, large firms are needed. Hence, programmes that promote collaboration with international partners can be valuable. For instance, the Functional Materials programme in Finland emphasises the whole value chain and international collaboration.

There have been two essential constraints to enhanced collaboration between academia and business: the low capacity of enterprises to absorb research, and the lack of applied research capability that enterprises can access. To correct this, Ireland has tried to close the gap by requiring that research programmes involve industry collaboration. Investments in key enabling technologies, such as nanotechnology, advanced materials, microelectronics and biotechnology, made by the *Science Foundation Ireland* are aligned with the interests of industrial partners interested in deploying these technologies in areas such as semiconductors, medical devices or food processing.

[14] Idea Consult et al.: Exchange of good policy practices promoting the industrial uptake and deployment of Key Enabling Technologies — Final report July 2012, not yet publicly available.

Policy example: The French patent fund

France Brevets is a EUR 100 million investment fund dedicated to promoting the use of patents. Its task is to enable universities and other public research bodies, as well as private firms, to better exploit their patents, also internationally. This should happen through creating patent clusters for licencing purposes, and through combined management and pooling of public and private patents.

Smaller Member States tend to have a less comprehensive research base on key enabling technologies. To achieve a critical mass, some countries are making specific choices on research themes to support, and on the scale of intervention. They concentrate often on close coordination between infrastructure and project investments. In Denmark, policy-makers have focused on new climate technologies and the objective of *Green Labs DK* is to become a leader in developing new technologies for the purpose of supporting energy-policy objectives on security of supply, independence from fossil fuels, a cleaner environment and cost-efficiency.

Several Member States are promoting key enabling technologies explicitly, while others use more general programmes targeting industrial innovation. Larger Member States tend to focus on top-down thematic programmes, whereas smaller Member States favour a bottom-up approach that is driven by industry demand. Further, many countries are pursuing active cluster policies to promote regional links between academia, enterprises, banks and policy-makers, benefiting also key enabling technologies.

But more could be done[15] and policy learning can provide a springboard for action. The United Kingdom is developing a network of technology and innovation centres — termed 'catapults' — based on the German Fraunhofer Institutes[16], with a focus on developing pilot and demonstration projects. The development of clusters and networks can be supported with the assistance of the EU structural funds.[17] And several Member States have set up ambitious programmes to improve the use of public procurement as a tool to promote innovation.

[15] http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=intro.

[16] The German Fraunhofer is Europe's largest application-oriented research organisation focusing on technological innovation and new systems solutions for customers, and helping to reinforce the competitive strength of the economy.

[17] 'smart Specialisation Platform': http://ipts.jrc.ec.europa.eu/activities/research-and-innovation/s3platform.cfm.

Policy example: The Dutch Small Business Innovation Research programme

This programme allows public authorities to publish calls for tender to procure an innovative product that still needs to be developed. In a first step, companies hand in their proposals for product development and several companies are then funded to perform feasibility studies. In the light of these studies, three companies are asked in a second step to develop their idea into a marketable product and are subsidised with up to EUR 450 000 each. In a third step, the procuring authority is free to buy one of these three products. The advantages of this scheme are: it is quick, result-oriented and tailored to SME needs, with 100 % funding and little red tape. The programme has been positively evaluated. More than a dozen marketable innovations (e.g. traffic guiding, dyke monitoring, bio-based catalysis) have been developed through this tool since 2004.

2.2.5. Using structural funds for innovation

In some countries, structural funds are the main source of financing for R&D and innovation policy budgets (e.g. Greece, Poland, the Czech Republic, Hungary, Estonia, Slovakia, Bulgaria, and Romania). The key question for them is how to spend the available funds well and how to increase the absorptive capacity.[18]

Structural funds are widely used to develop a research and innovation infrastructure. Bulgaria has created the Sofia Technology Park specialising in ICT and pharmaceuticals; and Lithuania has created five higher education, research and business oriented science and technology valleys.

To leverage public funding, Poland's *Operational Programme Innovative Economy* and Hungary's policy measure *Support for Market-oriented R&D Activities* show how EU structural funds can be employed to support industrial innovation. Another option is to trigger investment through the use of public-private partnerships, as is the case in the Christian Doppler Laboratories, where every private euro invested in applied basic research is doubled by a matching public investment. Grants by innovation agencies are sometimes linked to a requirement that companies and research institutions pay return fees based on the utilisation of research infrastructure. The French *Key Technologies for the Digital Economy* programme provides 100 % funding for pilot installations

[18] Funding Innovation in the EU and Beyond, December 2011, page 6, available at http://www.proinno-europe.eu/inno-policy-trendchart/page/innovation-policy-funding.

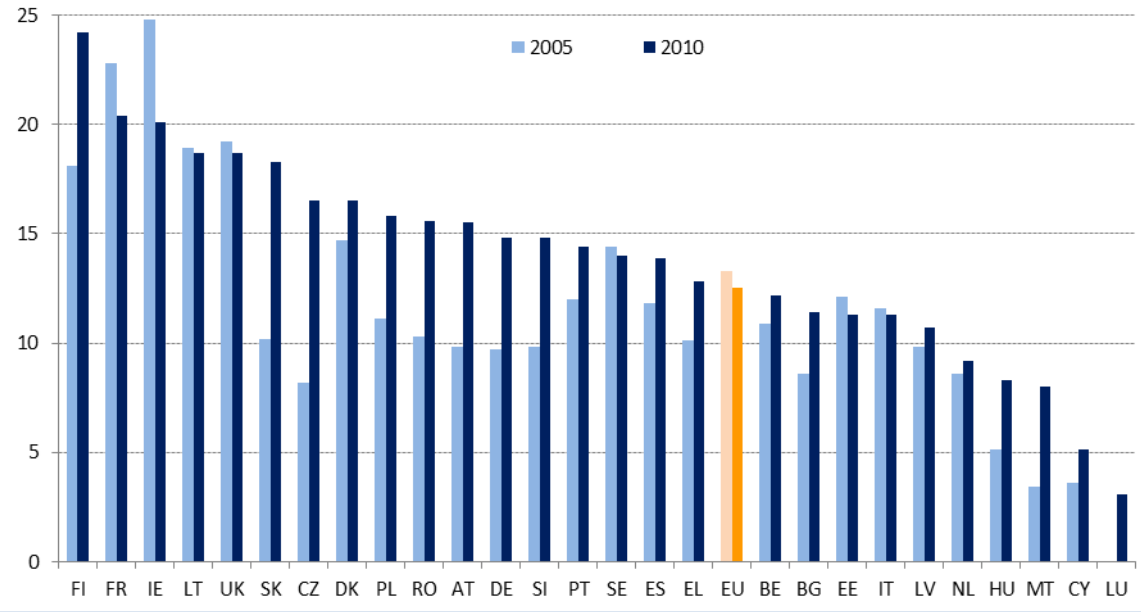
involving nanoelectronics. Industrial partners gain access to the equipment and laboratories by paying an access fee, and if the project is an economic success they have to pay a return fee.

Policy example: The CzechAccelerator

The CzechAccelerator 2011-2014 programme is part of the Operational Programme Enterprise and Innovation. Since 2011, the programme has offered companies doing business in ICT, clean technologies, biotechnology, life sciences, new materials or nanotechnology a stay in the US (Silicon Valley, Boston), Israel, Singapore or Switzerland. In addition to an office in one of the business incubators, the participants are provided with consulting services, coaching and training. Companies also participate in various networking events, which makes their search for a strategic partner or investor easier. The programme aims to enhance the managerial skills and capacities needed to successfully commercialise products, implement business plans and gain easier access to venture capital.

2.2.6. Improving skills for innovation

Figure 2.2: Tertiary graduates in science and technology per 1000 of population aged 20-29



Note: Latest available data for France (2009) and Italy (2008).
Source: Eurostat, 2011

Technological and industrial changes are increasing the demand for employees with high and intermediate levels of skills.[19] Thus in a knowledge-intensive economy, excellence in research, engineering and science needs to be backed by further skills, in particular in management, team work, creativity and design. Attracting top talent from abroad can be an effective strategy to build up excellence quickly and gain a more immediate competitive advantage.[20]

Skills gaps have started to emerge in some Member States, partly related to a decline in the working-age population due to decreasing birth rates over the last decades and emigration of well-qualified people. This issue is likely to become more important in the future. Most Member States have a relatively low share of graduates in science, technology and engineering (Figure 2.2), but not many have taken ambitious action to improve this. However, some have specific actions; for example, Germany has adopted a strategy to ensure a sufficient skills base;[21] Austria will fund more

[19] Cedefop (2011), 'What next for skills on the European labour market?', Briefing note.

[20] Innovation Policy Trends in the EU and Beyond, December 2011, available at http://www.proinno-europe.eu/inno-policy-trendchart/page/innovation-policy-trends, page ii.

[21] The 'Konzept zur Fachkräftesicherung', including initiatives to better activate the domestic supply of workers (e.g. women, workers aged 60+, reducing school drop-out rates

study places in applied natural sciences and engineering; and Estonia has an 'industrial PhD scheme' and a web portal to attract Estonian talent from abroad.

2.2.7. Good governance and evaluation in the area of innovation policy

Many Member States are improving the governance of their innovation system, in particular by extending the use of evaluations. Austria and Finland have evaluated their innovation system recently.

Others are evaluating partially: the Czech Republic embarked on an audit in 2012 and Estonia is evaluating its current policies. Germany has commissioned an evaluation of its major SME innovation programme which supports the findings of stakeholders and the government that the programme is very successful. The United Kingdom Innovation Agency NESTA has performed a preliminary evaluation[22] of its SBRI scheme, which aims to encourage innovation via public procurement. France is evaluating its cluster policy. Luxembourg has established annual evaluations of university research activities.

Italy has a new agency for evaluating research and the quality of R&D in universities. In Ireland, a number of partial evaluation reports have recently been published, but there are no plans to conduct an overall evaluation of the national innovation system.

Policy example: Germany's SME innovation programme

The evaluation of the *Zentrales Innovationsprogramm Mittelstand (ZIM)*[23] notes its easy and quick application procedures, high approval rates (about 75 %), sufficient amounts (up to EUR 350 000 per application), high flexibility (applications can be made by all sectors and industries and equally by individuals and groups of enterprises) and relatively low administrative costs.

Policy fragmentation due to overlapping programmes, unclear competences of public bodies and the lack of an overall strategy to promote innovation has been identified as a challenge in many Member States over the last few years. However, many Member States have recognised this challenge and are taking steps to address it. Evaluations of existing policies are a natural first step, upon which new strategies can be built.

Some Member States are developing new comprehensive strategies. The United Kingdom published a new R&D and Science Strategy in December 2011 and France will review its National Research and Inovation Strategy 2009-2012. Austria has adopted a new comprehensive innovation strategy with the vision to become an innovation leader and Finland is likely to streamline its governmental R&D institutions. Slovenia has adopted a new Research and Innovation Strategy for the next 10 years and simplified its governance structures. Ireland is planning to reform its innovation strategies on the basis of evaluations.

Romania adopted a reform action plan concerning the innovation system in 2011, as a result of the functional review performed in the context of the previous loan received from the EU. In Slovakia, an ambitious new strategy still awaits implementation.

Stakeholder involvement has been recognised as an important success factor in public and private innovation governance systems.[24] A fairly new development is that the internationalisation of the R&D and innovation system has become an important issue in many countries.

A question that will become more prominent in the future is to what extent increased R&D and innovation spending is translated into successful enterprises, growth and jobs. One factor that has an effect on this is the business environment, including improving the business environment for start-ups, reducing the administrative burden, and pursuing active SME and entrepreneurship policies. Such measures are essential for fostering innovation and commercialisation of research, and form an essential complement to policies promoting research.[25]

and improving the education system), but also measures to better attract employees from other EU and non-EU countries.

22 http://www.nesta.org.uk/publications/reports/assets/features/buying_power. See also Mini Country Report UK of the innovation Policy Trendchart, December 2011, page 17.

23 http://www.zim-bmwi.de/download/studien-berichte-expertisen/zim-endbericht-kurz_08-2010.pdf

24 Innovation Policy Trends in the EU and Beyond, December 2011.

25 See Raffaello Bronzini/Eleonora Iachini: Are incentives for R&D effective? Evidence from a regression discontinuity approach, Banca d'Italia Working Papers, Number 791, February 2011.

2.3. Sustainable industry

2.3.1. Introduction

Sustainable competitiveness refers to the promotion of economic growth and development while at the same time improving resource efficiency, minimising waste and strengthening energy security. The Annual Growth Survey 2012[26] highlighted the importance of unleashing the potential of green growth through enhancing structural reforms to create a new policy mix of regulatory, market and voluntary measures to promote investment in greening the European economy.

Businesses are becoming increasingly aware of the importance of sustainable industry. A recent Eurobarometer survey[27] highlighted that 93% of European SMEs are taking at least one action to be more resource-efficient, most notably in order to save energy, minimise waste and recycle. However, the survey also reveals that in comparison with large companies, SMEs less frequently undertake some form of sustainable activity, less frequently bid for a public procurement contract which includes environmental requirements, and less frequently offer green products and services. Although the concept of sustainable industry is gaining ground, the survey seems to indicate that there is significant growth potential to further enhance the role of sustainable industry in the EU.

2.3.2. Energy consumption, energy intensity and carbon intensity

Within the National Reform Programmes of the Europe 2020 Strategy, Member States have agreed to a number of targets, including energy efficiency and renewable energy targets. They have also been required to submit their second National Energy Efficiency Action Plan in June 2011[28] and to publish their National Renewable Energy Action Plans in 2010.

Between 2000 and 2010, final energy consumption in industry[29] in the EU fell by approximately 12%. This declining trend in energy consumption in industry compares to an increase in energy consumption of 7% for transport, 32% for services and 5.2% for residential sectors over the same 10-year period. As a result, the share of industry in total final energy consumption decreased from 29.4% in 2000 to 25.3% in 2010. With respect to energy intensity, for the same period 2000 to 2010, energy intensity in industry and energy[30] in the EU declined by 10.6%.

Looking at the figures at country level, most Member States have seen a decline in energy intensity over the past decade, 2000-2010. In particular, Member States with relatively high energy intensity have seen improved efficiency over the past decade. Particularly large declines in energy intensity were experienced in Bulgaria, Romania, Ireland, Cyprus and Poland. This has been due to a combination of both a decline in energy consumption by industry and an increase in its gross value added over the period. Other Member States have seen an increase in energy intensity between 2000 and 2010, such as Austria, Luxembourg and the Netherlands. In the case of Luxembourg, the increase in energy consumption can be explained by an increase in energy consumption by industry and a decline in gross value added. However, in the case of Austria and the Netherlands, the increase in energy consumption was greater than the accompanying increase in gross value added in that category.

[26] COM(2011) 815, http://ec.europa.eu/europe2020/pdf/annual_growth_survey_en.pdf.

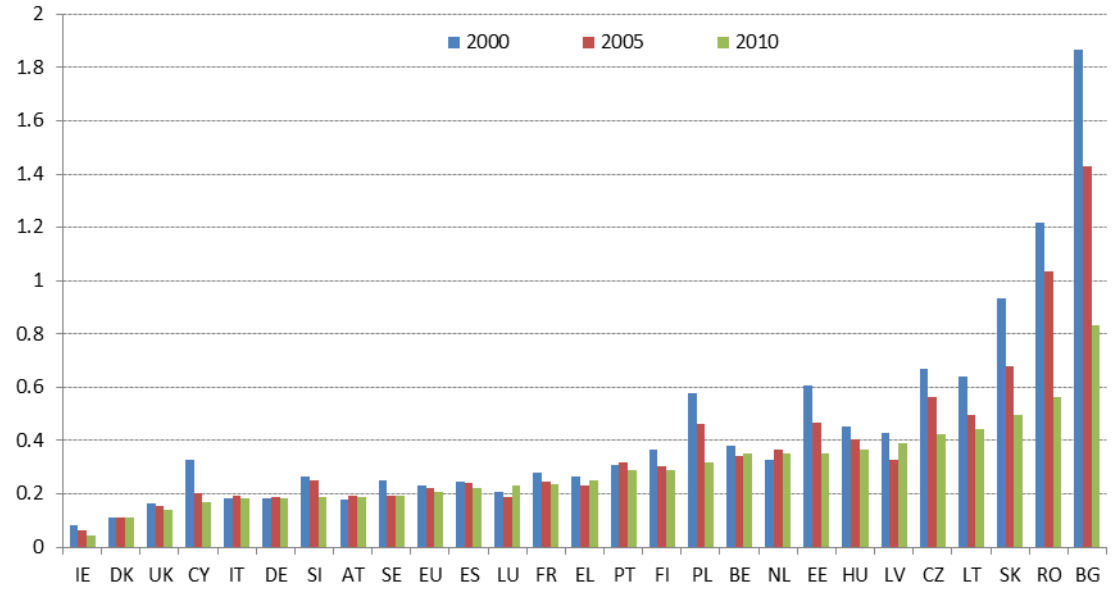
[27] Eurobarometer Report 'sMEs, Resource Efficiency and Green Markets' March 2012. The report focuses on three core themes — resource efficiency, green markets and green jobs, with a particular focus on SMEs: http://ec.europa.eu/public_opinion/flash/fl_342_en.pdf.

[28] Submitted under the Energy Services Directive 2006/32/EC and the forthcoming Energy Efficiency Directive, NEEAPs require Member States to describe how they intend to reach the 9% indicate energy savings target by 2016.

[29] Final energy consumption by industry covers all industrial sectors, e.g. the iron and steel industry, the chemical industry, the food, drink and tobacco industry, the textile, leather and clothing industry, and the paper and printing industry, with the exception of transformation and/or own use of the energy-producing industries.

[30] For ease of comparability between sectors and countries, energy intensity is measured as the ratio between consumption and total gross value added in the energy sector and industry (including construction and the non-energy sector) and is measured as kg of oil equivalent per unit. Due to data availability considerations and to the specific structure of the Eurostat databases on energy and national accounts and of European Economic Area greenhouse gas inventories, the indicators of energy and carbon intensity calculated in the report have been built in order to include a broader, still consistent definition of industry and provide information for all Member States (with the exception of Malta) in the most recent available year. In particular, energy intensity calculations refer to final energy consumption in industry (including construction), final non-energy consumption (i.e. for chemical reduction activities) and consumption in the energy sector. On the other hand, the carbon intensity indicator refers to CO_2 emissions in industry (including construction), from industrial processes and from solvent and other product use in industry and CO_2 emissions from energy industries. Both aggregates (energy consumption and emissions) have then been put into relation with consistent gross value added data at constant prices (2000 as the reference year).

Figure 2.3: Energy intensity in industry and the energy sector



Note: Includes construction and final non-energy consumption. Measured in kilograms of oil equivalent per euro gross value added (reference year 2000). The latest data for France is for 2009. No data were available for Malta.
Source: Calculations based on Eurostat data

The policy response of the Member States to help industries improve energy performance varies according to their specificities. For example, Belgium and the Netherlands provide tax deductions for investment in energy efficiency. The Netherlands also provides a subsidy scheme to support catching-up with the cheapest available technology in industry for renewables. Various forms of financial incentives are also provided across Member States. For example, in Malta grants are provided towards the initial capital investment in renewables and in Cyprus grants are awarded for energy-efficient investments. In Finland, funding is granted for environmental technologies. In Germany, interest-rate subsidies are granted to projects aimed at increasing the energy efficiency of SMEs. Measures have also targeted improving energy efficiency in buildings, including in industrial buildings. Furthermore, initiatives such as the Ecodesign Directive[31] are driving change and helping to deliver more sustainable products, production and consumption.

The recent Eurobarometer survey highlighted further measures that can be undertaken to assist industry. It underlined that more information on energy service contracts and options to save energy would help around a quarter of SMEs to reduce their energy bills. Moreover, 25 % of SMEs stated that simplifying administrative procedures for creating co-generation capacity, such as installing solar panels, would be effective in boosting energy efficiency.

The carbon intensity of European industry[32] declined by 12.1 % from 2000 to 2009. Almost all Member States were part of this, with the most significant reductions being measured in Romania, Slovakia, Ireland, Bulgaria and the Czech Republic. In all these Member States this was due to significant declines in carbon emissions accompanied by an increase in gross value added of industry and energy over this period.

2.3.3. Resource efficiency

Resource efficiency is one of the main challenges for the EU, but at the same time it offers significant potential for European firms. Enhancing resource efficiency can potentially reduce costs for businesses. There are good opportunities to improve further in this field, e.g. by adopting cleaner technologies, improving the use of by-products and waste, and adopting eco-design solutions. As part of the Europe 2020 Strategy, the Commission has launched the Industry Policy and Resource Efficiency flagships under the sustainable growth priority. More recently, the Commission

[31] The Eco-design Directive provides consistent EU-wide rules for improving the environmental performance of energy-related products (ERPs) through eco-design. It prevents disparate national legislations on the environmental performance of these products from hindering intra-EU trade. This should benefit both businesses and consumers, by enhancing product quality and environmental protection and by facilitating the free movement of goods across the EU.

[32] Carbon intensity is measured as the ratio between CO_2 emissions in the energy sector, manufacturing (including construction), process emissions and solvents, on the one hand, and GVA in the energy sector and industry (including construction) on the other.

launched a Resource Efficiency Roadmap[33] in 2011.

The recent Eurobarometer survey highlights a number of trends in resource efficiency. For example, a third of European SMEs are striving to improve their resource efficiency. Around a fifth say that they are taking these measures because of financial or tax incentives or other forms of public support. Over a third indicate that measures to improve resource efficiency have reduced their production costs while about a quarter report that their production costs have increased.

A 2009 study[34] suggested that European companies are taking action to increase their resource efficiency. The most prominent actions were first-order measures, i.e. incremental changes in production through short-term investments, e.g. recycling of materials, use of green and intelligent information technology, and the use of green business models. Second-order measures, i.e. fundamental changes to business operations involving longer-term investments, were present to a lesser extent. In both these cases, the lack of access to finance and lack of knowledge were identified as major barriers.

When looking at resource efficiency in the context of waste disposal, waste from production processes is no longer being seen as just a burden, but is being recognised as an important re-usable resource for industries. Figures from 2004 and 2008[35] show that the total amount of waste generated by EU industry fell by 8.6%, whereas for the whole economy this decline was 8.1%, thus indicating that industry reduced its waste faster than the wider economy. Country-specific data for 2008 indicate that enterprises generate the highest amount of waste (in tonnes per capita) in Bulgaria, Luxembourg, Finland and Estonia, while enterprises in Latvia, Hungary and Cyprus produce the lowest amount.

Policy example: Thermal insulation of buildings in Austria

A EUR 100 million package for the thermal restoration of existing premises up to 2014 was introduced in Austria in 2009. Owners of both private and company premises are granted special grants for insulating exterior walls of buildings and replacing old heating systems and windows with new ones. In 2011, more than 18 000 projects (approximately 17 500 for residential and 800 for industrial buildings) were funded which triggered a total investment value of EUR 860 million.

Policy example: The Green Start programme in Ireland

The *Green Start* programme (Ireland) helps companies to put a simple environmental management system in place. The programme is designed to boost the level of environmental awareness concerning regulatory compliance and developments in green markets in companies that have no in-house expertise or exposure to environmental issues. An increase in environmental performance can help companies reach a level where they will achieve competitive advantage through greater resource efficiency (energy/water/waste costs) and greater market share through enhanced credentials.

2.3.4. Development of environmental industries

Eco-industry refers to the production of goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil and problems related to waste, noise and eco-systems. The global market for environmental goods and services represents an opportunity for European firms. The global market for eco-industries is estimated at roughly EUR 1.15 trillion a year, with the European Union seen as capturing around one third of it. In the future the global market could almost double, with the average estimate for 2020 being around EUR 2 trillion a year.[36]

According to a recent study,[37] European companies are performing well on the global market, in particular in photovoltaics, air pollution control and waste disposal where the EU seems to have a comparative advantage. However, the study also shows that many environmental goods and services included in the study are sold on local or national markets and not traded extensively.

[33] The roadmap aims to transform Europe into a sustainable economy by 2050 and outlines how the EU can achieve resource-efficient growth. The roadmap identifies the economic sectors that consume the most resources, and suggests tools and indicators to help guide action in Europe and internationally. It is an agenda for competitiveness and growth based on using fewer resources when producing and consuming goods and creating business and job opportunities from activities such as recycling, better product design, materials substitution and eco-engineering: http://ec.europa.eu/environment/resource_efficiency/pdf/com2011_571.pdf.

[34] 'study on the Competitiveness of the European Companies and Resource Efficiency', ECORYS study carried out for DG Enterprise and Industry, 2009.

[35] 'sustainable Industry: Going for Growth & Resource Efficiency', 2011.

[36] 'The number of Jobs dependent on the Environment and Resource Efficiency Improvements', ECORYS study, 2012.

[37] Ibid.

When looking at the situation from an SME point of view, the Eurobarometer results suggest that one quarter of SMEs in the EU, approximately 26%, offer green products or services.[38] This would tend to suggest that SMEs still have significant potential to enter the eco-industry. Furthermore, the results show that 87% of SMEs in the EU that sell green products or services only do so in national markets and that it is large companies that are more likely to sell their green products or services in foreign markets. Therefore, there is significant potential for European SMEs to exploit the green market to a greater extent.

Innovation plays an important role in helping to decouple growth from environmental pressures and it is essential to have a framework conducive to innovation, including competitive markets and openness to trade and investment. Green innovation is also influenced by other factors such as the environmental policy framework. For example, in Slovenia, the Slovenian Development and Export Bank (SID) has earmarked EUR 44 million from June 2012 for SMEs to finance green technology solutions such as waste or water treatment or reducing air pollution. In Germany, the ongoing Energy Research Programme has allocated EUR 3.5 billion to energy research between 2011 and 2014. The SDE+ subsidy incentive scheme in the Netherlands is also promoting the use of cost-effective technologies, including renewable sources of heat. In Italy, as part of initiatives to favour the environmental restoration and industrial reconversion of local areas in difficulty, such as Porto Marghera in Veneto and Porto Torres in Sardinia, there is an attempt to favour the emergence of a more sustainable industry (e.g. through the promotion of 'green chemicals'), stressing that restructuring processes can also provide opportunities. Also, Finland has a green mining programme aimed at making Finland a global leader in the sustainable mineral industry by 2020.

The size of the eco-industry can be measured by its turnover, an approximation of which is the level of environmental protection expenditure. In 2009, the estimated environmental protection expenditure by industry as a percentage of GDP was 0.43%.[39] This figure has remained relatively stable since 2001.

In 2011 approximately 0.71% of the value of EU exports corresponded to environmental goods.[40] The percentage varies between Member States. The largest share of environmental goods in total exports was in Cyprus, Luxembourg and Germany. At the other end of the spectrum, Malta, Latvia and Bulgaria had the lowest level of exports of environmental goods. The large export share of Cyprus is due to the assembly and export of photovoltaic panels from imported parts.

The figure 2.4 shows that the bulk of exports of environmental goods belong to the group of photosensitive semiconductor devices, including photovoltaic cells which account for approximately 44% of EU exports of environmental goods. This concentration has perhaps contributed to the difficulties the sector has experienced. Other major exports were devices for filtering and purifying liquids and gases, accounting for approximately 24% of exports in 2011.

Several initiatives have been taken by Member States to promote green industries. Germany has an initiative on 'electro-mobility' which aims to establish it as a leading market for electric vehicles. A similar project has been launched in Finland, known as the Electric Vehicles Systems (EVE) programme. This programme is aimed at companies and research institutions whose goal is to increase the amount of business related to electric vehicles and machinery. Germany is also working on a programme aimed at developing hydrogen and fuel cell technologies. Poland has launched a green technologies accelerator scheme aimed at fostering the development and international transfer of Polish innovative environmental technologies.

Policy example: Green deals in the Netherlands

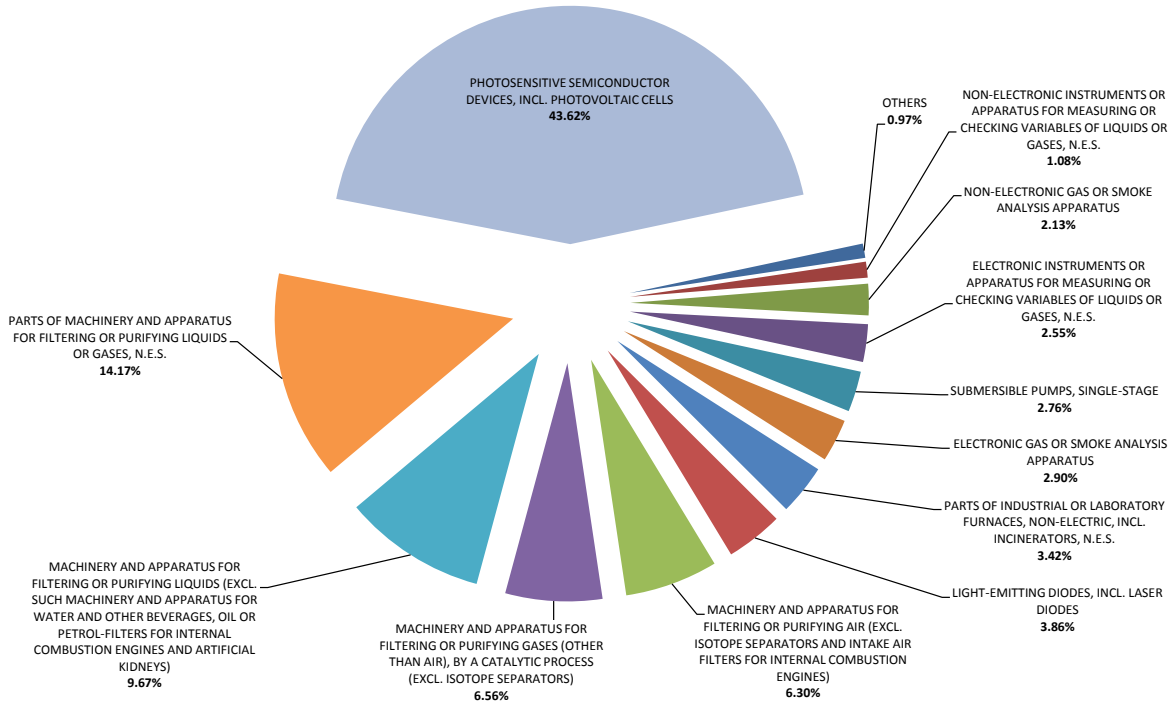
Green Deals are the government's 'deals' with society. The government has asked businesses, citizens, civil society organisations, and local and regional authorities to indicate green projects which they have not managed to launch in an effort to identify how it can help these projects become viable. This can take place through providing advisory capacity, organisational capacity, removing legislative and regulatory obstacles and establishing public-private financing structures. Nearly 60 'Green deals' have been signed since 2011 and an initial analysis by the Dutch Government found that these deals have supported and strengthened the policy to achieve CO2 reduction and renewable energy targets. An example of a green deal includes a pilot project with a greenhouse company to store heat from their greenhouses in the summer for use during the winter.

[38] In the Eurobarometer survey, green products and services are those with a predominant function of reducing environmental risk and minimising pollution and resources. For this survey, products with environmental features (eco-designed, eco-label, organically produced, with a substantial recycled content) were also included.

[39] Eurostat data.

[40] Exports of Environmental Goods refer to intra- and extra-EU 27 exports of goods from 'eco-industries' divided by total intra- and extra-EU 27 exports of goods (in nominal values). 'Eco-industry' refers to sectors whose products measure, prevent, limit, minimise or correct environmental damage. The trade codes considered to cover eco-industry goods are those identified on pages 190/191 of the Ecorys study of 22 October 2009 on the 'Competitiveness of the EU eco-industry', carried out for DG Enterprise and Industry.

Figure 2.4: Composition of intra- and extra-EU 27 exports of environmental goods, 2011 (volume)



Source: Eurostat COMEXT

On green public procurement, the Commission set an indicative target that by 2050, 50 % of all public tendering procedures should be green.[41] A recent study[42] found that the uptake of green public procurement in the EU has been significant. 26 % of the latest contracts signed in 2009-2010 by public authorities in the EU included all the core green criteria, while 55 % of these contracts included at least one core criterion. The top performing countries, according to the contracts signed by public authorities, were Belgium, Denmark, the Netherlands and Sweden. The Eurobarometer survey also showed that green public procurement is still a challenge for SMEs, with only 11 % of SMEs bidding for a public procurement tender that included environmental requirements compared with 16 % of large companies.

***Policy example: ÖkoKauf Wien/EcoBuy Vienna*[43]**

An example of best practice in green and efficient public administration is the green procurement initiative *ÖkoKauf Wien/EcoBuy Vienna*. It is a programme for sustainable public procurement across the entire city administration of Vienna. It has developed about 100 product catalogues and green criteria for supply, construction and other regularly procured services. By changing administrative routines the programme had a significant financial and environmental impact corresponding to about EUR 17 million and 30 000 t of CO_2 emissions per year. It demonstrates that green products do not need to cost more and educating suppliers is an important additional result. Ownership of the programme has been broad, with about 180 public procurement practitioners from all parts of the administration involved in 22 working groups.

2.3.5. Conclusion

In an effort to tackle the challenges posed by environmental constraints and ensure sustainable production, Member States are using a variety of demand-side and supply-side policies. The effects of these policies have not always been fully favourable, as the difficulties of the photovoltaics sector show. However, demand-side policies and support, such as green public procurement and labelling, taxation and subsidies seem to have solidly taken root. Supply-side policies, such as better access to finance for environmentally viable solutions, education and information services directed at enterprises, have been identified as bottlenecks and should be strengthened.

Despite the potential for problems, well-directed, commercially sound and significant investment by

41 'Public Procurement for a Better Environment', COM(2008) 400. 'Green' means compliant with endorsed common 'core' green public procurement criteria for ten priority product/service groups such as construction, transport, cleaning products and services: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0400:FIN:EN:PDF.

42 'Assessment and Comparison of National Green and Sustainable Public Procurement Criteria and Underlying Schemes', 2010.

43 www.oekokauf.wien.at.

European industry is needed to seize opportunities in environmental industries, especially for SMEs. To complement this investment, Member States have to strike the right balance between creating supportive policies, avoiding wasteful spending and avoiding excessive burdens on companies when they design policies aiming at creating incentives for investment required to achieve sustainable growth.

2.4. Business environment

2.4.1. Introduction

The business environment can be described as a set of conditions that affect a company's operations and include customers, competitors, suppliers, legislation and economic and political factors. The World Bank Report 'Doing Business in 2012', confirms that OECD high-income economies, by a large margin, have the world's most business-friendly environment. A good business environment requires rules that are efficient, transparent and provide certainty. The regulatory framework must contribute to achieving growth and jobs, while continuing to take into account social and environmental objectives.

2.4.2. Access to finance

Since the beginning of the financial crisis, SMEs have been particularly affected by tightening credit conditions and face difficulties in accessing financing. As a result of the slowdown, debt financing has become more expensive and difficult to obtain, and alternative financing instruments are often not fully developed in Member States.[44]

According to the SMEs' Access to Finance Survey 2011,[45] access to finance is the second most pressing problem facing EU SMEs after finding customers. Larger and older companies are more likely to obtain external financing whilst younger and smaller companies, and in particular microcompanies, are more likely to be rejected. 77% of large companies that applied for a bank loan were granted the loan. The equivalent figure for SMEs is 63%. For SMEs active for between 2-5 years, 24% received the finance requested and for microcompanies, with less than 10 people, only 16% could obtain access to finance.

The survey results show that access to bank loans has continued to deteriorate; on balance, SMEs reported a worsening in the availability of bank loans (20%, up from 14% in the previous survey round). Along with access to bank loans, SMEs also reported a further deterioration in the availability of bank overdrafts and of trade credit, indicating an overall considerable worsening in the access to finance.

According to the survey, since 2009 the overall situation has deteriorated in more than half of the Member States. This was mainly caused by the overall tightening of credit standards due to banks' greater risk aversion. The results show that just under a fifth (19%) of EU SMEs applied for a bank loan in the last six months of 2011, down from 26% in 2009. Applications for bank loans were most common in France (31%) and Slovenia (30%), while for SMEs in Germany, Italy and Poland there were significant drops in the proportion of firms applying for bank loans from 2009. SMEs in Ireland (12%) and Greece (11%) were most likely not to apply because of the risk of rejection. SMEs in Finland and Sweden were more likely than those in the other Member States to gain access to bank loans. In Greece and Ireland the proportions that were rejected were significantly higher than the EU average.

While the volume of large loans (over a million euros) to the corporate sector in the euro area has stabilised on a year-to-year basis, that of smaller amounts, and especially those below EUR 250 000, which are most likely to be granted to SMEs, has continued to deteriorate. In addition, the interest rate differentials for corporate loans have widened considerably within the euro area, reflecting the sovereign debt problems.

Although the decline reflects the lack of investment demand in a recession, SMEs perceived a further deterioration in the availability of bank loans between October 2011 and March 2012 (20% of SMEs thought so in net terms). In the second half of 2011, euro area SMEs' need for bank loans and overdrafts increased somewhat, although this was not reflected in their financing need for fixed investment or for inventory and working capital. The deteriorating economic environment was responsible for a part of the deteriorating access to loans, but banks' unwillingness has also played a role, as 23% of SMEs (in net terms) pointed to a lower willingness of banks to provide a loan, which was close to their perception in in the period after the Lehman bankruptcy.[46]

[44] *Industrial policy: Reinforcing competitiveness*, COM(2011) 642 final.

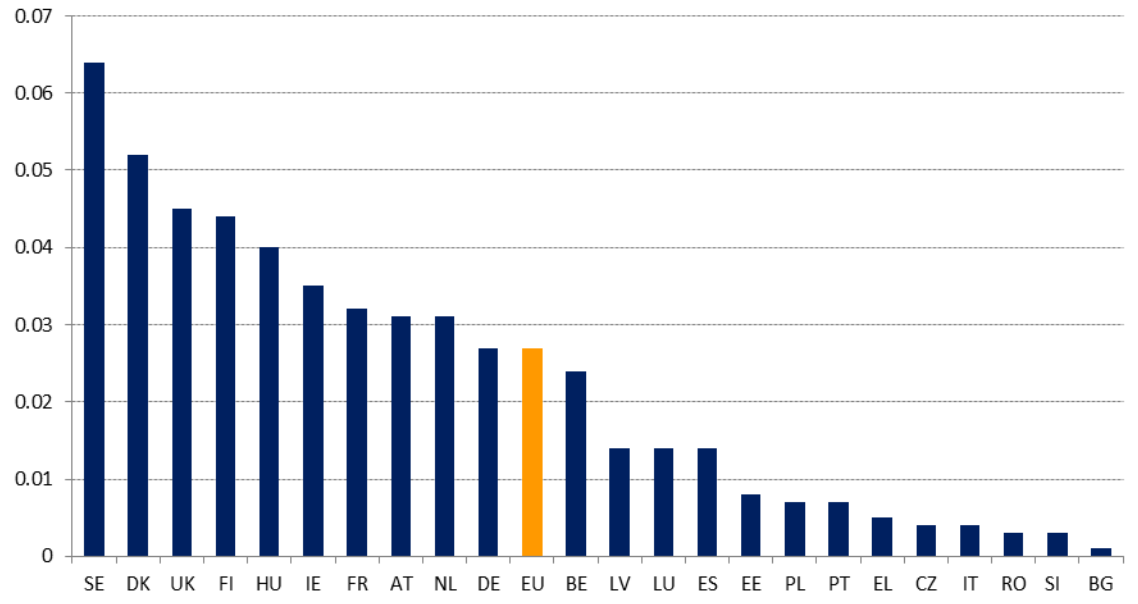
[45] ECB and European Commission, *SMEs' Access to Finance*, Survey 2011, 7 December 2011, http://ec.europa.eu/enterprise/policies/finance/files/2011_safe_analytical_report_en.pdf.

[46] ECB, Survey on the access to finance of small and medium-sized enterprises in the euro area. October 2011 to March 2012, April 2012.

Banks' continuing efforts to strengthen their balance sheets, their risk aversion, and their other difficulties could make it difficult for the European banking sector to continue to fullfill its role as the main provider of finance to the economy that it had before the crisis. Lending to businesses could be hampered even more if the securitisation market for small business loans does not take off in the near future.

However, obtaining financing from alternative sources is difficult for most firms. The issuance of bonds is a viable option only for larger companies with an external rating. The overwhelming majority of SMEs do not have an external rating and in any case look for smaller amounts of financing which is potentially more difficult to place with investors.

Figure 2.5: Venture capital as % of GDP, 2011



Note: No data for Cyprus, Lithuania, Malta or Slovakia.
Source: EVCA

Venture capital funds are operators that provide mostly equity finance to companies with growth potential. Venture capital is essential for innovative firms that have prospects for rapid growth and are willing to take outside equity investors. These firms are a small minority of all firms, but they often have the potential to grow into large ones. The December 2011 Commission survey shows that equity financing was used by less than one in ten SMEs (7%) during the period April-October 2011. Its use was more likely among larger businesses (11% of those with more than 250 employees). Gazelles (firms that are less than five years old and have grown at more than 20% per annum) are also slightly more likely (12%) than SMEs overall to use equity financing. The main challenge concerning this source of financing among SMEs is their lack of investment readiness and limited knowledge of equity financing.[47]

The deteriorating economic outlook and the sovereign debt crisis have taken their toll on the availability of venture capital. Many venture capital funds are nursing their portfolio of companies and are shunning new deals. Venture performance has remained weak, apart from those in the top quartile, emphasising the importance of careful selection by investors.[48] Venture capital markets continue to be seriously underdeveloped in a number of Member States.

Looking at a selection of policy responses from the Member States, a recent evaluation[49] identified good practices in terms of stages in programme development: design, operation and monitoring and evaluation. These practices can be built into any programme, whether a loan, guarantee or equity scheme, and whatever stage of company development is targeted.

The Member States have a variety of programmes over the whole spectrum of funding gaps that firms may encounter. This makes direct comparisons of programmes difficult, especially as the client firms range from start-ups with no employees to well-established growing firms.

[47] ECB and European Commission, *SMEs' Access to Finance*, Survey 2011, 7 December 2011.

[48] EIF, *European Small Business Outlook*, 2/2011.

[49] http://ec.europa.eu/enterprise/policies/finance/guide-to-funding/indirect-funding/files/evaluation-of-national-financing-programmes-2012_en.pdf.

In terms of programme design, good practices require the scheme to fit into the financial ecosystem; to provide for linkages with other support schemes; to have clear and specific intervention aims and targets; to avoid crowding out private sources of finance; for investments to specify the target rate of return; and to have flexibility built in from the beginning.

When operating programmes, good practices tended to favour speed in decision-making; awareness-raising among potential customers; collaboration with private sources of finance; direct cooperation with the applicants; and provision of advice in addition to finance.

On programme evaluation, it is good practice to ensure regular evaluation of the success of any programme, and ongoing public scrutiny.

Policy example: High-tech Gründerfonds in Germany

In Germany the Equity Fund for High-Tech Start-ups provides venture capital for start-ups with large growth potential, which nonetheless often have difficulty in obtaining financing from private venture capital funds, because the investment seems too risky. The fund provides not only financing, but also coaching to the companies in its portfolio. It is a good example of successfully implemented public-private partnerships, as the Federal Government and private companies contribute to the funding.

2.4.3. Support to SMEs and the implementation of the Small Business Act for Europe

In 2010, there were almost 21 million SMEs in the EU. Of these, over 19 million (or 92 % of all EU businesses) were microfirms with less than ten employees.[50] The Small Business Act for Europe (SBA) that was adopted in 2008 reflects the Commission's commitment to SMEs as the backbone of the EU economy. The SBA is a policy framework aimed at strengthening SMEs so that they can grow and create employment. Between 2008 and 2010, the Commission and the Member States implemented actions set out in the SBA to lighten the administrative burden, facilitate SMEs' access to finance and support their entry into new markets. Although many of the actions outlined in the SBA have been started, a review of implementation in 2011, and a reassessment of needs in the light of the recent economic crisis, revealed that more must be done to make Europe more entrepreneurial.

[50] Are EU SMEs recovering from the crisis? Annual Report on EU Small and Medium-sized Enterprises 2010/2011, Ecorys.

In order to remain competitive, to grow and to create employment, SMEs need to be encouraged and supported in their efforts to enter new markets. The SBA and its review encourage Member States to take measures to help SMEs access public procurement, take advantage of the single market, use environmental challenges as a springboard to new business opportunities, and tap into international markets beyond the EU.

2.4.3.1.Entrepreneurship

The SBA Fact Sheets 2011/2012 provide an analysis of the situation of SMEs across Europe. These indicate that several Member States have launched programmes and initiatives aimed at improving the environment for entrepreneurship.

Measures have been taken to encourage people to become entrepreneurs, in particular with projects targeting young people, the unemployed and women. A large majority of member States have introduced entrepreeurship curricula in schools and are increasingly providing entrepreneurship training programmesfor teachers. This should be extended to all levels of education. Many countries have also promoted the entrepreneurial spirit with a series of targeted initiatives. Female entrepreneurship has been fostered through programmes in Ireland, Italy, Luxembourg, Malta, Slovakia and Spain. In Finland child care allowances and social benefits have been increased to support self-employment.

Policy example: Entrepreneur Individuel à Responsabilité Limité in France

In France, the creation of an entrepreneur statute (*Entrepreneur Individuel à Responsabilité Limité* or *EIRL*) allows entrepreneurs to defer the payment of any tax until a turnover has been generated. This reduces the cost of setting up a business and encourages entrepreneurship. This statute also allows entrepreneurs to differentiate between their personal and business capital, thus avoiding situations where a business bankruptcy turns into a personal insolvency.

2.4.3.2.Public procurement

The SBA Fact Sheets indicate that SMEs are impeded from participating in public procurement markets, which account for 17 % of EU GDP, often simply because smaller businesses are not aware of opportunities or are discouraged by procedures. For small firms, the costs of participating in tendering procedures can easily be prohibitive if the process is not efficient. Further, public authorities may find it easier to focus on large enterprises.
Many Member States have enacted measures to simplify access to public procurement, using electronic portals and overhauling their legislation.

In Belgium, as from January 2012, it is compulsory for both the Flemish and the Walloon administrations to use e-tendering procedures. Further, Estonia, Finland, Ireland, Portugal, Romania and the UK have sought to improve access to information and to facilitate the participation of SMEs in public procurement. To this end they have improved the electronic procurement system, and facilitated the participation of, and the flow of information to SMEs.

Many Member States have also simplified existing laws to reduce and limit requirements for SMEs, and to divide larger contracts into smaller lots to facilitate access for SMEs. Austria, the Czech Republic, Italy, Latvia, Romania, Slovenia and Spain are examples of this.

2.4.3.3.Internationalisation

Many Member States have introduced support schemes or implemented plans aimed at fostering internationalisation. According to a study,[51] 25% of SMEs in the EU export or have exported at some point during the last three years. However, most of the exports are to countries inside the EU and only about 13% of SMEs export to markets outside the EU.

Support and financial assistance to businesses interested in expanding their markets has been introduced in Austria, Denmark and Malta. In the Netherlands the 'sME Export Accelerator' provides easier access to credit for SMEs that want to increase their exports.

Services and assistance have been offered to businesses to help them find new markets or improve their export potential. Estonia's government is preparing an 'Asia Programme' aimed at helping exporters to enter the Chinese market. Germany has put in place several initiatives to promote exporting. The UK has launched a programme that includes the provision of commercial export finance facilities to SMEs.

Policy example: Made in Italy portal

The *Made in Italy portal* is an interactive platform aimed at helping Italian companies to promote and sell their products around the world. The portal is available in English, Chinese and Russian. The services provided, which are all completely free, include e-commerce services and matching services for Italian partners. The programme addresses a key problem for Italian companies, namely the setting-up of online sales channels.

2.4.4. Reducing administrative burdens

2.4.4.1.Administrative burden

The EU's better regulation policy aims to simplify and improve existing regulations, improve the design of new regulations, and increase the effectiveness of applicable rules and regulations. The better regulation agenda is focused on ensuring that legislation affecting businesses is fit for purpose and that decision-makers fully understand all the costs and impacts associated with it.

One report[52] notes that almost a third of the administrative burden stemming from EU legislation has to do with inefficient national implementation. The report also notes good progress in implementing the action programme to reduce the administrative burden for businesses in the EU by 25% by 2012. The Commission has proposed measures that reduce administrative burdens by up to 33% or more than EUR 40 billion. Of these, Council and Parliament have so far adopted measures amounting to a reduction of about 22%.

According to the report, all Member States have set targets for reducing the administrative burden. Targets vary between -15% (Luxembourg, Malta) and -30% (Lithuania, Spain). Member States should further improve their stakeholder consultation, adopt a structured approach to impact assessment and take into account the implications of legislation for SMEs and microcompanies.

Policy example: Bottom-up regulation in Sweden

The comprehensive programme for reducing small businesses' costs includes a 'bottom-up' regulation, first launched in 2007, which states that every regulation proposed by a government agency must be analysed from the businesses' point of view to make sure that it does not cause any additional administrative burden. The impact analyses are then audited by the Swedish Better Regulation Council to ensure that the aim of the policy is fulfilled with the least possible administrative costs for companies. The Better Regulation Council can also intervene at an earlier stage in the legislative process, can assist in the scrutiny of impact assessments produced by the Commission, and must be consulted by government administrative agencies prior to the adoption of regulations with a potential impact on the business environment or business competitiveness.

[51] http://ec.europa.eu/enterprise/policies/sme/marketaccess/files/internationalisation_of_european_smes_final_en.pdf.

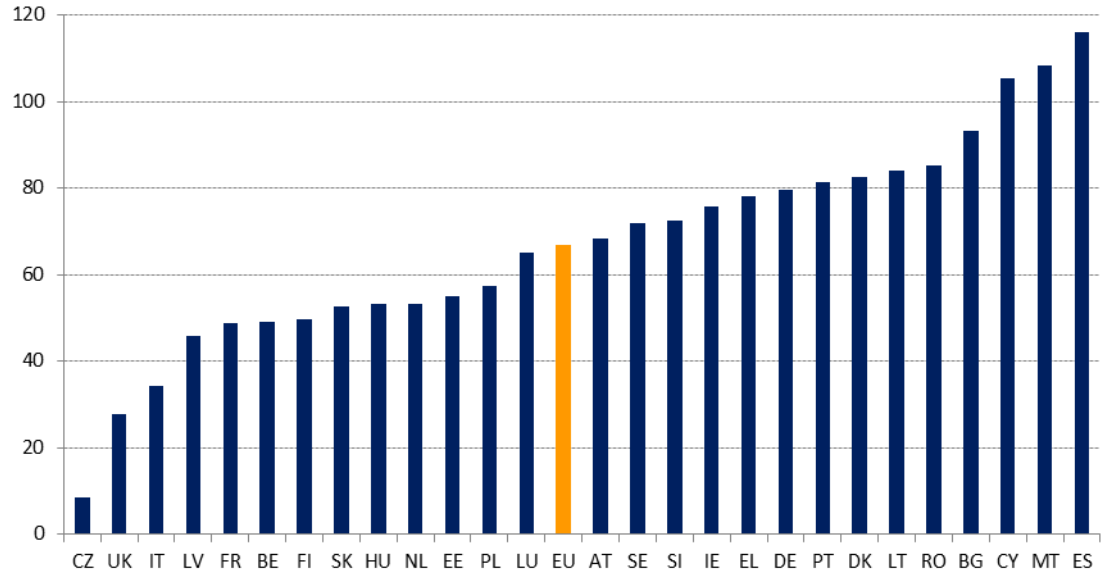
[52] Europe can do better: Report on best practice in Member States to implement EU legislation in the least burdensome way, 15 November 2011.

2.4.4.2.Licence requirements

Licence requirements refer to any form of government regulation, registration, permit or approval allowing a business to carry on an activity or an occupation.

The associated fees and time needed to obtain a licence greatly influence the ease of starting up a company and doing business.

Figure 2.6: Average number of days to obtain licences in Europe



Source: European Commission based on the pilot survey 'Business Dynamics: Start-ups, Business Transfers and bankruptcy", January 2011. This was carried out in 2010 with a limited number of respondents (2 in the case of Malta), which may have skewed the results. An extended survey will be carried out in 2013.

The Commission established in 2007[53] five different company models (a hotel with a restaurant, a plumbing company, a manufacturer of steel products, a manufacturer of small IT devices and a wholesale or retail distributor). These five firm types have since been used as benchmarks to estimate the burden of licensing procedures.

A recent study[54] assessed the impact on business exerted by legal and administrative procedures for licensing. The graph below shows the average number of days needed to obtain all the required licences to start running their economic activity for the five models of businesses included in the study.

The average time to obtain all necessary licences in the EU is slightly over 67 days. The best performers are the Czech Republic and the UK, with respectively 8.5 and 27.9 days.

There are substantial differences among Member States as regards the time needed and the cost and complexity of procedures. Austria is one of the best performers in Europe in terms of the total number of licences required. For all five types of business only two licences are needed. However, the complexity, the costs and the long delays in obtaining licences hinder business activity. The Czech Republic has a regulatory system featuring a relatively small number of licences and low complexity.

Policy example: Ley de Emprendedores in Spain

The legal and regulatory framework for businesses in Spain is one the most burdensome in the EU. The time needed to obtain an operating licence is the longest — 116 days. The government is working on a number of initiatives under the Law on Entrepreneurs (*Ley de Emprendedores*). These encompass rationalising and boosting the efficiency of the many one-stop shop systems and generalising tacit consent in licensing procedures.

[53] Assessing business start-up procedures in the context of the renewed Lisbon strategy for growth and jobs.

[54] *Business Dynamics: Start-ups, Business Transfers and Bankruptcy*, http://ec.europa.eu/enterprise/policies/sme/business-environment/start-up-procedures/.

2.4.5. Services

Figure 2.7: Economic activities as share of GDP (in %)

Source: Eurostat

Services play an increasingly important role in the European economy. Market services[55] account for more than 50 % of GDP, compared to around 45 % in 1995. Including non-market services,[56] the sector now represents about three quarters of the total economy, against about two thirds in 1995. At the same time the share of industry fell from 24 % to around 19 %.

Part of the shift represents the outsourcing of service activities previously performed in house. Manufacturing therefore retains a strong structural relationship with many services. Services have become important input factors for manufacturing that increasingly requires specialised services to design new products and manage the production and distribution processes. This results in vertical integration of services within the manufacturing process along the whole industrial value chain. Also, manufacturing firms have started to offer a variety of services with their products. At the same time, many service industries such as transport, health and information and communication technologies depend on a competitive industry to produce the equipment they use. Owing to this mutual dependency, industry and services are converging.

Business-related services account for over a third of production inputs in manufacturing and therefore play an important role for the competitiveness of industry. Such services include network industries (energy, telecommunications, transport, etc.), distributive trade and others (including consulting, engineering, research and development, and information technology services).

2.4.5.1. Competition and regulation in business-related services

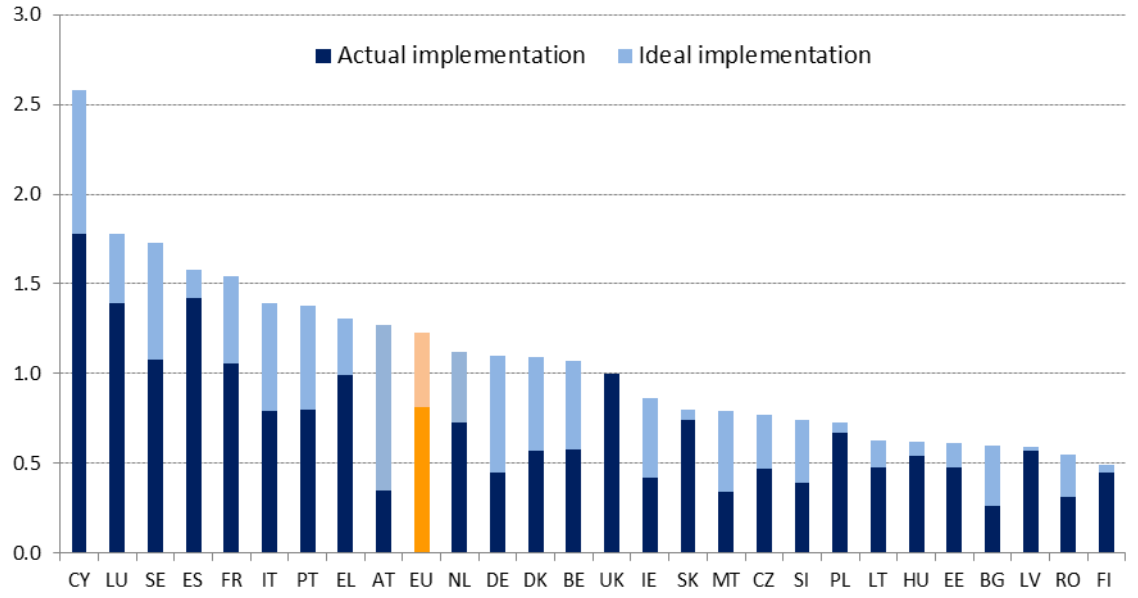
Government regulation normally aims to correct market failures and improve the functioning of markets. However, finding the correct regulatory balance between conflicting objectives is often delicate. Regulations may become too restrictive and impair the functioning of markets. This could have an effect on resource allocation and on production efficiency. Efficient competition and market regulation in business-related services have a considerable impact on the overall business environment and can strengthen the competitiveness of European industry. Competition creates incentives for companies to innovate and increase their productivity, and thereby to improve their position in global markets.

Based on a horizontal regulatory approach, the Services Directive has been a major step forward towards making the single market for services a reality. It has set in motion major efforts in the Member States to modernise their administrations and the legal framework for the provision of services, and to facilitate the establishment and operation of service activities across borders. Full implementation of the Services Directive is expected to lead to more investment and to stimulate competition and productivity, which would also result in higher performance of the sector and reduced average prices for services.

[55] (i) Trade, hotels, transport and communications services; (ii) Financial intermediation, business activities (real estate, renting, leasing, R&D, and other business services).

[56] Public administration, education and welfare.

Figure 2.8: The GDP impact of the Services Directive (in % of GDP growth)



Source: '*The economic impact of the Services Directive: A first assessment following implementation*', European Economy Economic Papers 456, June 2012, European Commission

The Member States have advanced considerably in implementing the Services Directive and have abolished many discriminatory, unjustified or disproportionate requirements, in particular in business services. Nevertheless, the Commission assessment is that in many Member States implementation is still incomplete and it has identified a large number of regulations in force that breach the Services Directive. In addition, in cases when the Directive leaves the Member States with a degree of discretion, often the Member States have chosen to maintain the status quo. Examples of this include quantitative and geographic restrictions, legal form and shareholding requirements, and the obligation to apply fixed, minimum or maximum tariffs. To improve the situation, the Commission has presented[57] a set of actions to stimulate growth in services, including a detailed report on the implementation of the Services Directive by Member State.[58]

Based on an economic assessment carried out by the Commission, the estimated impact of the implementation of the Services Directive on GDP is 0.8%, with an additional 0.4% expected under a moderatelu ambitious scenario – where each country would have the average EU levels of barriers.[59] The expected economic benefit is even higher in some Member States, reflecting their different starting positions, the extent to which barriers have already been reduced and the share of services in the economy.

As part of the implementation of the Services Directive, points of single contact (PSC) have been established by all Member States in order to provide entrepreneurs with access to clear, up-to-date information, together with an easy means of completing administrative procedures both at home and abroad. So far, the gap between the best performing and the less performing PSCs is wide, and there is considerable scope for further improvement. For example, many procedures are not yet available online and information and support is often available only in the language of the Member State. The level of awareness among businesses so far still appears to be rather low and more awareness-raising would be necessary at both EU and national level.[60]

A recent study has highlighted PSCs in Ireland, Slovakia, the Czech Republic, Estonia and one German *Land* (Hessen) as particularly user-friendly, based on the criteria of efficiency/effectiveness, user satisfaction and

[57] Communication 'Partnership for new Growth in Services 2012-2015' on the implementation of the Services Directive, COM(2012)261 final.

[58] The report includes assessment of the economic impact; the status of the Points of Single Contact; and implementation details by Member State.

[59] Commission Staff Working Paper on the implementation of Directive 2006/123/EC on services in the internal market ('services Directive'), DG MARKT, 2012.

[60] Commission Staff Working Paper on the implementation of Directive 2006/123/EC on services in the internal market ('services Directive'), DG MARKT, 2012.

online accessibility of information and procedures.[61]

A number of Member States have recently announced or have already launched ambitious initiatives to strengthen competition and to further reduce regulatory restrictions.

Entry and conduct regulation in business-related professions and services remains quite restrictive in many Member States. However, some Member States are currently in the process of analysing the potential for removing unjustified restrictions in regulated professions or have announced that they will do so in the near future.

Policy example: Grow Italy

The Italian government has initiated a number of measures to spur growth by reforming market regulation and strengthening competition in the services sector. The Decree-law *Cresci Italia* (Grow Italy) promotes enhanced competition in key markets by liberalising professional services, lowering entry barriers in some markets (fuel distribution, insurance, pharmacies), and increasing competition in energy and transport. The government has also strengthened the role of the competition authority.

2.4.5.2. Competition and regulation in network industries

The energy market is still not fully liberalised, since many Member States have not yet transposed the Third Internal Energy Market Package.[62] New investments are also needed to enhance the energy and gas networks in Europe. Analysing the competition in energy markets gives a mixed picture. In some countries a single electricity company either dominates national production (Cyprus and Malta) or has a large share of the market (above 80 % in Estonia, Latvia, France, Luxembourg, Greece and Slovakia). On the other hand, Poland, the UK, Spain, Italy and Germany benefit from a more competitive market.

In the markets for natural gas, considerable concentration is evident especially in Estonia, Finland and Latvia, but also in Bulgaria, Poland, Portugal and Slovenia. The UK and Germany have the lowest degree of market concentration in the hands of a single company. In order to increase competition in the gas market, in January 2012 Italy decided to unbundle the incumbent gas operator from the gas transmission operator.

The development of the transport sector is hampered by legal barriers to market entry, especially in the rail sector, where lack of competition considerably lowers the efficiency of the service. Improvements in the sector would particularly benefit the entire Union if made by large or transit countries. The challenges facing Member States include reducing the negative externalities generated by the sector, upgrading the infrastructure or increasing the degree of competition. Competition is particularly hampered where there is no effective separation between the infrastructure operator(s) and service providers.

The telecommunications sector has become increasingly competitive, and in particular mobile communication prices have fallen steadily in the EU over the last decade.[63] A comparison of the market share of new entrants between July 2009 and July 2011 shows mixed results. The EU telecommunications regulatory framework has encouraged many Member States to liberalise the sector. However, almost half of the Member States[64] have not yet fully transposed the relevant EU Directives.

[61] *The functioning and usability of the Points of Single Contact under the Services Directive — State of Play and Way Forward*, Deloitte, 2012, http://ec.europa.eu/internal_market/services/docs/services-dir/study_on_points/final_report_en.pdf.

[62] AT, BG, EE, IE, ES, CY, LT, LU, NL, PL, RO, SI, SK, FI, SE and UK have not transposed or have failed to fully transpose the Gas Directive (2009/73/EC) and/or the Electricity Directive (2009/72/EC). Infringement proceedings have been initiated against these Member States. Assessment under the European Semester 2012/2013.

[63] Mobile telephony prices fell by around 30 % between 2006 and 2010 according to the 2011 Teligen 'Report on Telecoms Price Developments'.

[64] Belgium, Cyprus, Germany, Greece, Spain, France, Italy, the Netherlands, Poland, Portugal, Romania and Slovenia.

2.5. Improving the quality of public administration

2.5.1. Public administration and competitiveness

The quality of public administration and institutions that govern economic and social interactions within a country is a fundamental factor in improving competitiveness and social well-being. At a time when governments are confronted with numerous challenges, including fiscal pressures and an erosion of trust in government,[65] Member States' administrations have also to deal with rapid economic change, complex regulatory issues, new technologies and services, and calls for openness, transparency and increased citizen participation.

Firms interact with the public administration in a variety of ways, for instance when registering a business, applying for licences, settling legal disputes or paying taxes. The efficiency and predictability of these interactions are important to economy-wide competitiveness, because they have a substantial impact on the costs and risks that companies face in investment decisions. In addition, firms indirectly depend on the public administration, as they are the prime beneficiaries of public goods and bear a large part of the overall tax burden.

SMEs face disproportionately higher administrative and regulatory burdens. Smaller enterprises have limited managerial capacities and are at a disadvantage when it comes to hiring specialised staff to look after administrative processes. The same holds for buying expertise in regulatory and legislative issues. Particularly in microenterprises, the entrepreneur has to deal with administration issues, which can deflect attention from core business activities. Furthermore, costs resulting from delays are more problematic for small firms, as their activities and range of products are usually less diversified than those of large firms.

The large number of interactions between the public administration and enterprises, as well as the various channels of transmission through which administrative quality has an impact on a country's competitiveness, make it difficult to fully capture the complexity of this relationship. The most important features of public administration for competitiveness are determined by the costs and uncertainty of firms in dealing with the public administration, as well as by its effectiveness in providing public services (see Figure 2.09). On this basis, the quality of an administration for the business environment could be captured through the following categories of links.[66]

The *general links* cover overarching influences that affect the quality of the public administration and its relationship to the business environment. These are *general governance* (the multi-dimensional concept of administration quality), *tools for administrative modernisation* (the use of instruments to enhance the capacities of the administration; developments in the general sophistication of service provision), and *corruption and fraud* (the extent to which the powers of government and administration are exercised for private gain, including state capture by vested private interests).

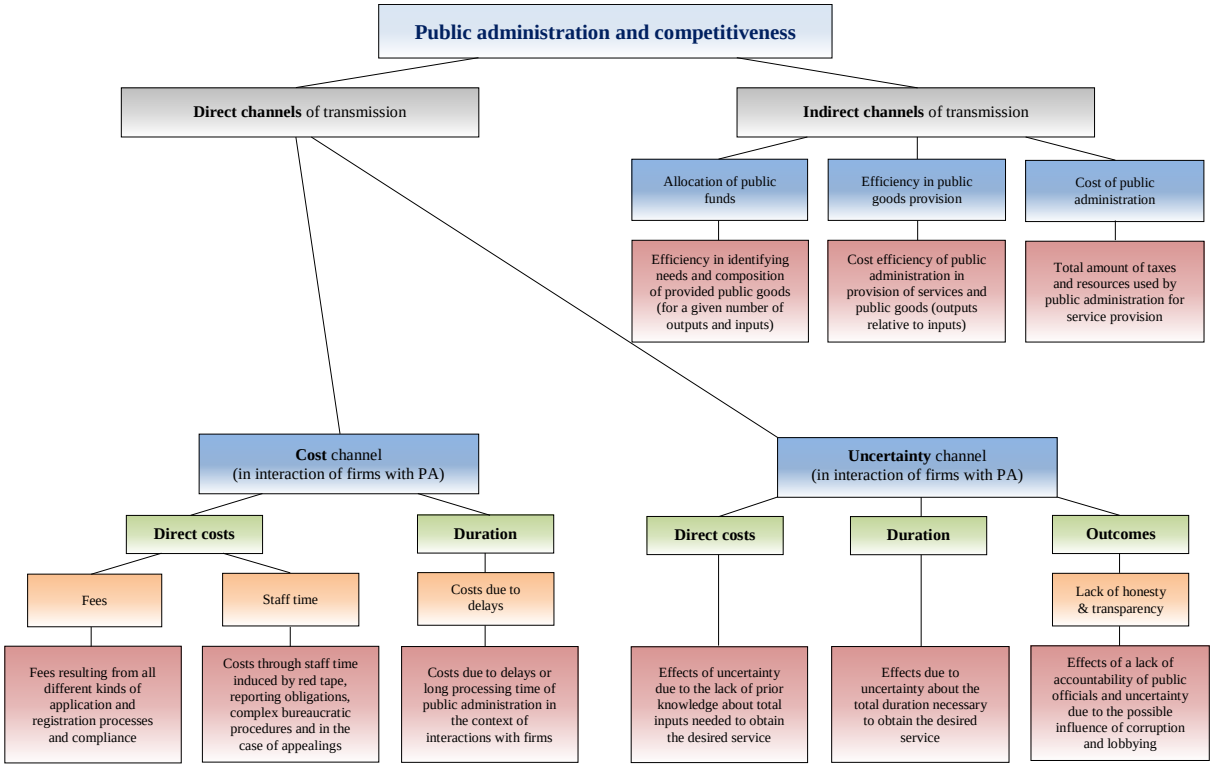
The *specific links* capture the most important interactions and contact points between the public administration and private companies. These are *starting a business and licensing*, *public procurement*, *tax compliance and tax administration*, and *efficiency of civil justice*.

Against this background, modernising public administrations in the Member States for competitiveness includes two separate but related aspects: reforms of the (regulatory) framework conditions under which private companies operate, and internal measures to improve the quality of service provision by increasing the public administration's capacities and incentives to provide goods and services in a reliable, flexible, efficient and effective manner.

[65] European Commission (2011), Eurobarometer 76.

[66] These links were identified and described in the framework to assess the quality of public administration for competitiveness purposes developed by the Austrian Institute of Economic Research (WIFO) in the Study on *Excellence in public administration for competitiveness in EU Member States* (2012) carried out for DG Enterprise and Industry. A summary assessment of performance against the EU average for each public administration–competitiveness link is illustrated in each country chapter through a spider diagram highlighting the weaknesses/strengths of the EU Member States.

Figure 2.9: Channels of transmission for the relationship between public administration and competitiveness



Source: WIFO (2012)

The quality of public administration affects competitiveness through two general transmission channels:

- The ***direct channel*** refers to the performance of public administration in dealing with firms from a business perspective. This channel can be further subdivided into 'cost' and 'quality' components, the latter referring to the reduction of uncertainty about public rules and decisions as a productivity-enhancing service to the enterprise.

  Costs, both direct costs (e.g. fees resulting from application and registration processes, compliance costs resulting from firm staff devoting time to bureaucratic procedures, fees for obtaining permits for new production technologies, costs due to staff time necessary for tax compliance) and costs of duration (e.g. payment delays in the context of public procurement, long processing times for solving commercial disputes, etc.), are a major barrier to competitiveness. High costs of interaction with the administration adversely affect the main drivers of economic growth as they are likely to discourage trade, investment and entrepreneurship, and reduce the capacity for innovation.

  Uncertainty about costs, duration and outcomes encourages smaller, shorter-term, and lower-productivity investment. Firms face considerable uncertainty about future conditions when making long-term decisions. In addition to shocks in the form of business cycles or crises, firms may find themselves insecure about the future business environment or regulatory framework. An efficient public administration can help to reduce this uncertainty through fast, predictable and reliable enactment of the general laws and rules affecting a business.

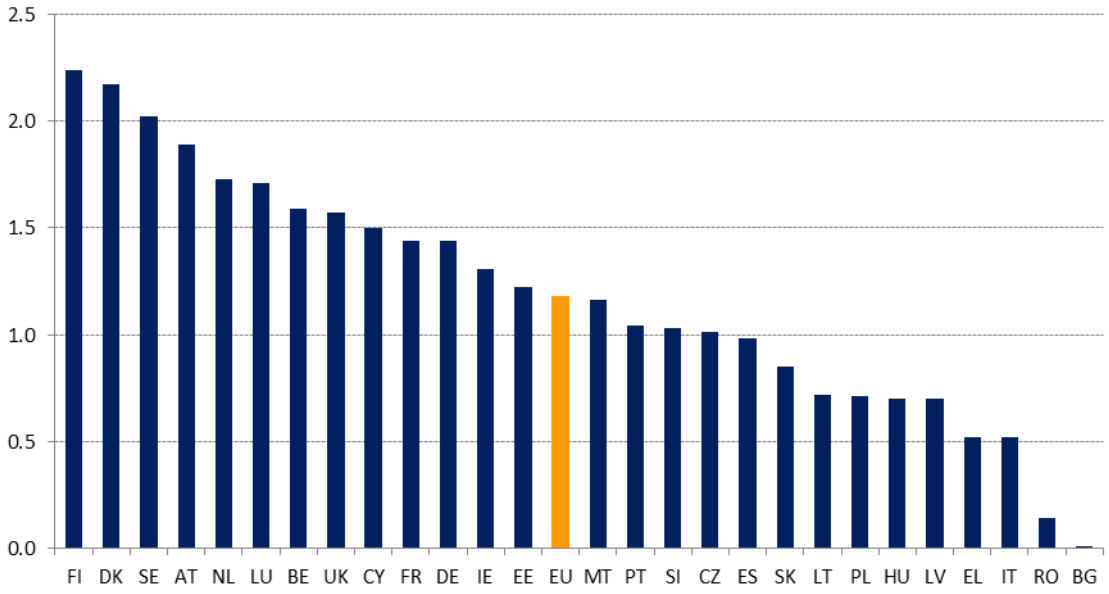
- The ***indirect channel*** captures the efficiency of public goods provision and resource use. A public administration that provides services efficiently and absorbs relatively few resources has an indirect impact on productivity and competitiveness. This is mainly due to the fact that public goods represent a central input factor for private production and that markets are unable to provide them efficiently. Thus, the allocation of public funds (not only the amount of allocations, but also their composition and quality), the efficiency in the provision of public goods, and the cost of administration are key factors for a country's competitiveness.

2.5.2. Policy improvements

The reform of public administration is a key challenge in several Member States (e.g. Bulgaria, Greece, Hungary, Italy, Latvia, Lithuania, Romania, Poland and Slovakia). In these countries, weak administrative and judicial capacity, and legal uncertainty, constitute key impediments in addressing economic development challenges. Nevertheless, in the aftermath of the crisis, almost all Member States have implemented deep changes that have an impact on the functioning of the public administrative systems and institutions.

However, the responses of the Member States have varied in their scope, scale, nature and effectiveness. Some governments have focused on reducing staff and wages in the public sector, but others have taken this opportunity to speed up the pace of wider administrative modernisation. At the same time, efforts are being made in some Member States to fight corruption and improve the efficiency of the civil justice systems. Figure 2.10 depicts the overall effectiveness of government in the Member States.

Figure 2.10: Government effectiveness (2010)



Source: World Bank — Worldwide Governance Indicators

2.5.2.1.Administrative modernisation

Modernisation of the public sector is pursued through the application of an array of tools that aim to increase the capacity of the public administration to provide high-quality services. Although solutions differ from one Member State to another, most instruments involve making use of opportunities provided by information and communication technologies (ICT), applying a strategic approach to human resources management, organising and steering public services provision based on performance, putting the clients' needs at centre stage, and reorganising the interaction between the public and private sectors.

Electronic and technology-enabled government

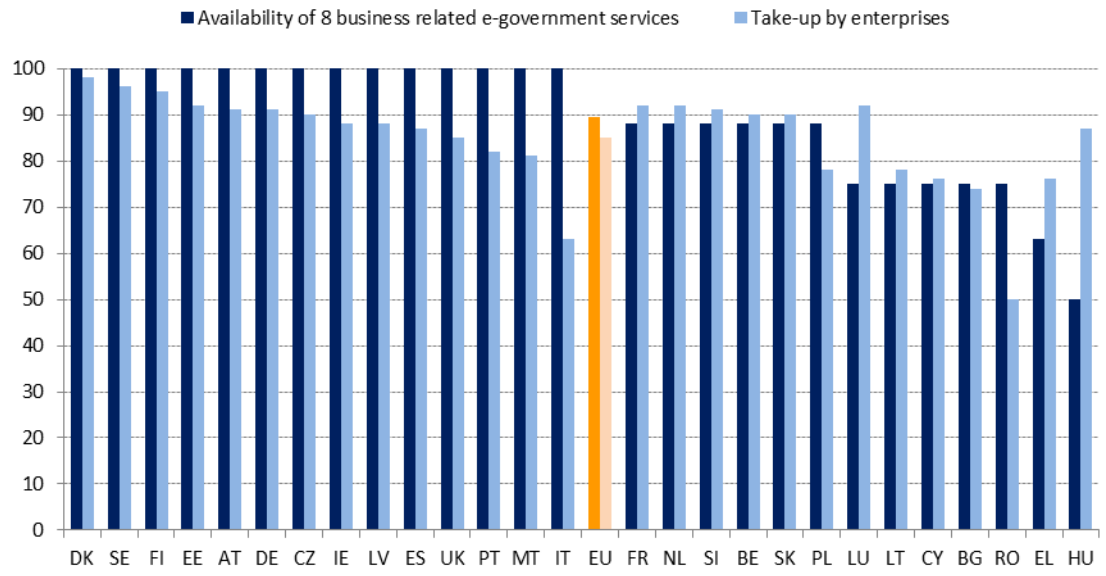
The enhanced use of e-government applications is a central characteristic of many recent reforms of public administrations. The use of online public services is a procedural solution to many general problems currently facing the public sector — such as accessibility, facilitating internal and external administrative processes, reducing administrative burdens and cutting red tape — thereby harvesting gains in transparency, efficiency and effectiveness of services.

Internal public sector excellence potentially benefits from ICT through several channels: public sector employees are relieved of routine tasks, several procedural steps can be outsourced to the clients themselves, the quality of information transmitted is increased while transaction costs are reduced, some tasks can be centralised, e.g. at shared service centres, and processing times are generally reduced. Additionally, there could be synergies with other internal technological innovations in the public sector, such as knowledge management and business management software.

Electronic exchange of information between administrative entities — e.g. regulatory bodies at different levels of government — may speed up multilevel decision-making processes and thus improve the overall quality of regulatory management and policy enforcement. To the extent that problems of mutual coordination and cooperation stem from informational deficiencies, substantial progress can be made through interactive systems of communication. Successful strategies for collaboration among different parts of the administration and levels of government must, however, incorporate the setting of common technology standards and the creation of a data network between organisations.

External applications of e-government include informative, transactional and interactional procedures, which are often streamlined for business interests. In several Member States some basic government services for businesses (e.g. social contributions for employees, submission of data to statistical offices, public procurement, customs declarations, VAT declarations, corporate tax declarations, environmental-related permits, and registration of a new company) are now 100 % e-enabled (Figure 2.11). This has been supported by the Services Directive, which requires Member States to set up points of single contact through which businesses can obtain all relevant information and complete all necessary procedures and formalities by electronic means. However, the take-up by businesses remains lower, which challenges the public sector to rethink how public services can become more user-centric and move away from a one-size-fits-all approach to e-government services, and towards greater personalisation.

Figure 2.11: Availability of eight business-related e-government services vs use by small enterprises (10-49 employees)



Source: CapGemini (2010); Eurostat (2011)

Although the utilisation of social media in the public sector is still very limited, there are several examples of the use of innovative communication technologies, with special reference to external communication and participatory feedback processes.

Policy example: Estonian prohibition on the collection of duplicate data

Previously Estonian companies had to provide the same data in various reports and the data were presented on paper or in a format that did not allow them to be processed electronically. Starting from 1 January 2010 the Business Register launched an electronic data transmission system for submitting annual reports. Under the Accounting Act, from 1 January 2010 the state or local government institutions have no longer been entitled to require businesses to provide data which they have already submitted to the Business Register in their annual reports. The government can exempt the state or local government institutions from the prohibition for a period of up to two years.

In order to avoid duplicate data collection, Statistics Estonia intends to improve its data collection channel eSTAT, such that data submitted electronically to the register according to the taxonomy of the annual report will be pre-filled for the economic units in eSTAT. The respondent needs to complete only the rows not included in the annual report. Statistics Estonia will be able to cease duplicate collection of the data included in annual reports after 2012 (when the collection of data for 2011 is finalised).

Policy example: Point of Single Contact for Business in Luxembourg

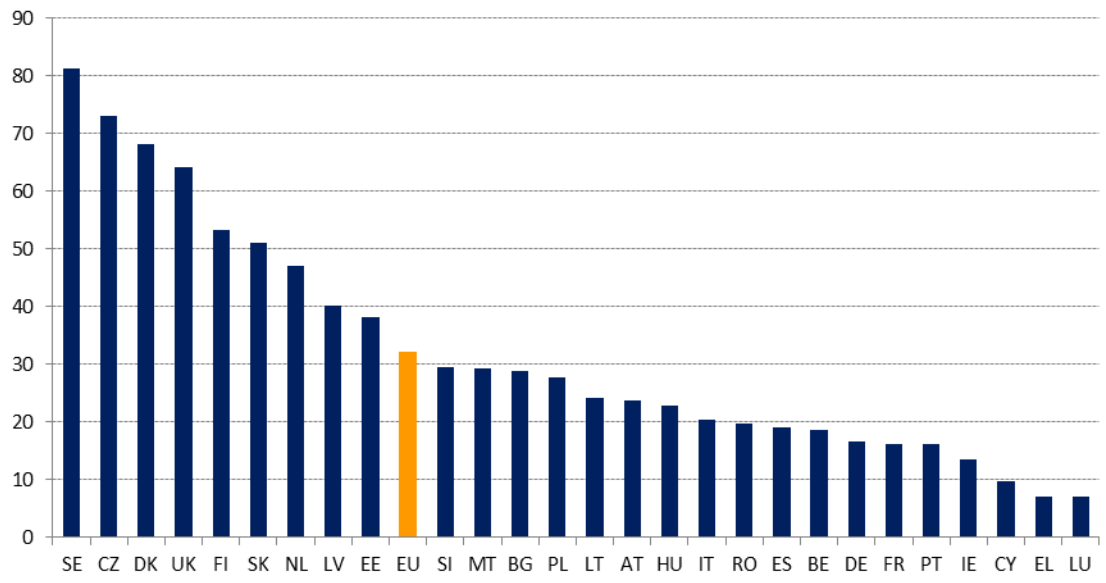
'Guichet.lu' is a national website with the objective of simplifying contacts with the state through fast and user-friendly access to all the information and services provided by public institutions. The website is designed to operate as

a one-stop shop for businesses. It is divided into two main sections: one for citizens and one for businesses. The business section is structured around the life cycle of a company (start-up, operation, R&D, environment, international trade, etc.) and offers businesses access to information and online services provided by the state; a description of the main administrative procedures; the possibility to download forms and to submit them online and electronically signed to the competent administration; and the possibility to carry out administrative procedures electronically.

Human resources management

Human resources management has become a central component of public sector reforms to enhance the skills and capabilities of administrative staff in dealing with the challenges of a modern public sector. The different cultural settings and backgrounds in the Member States determine how public sector personnel is controlled and managed. The tools used by the Member States vary significantly — including policies such as improving recruitment strategies, development, training, communication, leadership and motivation of employees — but they have in common a shifting focus from simply administering public personnel towards a people-centred approach. The degree of implementation of different human resources management tools by Member States is described by the post-bureaucracy index (Figure 2.12). Based on the analysis of public employment systems across the EU with regard to the legal status of employees, career structures, recruitment, salary systems and tenure system, contemporary trends in public personnel management reflect a convergence toward reforms that affect the legal status of public employees. Government staffs are experiencing a tendency towards more private law contracts without guaranteed lifetime employment, more flexible working patterns and pay, and a weakening of collectivist cultures. Not all human resources tools are uncontested and their application has to be evaluated in the light of the local context, but understanding public personnel as a key resource of the public sector is a central question in public sector modernisation.

Figure 2.12: Post-bureaucracy index[67] (0 % = traditional bureaucracy, 100 % = post-bureaucracy)



Source: Demmke and Moilanen (2010)

[67] The post-bureaucracy index — developed by Demmeke and Moilanen (2010) in a study on Civil Services in the EU of 27 commissioned for EUPAN — describes the degree of implementation of different human resources management tools concerning the legal status of employees (public law civil servants vs employment based on private law), career structures (regulated insider promotions, etc.), recruitment (special recruitment, private sector experience), salary systems (seniority, performance-based, regulated by law) and tenure system (lifetime tenure, special job security).

Performance orientation and evidence-based steering

Performance orientation, one of the most widely used instruments for modernising public service provision, includes the measurement, incorporation and use of information that refers to the quality of service provision. The performance perspective is fundamental for strategic thinking and steering of the administration. From an internal perspective, performance measurement aims to achieve a general improvement in the manageability of public sector organisations by providing information for improved decisions and supporting evidence-based instruments such as impact assessments; from an external perspective it is a prerequisite for benchmarking. Thus, it can serve as a foundation for informed decisions by policy-makers and increases accountability towards stakeholders, including businesses. Some Member States, such as the UK, used performance information already in the 1980s, while others have only recently started to make use of it (e.g. performance budgeting, management by objectives, regulatory impact assessment).

Policy example: Regulatory impact assessment in the United Kingdom

One of the earliest adopters of regulatory impact assessments was the United Kingdom, which in the late 1990s shifted its emphasis from deregulation to better regulation. A better regulation support unit was set up in the Cabinet Office to systematically apply this tool in order to inform policy decisions and provide a framework for the ex ante analysis of the costs, benefits and risks of policies. This regulatory impact assessment (RIA) of policy proposals is based on five principles formulated by the Better Regulation Task Force in 1997: (i) proportionality (intervention only when necessary, minimisation of costs); (ii) accountability (decision must be justified); (iii) consistency (of all government rules and standards; fair implementation); (iv) transparency (clear communication and effective consultation with affected interest groups, easily understandable); and (v) targeting (focus on problem, minimisation of side effects). The Department for Business, Innovation and Skills, currently responsible for the UK's better regulation efforts, has recently adopted the 'One-in, One-out' rule, which requires the administration to suggest the abolition of one regulation in the same 'red tape challenge theme' as a consequence of every new proposal resulting in a regulation, in order to cut, or at least avoid increasing, red tape for businesses.[68]

One of the key criteria for the success of the impact assessment was the top-level political support it received. Other factors are the allocation of responsibility for impact assessment programmes between the relevant line ministries and a central control and support body, thorough training of the regulators, consistent but flexible analytical methods (qualitative assessments and quantitative cost/benefit analysis), integration of RIA into the policy-making process and communication of its results, and extensive involvement of the public.[69]

Service orientation

The introduction of systematic quality management and the improvement of administrative processes, such as one-stop shop concepts, ensure that the public sector sets its course according to the expectations of businesses and citizens. Defining the satisfaction of clients as a target variable of public conduct leads to a large array of further tools, such as stakeholder consultation, participation, e-government, service charters, reduction of red tape, better trained service personnel, and easily understandable and concise forms.

Policy example: Service quality management among local administrations in the Netherlands

A quality institute (KING) supports representatives and public servants of local administrations in their ambition to be close to the public and business. KING is established by the local administrations and aims to achieve a sustainable increase in the effectiveness of local government and a steady improvement in the quality of local services. The label 'good quality of local administration services' for dealing with businesses could serve as a model for cities outside the Netherlands.

Institutional reorganisation: market mechanisms and decentralisation

The institutional arrangement of public tasks, i.e. cooperation with the private sector and competition within the public sector, is another key reform tool. First, several market mechanisms (e.g. benchmarking, the systematic comparison of costs and outputs, and competitions that promote best-practice solutions[70]) help to make European public administrations comparable and allow best practices to be identified and efficiency to be

[68] BIS (2012), *One-in, One-out: Third Statement of New Regulation*, London, Department for Business, Innovation and Skills.

[69] OECD (1997), Regulatory Impact Analysis: Best Practices in OECD Countries, Paris.

[70] For example, the European Public Sector Award (EPSA): www.epsa2011.eu.

improved. Second, the inclusion of the private sector and the general public in administrative tasks, by means of both consultation and co-production (e.g. outsourcing of formerly public tasks to markets, public-private partnerships, cross-departmental support units), has increased the number of organisations that hold an active stake in public service provision. Third, several reform approaches have included decentralisation efforts and notions of agency multiplication, whose effects are largely dependent on the national context and the administrative culture.

2.5.2.2. Efficiency of civil justice

A highly efficient civil justice system is overwhelmingly important for competitiveness. Securing property rights, timely and correct resolution of business disputes, insolvencies, commercial claims and labour disputes, and swift enforcement of decisions are all important for a business environment conducive to growth, risk-taking and investment. The direct costs of 'using' the system, associated with the indirect costs stemming from the long duration of procedures, constitute a burden for businesses and undermine access to justice. At the same time, an inefficient judiciary system that is vulnerable to political or special interest influence and corruption is probably one of the largest obstacles to economic development and competitiveness.

Figure 2.13 ranks the Member States based on the time (calendar days) and estimated cost (percentage of claims) required to enforce a contract.

Figure 2.13: Time and cost to enforce contracts in the EU Member States

Source: Word Bank, Doing Business (2011)

Some Member States have initiated reforms aimed at reducing delays in the legal system, in particular through changes in judicial organisation and a general reduction of the number of courts (e.g. Austria, Belgium, France and the Netherlands). However, the efficiency of civil justice systems needs to be improved in many countries, in particular by reducing backlogs, speeding up judicial proceedings and introducing alternative forms of dispute resolution, as highlighted by the 2012 European Semester recommendations.[71]

Performance measurement

Techniques and methods to speed up the processing of cases are increasingly being implemented by Member States. This requires quantified objectives

[71] COM(2012) 299, http://ec.europa.eu/europe2020/pdf/nd/eccomm2012_en.pdf.

to be set (timeframes for different case types) and performance to be evaluated. For example, some regions of Germany (e.g. the Stuttgart Court of Appeal) have introduced a system of inspections (*Nachschau*) through which Court of Appeal judges visit lower courts to look at cases pending longer than a certain period.

Performance measurement is essential, as it is the only way to understand real inefficiencies and to devise reforms capable of speeding up civil procedures. The publication of court performance data (including timeframes and duration) is a key component of the public accountability of courts and helps to set up processes where delays are identified and trigger action. For example, some regions in Denmark (e.g. the Esbjerg District Court) and Finland (e.g. the Turku Administrative Court) publish annual reports on courts' performance.

Case management policies

Long judicial procedures increase the uncertainty and cost for the plaintiff and the defendant. Delays can result from the way in which procedures are regulated but also from deliberate tactics employed to lengthen the process. Procedural rules containing standards for certain types of cases, and enhanced powers of judges in the conduct of the proceedings are central in reducing the length of contract disputes. Several instruments have been applied in a number of Member States to speed up the proceedings:[72] limitations on the number of hearings, for example two hearings for a typical case; limitations on adjournments; an active case management role for judges (authority to push cases forward); stimulation of early meetings between parties; triage between small and large cases, with separate procedures; standard templates for decisions. Overall, case management policies need to take into account the complexity and the size of the claim.

Alternative dispute resolution

An important role in resolving disputes rapidly and economically can be played by alternative dispute resolution mechanisms. These can be used by disagreeing parties as a means to come to an agreement outside of litigation in court, and take the form of arbitration, conciliation or mediation. Many of these processes are organised and conducted outside the judicial system by different institutions. But alternative mechanisms can also be informal methods attached to official judicial mechanisms and to settlement methods such as mediation programmes and ombudsman offices. An increased use of alternative methods allows courts to concentrate primarily on those matters that require resolution by a judge.

Alternative mechanisms have gained widespread acceptance in most Member States. They are also being used as a means to speed up dispute resolution in specific areas, such as construction. For example, the UK Housing Grants, Construction and Regeneration Act 1996 recommended that contracting parties include in their contracts provisions for adjudication[73] of disputes.

2.5.2.3. Corruption and fraud

By undermining the rule of law, deterring investment and distorting competition and the efficient allocation of public funds, corruption has significant effects on a country's competitiveness. It is estimated that annually up to one per cent of EU GDP is diverted through corruption.[74] The occurrence of corruption is probably one of the most widespread problems facing administrative systems, and this holds true for many of the Member States.

The 2011 Eurobarometer[75] survey on corruption carried out in all 27 Member States showed that the majority (74%) of Europeans believe that corruption is a major problem in their country. The differences of perception among Member States are considerable (i.e. from 98% to 19%). Almost half of all Europeans (47%) think that the level of corruption in their country has risen over the past three years. Most Europeans think corruption exists within local (76%), regional (75%) and national (79%) institutions. Europeans believe that bribery and the abuse of positions of power take place in all areas of public service. National politicians (57%) and officials awarding public tenders (47%) are the most likely to be considered involved in such activities. 40% of Europeans believe that too close a relationship between business and politics contributes to corruption. Lack of action by politicians (36%) and lack of transparency about how public money is spent (33%) are believed to be contributing factors.

[72] CEPEJ — European Commission for the Efficiency of Justice (2006), Compendium of 'best practices' on time management of judicial proceedings, Strasbourg, Council of Europe, CEPEJ (2006) 13.

[73] Adjudication refers to a specific type of arbitration, where an adjudicator reviews evidence and argumentation including legal arguments set forth by the litigants in order to come to a decision that determines rights and obligations between the parties involved. The decision is legally binding but can be reviewed by a court.

[74] European Commission (2011), *Europe can do better — Report on best practice in Member States to implement EU legislation in the least burdensome way*, High Level Group of Independent Stakeholders on Administrative Burdens.

[75] Special Eurobarometer 374, February 2012, http://ec.europa.eu/public_opinion/archives/ebs/ebs_374_en.pdf.

One very common proposal of international anti-corruption programmes is the establishment of dedicated independent anti-corruption agencies with law enforcement powers.[76] This approach has been used in several Member States. For instance, Bulgaria and Romania have established anti-corruption agencies and have taken a number of measures to pursue judicial reform and the fight against corruption. However, if such agencies are to make a real contribution to the fight against corruption, the independence of the judiciary needs to be strengthened.

State capture

State capture refers to attempts by individuals or firms to influence the drafting of laws or regulations. Increasing accountability and the level of transparency could make an important contribution to successfully combating this form of corruption. For instance, Slovenia has had a mandatory register of lobbyists since 2010; France and Germany have voluntary registers, and the UK and Irish governments are considering whether to introduce mandatory registers of lobbyists.

Specific areas, such as public procurement, are considered at higher risk. According to the assessment made by Transparency International,[77] this is particularly the case in Bulgaria, the Czech Republic, Italy, Romania and Slovakia, where, in spite of legislative frameworks in line with the EU law, the rules are often circumvented with impunity. The obligation for public administrations to publish details on their spending and funding decisions, especially in the context of public procurement tenders, could be a useful tool to increase transparency. For instance, Portugal has reached a share of 75% of public procurement tenders that are fully digitised, whereas this proportion is below 5% for the rest of Europe.[78]

Policy example: Central electronic registry of contracts in Slovakia

Following its introduction in late 2010, the government operates a central electronic registry of contracts and invoices.[79] All contracts awarded by and invoices paid by public administrations, including those at regional and municipal level, have to be published in the online registry. In addition, following the amendment to the Civil Code, the contracts awarded by public bodies become legally valid only upon their publication on the internet. The measures adopted have significantly increased transparency and public control of public spending.

A positive contribution can also be made by disclosing asset declarations of staff, adopting dedicated rules for handling conflicts of interest not only at the level of members of parliament, but for the administration too, conducting compulsory public hearings on draft laws in the presence of experts, carrying out external supervision of the financing of political parties and generally strengthening media independence.

Administrative corruption

At the root of administrative corruption (i.e. corruption that affects the implementation of existing laws) is discretion on the part of public servants, who may discriminate or prioritise service delivery and apply exemptions from existing regulation. Therefore, one step to curb administrative corruption would be to cut red tape and to conduct risk analyses of existing laws on a regular basis to identify those bearing a high risk of misapplication. A further powerful step would be to increase the use of e-government tools for interacting with the public administration. In particular, this allows anonymous interactions between firms and public sector officials, which could be an effective measure to limit administrative corruption.

2.5.2.4. Towards less burdensome taxation systems

The tax compliance burden and competitiveness

The compliance burden of taxation has become heavier for businesses in the last two decades. Economic literature indicates that since compliance costs for businesses are high and fall disproportionately on small enterprises, it is not enough to calculate the purely financial cost of a tax rule; the administrative costs it causes also have to be taken into account. For example, the compliance costs connected with a tax credit may well outweigh its perceived value for some firms; consequently, the design of tax policy must include such costs.

The Annual Growth Survey 2012 paid attention to both the quality and the quantity of tax revenues and noted that tax systems could be improved by reducing the administrative burden and

[76] OECD (2007), *Specialised Anti-Corruption Institutions — Review of Models*, Organisation for Economic Cooperation and Development — Anti-Corruption Network for Eastern Europe and Central Asia, Paris.

[77] Transparency International (2012), *Money, Politics, Power: Corruption risks in Europe*.

[78] European Commission (2011), Fighting Corruption in the EU. Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, COM(2011) 308.

[79] www.crz.gov.sk.

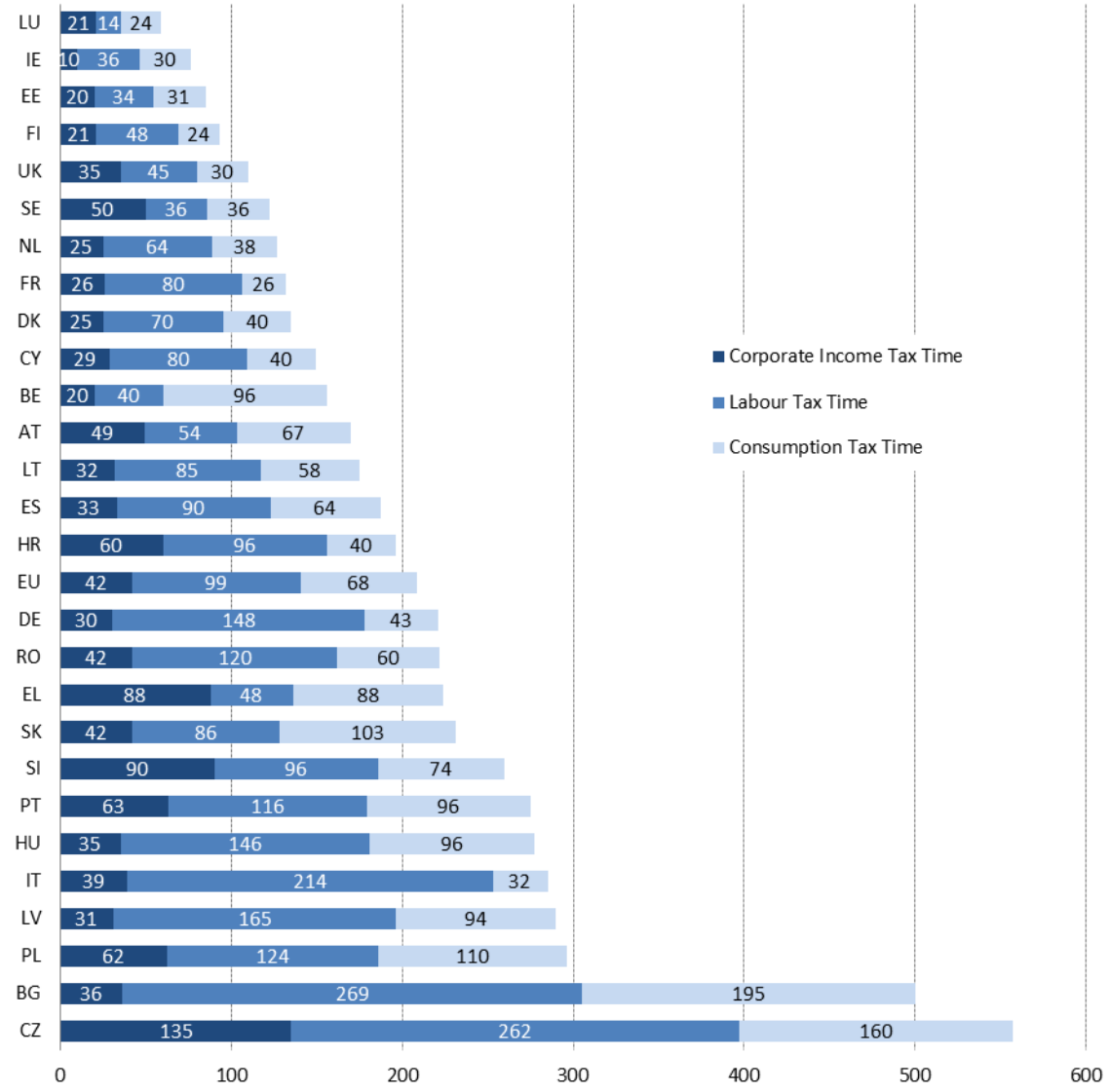
coordinating measures at EU level. This could be done while keeping revenues stable, and without compromising the fight against tax fraud and evasion.

Given the complexity and variety of tax systems, comparisons are difficult. The most wide-ranging study has been conducted by the World Bank and PriceWaterhouseCoopers, measuring the burden a sample company would incur around the world. According to this study, the European Union scores slightly below average among the OECD countries.

The average total time required to pay taxes in the EU is 208 hours (OECD average 195). However, thanks to policy efforts and the increasing use of online tools, there is a general trend towards a lower tax compliance burden, meaning that EU countries must improve their tax systems just to maintain their relative position.

Figure 2.14 depicts the situation as of 2012 by showing the number of hours a company operating in the same conditions would need to spend to comply in the Member States.

Figure 2.14: Number of hours to comply across the European Union



Source: Chart adapted by the Commission based on the PwC study *Paying Taxes 2012, The Global Picture*

The data paint a complex picture — there is large variance in the burden caused by any of the three tax types, and Member States can have a light burden for one tax and a very heavy one for the others. This suggests that there is room for improvement and policy learning using good practices.

Clearly, all taxes impose some collection burden on economic actors. The scope and weight of rules governing tax collection could also depend on the

prevalence of tax avoidance and attempts to reduce it. However, increasing the compliance burden does not seem to be a very successful way of combating avoidance. Comparing data on the tax compliance burden with the size of the shadow economy, it appears that countries with a heavy compliance burden also tend to have a higher than average shadow economy. In other words, countries that score well in terms of the tax compliance burden also tend to have a smaller black market. However, the causality is not clear as the compliance burden may be a consequence of tax avoidance, because countries facing high levels of both may try to reduce them with more rules. Independently of this, there is no discernible positive effect: a heavy compliance burden does not seem to lead to less tax evasion, not even over time, and therefore penalises honest businesses without achieving its goal. Furthermore, a tax system that is burdensome on companies is also likely to be more expensive for the state to administer and enforce, in terms both of resources and personnel.

In conclusion, since a heavy tax compliance burden clearly imposes higher costs on businesses, without any evident benefits in reducing tax evasion, and is probably more expensive to run, lightening the tax compliance burden would have a positive effect on competitiveness.

Policy example: The Office of Tax Simplification in the UK

Although the United Kingdom is already one of the top performers among the Member States in terms of the tax compliance burden, the UK government has committed itself to further improving its tax environment. A new Office of Tax Simplification (OTS) was set up in July 2010 in order to specifically address this issue. Particular attention has been paid to smaller companies, which are most likely to suffer from regulatory burdens. In particular, the OTS was given the task of compiling a 'small Business Tax Review', published in February 2012, aimed at providing the government with independent advice on how to simplify the tax system. The two goals of this process are to make the tax obligations easier to understand, and simpler to fulfil. The report has started a dialogue between the OTS and the government aimed at identifying action that could be taken to make tax compliance easier and quicker.

Broadening of the tax base

In recent years, flat-rate taxes have received a considerable amount of attention as a tool for reducing the complexity of the tax system and a means of attracting investment. However, apart from VAT, where multiple rates lead firms to keep parallel accounting systems and thus increase the administrative burden, flat rates do not automatically lead to a lighter compliance burden; they only do so when linked to a simplification of the tax code, reducing exemptions and deductions and leading to a broader tax base. An example of this is Ireland, where the flat corporate tax rate (at 12.5% in most cases) was combined with a cut in tax deductions by 29%. At the same level of resources raised, a low flat rate imposed on a larger base is more efficient than a higher rate, or multiple rates imposed on a tax base narrowed by exemptions and deductions, since these inevitably increase the complexity of the system. The tax code is often used as a policy instrument to promote or discourage certain forms of behaviour; it is clear that this increases its complexity and the administrative costs. These can be so high that sometimes firms can choose to forgo the tax incentives they could claim rather than incur the administrative costs necessary to do so. This is the case in particular for smaller companies, which have very limited amounts of in-house tax expertise.

There has been a widespread trend towards a broader tax base with a reduced tax rate, even though most countries have at the same time continued to grant new allowances to favour investments in priority areas such as R&D. Nonetheless, the steep decline in corporate tax rates has stopped since the outbreak of the crisis. At the same time, top marginal income tax rates are on an upward trend again, which is to the disadvantage of non-incorporated businesses. This is particularly relevant for SMEs.

While broadening the tax base has proven to be an effective method of reducing the tax compliance burden, it is often difficult to implement. The multiple aims of the tax system make it difficult to introduce reforms without a fundamental rethink, and the elimination of allowances, incentives and special tax rates is politically difficult, as this always creates winners and losers.

Inevitably, the number of authorities the taxpayer has to have contact with and report to is positively correlated with the resulting administrative burden. For instance, a study has indicated that the compliance costs for VAT are higher when it is administered by a different authority from the one dealing with corporate income tax. In many countries taxes and social charges have in the past been administered separately, sometimes each by a different administration. While this is sometimes still the case, there has been a movement towards reducing the number of interfaces for the taxpayer.

Value added tax

Within the taxation system, VAT has become a larger revenue component, partly owing to a rise in the standard rate in half of the Member States. As noted in the Annual Growth Survey 2012, it is growth-friendlier than taxes levied on capital and labour income. This makes VAT central in the pursuit of fiscal consolidation and economic growth. The OECD also considers that reforms to broaden the VAT base would be good for both economic growth and tax revenues. Less clear-cut is the effect of VAT on the compliance burden. The compliance costs of VAT are substantial according to most studies, but they are estimated to differ greatly across countries, and across firms within the same country. For instance, in the United Kingdom they have been estimated to range from approximately 2% of the total bill for small businesses to 0.04% for large businesses. VAT compliance costs are partially due to the possibilities of evasion and fraud, but as the effectiveness of checks does not seem to increase as the burden increases, there is room for improvement.

One of the most effective ways to reduce the burden of VAT compliance appears to be to have fewer rates and exceptions. This was advocated by the Commission's 2010 Green Paper on the Future of VAT, which noted that a 'broad-based VAT system, ideally with a single rate, would be quite close to the ideal of a pure consumption tax that minimises compliance costs'. Most Member States have been reluctant to take action on this front. There are reasons to believe that VAT is not an optimal way of achieving other goals — studies suggest that the increased compliance burden and the distortion of incentives created by a complex VAT system can easily outweigh its benefits, and that social goals could be better achieved through targeted social policies.

The one-stop shop approach and the use of online tools have been widely adopted in taxation and often also cover the administration of VAT. The Commission is planning to use a one-stop shop approach for cross-border transactions, in which information about all VAT regimes should be provided through a central web portal. The one-stop shop system will initially be applied to e-commerce, broadcasting and telecom services, even if the payment will be allocated to different Member States. The system will be gradually extended to other goods and services. Electronic invoicing will be a cornerstone of the system.

While a well-designed system and robust electronic support can significantly reduce the VAT compliance burden, they do not change the fact that the burden falls disproportionately on smaller enterprises. Therefore some countries have devised special regimes that reduce their obligations with regard to VAT as well as other forms of taxation.

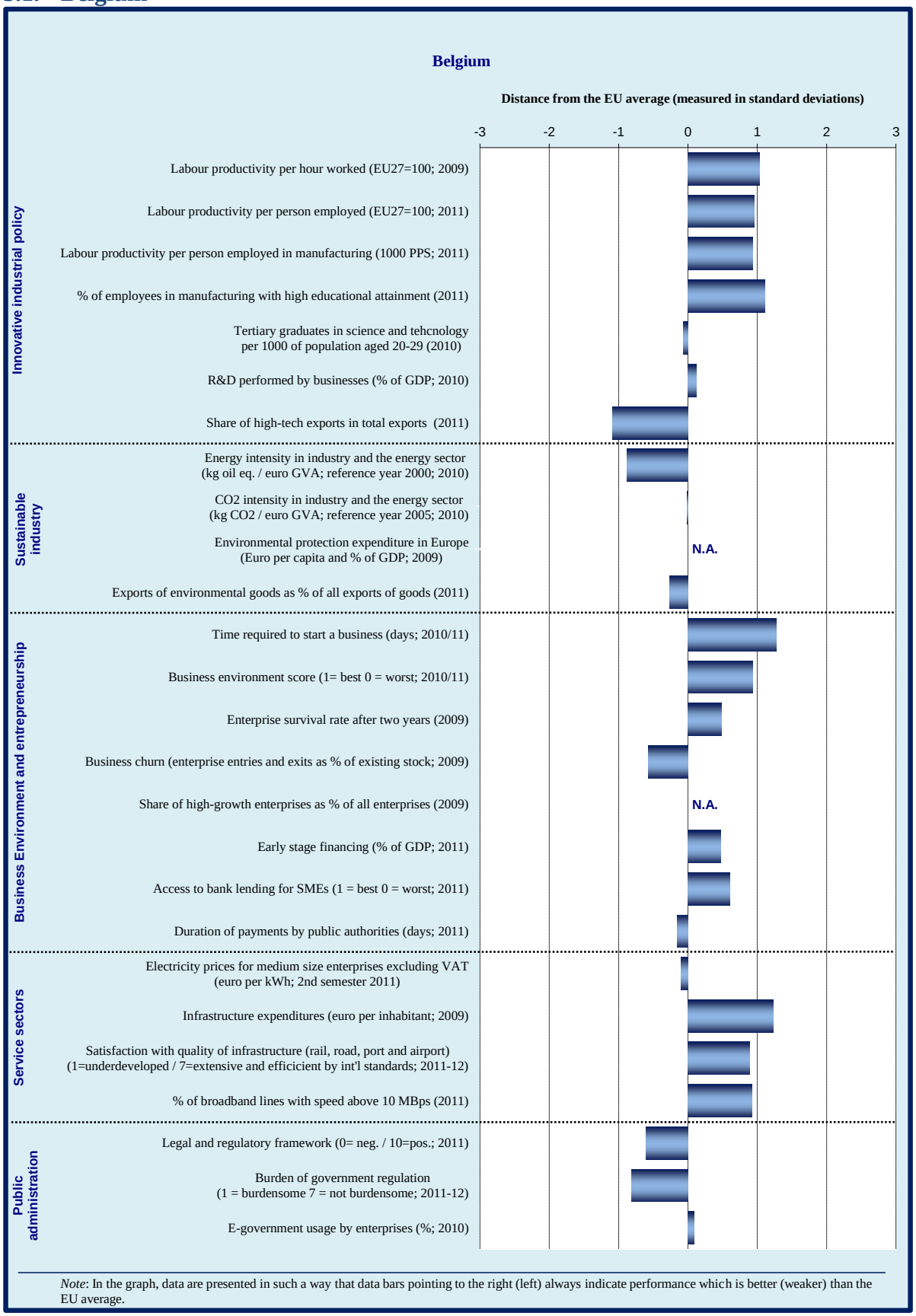
Special regimes for small and micro enterprises

There are good reasons for policies that aim specifically to reduce the tax compliance costs of smaller companies. The OECD found that while total business tax compliance costs tend to be higher for large companies as an absolute figure, as a percentage of sales they are significantly higher for SMEs; similarly, the European Tax Survey estimated that European SMEs have a cost to tax revenue ratio (i.e. the ratio between total tax-related compliance costs and paid taxes) of 30.9%; for large companies this was 1.9%. For small firms time is literally money and time used to prepare taxes could be used productively. This could create a more level playing field, in particular for microenterprises. Reducing the tax compliance burden on small and micro enterprises could improve their chances of survival and encourage growth.

While all Member States have simplified tax rules for SMEs, often reducing the amount of information to be reported to the tax authorities and the frequency of filing, some countries have taken much more radical steps. In particular, they have allowed some or all taxes to be replaced by a simple replacement tax, usually defined as a cash-basis or presumptive tax.

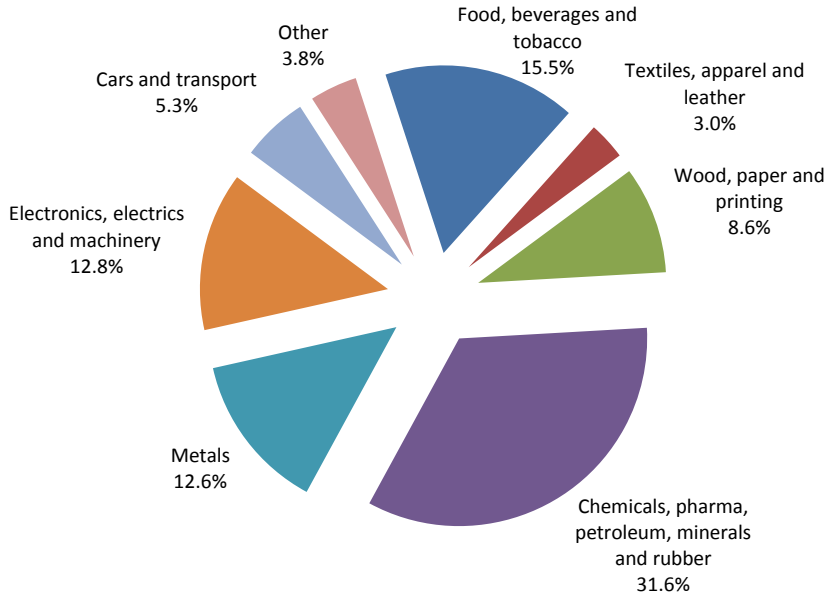
The design of a simplified taxation regime for microenterprises is important, since it has to achieve the goal of reducing the administrative burden on them without producing distortive effects, such as encouraging companies to stay small, or creating conflicts with other aspects and aims of the tax system (e.g. incentives and rebates). Therefore, such systems need to be designed for the specific conditions and needs of the microenterprises of a specific country.

3.1. Belgium



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Belgium (2009)



Note : No data available for sectors C12 (tobacco products), C15 (Leather and related products), C30 (other transport equipment) and C32 (other manufacturing)
Source: Eurostat

3.1.1. Introduction

At the detailed manufacturing industry level, Belgium is specialised in capital-intensive industries, such as fabricated and basic metals, chemicals, food and electronic equipment. At the more aggregated sector level, Belgium is specialised in sectors featuring medium-high educational and innovation intensity, such as chemicals, petroleum industries, but also textiles. Overall, manufacturing produces 13.8 % of total value added (versus 15.5 % in average in the EU).

Belgium belongs to the top EU countries in terms of productivity levels, although its performance is weak in terms of productivity growth and wage costs remain high (the contry-specific recommendations of the European Semester 2012 required Belgium to act in this respect). With regard to exports, Belgium is still specialised in low- and medium technology goods, for which price competition is higher, although the share of high-tech exports has been rising rapidly.

3.1.2. Innovative industrial policy

According to the Innovation Union Scoreboard 2011, Belgium is one of the innovation followers, although with an above average performance. Its relative strengths are in high-skilled human resources, the attractive open research system and the high number of innovative companies. Its relative weaknesses are business investments, intellectual assets and outputs.

In 2000-2010, private expenditure on R&D declined (from 1.42 % to 1.32 % of GDP)[80] due to two reasons: (i) changes in the economic structure, which has become more service-oriented; and (ii) the reduced Belgium-based R&D activities of the telecommunications and chemical sectors. Business R&D is highly concentrated in only a few sectors, and in a small number of large companies and multinationals. Four sectors are responsible for 50% of R&D expenditure (pharmaceuticals, chemicals, computer-related services, and telecommunications equipment). The dominance of the services sector in Belgium, which is growing at a faster rate than manufacturing, would justify specific measures to improve the knowledge intensity of the service sector over time.

A key challenge for Belgium is how to speed up the transition towards a more knowledge-intensive economy by fully exploiting the strengths of its research and innovation system, including by further developing the support given to clusters, and better conditions for the growth of innovative firms. This includes addressing the fragmentation of the relatively low level of public R&D expenditure, promoting entrepreneurship and the commercialisation of research outputs. The relevant authorities have recognised the importance of innovation for productivity growth, and competitiveness. This is reflected in the budgetary

[80] In the same period public R&D expenditure increased (from 0.52 % to 0.65 % of GDP). Total R&D intensity (private and public) stagnated (rising only from 1.97 % in 2000 to 1.99 % of GDP in 2010).

decisions taken by all political entities in recent years[81].

The federal government provides a 75 % payroll tax exemption for researchers.[82] Despite the availability of highly-qualified human capital, there appears to be a mismatch between demand and supply of labour in some sectors. Shortages of skilled graduates, in particular in in sciences and engineering could become a barrier to improving the competitiveness of the Belgian economy.

All Belgian regions have developed strategic innovation approaches covering all major aspects of an innovation strategy. In the Walloon Region the focus has been on supporting a limited number of competitiveness poles (a cluster approach); in 2011, EUR 125 million was allocated to R&D projects on competitiveness clusters under the Marshall2Green.

New approaches have been developed under the so-called 'Creative Wallonia' Plan, including supporting the market take-up of new products and services; and promoting cultural and creative industries. Concrete actions include promoting creativity in schools; monitoring innovative performance; and creating an electronic platform for networking.

In the Flemish Region, the willingness to address through innovation the major economic and societal challenges is a main driver of research and innovation policy. In 2011, the competence poles for industrial design, logistics, materials research and mobility have been extended and a new competence pole for sustainable chemistry has been created.

In the Brussels Capital Region, the preparation of a new research and innovation strategy has started in 2011. To improve innovation financing, the Region created a fund to support starting young innovative companies (Brustart). The implementation of an Interfederal Plan for Research and Innovation has to ensure better coordination of the efforts made by the Regions and the federal government with regard to R&D and technological innovation.

Within the framework of its industrial policy, special attention was given by the Walloon government to the internationalization of the competitiveness clusters to attract foreign investors and to boost international visibility. The Flemish government adopted in 2011 the White paper 'A new industrial policy for Flanders' presenting a global view of Flanders' industrial future and comprising 50 concrete actions to be followed by an Industry Council. A particular investment fund (TINA fund) with EUR 200 million at its disposal has been set up in order to help reforming the Flemish economy through innovation.

3.1.3. Sustainable industry

The Belgian economy is some 20 % more energy-intensive than the EU average, due to the high energy intensity of its industry and the poor energy efficiency performance of households. The higher energy intensity of industry can be explained by the large share of particularly energy-intensive activities, such as the production of metals and chemicals, in the country's industrial structure: these two activities represent one fifth of all industrial value added and consume almost two thirds of all final energy used in industry[83]. Improvements have been made however: between 2006 and 2010, the energy intensity in Belgian industry and energy sectors decreased by 8 %.

Belgium has developed a series of measures on energy efficiency, covering most sectors, with a particular focus on refurbishing existing buildings. It is also one of the best performing EU countries in terms of green public procurement, according to a recent study.[84]

The emission intensity of the Belgian economy is high in some important sectors (such as heavy industry or residential heating) but is mitigated overall by the importance of nuclear energy. In particular, the emissions from road transport have increased over the past two decades whereas most other sectors managed to cut emissions. Consequently, road transport now already represents 20 % of all greenhouse gas emissions, and should be a central part of every future emission reduction policy[3].

The Walloon '*Plan Marshall 2.Vert'* incorporated guidelines for broader integration of the sustainable dimension. To this effect, the Government launched 'Employment-Environment' Alliances (the first one is dedicated to energy efficiency in buildings) and introduced a 6th competitiveness cluster dedicated to new environmental technologies. Flanders will elaborate a new regulation for strategic and ecological investment projects; this regulation is aimed at projects that offer a global or integral

[81] Public R&D budgets have increased from EUR 2.29 billion in 2009 to EUR 2.47 billion in 2012.

[82] Foregone revenues from R&D tax incentives are almost as big a subsidy as direct public funding of business R&D. Taking both of these into account, support for business R&D in Belgium is 0.17% of GDP, higher than in most other Member States.

[83] Source: Schmitz, T. (2012), 'Greenhouse Gas Emissions and Price Elasticities of Transport Fuel Demand in Belgium', OECD Economics Department Working Paper No 955.

[84] 'Assessment and Comparison of National Green and Sustainable Public Procurement Criteria and Underlying Schemes' 2010.

environmental or energy solution at company level. In the Brussels Region, the 'Employment-Environment' Alliances mobilise and coordinate public and private partners and associations around concerted actions on sustainable construction, water and waste.

Compared to the EU average, Belgium has a medium performance with regard to waste generated by enterprises and with regard to the share of environmental goods of the total export of goods. The 2010 trade balance of environmental goods was in deficit for the majority of Member States and also for Belgium (- 0.14 % of GDP).

3.1.4. Business environment

The share of successful loan applications was in 2011 higher in Belgium than in other EU countries, even though access to private capital (bank lending) became more difficult in 2011 compared to 2009. Belgium's performance is particularly high in the amount of venture capital flowing to early stage investments. Belgian SMEs have also better access to public financial support than similar firms in other EU countries. On the other hand, business organisations expect that access to finance will become more difficult in the future also because of a more restricted lending policy from banks confronted with Basel III requirements; most problems are encountered with the craft enterprises.

The duration of payments by public authorities also has an impact on the financing needs of SMEs. In 2011, the average duration of payments by Belgian public authorities was 73 days, exceeding the limit of 30 days set by the EU directive and above the EU-average of 66 days. Corrective measures have been implemented in 2011 and will be pursued in order to respect the deadline of 30 days.

A number of initiatives have been taken to improve access to funding for SMEs. The various measures put in place cover a wide range of needs for SMEs and include financing (loans, guarantees, venture capital investments, cash advances etc.) and support measures such as credit mediation. Some new initiatives have been taken such as FINMIX (helping companies to participate in venture capital financing) or the Win-Win Loan which has been extended to all SMEs and with increased amount limits (Flanders). Also loan guarantee schemes such as the Automatic Financing product or various support schemes by *Participatie Maatschappij Vlaanderen* have been put in place. Other examples (Wallonia) are the VIVES2 fund to support spin-offs and the development of the BIOWIN pole via risk capital participation in the VESALIUS Fund. Belgium has been one of the first countries to create a Credit Mediator service, as well as using a monitoring system of the financial markets and access to finance of companies (Flanders) to detect possible problems very soon. In Wallonia, the Concileo mediation platform was transformed from a temporary anti-crisis measure to a permanent service.

According to the Global Competitiveness Report, Belgians are quite satisfied with the quality of infrastructure, although a decrease in the satisfactory score is observed since 2006. Congestion (concentrated in bottlenecks around Brussels and Antwerp and on some trunk roads) is placing a particularly heavy burden on the Belgian economy; estimates of the cost of congestion in Belgium range from 0.05 % of GDP to 2 % of GDP. For company cars, the development of an environment-friendly fiscal system will further be pursued via a new taxation system. A more efficient public transport service would encourage a transfer of traffic from road towards more environmentally-friendly modes of transport. Also increased coordination between the different levels of powers and responsibilities would help in reducing negative transport externalities.

3.1.5. Services sector

Electricity prices for Belgian medium size enterprises are slightly higher than the EU average (0.1147 €/kWh vs. 0.1117 €/kWh). Although measures have been taken to limit the indexation of prices, efforts to enhance competition in the markets for energy are needed for more competitive pricing. This could include reducing the competitive advantage posed by amortised nuclear plants. The electricity and gas market regulator and the competition commission should play a more active role to improve price transparency. The distribution rates that seem to have caused price rises to the tune of 20 % should be reviewed.

Generally speaking, goods and services are more expensive in Belgium than in many other Member States, reflecting weak competitive pressures and some structural barriers, especially in the retail sector and network industries. The country-specific recommendations of the 2012 European Semester require Belgium to remove obstacles from competition in the network industries.

3.1.6. Public administration

Belgium's overall public administration performance, as depicted by the World Bank's *Government Effectiveness* Indicator, is above EU average. Perceived quality of public services, including quality of the civil service and policy implementation in Belgium is quite good, although

not exceptional. On the other hand, the use of tools to improve public administration performance (e-government, impact assessment, performance and service orientation, accountability) is less widespread than on average in the Member States.

Belgium's situation as regards corruption and fraud is better than the EU average. Indeed, irregular payments, as well as diversion of public funds and experience of corruption are rarer than in other Member States. Also the individual experience of corruption (3 % of all cases) is much lower than the EU-average (10 %).

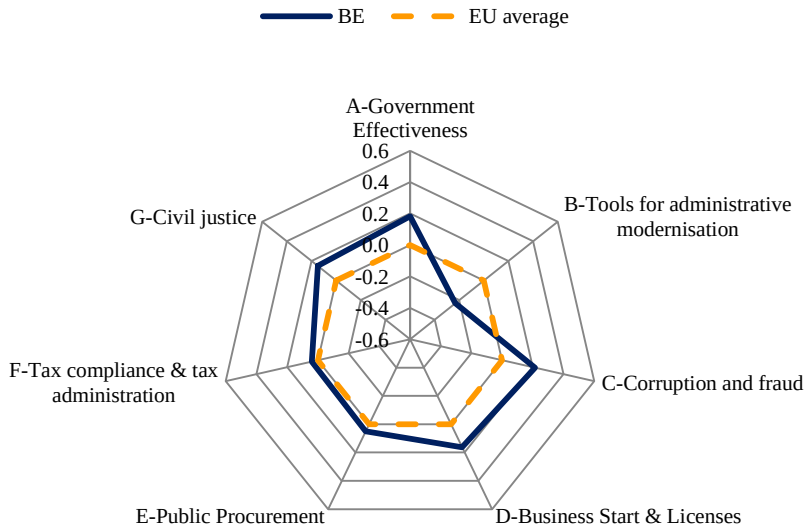
The *civil justice* indicator is above the EU-average and also the time for resolving insolvency is good compared to EU mean; in Belgium it take less than one year to resolve insolvency, while it takes on average almost two years on average in the European Union.

Belgium performs quite well in terms of indicators linked to paying taxes (the number of payments and the complexity of procedures); according to the most recent World Bank Doing Business data, Belgian firms, on average, make 11 tax payments a year (EU-average: 17) and spend 156 hours a year filing, preparing and paying taxes (EU-average: 218). Nevertheless administrative costs of taxation are slightly higher than the EU average. Since the latest reform in 2010 (when the tax payment process and administration were improved by mandating electronic filing for medium-size businesses), no new tax reforms to make paying taxes faster or easier for businesses, have been recorded.

The *public procurement* index is slightly above the EU average. Whereas on average the typical costs of taking part in a tender amount to 0.19 % of the respective domestic GDP per capita in the EU, participation in Belgium causes cost of 0.18 % of GDP per capita. As from 2012, it is compulsory for both the Flemish and the Walloon administrations to use e-tendering procedures.

The performance of Belgium with regard to *starting a business and licensing* is higher than the EU average. In Belgium there is a fully operational one stop shop to start up a company and the procedures for starting up a business seem less complex in Belgium than in the EU; it takes only four days in Belgium compared to two weeks on average in the EU. However, the cost of starting-up a company and the licensing complexity sub-indexes are closer to the EU-average.

Overall profile of public administration



Source: WIFO

The use of new tools to improve the performance of public administration, in particular evidence-based instruments, is less widespread than in many other Member States. Nevertheless, a tool called 'e-Depot' was introduced in 2007 to offer notaries a quick and easy way to complete, sign and deposit the forms and documents required to create a company in all administrative databases.[85] Tax, social security and land registry information can

[85] http://www.simplification.fgov.be/showpage.php?iPageID=3622&sLangCode=FR

also be researched electronically. Thanks to e-Depot, a company can be set up in just a few days. Overall, e-Depot provides complete and integrated services for notaries and their clients, as well as the authorities. It improves their work by providing access to a complete database, reduces time and costs, facilitates trade, improves administrative work, and allows for paperless interaction.

According to the World Bank Doing Business 2012, Belgium's overall performance with regard to responsive administration matches the EU average, but it performs particularly badly in terms of the time needed to transfer property and the cost of doing so[86]. On the other hand, the cost of enforcing contracts is lower in Belgium (16.6 % of the claim, as against the EU average of 20.84 %). On the policy front, the procedures for e-invoicing have been simplified at federal level, and property registration has been tightened up for entrepreneurs by the introduction of time limits and implementation of the 'e-notariat' system. Belgium has also recently adopted a package to modernise its public procurement legislation.[87]

A survey on administrative burdens shows that the administrative burden fell from 2.55 % of GDP to 1.43 % between 2000 and 2010.[88] However, inefficient government bureaucracy is still listed as one of the three major problems in terms of doing business in Belgium.[89]

The time and effort needed to obtain permits still seems to be a problem experienced by many businesses. The results of the 2011 survey (2010 data) on administrative burden show that businesses saw a slight increase in administrative burdens (0.07 %) as a proportion of GDP, compared with 2008. For businesses, environmental legislation has been the main factor in increasing administrative burdens, with a rise in the relative share of burdens resulting from such legislation compared with the other two domains that were examined (taxation and employment).

Initiatives are being taken at the federal and regional levels to simplify and streamline investment procedures, and to enhance the performance of the authorities vis-à-vis the business sector.

One of the projects covered by the Flemish multiannual programme 'Decisive Governance' (*Slagkrachtige overheid*) concerns fast procedures for investment files. In this context, the Flemish government decision (July 2011) to introduce a single permit integrating the environmental with the urban planning licences, can be referred to. The Walloon Region and French Community continue the implementation of their Administrative Simplification Plan (*Ensemble Simplifions*) and the Industry Action Plan with the aim to minimise administrative complexity and reduce the administrative burdens affecting all users of public services, particularly companies; the introduction of the confidence principle was launched as a pilot project. To succeed in the 25 % reduction goal, the Brussels government approved a list of 11 projects; the main focus is on businesses. The new federal government established the priority to reduce by 2014 the administrative burden for all companies by 30 %.

3.1.7. Conclusions

Belgium presents a competitiveness profile that reflects in many ways the average position of Western Europe, with strengths in many pillars and the need to improve in a number of others. Specific weaknesses relate to the fragmentation of research efforts, the relatively low level of private investment, and deficiencies in leveraging intellectual assets. Improving the commercialisation of research and promoting entrepreneurship are challenges Belgium shares with many other Member States.

An important challenge concerns Belgium's competitiveness. Although the Belgian economy is characterised by high labour productivity and a high level of foreign direct investments, Belgium is losing its relative good competitive position in recent years and Belgian exporters have progressively lost shares in world market. Moreover, even if the share of high-tech exports has been rising, Belgian exports are mainly composed of low/medium-tech goods, facing fierce competition from lower-cost countries.

In such context, a key challenge for Belgium is how to speed up the transition towards a more knowledge-intensive economy by fully exploiting the strengths of its research system, including by further developing the support given to clusters and better conditions for the growth of innovative firms.

In general, pro-business policies, despite the high taxation system, provide the right conditions for businesses to develop their activities. Further implementation of initiatives at the federal and regional levels to simplify and streamline

[86] World Bank, Doing Business 2012, Belgium.

[87] http://www.publicprocurement.be/portal/page/portal/pubproc/beep%20algemeen/wetgeving%20overheidsopdrachten/

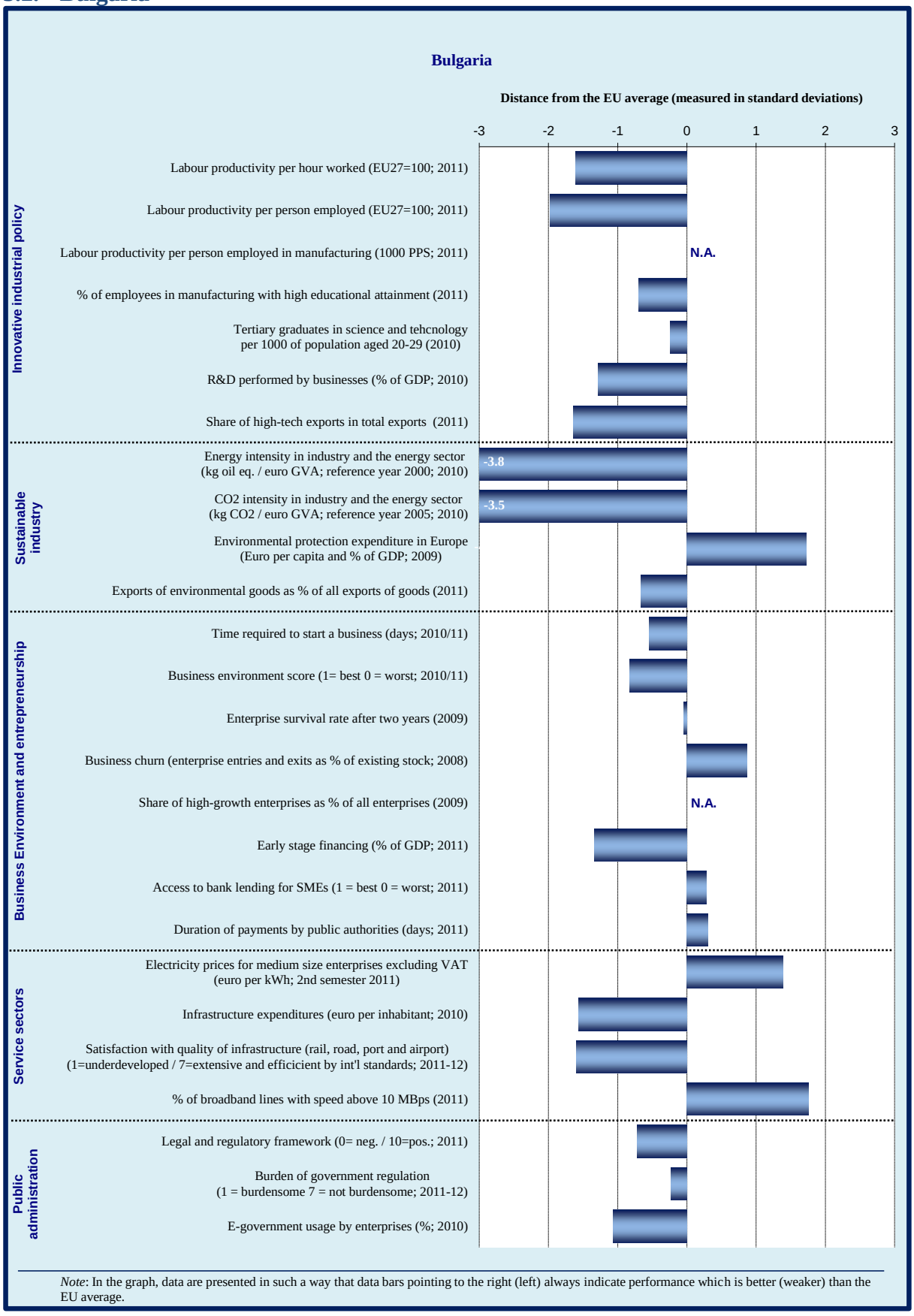
[88] Sixth edition of the survey on administrative burdens, commissioned by the Agency for administrative simplification.

[89] Third factor behind 'restrictive labour regulations' and 'tax rates' (World Economic Forum Global Competitiveness Report 2011-2012).

procedures is needed and will enhance the performance of the authorities vis-à-vis the business sector.

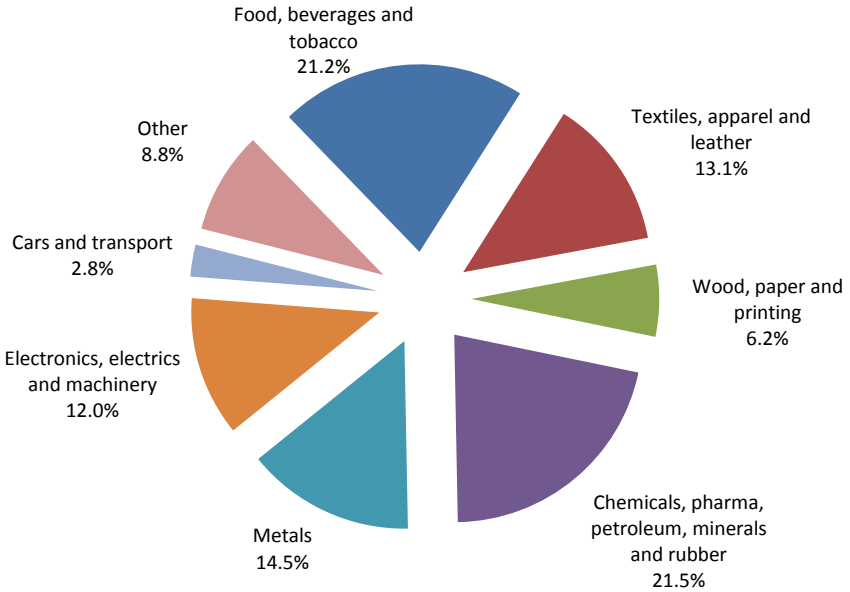
Finally, improving the efficient use of energy and other resources will lower costs and will directly boosts productivity by virtue of making better use of inputs.

3.2. Bulgaria



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Bulgaria (2009)



Note : No data available for sectors C19 (coke and refined petroleum products) and C21 (Manufacture of basic pharmaceutical products and pharmaceutical preparations)
Source: Eurostat

3.2.1. Introduction

The manufacturing sector plays a slightly bigger role for Bulgaria than for the EU in total. This is mainly due to specialisation in labour-intensive industries e.g. textiles and clothing, leather and footwear, and in capital-intensive industries e.g. manufacture of cement, lime and plaster, refined petroleum products and non-metallic mineral products. The primary sector is larger compared to the average for the EU due to the higher share of agriculture. In general, the Bulgarian economy is dominated by sectors with low and medium-low technology intensity. With respect to services, wholesale and retail trade, financial services, tourisms, transportation and health-care services are the most important market services in the Bulgarian economy.

Overall, Bulgaria is a typical member of the group of countries featuring relatively lower income levels and specialisation in labour-intensive industries. While labour productivity per hour worked has gradually increased over the last years, it is still about 58 percentage points below the EU27 average. The crisis seems to have accelerated Bulgaria's structural change towards more advanced and knowledge-intensive industries and sectors, as demonstrated by the sizeable gains in exports by technology-driven and mainstream manufacturing industries. However, Bulgaria can be seen as catching up with respect to competitiveness, in particular as regards specialisation and the quality ladder, but not with respect to R&D.

3.2.2. Innovative industrial policy

According to the Innovation Union Scoreboard 2011, Bulgaria belongs to the modest innovators group in the EU i.e. its innovation performance is well below the EU average. Though, Bulgaria has been slowly catching up for the past 7 years. In 2010 the investments in research and innovation represented only 0.60 % of GDP[90]. Although the updated National Reform Programme reconfirms the target of 1.5 % GDP spending in R&D activities by 2020, investment in this field will have to be further raised.

The industrial research and innovation activity essentially takes place in the sectors of information and communication technology, electronic equipment, machine building and pharmaceuticals with increasing trend of trademark applications. However, the number of patent registration applications[91] and the share of SMEs introducing innovations are still very low compared to the EU averages. Therefore, the development of adequate human capital, well-established clusters and technology centres is essential for the innovation capacity of Bulgarian companies. The

[90] The 0.60 % GDP consists of almost equal shares of public (0.29 %) and private (0.30 %) investment.
[91] 1.22 patents per million of residents, compared to the EU average of 115.8.

establishment of the first science and Technology Park[92] in Sofia, a project of approx. EUR 50 million co-financed by the ERDF, will deserve continued public support.

The current innovation strategy was adopted in 2004 and, today, it does not appropriately tackle the bottlenecks in the area of industrial innovation. Overall, there is policy fragmentation because research and innovation policies are being developed separately by respective ministries, each with different policy objectives and implementation structures. So far, the national R&I funds (i.e. Innovation fund and Science fund) have not effectively supported companies and universities in their innovative projects, for lack of regular funds. National funding for R&I has no stable mid- to long-term funding perspective. The planned adoption of a new Law on Innovation in 2012 and the next innovation strategy will have to set an adequate and up-to-date innovation framework in Bulgaria, which is coherent with the national research policy.

3.2.3. Sustainable industry

Although the sustainability indicators continue to improve, the industry lags behind the EU average in terms of energy intensity and carbon intensity. Moreover, the industry is particularly vulnerable to energy price shocks and stringent environmental and emissions obligations because of the high level of energy intensity of the economy and the dependency on limited number of foreign energy suppliers. National strategies in key areas such as carbon emissions and water have not been delivered yet. Nevertheless, Bulgaria is committed to deliver on its 2020 targets, namely to increase the share of renewable energy in the energy mix to 16 % in 2020 and to reduce the greenhouse gas emissions in the non-ETS sectors by 20 % by 2020.

In October 2011, the Council of Ministers adopted a national plan for green public procurement. The plan sets binding objectives for the central administration on green procurement of 6 product groups (e.g. IT equipment, air-conditioning, lighting). A System for Certification of Green Jobs is operational since January 2011 and 786 new green jobs were created under this programme.

A new Law on waste management, transposing the Waste Framework Directive, was adopted in 2011. The law introduces a life-cycle approach on waste management and defines greater role of municipalities as owners of the infrastructure. The goal is to create an integrated waste management infrastructure and to address several bottlenecks on permitting as well as restriction on ferrous and non-ferrous metals recycling.

A couple of calls have started under Operational Programme Competitiveness in 2011 in the area of green industry. They aim at mitigating the negative impacts of large enterprises and SMEs on the environment by supporting the adoption of energy efficiency technologies.

The Ministry of Economy, Energy and Tourism is working on a national plan for the introduction of electric vehicle, which will be presented during 2012.

3.2.4. Business environment

The regulatory environment is not stable and predictable for the companies as legislative acts change very often. The national harmonisation with the EU legislation sometimes is complex and contradictory. In the Doing Business 2012 Bulgaria's ranking worsened for a second consecutive year (from 57 in 2010 to 59 in 2011), pointing to excessive red tape and inefficiencies in the business environment, including permitting, access to electricity, contract enforcement, and the insolvency framework. The following reforms to improve the business environment, both at local and state level, are still lagging: alleviation of regulatory regimes and permitting; simplification and decrease of administration fees, implementation across the board of tacit consent; significantly increasing the provision of e-government services; and improvement of the public procurement framework. The actions, in the spheres of improving the functioning of the judicial system and fighting against corruption and organised crime, could be strengthened further, as noted in a recent Commission report.[93]

Bulgaria envisages to adopt the Small Business Act as a national strategy in 2012 and possibly also the SME test thereafter. The SME Test has not yet been implemented as the introduction of mandatory impact assessment of regulatory measures was delayed several times so far. Companies are still too small to internationalise. If enterprises internationalise, they invest in neighbouring countries such as in the countries in the Western Balkans and in Turkey rather than in the EU. This is because Bulgarian companies have better knowledge of these markets, face less competition from multinational companies or are not aware of existing FTAs with other countries.

[92] The park will focus on R&I activities in the areas of ICT and pharmaceuticals.

[93] 'On Progress in Bulgaria under the Cooperation and Verification Mechanism', COM(2012) 411 final, http://ec.europa.eu/cvm/docs/com_2012_411_en.pdf

The absorption of EU funds is low because of low administrative capacity and limited access to finance despite financial engineering. The administrative procedures are complicated and, at the same time, the enterprises do not find the needed co-financing for the projects[94]. Meanwhile, more than a billion euros were allocated to SMEs in 2007-2013. This included EUR 988 million from ERDF in the form of grants and financial engineering instruments, EUR 80 million from the Competitiveness and Innovation Framework Programme, EUR 9 million from the European Progress Microfinance Facility and over EUR 500 million from EIB in the form of credit lines for SMEs.

Over the past years, SMEs have encountered difficulties in financing innovative projects due to high interest rates and credit rationing, while start-ups have not been able to find appropriate funding. In 2009 and 2010 Bulgaria registers a share of investment in seed and start-ups significantly lower than the EU average[95]. Moreover, Bulgaria experienced the largest increase in unsuccessful loan applications over the past several years - from 3 % in 2007 to 36 % in 2010[96]. This has a direct impact on SMEs' innovation and growth potential[97]. The limited public financial instruments and guarantees for innovation mainly consist of EU programmes, which are still to be realized. Therefore, it is urgently needed to speed up their absorption and make them attractive to enterprises.

Several calls for proposals to support SMEs were launched in 2011 through Operational Programme 'Competitiveness'. These calls are in the areas of compliance with international standards, energy efficiency improvement, and enlargement of clusters. Altogether about EUR 1.2 billion has been allocated to this programme in 2007-2013.

3.2.5. Services sector

The modernisation of the transport and energy infrastructure is a major challenge after years of underinvestment in core areas such as highways, ports, rail, and gas interconnections. The railway sector has experienced decreasing performance and shrinking market share over the past decade. The enhanced usage of European structural funds will be a prerequisite for the successful completion of these projects as Bulgarian public funding is limited. Although medium-sized enterprises in Bulgaria pay the lowest electricity prices in the EU, the liberalisation reforms of the electricity and gas markets are still uncompleted.

Bulgaria is a top performer in relation to the speed of broadband internet. However, the deployment of broadband in Bulgaria is still lagging behind the EU average. The provision of broadband internet in rural areas is the lowest in the EU. In the area of the health services sector, important public health measures have been continuously postponed and, thus, hindered the potential for growth of the sector.

Professional services such as these provided by architects, lawyers and others are subject to regulations on legal forms, shareholding or prices which may hamper competition. In general, competition in the services sector is also hampered by the absence of a clear distinction between rules applicable for the establishment of a service provider and the cross-border provision of services by a provider established in another Member State.

3.2.6. Public administration

Bulgaria is still in the process of reinforcing its public institutions, which have to become stable and efficient and increase their capacity to support the business environment. The Council of Ministers adopted the Action Plan for Optimisation of the State Administration (2010–2011) in July 2010. Around 75 % of the proposed measures in the Action Plan have been accomplished by the end of 2011. The reform of the state administration also included a reduction of 14 % of the staff since 2009. However, there are still many corruption risks in public contracting and procurement processes due to inefficiency and lack of transparency in the public administrations.[98]

According to the Government, 89 measures from its plan for reducing administrative burden have been implemented and another 37 are in progress. The total expected economic effect from these measures is EUR 55 million less costs for the business. Also, a methodology for cost-based calculation of fees for administrative services has been developed and will enter into force in 2013. However, the criteria of exemption from the methodology are very broad. The expected economic effect from this methodology is between EUR 25 and 100 million savings for the business and the citizens.

The procedure of impact assessment of future regulatory acts has still not been implemented.

[94] There is a problem of co-financing of EU projects in Bulgaria as under the EU Financial Regulation (Article 111) double funding of projects is not possible.

[95] Source ECVA.

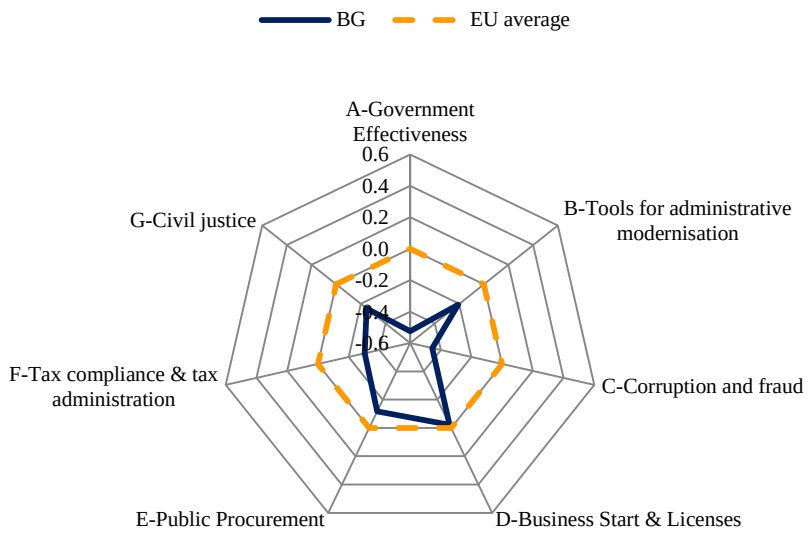
[96] Source Eurostat.

[97] A 2011 report from the Bulgarian Small and Medium Enterprises Promotion Agency showed that innovation activities of enterprises are in direct correlation to access to financing.

[98] Transparency International 'Money, politics, power: corruption risks in Europe' 2011.

There were only a few pilot measures (e.g. Law on independent evaluators) that had been subject to an ex-ante impact assessment. There is no clear timetable.

Overall profile of public administration



Source: WIFO

The implementation of e-government has been delayed many times and, since 2011, it has become a priority for the Government.[99] A strategy for e-government was adopted in 2011 aiming to integrate the existing systems and tools within individual administrations. According to the National Revenue Agency, most administrative services have been made available online for the past several years. Despite the progress of the implementation of different action plans, businesses and citizens do not perceive significant amelioration of the public services so far.

Bulgaria has in general a very low tax structure favourable to businesses. However, tax evasion and relatively low administrative efficiency of the tax system appear to be significant bottlenecks to the system. Further, the shadow economy is large, by some estimations the largest in the EU.

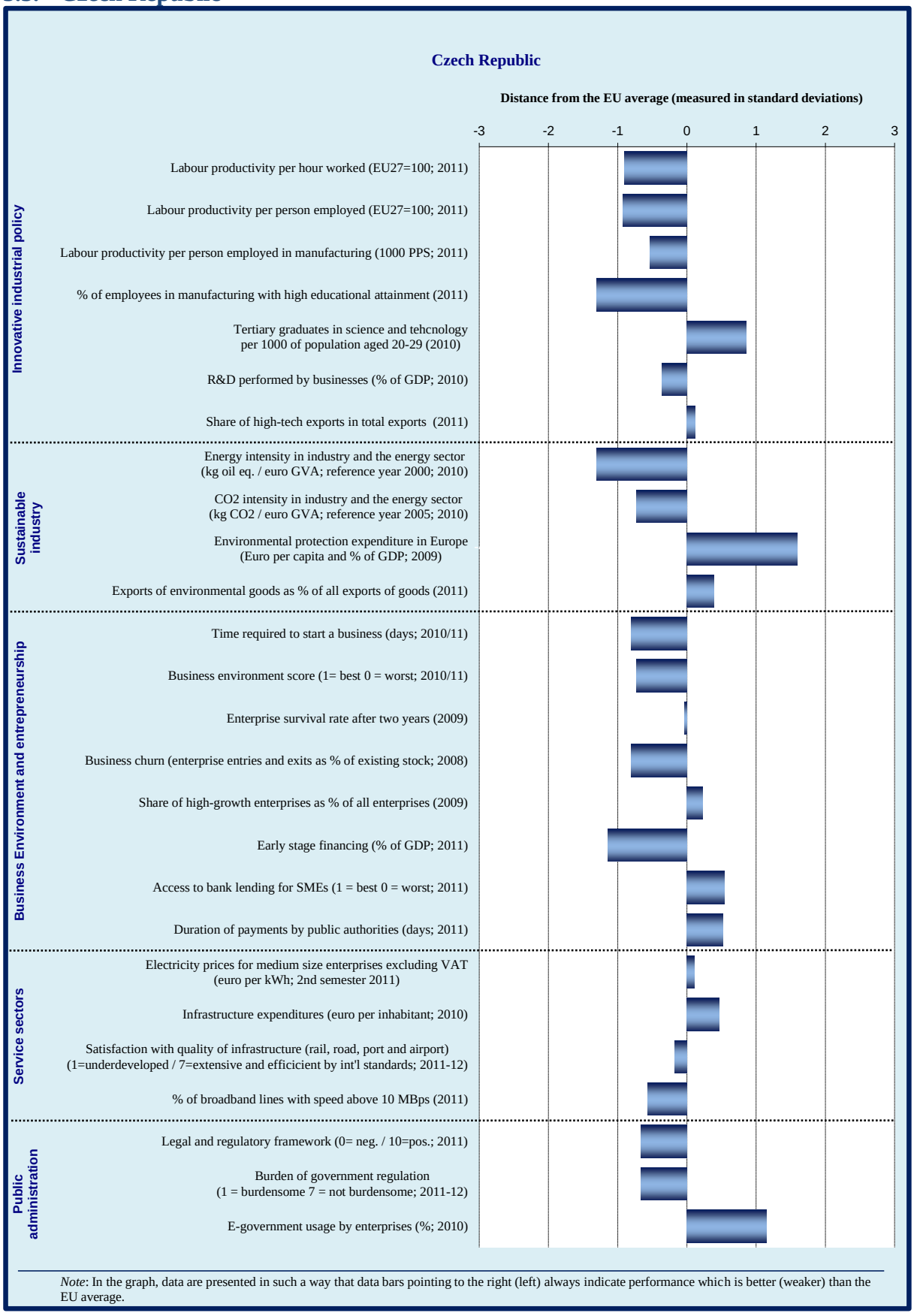
The tax compliance burden is still very high and stands at around 500 hours according to Doing Business 2012. In 2012 the Government plans to simplify VAT invoicing rules and fully implement the Late Payments Directive.

3.2.7. Conclusions

Bulgaria is still in the process of reinforcing its public institutions, which have to become stable and efficient, while increasing their capacity to support and promote the business environment. Important structural reforms to improve Bulgaria's competitiveness have been continuously postponed for the past several years. Such reforms include, among others, cutting the red tape at national and local level, fostering innovation in view of increasing industrial productivity, setting an integrated R&I system and improving the energy efficiency across the economy. Bulgaria has committed to more than double its current R&I spending by 2020 and will have to make effective use of all existing policy instruments in order to succeed. This will imply to focus resources on key sectors and enhance participation of industry and business in innovation activities. The modernisation of the transport and energy infrastructure is another major challenge to growth. The increased absorption of structural funds will be crucial in supporting all these key undertakings.

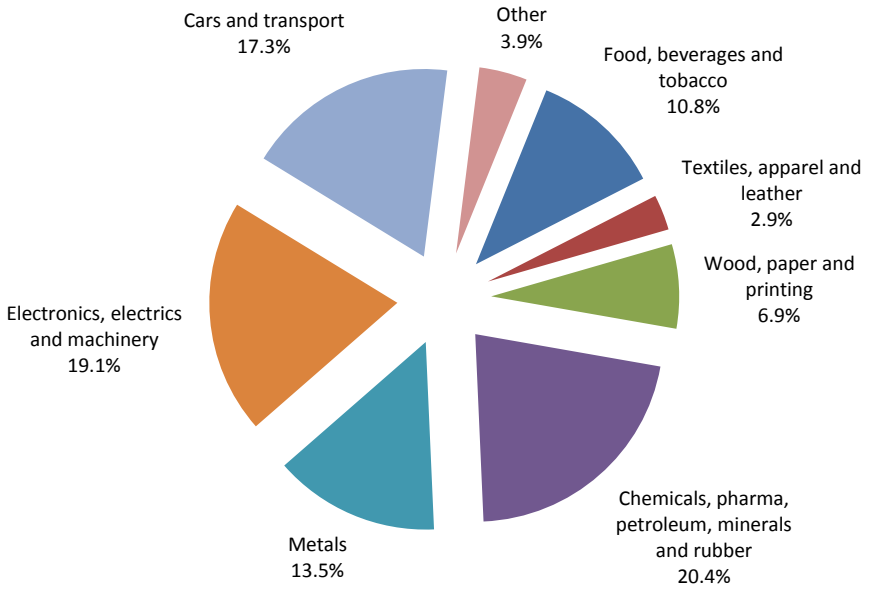
[99] According to the Bulgarian Industrial Chamber, only 30 out of 700 administrative services are available through internet.

3.3. Czech Republic



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Czech Republic (2009)



Note : No data available for sectors C12 (tobacco products) and C33 (installation of machinery and equipment)
Source: Eurostat

3.3.1. Introduction

The manufacturing sector plays a crucial role in the Czech economy, representing 24.3 % of value added in 2011 (EU average was 15.5 %). The main areas of specialisation within the manufacturing sector are transport equipment, electrical and optical equipment, machinery and equipment and basic metals and fabricated metal products. Over the past decade there has been an increase in specialisation in sectors such as rubber and plastic, air transport, motor vehicles, trailers and semi-trailers. On the other hand, there has been a decline in specialisation in the textile sector, refining petroleum and nuclear fuel and recycling.

3.3.2. Innovative industrial policy

The Innovation Scoreboard 2011 classifies the Czech Republic as a moderate innovator with a below average performance. In an effort to shift the Czech economy towards higher value added the Czech Republic adopted the International Competitiveness Strategy for 2012-2020 and the new National Innovation Strategy (NIS) in 2011. A more targeted set of national R&D and innovation priorities will be submitted to the Government in the course of 2012.

The Czech Republic has a target to increase public R&D investment to 1 % of GDP by 2020. While there was an increase in expenditure on R&D in 2010, public R&D expenditure remained similar to the level reached in 2009, that is, 0.58 % of GDP in 2010. However, there was a good performance of the Czech research and innovation system in terms of business expenditure on R&D (BERD), which reached 0.97 % of GDP in 2010, mainly due to a strong manufacturing sector with industrial specialisation in innovative sectors. The majority of companies performing R&D are foreign owned.
One of the main problems faced by the Czech Republic is the lack of co-operation between research and business sector. The above mentioned problem is mainly due to low readiness of research organisations to collaborate with companies (e.g. a code of practice concerning intellectual property right issues for the purpose of technology transfer is often missing), low horizontal mobility between the research organisations and companies, but also low demand for contracted research from companies. Structural funds are helping in this regard. There is also a lack of policy instruments for long-term collaboration between Universities and businesses. Some progress is expected from 'competence centres' which are to be set for mid-to-long-term projects and are to be fully government-funded. The setting up of an evaluation and funding allocation system which rewards best science and technology teams to create an incentive for firms to start co-operating with Universities would be useful. While the National Reform Programme 2012 makes reference to work launched in this respect, results are only expected in the end of 2013.

The Czech Republic also suffers from a lack of co-ordination and fragmentation of responsibilities on innovation policy at government level. The planned amendment of the relevant Act[100] in 2012 should be

[100] No 130/2002 Coll.

helpful in this respect as it will strengthen the role of the Council for Research, development and Innovation, which would help in overcoming the issues of weak coordination and governence.

Direct support, such as those financed through structural funds, remain the main policy tool to foster R&D spending with low investment from the private sector in R&D and innovation. Introducing new types of tools for R&D and innovation support would thus be beneficial. A positive development relates to the tax reform adopted on 1 January 2012 but which will be effective from 1 January 2014. Amongst other things, this will allow tax credits for R&D services purchased by companies from universities or research organisations, as opposed to the previous practice of tax credits only for in-house R&D. In May 2012, the Government also approved the amendment to the Act[101] on investment incentives, using investment incentives that would make the Czech Republic more attractive for both domestic and foreign firms.

The Czech Republic tends to suffer from a lack of venture capital to support innovative businesses. In light of this, Government's recent approval of a joint stock company which aims at supporting the creation of new SMEs and the development of innovative and technologically oriented companies is welcomed.

3.3.3. Sustainable industrial policy

The Czech Republic is one of the most energy-intensive countries in the EU, mostly due to the high energy intensity of its industry and an unfavourable energy mix. Renewable energy was 9.2 % of the gross final energy consumption in 2010. There is an intention to extend two existing nuclear power plants. Smarter grids are important for an increase uptake of renewable energy and energy efficiency improvements and in this respect some progress has been made. However, concerns remain about the capacity of the electricity grid to facilitate increases in renewable energy generation from domestic and mainly foreign sources. Consequently, the Czech Republic is currently holding talks with Germany on the interconnection of electricity grids concerning problems faced by the Czech Republic with excessive transit of electricity from Germany.

In September 2011, the Second National Energy Efficiency Action Plan was adopted. The National Reform Programme 2012 makes reference to programmes to support projects that contribute to reducing energy consumption in industrial production. However, adoption of the Government's long term energy policy and also the Climate Change Policy has been postponed and these strategic documents are to be submitted in 2012. Subsequently, the energy efficiency target has not yet been established. A number of legislative amendments proposed in 2011 have also been delayed.

In the area of environment legislation, eco-audits have been carried out in consultation with stakeholders to eliminate environmental legislation which was overburdening businesses unnecessarily. As a result 96 specific incentives have been identified to be reduced or eliminated and some of them have already been implemented.

The New Waste Act of the Czech Republic is still being developed. A new Waste Management Plan is envisaged for mid-2013. Czech industry has a particular interest in secondary materials given their importance for Czech industry. With respect to recycling and waste related to construction material, good results have been achieved in the Czech Republic with approximately 86 % of construction and demolition waste being re-used. A raw material policy is also planned to be submitted to the Government by August 2012.

3.3.4. Business environment

Regulatory and support environment

The Czech Republic has a target of reducing administrative burden for businesses by 30 % compared to 2005 levels by 2020, with an intermediate target of 25 % by the end of 2012. Most recent data suggests that a reduction of 22.6 % in administrative burden has been achieved, with 295 information obligations being reduced or cancelled. Czech authorities are currently working on re-measuring administrative burden.

Czech Points[102] and 'data boxes'[103] are currently in place and new features in the data boxes have been implemented. Other features are planned for the second quarter of 2012, such as providing links to e-banking services.

The Czech Government has set a target of 50 % of population and 95 % of business using e-government services by the end of 2015. Data as at 2010 suggests that 91 % of businesses and 22 % of citizens are using e-government services. It is pertinent to note that data for 2011 shows a significant rise in e-government use by citizens,

[101] Act No 72/2000 Coll.

[102] 'All in one' contact points where any citizen can obtain all the information about the personal data held by authorities in centralised registries.

[103] An electronic delivery system for sending and receiving documents related to public authorities.

measuring 42%. This notable increase is likely due to the establishment of basic public administration registers. While this is good progress, the system is still not fully operational, e.g. paper copies are still required by law courts. The National Reform Programme 2012 also makes reference to projects of electronic legislation (e-legislation) and electronic legal code (e-collection) which aims at simplifying access to law for citizens, business and public administration. The Czech authorities aim to complete this project by 2015. Concerning the ease of starting up a business, the Czech Republic does not score well in this regard[104].

A new Act on Business Corporations which entered into force in January 2012 will take effect on 1 January 2014. This Act will replace the current Commercial Code as part of a re-codification of civil and business laws. Amongst others, this new Act provides for elimination of a minimum capital requirement and creditors' protection to be enhanced by new solvency requirements. The Ministry of Justice is also preparing a new law on business registers that should simplify company starts-ups so that register could be made by public. However, one-stop shops have not yet been established.

The Czech Republic fairs very well with respect to the time and cost it takes to obtain licenses[105] with the lowest level of licensing complexity in all dimensions (number of licenses, time and costs) compared to the other countries in the survey. On the other hand, the Czech Republic scores badly with respect to payment culture[106] with average delays in payment by both the public and private sectors increasing between 2010 and 2011. Total value of payments lost is also high, calculated at 3.1 % of payments lost compared to total turnover in 2011. The late payment directive is currently being transposed into the Czech legislation and should enter in force in 2013.

Through its Export Strategy for 2012-2020, which was approved by Government in March 2012, the Czech Government is aiming at securing growth for exporting firms, shift the composition of Czech exports towards final products and increase the share of exports to countries outside the EU. The document was created in co-operation with the Czech Chamber of Commerce and the Czech Confederation of Industry.

Access to finance

Access to finance remains one of the main concerns highlighted by Czech businesses, especially in the early stages of financing[107]. Instruments such as seed and venture capital funds were still not operational in the Czech Republic[108]. However, as identified in the 2012 National Reform Programme, the new state Seed/VC fund designed to assist in funding for newly emerging innovative businesses will be introduced at the end of 2012. During the summer 2012, commercial banks will be supported by the INOSTART programme, falling under the Swiss-Czech Co-operation programme. This programme will provide investment loads, backed by preferential guarantees and targeted technical assistance, to start-ups with innovative business plans in the Olomouc and Moravia-Silesa regions.

3.3.5. Services sector

Challenges remain in the Czech Republic with respect to competition in network industries, in particular in the telecoms and electricity/gas market where incumbents still control the vast majority of the market. There is also lack of competition in the railway sector.

With respect to the gas market, a new gas line is being build and is expected to be finalised in 2 years' time. There is also a gas interconnection with Poland. While there are 5 distributors of gas in the Czech Republic, there is no significant price differential amongst distributors. A similar situation is also present in the electricity market. While the transmission and distribution of electricity has been unbundled there are three main distributors in the Czech market charging similar prices across the board. With respect to railway sector, there has been a gradual liberalisation of the market with a new competitor entering the market (RegioJet).

[104] According to the World Bank Doing Business Report 2012 it takes 20 days to start up a business in the Czech Republic. However, the Czech Government has indicated to the World Bank that these figures are outdated. The start-up procedures data published by DG Enterprise and Industry says that it takes 15 days to start a company in the Czech Republic — http://ec.europa.eu/enterprise/policies/sme/business-environment/start-up-procedures/progress-2011/index_en.htm.

[105] European Commission's study 'Business Dynamics: Start-ups, business transfers and bankruptcy' 2011. Data from this report is based on a survey from a number of stakeholders and measures the complexity of licensing procedures (in terms of cost, time and effort) for five model companies (hotels with restaurant, plumbing company, wholesale or retail distributor, manufacturer of steel products, manufacturer of small IT devices).

[106] The Czech Republic scores among the worst performing countries in the European Payment Index 2011. Average delays in payments by both the public and the private sectors increased between 2010 and 2011 from 10 to 13 days and 15 to 17 days, respectively. .

[107] Czech Republic is one of the Member States identified in the ECB-Commission survey on access to finance of SMEs (December 2011) where rejected loan application was higher than the EU average in 2011 and where the loan application situation deteriorated between 2009 and 2011.

[108] The European Private Equity and Venture Capital Association (EVCA) also estimates that the share of investment in seed and start-ups as a percentage of GDP is lower than the EU average in the Czech Republic.

There is a particular concern about entry requirements for notaries. Despite the judgements of the Court of Justice in May 2011 concerning eight Member States, the Czech Republic has refused to repeal the nationality requirement for notaries. There are also 335 regulated professions (compared to the EU average of 152); 25 of these are in business services, (EU average is 13).

3.3.6. Public administration

As measured by the World Bank's Government Effectiveness Indicator, the overall public administration performance scores for the Czech Republic are lower than the EU average showing an inferior perception of quality of public services and policy implementation than the EU average. Scores for the quality of its institutions, regulatory framework and the efficiency and stability of its public administration are all low[109].

In contrast, the composite indicator on the use of tools for administrative modernisation (e-government, impact assessments, performance and service orientation, accountability) points to a performance significantly better than the EU average. In fact, the Czech Republic is one of the best performing Member States. This is due to good results in e-government services, implementation of modern human resource management tools and intensive reliance on evidence based instruments such as regulatory impact analyses.

However, indicators on corruption exhibit a significantly lower score compared to the EU average indicating that corruption is still a major issue[110]. In this context, especially in relation to the sub-indicator on 'diversion of public funds' this type of corruption is perceived to be very common by a majority of respondents.

The current anti-corruption strategy for 2011-2012 established extensive anti-corruption measures which a long list of measures to be tackled. While a quarterly report is submitted to government with updates on the government website, a central website with comprehensive information concerning public tenders is still lacking. An anti-corruption strategy for the period 2012-2013 is currently being drafted.

The composite indicator on starting a business and licensing shows that the Czech Republic's performance is fairly equal to the EU average. However, looking at sub-indicators shows that this result is mainly driven by the indicator on the complexity of obtaining permits. By contrast, in the remaining sub-indicators – such as the existence of a fully operational one-stop shops – the Czech performance is below average.

While the composite indicator on public procurement shows a better than EU average score, this indicator should be interpreted with caution. This composite indicator takes into account three indicators of the direct and indirect costs of public authorities to assess public procurement. In relation to cost and time needed to participate in a public bid, the Czech Republic scores well. However, the indicator does not take into account the competitiveness of the Member State, such as the number of public bids. This is an important factor when assessing the overall effectiveness of public procurement.

The system of non-transparent public procurement contracts is one important aspect of the anti-corruption strategy. Non-compliance with public procurement provisions has had an effect on Structural Funds with a number of operational programmes being interrupted. However, on 1 April 2012 the new Act on Public Procurement entered into force. The Act simplifies and makes the tendering process more transparent and extends the powers to supervise public procurement contracts by the Office of Protection of Competition. As of 1 April 2012, an e-market place system has also become functional for tenders below the threshold. While this reform is an important step forward, proper enforcement and implementation is crucial. The Czech Republic also still needs to fully address the issue of anonymous shareholding, which was initially foreseen to be addressed in 2012. Such company ownership can lead to conflicts of interest in tendering procedures, also in relation to the implementation of Structural Funds.

Concerning tax compliance and tax administration the composite indicator reports a score significantly lower than the EU average. This holds true for both the time needed to prepare tax returns as well as administrative costs. The tax compliance burden for businesses is relatively high[111]. Tax regulation in the Czech Republic is identified as one of the main problematic factors for doing business[112].

The adoption of the Act No 458/2011 is supposed to improve the efficiency of tax collection, as it establishes a single collection point for the collection of taxes, healthcare and social security

[109] 'Global Competitiveness Report 2011-2012' World Economic Forum.

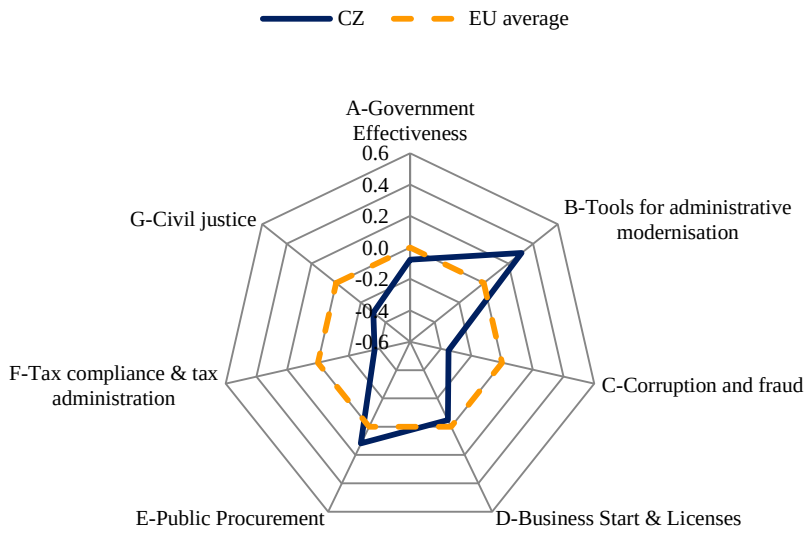
[110] Transparency International ranked Czech Republic in 57th place in its 2011 report, as opposed to 53rd place a year earlier.

[111] World Bank Doing Business Report 2012 estimates that on average firms make 8 tax payments a year and spend 557 hours filing, preparing and paying taxes. .

[112] 'Global Competitiveness Report 2011-2012' World Economic Forum.

contributions. It will be fully in force as of 1 January 2014. The reorganisation of tax and customs administration and the institutional reform related to the single collection point have been launched.

Overall profile of public administration



Source: WIFO

The efficiency of civil justice composite indicator shows that the Czech Republic again performs worse than the EU average. This is due to the fact that it takes up to 100 days longer to enforce contracts at a higher cost than the EU average and it takes longer to resolve insolvencies when compared to the EU average[113]. There is a lack of expertise to fight financial crime, weak power of prosecutors and low efficiency of contract enforcement. To tackle this, a draft state prosecution act aimed at strengthening the independence and responsibility of the Prosecution Office is aimed at being submitted to the Government in June 2012. Several measures have been highlighted in the national Reform Programme 2012.

The Czech Republic does not have a public servants act in place to promote stability and effectiveness of the public administration with the adoption of such an act being postponed a number of times in the past. The Ministry of Interior is working on a new bill which aims at legislating rights for all public officials, both at the central and local level. The final draft bill is expected to be submitted to Government by 30 September 2012 with entry into force foreseen for 1 January 2014. The adoption of this act is one of the key conditions for the use of Structural Funds in the new programming period 2014-2020.

[113] The World Bank doing Business Report highlights that it takes 611 days to enforce a contract and requires 27 procedures.

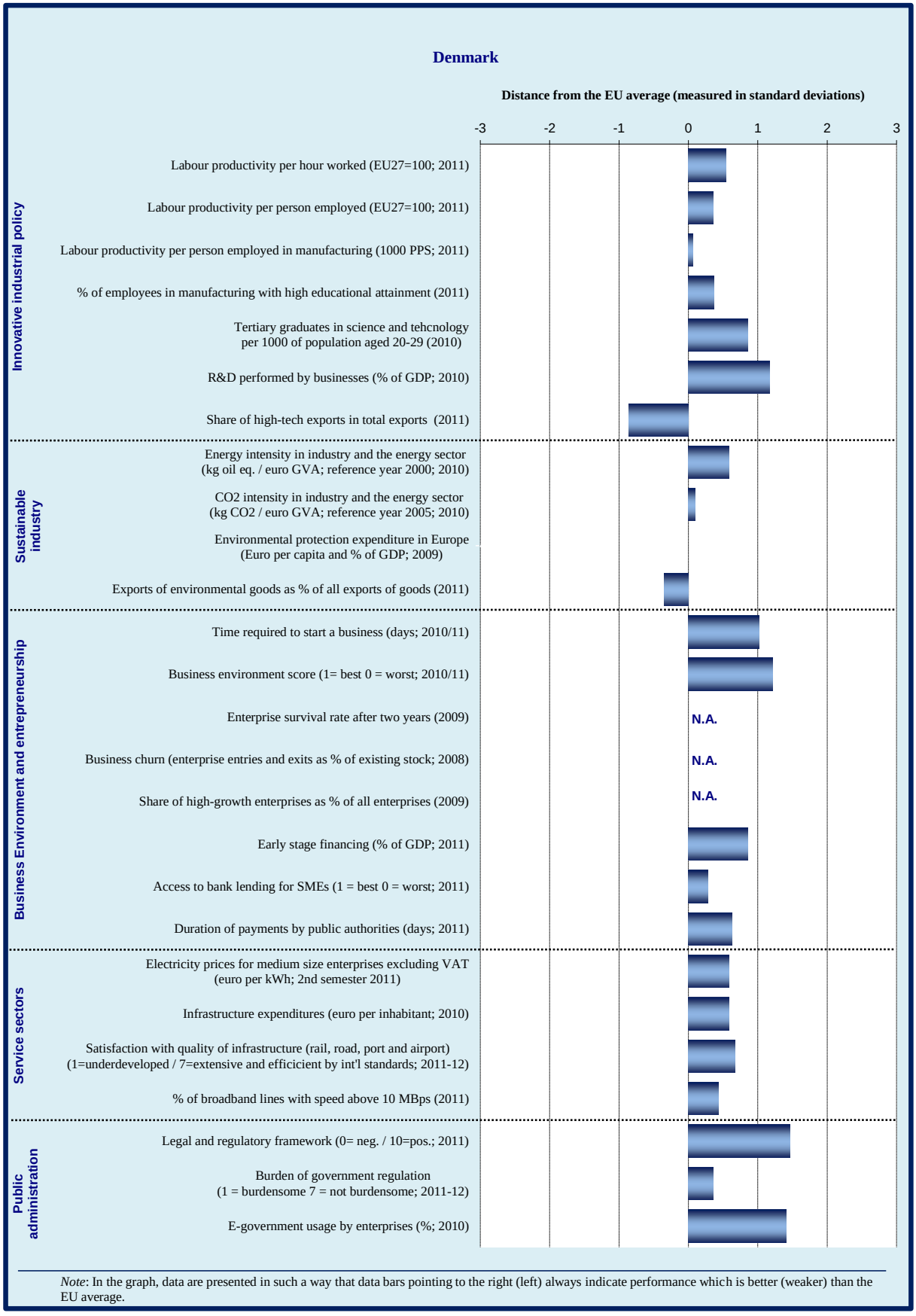
3.3.7. Conclusions

As one of the most energy intensive countries in the EU, moving towards a cleaner and more efficient energy mix is crucial. The Government should deliver its long term energy policy as soon as possible and also establish its energy efficiency target.

The Czech Republic also faces challenges with respect to improving the business environment. A key area of concern here is access to finance for business, in particular in the early stages of financing. Seed and venture capital funds would be beneficial in this regard.

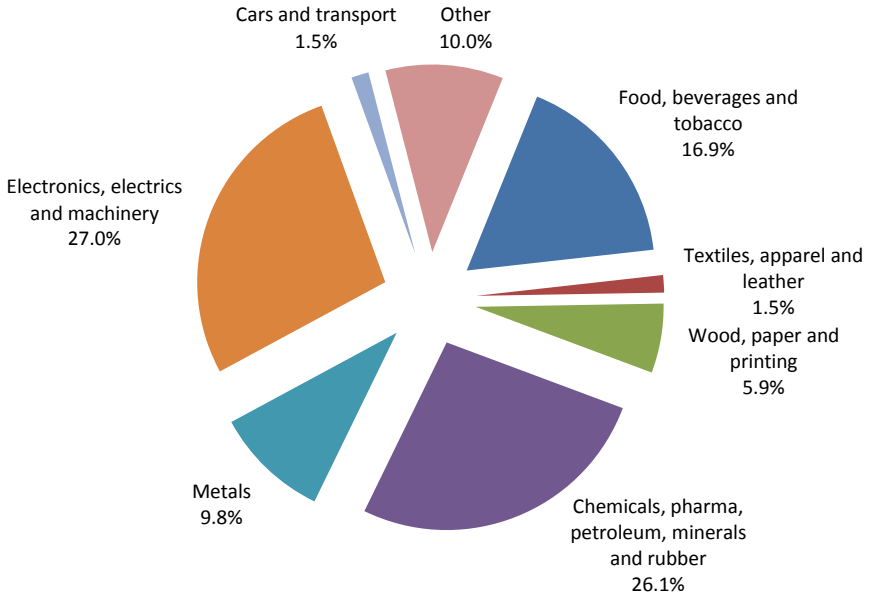
While progress has been made to address deficiencies in public administration and corruption, such as the adoption of the Public Procurement Act, this area remains one of the major challenges faced by the Czech Republic. Effective monitoring of the new act and continued efforts to deal with corruption are crucial for the business environment.

3.4. Denmark



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Denmark (2009)



Note : No data available for sectors C12 (tobacco products) and C19 (coke and refined petroleum products)
Source: Eurostat

3.4.1. Introduction

Manufacturing plays a smaller role for Denmark than for the EU in total (10.9 % compared to 15.5 % in 2011). Danish industries are specialised both in sectors with high innovation intensity (machinery), and with low innovation intensity (water transport). In exports, Denmark is strongly specialised in sectors with low innovation and medium-low education intensity. Overall, Denmark's specialisation profile is determined both by intangible assets (marketing-driven industries such as games and toys), but at the same time by natural endowments (agricultural products, maritime industries), explaining its bipolar specialisation in both innovative and less innovative sectors.

Danish manufacturing cost competitiveness has deteriorated since the last decade giving rise to an appreciation of the real effective exchange rate. Nominal unit labour costs have increased by significantly more than in the EU27 and in the Euro area, reflecting in particular relatively higher wages and weaker productivity growth in Denmark. As noted in the country-specific recommendations of the European semester 2012, these could be at least partially addressed by removing obstacles to competition and improving the quality of the educational system.

3.4.2. Innovative industrial policy

Denmark is an innovation leader according to the Innovation Union Scoreboard 2011. Denmark is successful concerning linkages and entrepreneurship and intellectual assets and research systems, while input in terms of human resources is relatively low.

The strong cooperation between private and public partners in the innovation system has led to a strong involvement of also SMEs in the innovation system. Denmark actively participates in public-private cooperation in the EU with good results for participating firms. Denmark has recently launched reforms to boost innovation and is currently elaborating a new broad innovation strategy. The strategy aims at strengthening the links between public expenditures on R&D&I and growth. The aim is further to accelerate the development process in a few key areas which are expected to speed up the results in terms of growth and productivity. Two related initiatives are the strategy for public procurement for innovation, and a strategy for innovation networks and clusters involving regions.

The key areas are water (technologies for cleaning etc.), maritime affairs, green technologies, creative industries and health care industries where Danish industries have comparative advantages.

Even though the Danish innovation system is well functioning, a number of challenges remain. Despite impressive efforts to increase R&D and innovation, so far the economic effects in terms of

innovating firms and medium- and high-tech manufacturing exports have not fully materialised. The reasons are likely to be found in bottlenecks in the commercialisation of research, and lack of growth among new firms, reflecting the experience of many other Member States.

3.4.3. Sustainable industry

Danish industry scores comparatively well in energy and carbon intensity with low scores on both parameters. The Danish industry is relatively low energy and carbon intensive. Danish industries have comparative advantages in exports of goods and services based on bio-technology and energy technologies and are particularly successful in exporting wind-turbine components, insulation materials and energy efficient pumps.

Following up on the former Government's *Energy Strategy 2050* (February 2011) and the present Government's *Our Future Energy* (November 2011), an energy agreement for Danish energy policy for 2012-2020 was launched in March 2012. The agreement contains a number of initiatives promoting green technology growth and the transformation of industry to become less energy intensive and less dependent on fossil fuels. The initiatives in the energy agreement aim at raising the share of renewable energy in final energy consumption to more than 35 % in 2020; and at reducing the gross energy consumption by 7.6 % in 2020 relative to 2010.

Comprehensive policy measures in the environmental technologies action plan, the energy agreement as well as other initiatives promoting green growth and the Business Innovation Fund provide evidence on Danish ambitions in this policy area.

3.4.4. Business environment

Regulatory and support environment

Regulatory reform is a priority and many ambitious measures have been implemented. The target of reducing administrative burdens for business was met in 2010 and the new Government has launched a strategy for reduction of administrative burdens. The strategy is centred around the Business Forum for Simpler Rules which advises the government on where the burdens are perceived to be particularly high and on corresponding simplification measures. The Business Forum consists of the main interest organisations, businesses and experts. The strategy also focuses on the continued measurement of administrative burdens and on handling EU legislation.

Indicators on SME performance and SME policies indicate that Denmark perform well above the EU average with the exception of entrepreneurship. A number of measures aiming at increasing the entrepreneurial spirit in the education system have been implemented. Denmark has for a number of years had a high level of start-ups. The challenge is a low level of high growth and innovative firms. This is well recognised and has been addressed by a number of measures[114].

Other measures aiming at improving business conditions include advice to business in crisis aiming at promoting a 'second chance' for failed enterprises. Transfer of business due to retirement of owner has become an issue as many firms need to have their ownership transferred. In order to address this issue, the Danish Business Authority has launched the initiative Business Transfer Denmark ('EjerskifteDanmark').

In order to facilitate start-up of new enterprises, two digital initiatives will be launched in 2012. A digital guide will provide enterprises an overview of requirements and possible business relevant regulation. From the end of 2012 will all new enterprises be equipped with basic tools for digital communication with authorities.

Despite the growth friendly business environment, the low level of high growth firms remains to be a challenge together with low labour productivity growth. The problem of weak productivity growth is well recognised and the government has appointed a Productivity Commission in order to address the issue and get a better understanding of the reasons behind the development. Nevertheless, studies point towards competition and education as possible drivers.

Access to finance

Following the financial crisis, access to finance again became a problem for SMEs. A number of bank packages aimed at securing the functioning of the financial system and easing access to finance for firms have been launched.

Recent financial measures include the 'Development package', which launched several initiatives in order to generate new loans for enterprises. The package includes, among other, an increase of the Export Credit Fund's export credit facility and an extension of the reduced capital-adequacy band, which allows for additional funds. Business development is supported by an increase

[114] For details, see the SBA fact sheet: http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/files/countries-sheets/2010-2011/denmark_en.pdf

of the credit facility of 'Vaekstkaution' loan guarantees and a subordinated debt initiative targeted at SME's. Overall, the financial measures taken in Denmark to support lending activity seem to have been appropriate and well designed for meeting the needs.

3.4.5. Services sector

Weak competition in the services and construction sectors is hampering productivity growth and innovation in these sectors. The electricity and natural gas sectors were liberalised in 2000. Being natural monopolies, the transmission and distribution companies are subject to economic regulations. The retail market for electricity and gas has been liberalised gradually although some regulations still exist, which according to the Danish Competition and Consumer Authority, limits the competition on the retail market and makes consumers less inclined to change distributors of energy. The market for large consumers was fully deregulated by 2000, and the freedom to choose supplier was implemented for all other consumers by 2003.

While large enterprises are active on the market and reap the benefits of competition, most SMEs, private consumers and public institutions have refrained from switching suppliers and remain customers of companies that sell electricity at a regulated price. The picture is similar for natural gas. In general the regulated retail prices have increased more than prices for large consumers.

In order to improve the competition on the retail electricity market, the Danish Parliament has passed a bill on June 2012 on introduction of a wholesale model, where the electricity retail companies become the central players at the market. The model is also known as a supplier centric model. The wholesale model will have effect from October 2014.

Regarding the telecom sector, the Danish mobile market is characterised by strong competition at retail level and mobile broadband is increasing significantly. The fixed telephone market is still dominated by the incumbent operator.

According to the 'Konkurrencepakke' in 2011, more railway lines should be opened up for competition. However, the rail passenger market is still not open to competition, but licensed operators are providing services on about 15 % of the network.

The postal services were liberalised in 2011. The new legislation enables free entry for competing firms on all postal markets. State owned 'Post Danmark' has however in reality still monopoly on the market for delivering letters as it is the only actor on major parts of the market.

With the exception of lawyers, the level of regulation of professional services in Denmark is low. A bill decreasing lawyers' monopoly on representing parties in minor cases of debt collection was introduced in 2011. However, pharmacies, dentists, construction, financial markets and the markets for taxis are subject to regulations that considerably limit the competition on these markets. The problems are well recognised and the Government has announced a new competition-package before the end of 2012, with initiatives aiming at increasing the competition in these markets, generally strengthening the competition law and initiatives aiming at increasing the competition within the public sector.

Concerning retail and wholesale services, zoning laws were partly liberalised in 2011. Shops' opening hours will, with the exception of holidays and special days, be liberalised in 2012.

3.4.6. Public administration

Denmark's overall public administration performance, according to the World Bank's Government Effectiveness Indicator, is significantly better than the EU average. Denmark is one of the countries where the quality of public service provision is perceived to be most excellent in international comparison.

According to the global government governance indicator, Denmark has one of the most efficient public administrations of very high quality and impartiality. Regulatory quality is also high in Denmark according to the World Bank.

The composite indicator for corruption and fraud displays very good results in comparison to the EU-average, with irregular payments and the diversion of public funds being far less common than in the EU27. The individual experience of corruption appears to be especially low, with a value of not more than 2 % of all respondents in the according survey. This corresponds well to the overall assessment of similar corruption assessments (such as in the Worldwide Governance Indicators) where Denmark regularly performs best.

Tax compliance burdens are relatively low in Denmark compared to the EU average. The average number of hours to comply with VAT rules is only two thirds of the EU average. Also the number of payments per year for enterprises is low in an international comparison. Tax compliance and

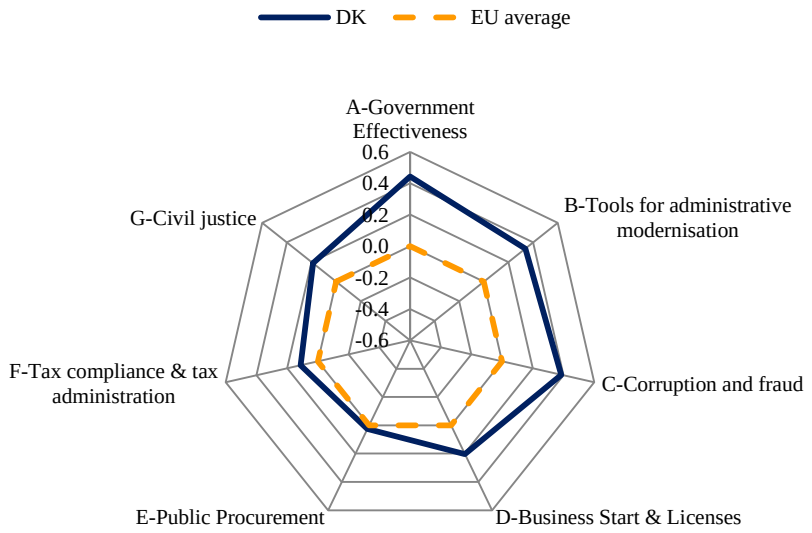
compliance costs for other purposes are not perceived as a big problem for Danish enterprises with regard to current legislation. But industry organisations complain that it is however very time consuming for companies to familiarise themselves with new pieces of legislation on tax.

The compound index for public procurement signals some scope for smaller improvement. The average delay in payments from the public administration is 12 days, and is shorter than in most other EU countries.

The composite link-level indicator for starting a business and licensing reflects a similarly good performance in Denmark, including a fully operational one-stop shop for start-up purposes and licensing procedures that are less complex than the EU-average. Most strikingly, however, are the fast procedures to start-up a company and the elimination of all administrative costs whatsoever to do so.

Most sub-indicators measuring the efficiency of civil justice are well above the EU average, especially due to the perception of the judiciary as highly independent from political pressure and the short time necessary to enforce contracts as well as to resolve insolvency. However, the costs of enforcing said contracts (23.3 % of a claim) are slightly above average (20.6 %), which indicates some room for improvement.

Overall profile of public administration



Source: WIFO

Denmark has been one of the most ambitious countries regarding e-government for several years and in August 2011 a new e-government strategy was launched, also taken up by the new government. With its new e-government plan the government has launched new targets for the digital communication with both business and citizens. Digital portals for communication with both citizens and business have existed for a number years and the new strategy takes the digital communication further by introducing mandatory digital communication between public authorities and business and citizens.

The business portal 'virk.dk' will from 2012 be supplemented by personalised services with content related to the situation of the specific business. After identifying themselves, businesses will be able to see recent reports to public authorities and get an overview of coming reporting requirements and selected data stored about the business in public databases. In this way the personalised section of 'virk.dk' will help business' get an overview of their obligations towards the public administration. The main website, www.virk.dk, also gives access to all digital self-service solutions for businesses.

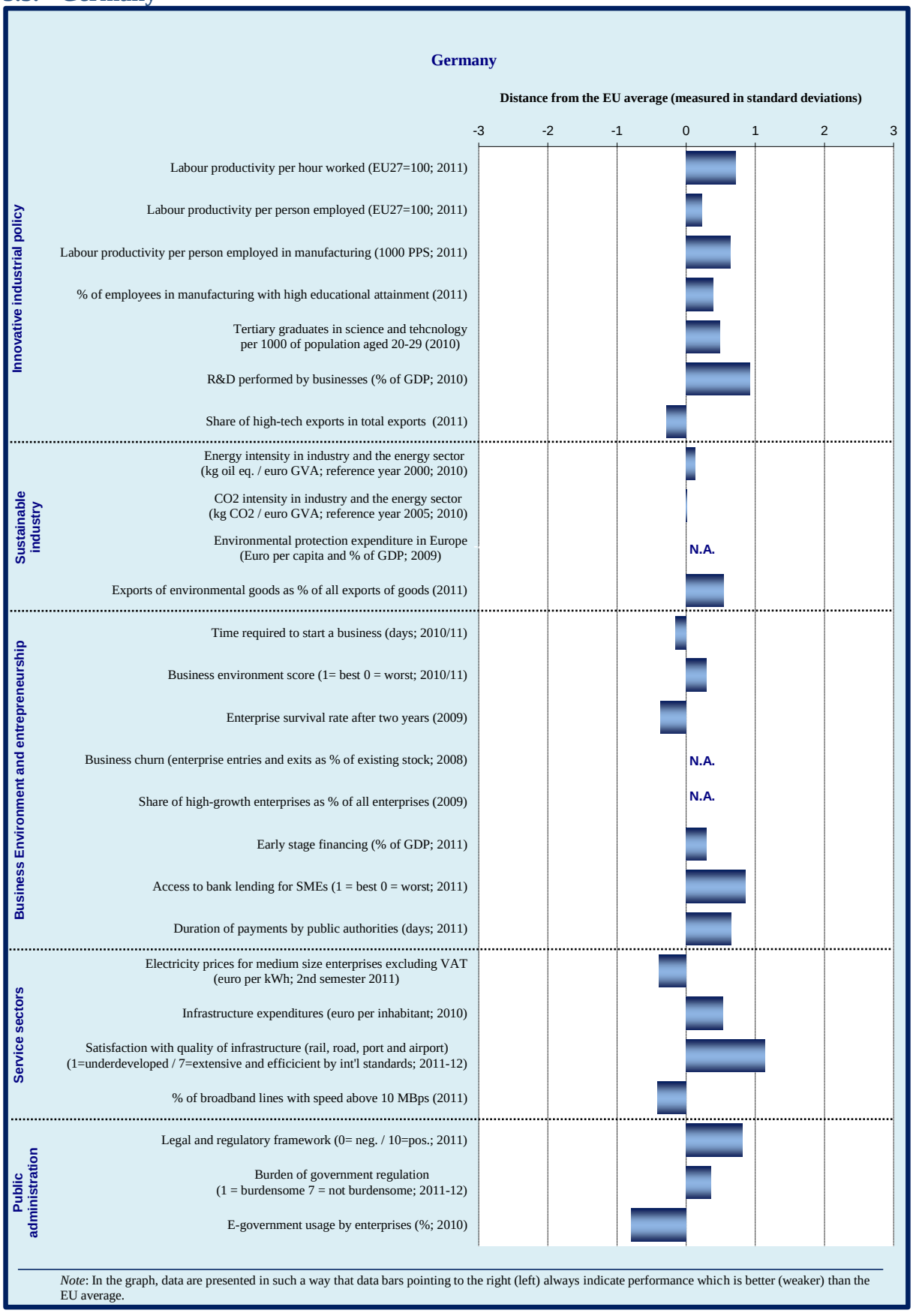
3.4.7. Conclusions

Ambitious policies related to the business environment and public administration have been successful. Danish ambitions regarding sustainability of industry are very high. Concrete measures are in place in order to reach targets of reducing the use of fossil fuels and increasing energy efficiency throughout the economy. The impacts of the response to the financial crisis are yet too early to assess but the existing initiatives

concerning access to finance appear comprehensive.

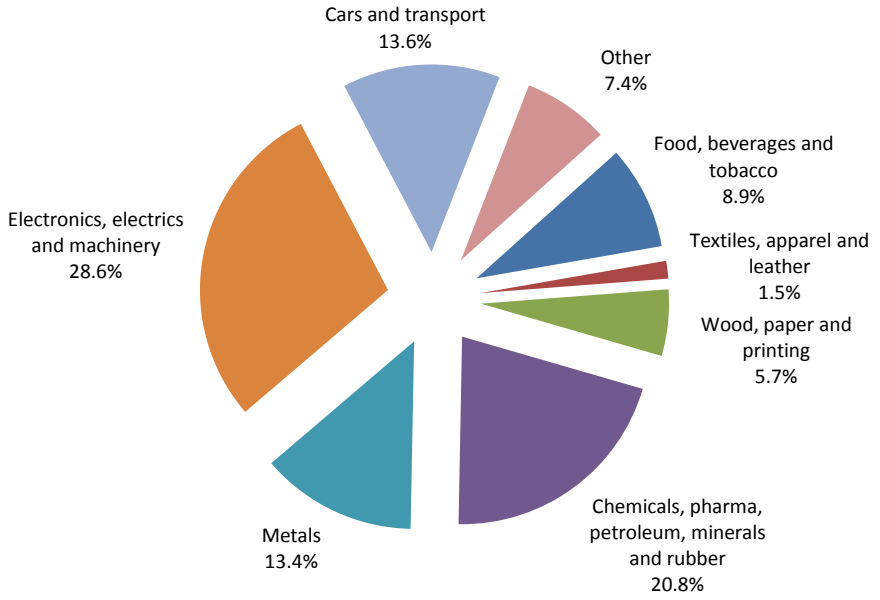
Challenges remain with reference to the innovation system and competition in some markets. Even though Denmark is an innovation leader, the economic effects are in some respects lower than expected given the ambitious efforts to increase the functioning of the national innovation system. A strengthening of the linkages between the private and public sectors in the innovation system has yielded promising results. Lack of skilled capital is a bottleneck for enterprises and taken into account the well established links between education and innovation and productivity growth, policies aiming at increasing the supply of skilled labour should be taken into consideration.

3.5. Germany



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Germany (2009)



Source: Eurostat

3.5.1. Introduction

The impact of the crisis has been less harmful to the German economy than initially expected. Germany's manufacturing production rebounded quickly and the labour market has proven remarkably resilient. ***Manufacturing*** plays an important role in the German economy and contributes 22.6 % to Germany's total value added compared to an average of 15.5 % in the EU (2011). Germany is particularly specialised in technology-driven industries and capital-intensive industries, such as machinery, electrical and optical equipment, motor vehicles, metal products or chemicals.

Germany's ***cost competitiveness*** has improved over the last decade, as indicated by a depreciation of the real effective exchange rate. ***Labour productivity*** per hour worked is about 24 percentage points above the EU27 average and about 10 percentage points above the Euro area average.[115] Overall, the German industry enjoys a favourable position with respect to competitiveness but faces important challenges in securing its competitive position also in the medium and long term.

3.5.2. Innovative industrial policy

The Innovation Union Scoreboard 2011[116] classified Germany among the ***innovation leaders in the EU***[117], based on its R&D capital stock as well as its output in terms of patents and new products. Funding for R&D and innovation has been increased over the last years. With an ***R&D intensity*** of about 2.8 % in 2010, Germany is approaching its target of 3 %. However, other major competitors outside the EU also pursue ambitious innovation policies and some invest even more in research and innovation. Moreover, significant disparities remain at regional level in terms of R&D investments as well as innovation performance, including for example in respect to technology transfer and cooperation between firms and universities or other research institutes.

Germany's '***High-Tech Strategy 2020***"[118] defines the central goals of Germany's research and innovation policy. The strategy concentrates public R&D resources for scientific and technological research into areas that face particular global challenges. These include energy and climate protection, health and nutrition, mobility, as well as security and communication. The strategy also supports the development of key enabling technologies, which act as drivers of innovation and which build the basis for new products, processes and services[119].

The ***Central Innovation Programme for SMEs*** *('Zentrales Innovationsprogramm Mittelstand',* ZIM) successfully assists SMEs in enhancing their research and innovation efforts in order to develop

[115] Eurostat data for 2010.
[116] Innovation Union Scoreboard 2011, http://ec.europa.eu/enterprise/policies/innovation.
[117] Together with Denmark, Finland and Sweden.
[118] High-Tech Strategy 2020 for Germany http://www.hightech-strategie.de.
[119] Report on 'Innovation Policy Trends in the EU and Beyond', December 2011, INNO Policy Trend Chart, http://www.proinno-europe.eu/inno-policy-trendchart.

new products, processes and services. The program was opened for enterprises (including connected enterprises) with up to 500 employees until end of 2013. In addition, the supplement costs for transnational projects will be reconsidered by an increase of 5 % of the funding rate. In recent years the Association of German Chambers of Industry and Commerce ('Deutscher Industrie- und Handelskammertag', DIHK) identified ZIM in its innovation report ('Innovationsreport') as 'best practice'. For 2013, the planned annual budget has been fixed to about EUR 500 million, which will finance an estimated 5 000 new applications and 8 000 on-going projects[120].

In view of the demographic trends, an important long-term challenge will be to avoid a systematic ***skill shortage in industry, services and academia***. Shortages of skilled workers are emerging in various sectors and regions. High skilled professions, such as engineers and IT professionals, continue to be particularly in demand. SMEs are generally more affected than large enterprises. The challenge is addressed in the government's initiative '*Konzept für Fachkräfte*'[121]. The related key actions aim in particular at increasing the number of tertiary students, reducing early drop-out from education and training and enhancing life-long learning as well as the labour market participation of older workers and women. The initiative recognises that mobilising domestic labour potential will not be sufficient and that the German economy will also depend on better attracting skilled workers from other EU but also non-EU countries[122]. In 2012, laws have entered into force aiming to better facilitate the recognition of professional qualifications obtained abroad as well as the immigration of non-EU skilled workers (blue card law). While these measures go into the right direction, it remains to be seen whether they will be sufficient.

3.5.3. Sustainable industry

Overall, the ***environmental performance*** of Germany's industry can be characterised as good. The energy intensity in manufacturing is below the EU average and the carbon intensity in industry is close to the EU average. Moreover, ***green technologies, products and services*** play an increasingly important role in the German economy. In 2012, about 34 % of companies offered green products or services compared to 26 % in the EU[123].

In respect to ***raw materials***, there are two factors which may have a particular impact on the competitiveness of German industry: the dependence on high quality raw materials and the substantial price increases over the last years. The challenge of access to raw materials is primarily being addressed through initiatives of the private sector; however, the Federal Government also actively supports the establishment of raw material partnerships.

Germany is pursuing a major ***reform of the energy system***, which includes a gradual phase-out of nuclear energy production until 2022, measures to accelerate grid expansion, and a more market-based development of renewable energies. The new energy strategy introduced in 2011 opens the door to new opportunities for growth, but it also involves challenges in terms of potentially high costs and risks of vulnerability of the system due to capacity constraints. Energy prices in Germany are already among the highest in Europe and are expected to increase further[124]. If the energy strategy is to be successful, the overall economic costs need to be minimised, including by increasing the cost-effectiveness of renewable energy, by stimulating competition in the energy markets and by further enhancing energy efficiency. The timely deployment of the required infrastructure will be an important pre-requisite for achieving the strategy's objectives.

In 2011, the German federal government also decided to launch a new ***Energy Research Programme*** *("Sechstes Energieforschungsprogramm")*, which increases the financing for R&D in these areas by 75 %, mainly using funds from the special 'energy and climate fund". Between 2011 and 2014, about EUR 3.5 billion will be dedicated to energy research[125].

The ***public procurement system*** in general has an important potential to support the deployment of environmentally friendly products given its significant level of expenditure. The public procurement system is increasingly integrating sustainability aspects, in particular energy efficiency and emissions, based on a life-cycle approach. Since August 2011, the revised public procurement laws place an even stronger emphasis

[120] '*Zentrales Innovationsprogramm Mittelstand'* http://www.zim-bmwi.de.

[121] Bundesregierung, '*Konzept für Fachkräfte"*, 22.6.2011, http://www.bundesregierung.de.

[122] Bundesarbeitsagentur '*Perspektive 2025: Fachkräfte für Deutschland'*, http://www.arbeitsagentur.de.

[123] Flash Eurobarometer 2012, European Commission, http://ec.europa.eu/public_opinion/flash.

[124] EU energy and transport in figures, DG Energy, http://ec.europa.eu/energy/observatory/statistics.

[125] *Pressemitteilung* '*Bundeskabinett verabschiedet 6. Energieforschungsprogramm',* 3.8.2011, http://www.bmwi.de.

on energy efficiency and require the highest standard of energy efficiency performance[126].

3.5.4. Business environment

Overall, Germany offers a ***favourable business environment***. It scores the highest among the 27 Member States concerning the overall satisfaction with the quality of infrastructure. However, it scores around average regarding the administrative burden of the regulatory framework[127].

Entrepreneurship and SME policy

The business environment is favourable for ***entrepreneurial activities*** and federal and regional programmes are in place to support the development of SMEs through a broad range of consulting and financing services. Of particular importance is also the support provided by the well-developed network of chambers of commerce and other crafts and business associations, both in Germany and abroad. Compared to the EU average, German SMEs tend to be more active in other EU and non EU markets. The high share of exports to emerging markets indicates further growth potential.

Nevertheless, Germany is traditionally lagging behind the EU average regarding entrepreneurial activity[128]. Low unemployment, emerging skill shortages as well as demographic effects are likely to result in a further decline in the ***number of entrepreneurs***. For 2012, the number of entrepreneurs who start a business is expected to be at a lower level, because of less 'necessity' entrepreneurs[129]. A further decline in the number of entrepreneurs could hamper Germany's economic growth and innovation performance in the long term. Moreover, women still represent only one third of entrepreneurs, indicating further untapped potential.

In 2011, the Federal Ministry of Economics and Technology has introduced an '***EU SME Monitor'*** *('Mittelstandsmonitor für EU-Vorhaben')*[130]. The tool provides information on current and planned EU initiatives early on in the process and aims to facilitate better involvement of German SMEs and their representatives in the European decision-making process, including the participation in public consultations[131].

Access to finance

Access to finance for the private sector (including SMEs) was not substantially restricted in 2008/09 and credit growth has picked up slightly since then, with no significant tightening of lending conditions in sight[132]. The German federal government undertakes considerable efforts to provide start-up companies with a wide range of support services and financing instruments, including risk capital[133]. Nevertheless, while the ***availability of risk capital*** is broadly in line with the EU average, Germany has the potential to still do better in this respect.

Reduction of administrative burden

Germany has made noticeable progress over the last years in reducing the ***administrative burden*** related to reporting obligations in the business sector. By the end of 2011, a reduction in reporting obligations of 22 % has been achieved under the 'Bureaucracy Reduction and Better Regulation programme". Since the initial target for 2011 was a reduction of 25 %, the federal government agreed in December 2011 to introduce a number of additional simplification measures, such as the reduction of the minimum archiving period for invoices and documents. These measures still need to be implemented.

Furthermore, the 'Bureaucracy Reduction and Better Regulation' programme has been extended in 2011 to cover in addition to reporting obligations also other measurable ***compliance costs***. The National Regulatory Control Council ("*Nationaler Normenkontrollrat"*) now scrutinises the administrative burden and compliance costs for businesses, citizens and public administrations of all newly proposed regulations[134]. Continuing the process of simplifying the regulatory framework and reducing the administrative burden for enterprises, especially SMEs, should contribute to further strengthening investment and encouraging entrepreneurship.

126 *Novellierte Vergabeverordnung* (VgV), 20. August 2011.
127 Global Competitiveness Report 2012, World Economic Forum.
128 SBA Fact Sheet 2012, DG Enterprise & Industry, http://ec.europa.eu/enterprise/policies/sme.
129 *DIHK Gründerreport 2012.*
130 *Mittelstandsmonitor für EU-Vorhaben*, http://www.bmwi.de.
131 The initiative has been highlighted as a good practice in the Report of the High-Level Group of Independent Stakeholders on Administrative Burden, December 2011 http://ec.europa.eu/dgs/secretariat_general.
132 See ECB's 'bank lending survey' of April 2012.
133 Including for example through the 'ERP Start Funds', the 'ERP/EIF Dachfonds', or the 'High-Tech Gründerfonds'.
134 The initiative has been highlighted as a good practice in the Report of the High-Level Group of Independent Stakeholders on Administrative Burden, December 2011 http://ec.europa.eu/dgs/secretariat_general.

3.5.5. Services sector

Competition in the ***gas and electricity sector*** has increased due to initiatives launched in recent years, including the transposition of the Third Energy Package in 2011. The new legislation should further strengthen the independence of energy production and supply, on the one hand, and transmission activities, on the other hand. In 2012 the federal administration is establishing a ***market transparency agency*** (part of the Federal Cartel Agency) aimed to better monitor competition and pricing in the gas and electricity market and to improve market information and transparency.

Competition has developed noticeably over the last years in the ***telecommunication sector***[135]. Moreover, the government has recently proposed a revision of the act against competition restrictions and has adopted a revision of the telecommunications act. Effective implementation of these measures should contribute to further stimulating competition.

In the ***postal sector***, competition develops only slowly[136]. In 2012, the government has announced its intention to review the competition framework in the postal sector[137].

Also in the ***railway sector*** competition develops only slowly, mainly due to the lack of effective separation between the infrastructure manager and the railway holding. Competition has increased over the past year, in particular in the regional rail passenger market. However, in the long-distance market there is very little competition[138].

A draft law has been proposed to partially open up the ***long-distance bus transport market*** but still needs to be adopted.

The government announced that it will assess in the coming period whether ***entry and conduct regulation*** in services sectors can be further reduced without any negative impact on quality and safety[139].

3.5.6. Public administration

According to the World Bank Doing Business Report[140] and the Government Effectiveness Indicator[141], Germany has in general a business friendly regulatory environment and an ***efficient and transparent public administration***. While overall the perceived quality of public services is ranked above the EU average, there is scope for further improvement or simplification in some areas.

On average, ***payments by public authorities*** are processed within 36 days, which is considerably below the EU average (66 days). Also in respect to late payments, the average delay (11 days) is noticeably shorter than the EU average (28 days)[142]. ***Public procurement*** processes seem to be well organised but often remain complex. On average, companies have to invest slightly more time than on EU average when participating in a public tender[143].

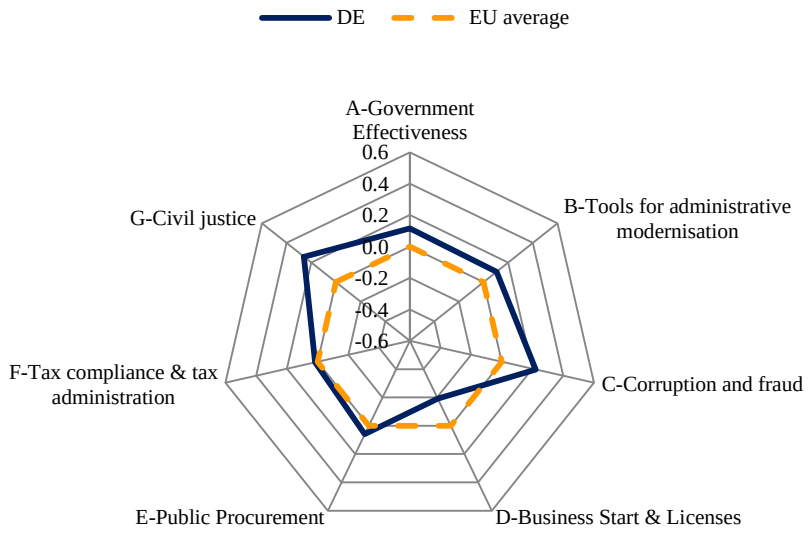
Germany has made progress over the last years in reducing the costs and time of ***business start-up and licensing procedures***. The time required to start a business and the administrative costs are broadly in line with the EU average, but there is still room for further improvement[144]. Moreover, fully operational One-Stop-Shops for starting a company do not yet exist in all Länder.

Overall, the ***German tax system*** is rather complex. The average time required to comply with tax obligations (221 hours) exceeds the EU average (208 hours). While Germany still scores slightly better than the EU average in terms of the tax compliance burden[145], in particular SMEs would benefit from further simplifications. The tax compliance burden weighs disproportionally high on SMEs, since they have less resources and expertise than large companies. The 2011 Tax Simplification Act *("Steuervereinfachungsgesetz 2011")* has introduced some further improvements and simplifications, for example regarding electronic invoicing. Despite the complexity of the tax system, the public authorities are quite efficient. The corresponding administrative costs measured in per cent of tax receipts are smaller (0.8 %) than the EU average (1.3 %).

135 Monopolkommission, www.monopolkommission.de.
136 Monopolkommission.
137 BMWi, *Eckpunkte zur Änderung des Postgesetzes*, www.bmwi.de.
138 Monopolkommission.
139 National Reform Programme 2012.

140 Doing Business Report 2012, World Bank.
141 Government Effectiveness indicator, World Bank.
142 European Payment Index, Intrum Justitia.
143 Cost and effectiveness of public procurement in Europe, European Commission, http://ec.europa.eu/internal_market.
144 Doing Business Report 2012, World Bank.
145 Paying Taxes Report 2012, World Bank.

Overall profile of public administration



Source: WIFO

While in general the online availability of information and basic public services seems satisfactory, small enterprises in Germany still use ***e-government services*** less often than their counterparts in some other Member States[146]. The federal government intends to pass legislation in this legislative period with the aim of increasing the availability of e-governance services.

The ***civil justice system*** in Germany is perceived as particularly independent and efficient[147]. Enforcing contracts in Germany takes less time in comparison with the EU average (394 days vs. 556 days) and is less expensive (14.4 % of the value of the claims compared to 20.6 % in the EU). The time to resolve insolvency issues (1.2 years) is also shorter than the EU average (1.95 years)[148].

3.5.7. Conclusions

The impact of the crisis has been less harmful to the German economy than initially expected. This is due to a large extent to the German industry's favourable position with respect to competitiveness, a strong orientation towards international markets, a resilient labour market, the absence of a serious credit crunch and an overall favourable business environment.

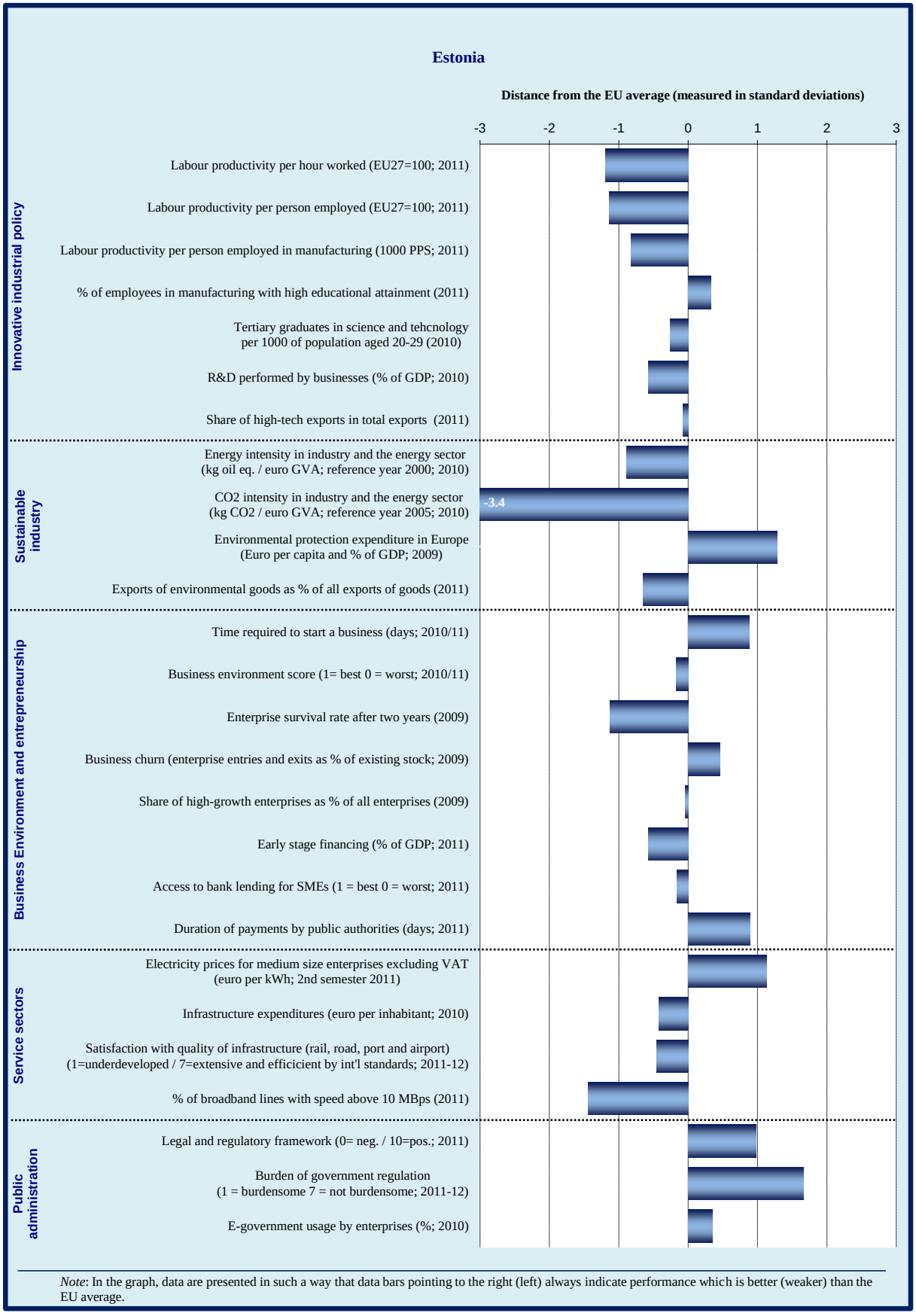
Germany is among the innovation leaders in the EU and the framework conditions are conducive to R&D and innovation. The capacity of Germany's industry to innovate and to remain at the technological frontier is of increasing importance in securing Germany's competitive position also in the medium and long term.

An important challenge will be to avoid a systematic skill shortage by adapting both the educational system and labour market to the changing requirements of technology and innovation. The declining number of entrepreneurs could also have a negative impact on Germany's economic growth and innovation performance.

The new energy strategy creates important opportunities for growth, but also entails considerable challenges regarding the overall economic costs and the timely deployment of the required infrastructure.

146 Survey on ICT use, 2011, Eurostat.
147 Global Competitiveness Report 2012, World Economic Forum.
148 Doing Business Report 2012, World Bank.

3.6. Estonia



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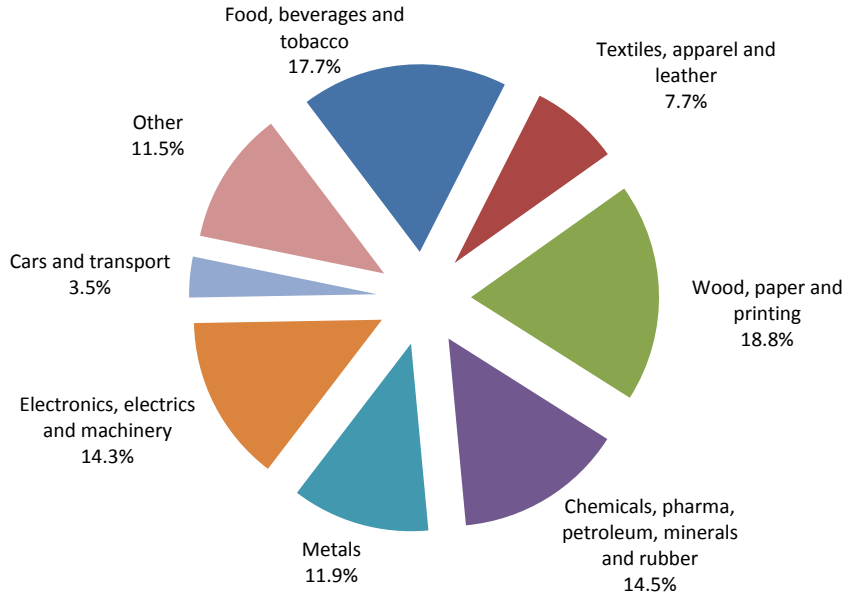
Sectoral specialisation of manufacturing – Estonia (2009)



Source: Eurostat

3.6.1. Introduction

Estonia is one of the countries that are catching up fast: it has a highly developed e-government, a SME-friendly business environment and is highly supportive of entrepreneurship; manufacturing production has regained the ground lost during the crisis producing 17.3 % of value added (EU average is 15.5 %). However, Estonia has a weak innovative business culture with low R&D intensity; it has relatively lower income levels and a relative specialisation in labour-intensive industries. In general, Estonia is improving its competitiveness and, if it keeps momentum, it will join the group of higher income countries that are specialised in labour-intensive industries.

In terms of trade and industry specialisation, Estonia's rapid recovery in industrial production has been driven by manufacturing of food, electronic products and equipment, wood products, fabricated metal products, motor vehicles, electrical equipment as well as machinery and equipment, 70 % of which were sold on the external market. Estonia's main trading partners are Sweden and Finland, Russia, other Baltic States and the rest of the EU. While Estonia still has sectors with low or medium innovation and education intensity and predominantly exports low-to-medium tech products, it has been climbing the technology ladder thanks to dynamic medium-to-high tech exports.

3.6.2. Innovative industrial policy

Estonia ranks slightly below the EU average according to the 2011 Innovation Union Scoreboard. In spite of the government's efforts to create competitive framework conditions for businesses innovation, Estonia has no clearly formulated industrial policy and its R&I system appears too fragmented. To increase its competitiveness, Estonia needs a comprehensive innovation strategy that would allow the identification of knowledge-intensive sectors that could push the country up on the value chain.

The R&D intensity target of 3 % of GDP in 2020 is achievable only if business R&D grows significantly and Estonia is able to attract more R&I intensive foreign direct investments. Despite recent improvements, only about 10 % of Estonian companies are active in R&I. The support and investment tools available for fast-growing innovative firms include: KredEx technology loan, the Estonian Development Fund pilot programs, a start-up programme supporting innovative companies, and the 'start-up Estonia' pilot scheme aimed at training fast growth start-ups on how to get funding from the market. However, the current grants are aiming at cutting edge technology and therefore have fewer candidates among companies. To remedy this, Enterprise Estonia has launched a new program supporting innovation in the manufacturing industry; KredEx is also offering a simpler loan scheme with a lower technological threshold but targeting technological upgrade. There are no specific tax measures acting as incentives for companies to invest in R&I, but the

retained profits of firms are not taxed, thus encouraging investment in general.

Cooperation between academia and business continues to be weak; hence the need to significantly encourage the exploitation of research results by the business sector, particularly for boosting the productivity of existing industries. There has been some progress in terms of technology transfer: the number of patents and industrial designs has increased, in part as a consequence of the six technology transfer offices operating in universities (part of the Spinno programme). In general, neither universities nor the twelve excellence centres engaged in academic research have enough incentives to promote an efficient commercialization of research output, in spite of the fact that they own the intellectual property rights. In an effort to undertake industrial research and develop innovative products, eight competence centres, co-financed by companies, have been created; some of their products have been already released on the market. The government is planning to evaluate these centres against their work programme and cut financial support in cases where progress is insufficient.

On the demand side, the innovation vouchers program, intended to open the doors for SMEs towards R&I, has been extended: the price is now 4 000 EUR/voucher, limited to one per company. The list of R&D providers has been extended to include private entities – i.e. competence centres – and the possibility of including designers is being studied. However, while universities and companies seem satisfied by the program, its real impact has not been thoroughly evaluated.

In terms of the skills gap, there is still an insufficient supply of scientists, engineers and ICT professionals, which also constitutes a hindrance for foreign R&I investments. In order to increase the level of highly skilled graduates, the government initiated an 'industrial PhD scheme' two years ago, whose final impact still cannot be estimated. In addition, the Estonian Development Fund has initiated an IT Academy and the Chamber of Commerce has been campaigning to raise awareness about vocational schools, as these are historically not well regarded in Estonia. Further, a matching portal that intends to bring Estonian talents back home has been started in 2011, with 11 people (out of 500 subscribers) returning as a result of using this service.

3.6.3. Sustainable industry

Estonia needs to step up its efforts to promote greener growth, as it has an industry with high energy intensity, high CO_2 emissions, and high dependence on non-renewable resources, as most electricity is generated by oil shale. However, the share of renewable energy has been growing in recent years, as Estonia has been developing a renewable energy support scheme, in spite of the fact that the transposition of EU legislation on renewable energy (and the electricity and gas sectors) is lagging behind. Most environmentally friendly tools are co-financed by the Environment Investment Fund.

Estonia still suffers from high dependence on imported energy from Russia and a relative isolation from the EU gas and electricity networks. The construction of the Estlink 3 marine cable ensuring an electricity interconnection with Finland has been started in 2011. In addition, the first stage of the Tartu-Sindi high voltage line has been completed. Estonia is considering some supply diversification through the participation in a regional LNG terminal as well as strengthening the energy interconnection with Latvia.

In order to reduce GHG emissions and improve energy efficiency, particularly in the building and transport sectors, Estonia has made some investments, including from the sale of CO_2 permits trading. Most notably, some 500 electric cars have been distributed to social workers and the government plans to complete the charging infrastructure by 2012. In terms of public transportation, some 18 new electric trains have been acquired and the upgrading of the rail at the Russian border has started. There are some plans to introduce environmentally friendly trams and buses, start the works on the main Tallinn-Tartu highway and in the Eastern parts of the country, acquire a more fuel-efficient air fleet and expand the national airport; however, these plans need to be materialized in due course. Further, the energy efficiency of some blocks of flats and public buildings is being improved through a building renovation program that started last year. In spite of this progress, there is a modal shift of passenger transport from public transport towards private cars (a volume decrease of more than 10 %), and of freight transport from rail to road. Consequently, the National Energy Efficiency Action Plan should effectively address the need to make the public transport more efficient. Further, a commitment to the 'Rail Baltica' project, which foresees a double track electrified line connecting Poland, Lithuania, Latvia, Estonia and Finland, would increase the modal share of a more sustainable rail freight and passenger transport.

In terms of co-generation of heat and electricity, the gradual decommissioning of 3 oil shale plants that will be partially replaced with biomass plants has started last year. The most pressing problem

remains the renovation of district heating networks, as they have areas entailing losses of up to 50 %; the problem is exacerbated by municipalities lacking the capacity to oversee district heating.

One of the main environmental challenges in Estonia is waste management: the discharge of waste generated by oil shale (70 %) needs to be reduced. While 4 landfills have been closed and some 70 contaminated sites are being cleaned up, there are hundreds of smaller sites left from the Soviet era that need to be tackled. While the state-owned Estonian energy company is planning to invest in a waste incineration co-generation power plant in 2013, municipalities lack the capacity to oversee waste collection.

3.6.4. Business environment

The *OECD Economic Review* considers Estonia to be a dynamic business environment with good network readiness, as well as high levels of corporate governance and transparency. Estonia's entrepreneurship-friendly business environment is strongly supported by e-government – one of the best in Europe.

In general, access to finance remains tight in Estonia: loan volumes dropped by 5 % in 2011, in spite of the fact that the number of lenders increased by 12 %, leading to a healthier competition between banks. On the one hand, banks have become more risk-averse – the loan rejection rate is approximately 30 %. Moreover, some companies are involved in the informal economy and tax evasion, being therefore unable to secure traditional financing. At the same time, smaller companies and start-ups complain about banks becoming stricter in terms of required collaterals. On average, microenterprises seem to have a much harder time accessing financial support schemes.

Estonia has made some progress in developing programmes financed with structural funding and state support. Approximately 130 companies have benefitted from start-up loans, as well as export guarantees offered by KredEx, whose number of credit guarantees for loans has increased 3.5 times. Further, Enterprise Estonia provides business plans advice and has offered some support financed through the European Social Fund: a EUR 7 000 start-up grant and a EUR 32 000 development grant for companies up to 3 years old focused on fast growth; a new 'start-up Estonia' scheme is being started, aimed at coaching start-ups on getting funding from the market. However, a 2010 Report by the National Audit Office, cited by *OECD Economic Surveys: Estonia 2011*[149], argues that enterprise support is inflexible and fragmented, benefiting only a few companies, while support policies have not been focused on whether the distributed funds have created any permanent development benefits.

In terms of venture capital, the Estonian Development Fund is specialized in early stage (seed and start-up) venture capital investment. So far, the Fund has the biggest early stage investment portfolio in Estonia (EUR 7 million) with 15 investments; in general, investments must be made together with private investors, only for equity expansion, and in exchange of a holding of 10-49 %. A new venture capital targeting seed and start-up financing is under discussion – the Baltic Investment Fund, supported by the European Investment Fund (EUR 40 million) – but the commitment of both Latvia and Lithuania is not entirely clear yet; Estonia has already announced its support for the initiative (EUR 20 million).

When it comes to access to foreign markets, about 15[150] Estonian start-ups (mostly in biotech and ICT) have obtained financing in the UK and/or the US. The Export Revolution Program has had some initial success: the first 24 export managers that were matched with companies lacking international experience are still employed; the second offer of another 25 export manager places had 500 applications, which shows room for program expansion. On the contrary, the program supporting the hiring of foreign engineers and developers has had more limited results, as only approximately 25 foreign export managers were hired. In addition, the Chamber of Commerce has set up an Export Academy offering training and export awareness services. Further, Estonian companies are encouraged to participate in international trade fairs and explore foreign markets: currently, five Estonian enterprises are supported in their efforts to enter the Chinese market.

Estonia supports entrepreneurship through a set of targeted measures. In the educational system, entrepreneurship is offered as an elective in five universities and will be introduced as mandatory in secondary education starting with 2013; students can also participate in an 'entrepreneur shadowing' programme. In addition, the competition for business ideas is being continued and a new initiative – 'Garage 48' – has been designed to build a company/prototype in 48 hours.

[149] OECD (2011), OECD Economic Surveys: Estonia 2011, OECD Publishing. http://dx.doi.org/10.1787/eco_surveys-est-2011-en, page 123-124.

[150] A considerable number given Estonia's size.

Given Estonia's geographical position, transport and transit are crucial for the economy. While the coverage of infrastructure networks is in general adequate, its quality could be improved.[151] Further progress could be made in increasing the interoperability of transport systems, the availability of intermodal connection points (especially those linking ports and railways), and upgrading the infrastructure of hubs, especially in border sections. Public transport faces several problems, such as: a fragmented market approach, an inadequate quality of the services, an ineffective subsidising system and a poor state of the fleet.

3.6.5. Services sector

Services are quite a significant part of the Estonian economy and constitute approximately 18 % of total imports and 24 % of total exports. IT seems to be the most competitive sector – exports increased during the crisis by 12 % in 2009 and 16 % in 2010 – followed by telecommunications, financial services and retail. The number of regulated professions in Estonia is quite low. As far as competition is concerned, the efficiency gains from having merged the 3 competition authorities into one are not yet apparent.

3.6.6. Public administration

In terms of the overall performance of the public administration, Estonia is at the EU average, as measured by the World Bank's Government Effectiveness Indicator. Similarly, the perceptions of the quality of public services and policy implementation, respectively, are at the EU average. However, Estonia scores significantly better than the EU average in terms of tools for administrative modernisation, which is mainly due to the expansion of business related e-government services.

Corruption seems to be a relatively minor issue in Estonia: 'diversion of public funds' occurs seldom, and the experience of corruption reported by individuals is only half the EU average. Estonia ranks in the top group of Member States in terms of licenses and starting a business; the time required to start a business is half the EU average and the corresponding cost is approximately a third of the EU average.

Payment delays from public authorities are just 10 days compared to an EU average of 28 days. Further, Estonia is considerably above the EU average in terms of tax compliance and tax administration efficiency: it takes only 85 hours per year to pay taxes in Estonia, compared to the EU average of 208 hours. As for the efficiency of civil justice, Estonia is at the EU average.

Recent initiatives

The government has set the target of reducing administrative burden by 20 % in 2014 in 4 sectors: permits & licences, environment, construction and social services. The obligation to submit annual reports and tax returns electronically has reduced the burden on companies by 29.7 %, according to the government. E-invoicing has started to be used by public authorities, but further expansion is hindered by the high costs of digitalization. Email notifications on VAT liabilities are sent to companies, which has reduced the number of companies being late. The government is planning to further expand e-services by further increasing the availability of electronic pre-filled tax declarations and creating an application for smart phones. However, the e-bookkeeping platform is not operational yet, as the project seems to have stalled at the Ministry of Justice. Recently, Estonia has prohibited the duplicate collection of the data included in companies' annual reports: the Business Register is using an electronic data transmission system for submitting annual reports, and government authorities cannot request any of such data that has been already submitted.

The law on public procurement has been amended, such that e-procurement for at least 50 % of tenders becomes mandatory in 2013. In an effort to increase transparency, procurements above EUR 10 000 must be announced in the public procurement register and companies are required to draw up a procurement plan every year. However, the participation of companies is rather low, in part due to a frequently changing and rather complex procedure. According to the *2012 Report of Transparency International*, the capacity of the body overseeing public procurement is severely limited, compared with the body monitoring the use of EU structural funds, which poses an increased corruption risk.

Estonia has indicated its intentions to extend the powers of the Tax Office to fight tax evasion. In 2011, Estonia adopted a package of legislative proposals that reduce the tax burden on labour, provide incentives to increase participation in lifelong learning, and reduce incentives to borrow; the fringe-benefit tax on work–related studies has been abolished as of 2012. In addition, Estonia enacted the first stage of a comprehensive reform of the preferential excise taxation system for motor fuels, narrowing the scope of application of the reduced excise rate; this measure is intended to

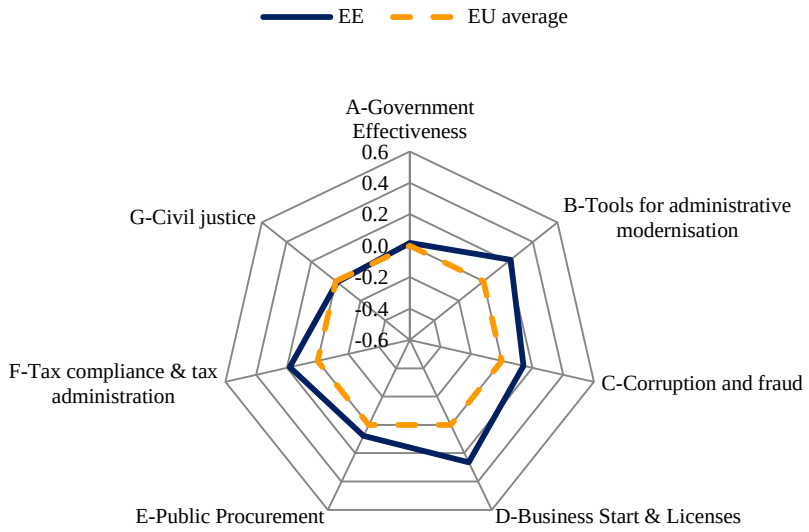
[151] The World Bank Global Logistics Performance Index ranks Estonia as 43rd, weakest point being infrastructure.

reduce market distortions, minimise fraud and create incentives to improve energy efficiency.

Despite this progress, a few areas still remain problematic. The current rules for accepting/rejecting construction and planning permits are still confusing and interpretable, and it is not clear if the amendments of the Construction Law, to be enforced in 2014, tackle this issue. While a new regulatory impact assessment system has been introduced in 2012, its implementation is less advanced. In spite of the fact that the Reorganization Act has been amended, little progress has been achieved to make insolvency processes faster and cheaper.

The comprehensive reform of the legal system has produced good results, and a new Public Service Act has been adopted by Parliament, coming into effect in 2013. This civil service reform aims at increasing the openness, flexibility and transparency of the public service.

Overall profile of public administration



Source: WIFO

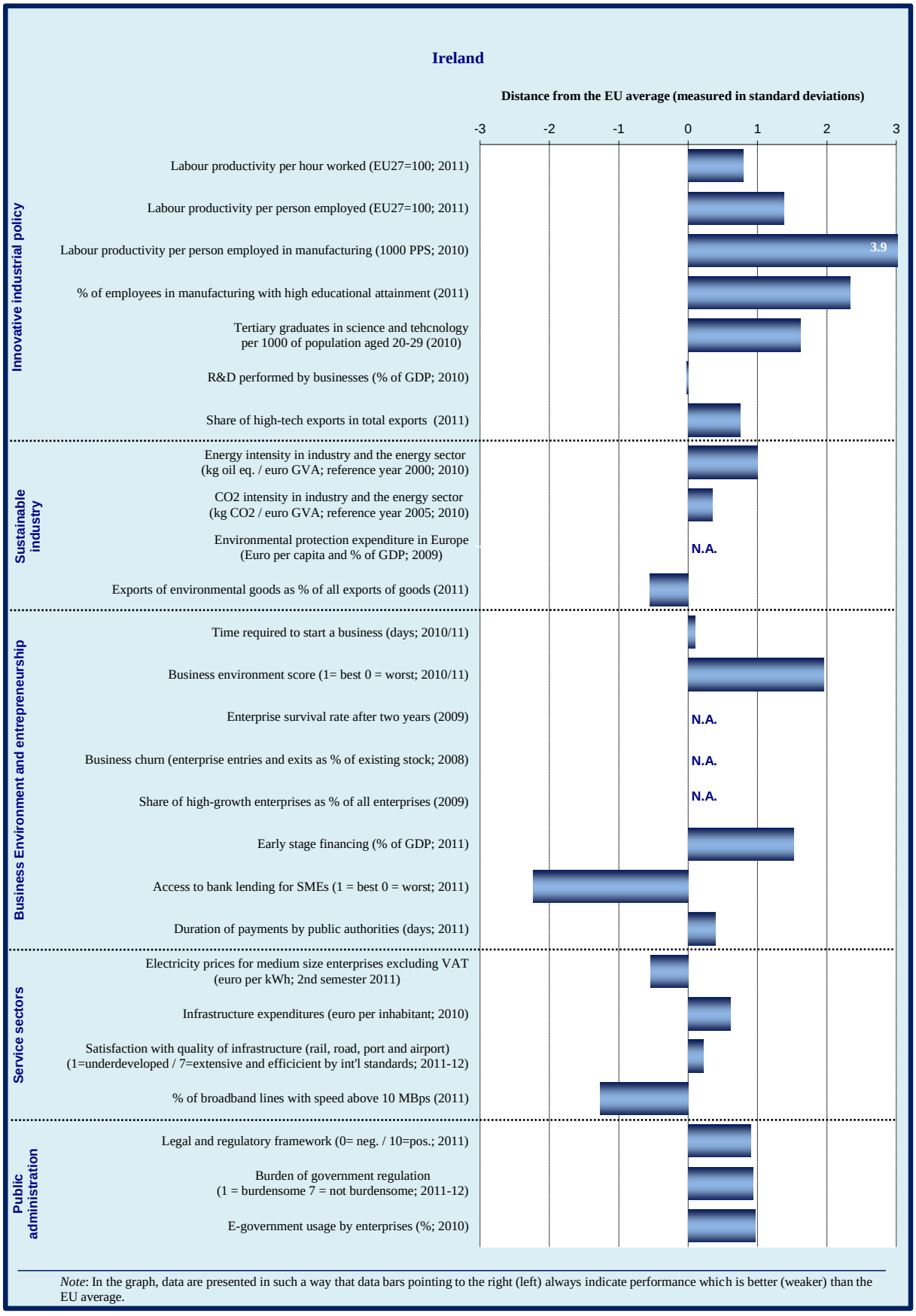
In terms of local administration, a comprehensive reform remains outstanding, as there is a need to ensure a better provision of public services. Local resources are currently dispersed and local authorities do not have the capacity needed to handle projects financed through EU structural funding.

As for fighting fraud and corruption, a new Anti-corruption Act is currently in Parliament. It aims at widening the scope of the e-register to include declarations of interests from civil servants, local authorities and enterprises. In addition, there is no legislation for regulating lobbying and protecting whistle-blowers, which, according to Transparency International, weakens the quality of the integrity system in Estonia.

3.6.7. Conclusions

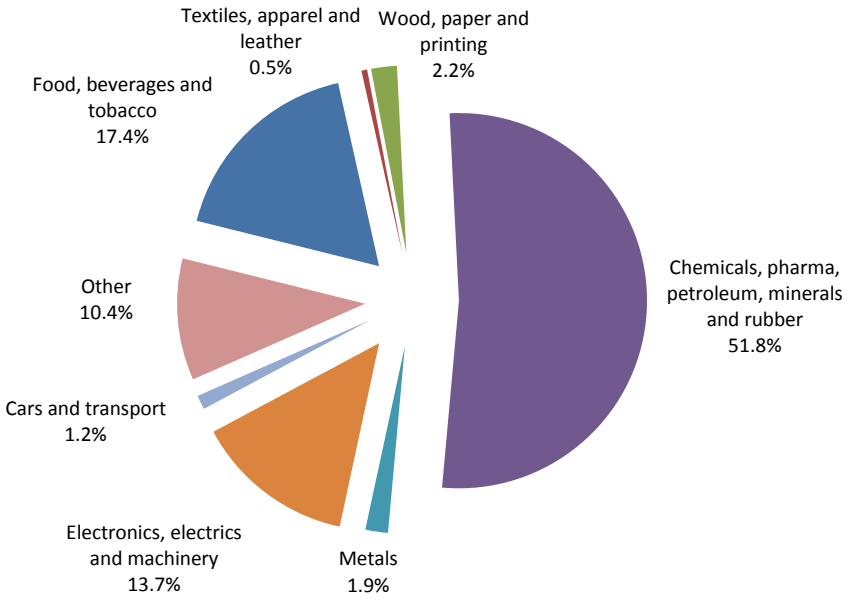
Estonia has a well performing business environment, supported by strong e-government and a developed culture of entrepreneurship. In order to increase productivity and thus improve its competitiveness, Estonia should promote a coherent industrial policy and a systematic and comprehensive research and innovation strategy. Particular attention could be paid to the following: encouraging companies to innovate and better exploit the resources offered by universities and research institutes, improving access to finance and creating a more competitive environment, increasing the supply of high-skilled labour according to market needs, and improving training schemes, and promoting greener growth by continuing to increase the share of renewables and modernizing the infrastructure. At the same time, Estonia's share of higher value added products and services, in particular in exports, could be further raised. Finally, cooperation opportunities in the Baltic region could be exploited in a more fruitful way.

3.7. Ireland



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Ireland (2009)



Note : No data available for sectors C12 (tobacco products), C19 (coke and refined petroleum products) and C31 (furniture)
Source: Eurostat

3.7.1. Introduction

Ireland has a diversified economy with a strong manufacturing base that produces 25.8 % of total value added (the EU average is 15.5 %, 2011). However, the economy has two distinctive parts: the export-oriented and technology-driven part (including information technology, medical technology, pharmaceuticals, and chemicals), and the domestic, small business sector that is less innovative, less technology-oriented, and exports less. The key challenge for Ireland is to improve the prospects of these domestic firms.

The technology-driven multinationals, in particular in the chemicals and pharmaceuticals sectors, are driving the high labour productivity improvements in Ireland. However, it should be noted that the extremely high labour productivity figures are to some extent inflated by research and marketing activities undertaken mainly outside Ireland, as well as by transfer pricing.

3.7.2. Innovative industrial policy

The difficult economic situation has continued to have an effect on Irish research and innovation. Business expenditure on research and development fell about 2 % between 2009 and 2010, driven by a decrease in the foreign affiliates. Although research spending by the indigenous firms rose by 3.6 %, the foreign affiliates continued to spend about two thirds of the total[152]. To address this discrepancy, the R&D tax credit has been made more flexible and SME friendly by the Government. The headline target for R&D investment is 2 % of GDP and Ireland is on track towards the goal.

The policy response was spelled out in the Irish strategy for science, technology and innovation for 2006-2013. One of the recent achievements is the Innovation Fund Ireland that seeks to support the development of a vibrant venture capital market. The use of technology transfer has increased considerably since 2007 when Enterprise Ireland started a programme for this. In 2011 the overall number of spin-out firms was 30, with 95 technology licences issued. Recommendations on managing intellectual property, based on good practices have recently been published.

A number of partial evaluation reports of the strategy have been published, but there are no plans to conduct an overall evaluation of the national innovation system.

A new research prioritisation report was published in March 2012. It identifies 14 priority areas, with an added focus on increasing the efficiency and effectiveness of the Irish science, technology and innovation ecosystem. The priorities are to be complemented with an implementation focus on coherency, monitoring, cooperation with industry, and upgrading of skills as part of initiatives aiming

[152] http://www.djei.ie/publications/science/2011/SSTI_Indicators_December2011.pdf .

to accelerate the commercialisation of research, in particular through cooperation with businesses.

Ireland's well-educated workforce has continued to expand as the number of science, engineering and technology postgraduate students has increased by 33 % between 2005 and 2010. The Government has this year also allocated EUR 20 million to a new Education and Training Fund to retrain long-term unemployed.

The Government has introduced a new 'Procuring Innovation' initiative which focuses on procuring solutions to cover needs, rather than prescriptive products or services. This practice of purchasing often favours SMEs, as they can have innovative solutions, and SMEs' access to public procurement seems already to be improving.

The widely recognised policy challenge is to continue to improve the financial and managerial capacity, and ambition, of indigenous companies to research, innovate and to turn these into growth.

Overall, the policy response on research and innovation currently being implemented is comprehensive, but the number of strategies and priorities might lead it being too fragmented, with diminished efficiency and effectiveness[153]. To make sure that this is not the case, and to enable a sharper policy focus, a comprehensive evaluation of the innovation system and related past policies should be carried out and efforts focused on the most successful policies.

3.7.3. Sustainable industry

The use of environmental technologies in Ireland has increased in waste and energy use, in particular in the food industry; and energy efficiency has improved in the engineering sector. However, there is potential to increase awareness about sustainability issues among Irish firms. At least for smaller firms, the adoption of cleaner technologies largely depends on demand pull from customers (whether other firms or consumers), and even here awareness-raising might be useful.

There is a series of programmes seeking to provide support for greener businesses, including the 'National Action Plan on Green Public Procurement' that addresses the purchase of energy-using products, energy services, and capital projects.

Concerning the use of energy, the Irish energy intensity is lower than the EU average, reflecting structural changes in the economy, in particular the trend towards higher value added goods like pharmaceuticals, electronics and high-value foods. Further improvements have been obtained from fuel mix changes and energy efficiency improvements. Over the period 1995 to 2010, the energy intensity of industry fell by 54 % (5.0 % per annum). However, if the structural change had not occurred, the annual fall in energy intensity would have been only one-tenth of this.[154]

Despite the progress achieved in the environmental performance of the Irish industry, there is considerable potential for Ireland to get the indigenous firms to grasp the opportunities a comprehensive greening of the economy.

3.7.4. Business environment

Access to finance

The severe banking crisis has had a considerable influence on SMEs' access to finance. Although the low level of final demand has led to a sharp contraction in investment, many SMEs also signal that they find access to working capital difficult. The Irish rejection rate for credit applications is the second highest in the euro area, and Irish SMEs are among the most likely to have faced increased collateral requirements, increased interest rates, and lower loan amounts.

The Irish credit demand would seem to be close to the euro area average, as measured by changes in firms' reported need for external financing. Application rates for credit are slightly lower than the EU average. The difference between Ireland's ranking on demand and application rates is partly explained by a share of discouraged borrowers, who need loans but have not applied for credit. For Ireland, this figure is double the euro area average.[155]

The Credit Review Office was set up in 2010 to resolve disputes between banks and their SME clients about loan refusals. Although the absolute number of cases reviewed has been relatively small (197), the banks have become more careful as a result of its existence. Of the cases where a decision

[153] See the chapter on Innovative industrial policy.

[154] Energy in Ireland 1990-2010, http://www.seai.ie/Publications/Statistics_Publications/Energy_in_Ireland/Energy_in_Ireland_1990_-_2010.html .

[155] European Commission and European Central Bank Survey of Access to Finance of Small and Medium Enterprises (SAFE) http://ec.europa.eu/enterprise/policies/finance/files/2011_safe_analytical_report_en.pdf; the Mazars SME lending demand survey commissioned by the Irish Department of Finance http://www.finance.gov.ie/documents/publications/reports/2012/mazerssme.pdf

has been reached, over half of the bank decisions contested have been overturned.

The Government has set lending targets of EUR 3.5 billion in 2012 and EUR 4 billion in 2013 for the two largest Irish-owned banks. The 2011 lending targets were achieved, but 2012 is proving to be more difficult. Banks have been slow in reorienting their practices from lending against real estate collateral to lending for general business purposes, while SMEs have had to adjust to providing a greater volume of information needed for banks to make cash flow-based analysis. To improve the decision-making processes and to facilitate SMEs' access, four banks have introduced a standardised application form for SME loans and are training front-line staff on SME credit issues. The Government has also taken upon itself to further address the problem through actions that seek to contribute to informed lending decisions at the banks, improved sectoral expertise and better lending products.

These are included in the 'Action Plan for Jobs 2012'[156], and the Government has already launched actions to provide capital for high-growth firms; partial guarantees for business loans; allocated funds for the delivery mechanism of the micro-lending scheme; and increased investment in private venture capital funds. Further action is scheduled for strategic investment, and improving the quality of loan applications.

Irish legislation mandates a 30-day payment period for business payments (unless otherwise specified), but this is not enforceable and the average payment period between firms in 2012 is 66 days, causing problems for many SMEs. For public sector payments there is a code of paying suppliers within 15 days. The Government has also requested business organisations to introduce guidelines on prompt payments charter.

Overall, access to finance continues to be one of the weak points of the Irish business environment. It remains to be seen how quickly and to what extent bank lending recovers, and whether complementary financing options emerge when Irish SMEs start to invest again. The government should follow developments closely and, if need be, intervene with supportive policy measures.

Regulatory and support environment

Despite the business-friendly regulatory environment, SMEs are concerned about the rising costs of doing business, including rates for energy, transport, refuse collection, and municipal taxes. Despite the high unemployment, skills gaps have been emerging for some businesses

Exports of the SME sector are mainly going to the UK, and lack of language and management skills have been hindering further export efforts. The Government is attempting to provide more targeted support for SMEs, particularly in terms of assisting firms to access new markets, and identifying businesses with growth potential at an early stage.

Key measures in the 'Action Plan for Jobs 2012' include establishing a new Potential Exporters Division within Enterprise Ireland to target potential exporting companies, and the setting up of a new one-stop-shop support structure by creating a new Small Business Unit in Enterprise Ireland and a new network of Local Enterprise Offices. These measures are in line with the objectives of Europe's Small Business Act (SBA) and should have a positive impact on the small business sector.

Export promotion assistance for indigenous SMEs is being complemented by efforts to attract inward entrepreneurial start-ups through specific cooperation between Enterprise Ireland and the Industrial Development Agency, an initiative designed to complement targeted inward foreign direct investment from larger firms. Enterprise Ireland supported 93 new high-potential start-ups in 2011 and approved EUR 20.4 million in funding.

Policy initiatives focusing on improved SME participation in public procurement include the lowered minimum values for public contracts and reduced company size restrictions. In addition, a new Procuring Innovation initiative is intended to focus on procuring solutions to specific needs, rather than being limited only to pre-defined products or services.

In conclusion, the Government has identified most of the areas that Irish businesses and their organisations have identified as problematic. The actions of the 'Action Plan for Jobs 2012' are a reasonable attempt to address these problems, but the challenge is to ensure coherent and efficient implementation of the plan, in particular keeping enough flexibility to increase focus on measures that are working well.

3.7.5. Services sector

Improving the implementation of e-government initiatives continues. Telecommunication services are competitive, which has driven mobile prices lower despite the consolidation towards only four operators. However, the spread of broadband is hindered by a lack of business demand, especially in areas with low population density.

[156] http://www.djei.ie/publications/2012APJ.pdf .

The Act liberalising postal services was enacted in August 2011 and competing courier services have started to appear on the scene. The Government policy is to keep An Post as a strong participant in the marketplace.

High dependence on imported fuels and past underinvestment in distribution networks have kept electricity prices relatively high. However, recent investment in the network, increased competition, the single market with Northern Ireland, and the deregulation of electricity markets have improved the situation. The customer charter of the electricity company promises a connection in 14 days and customer surveys indicate an 80% satisfaction rate on the service.

The Government has indicated that it sees the motorway infrastructure substantially complete, and the 'Medium Term Capital Investment Framework 2012-2016' prioritises health, education and water services. On the rail network, provision of freight and international passenger services have been opened to competition, but Irish Rail is still the only operator. The separation of the provision of essential functions for rail infrastructure is planned for before March 2013.

3.7.6. Public administration

The public administration of Ireland performs better than the average of other studied Member States, but the progress in the use of administrative modernisation tools (e-government, impact assessments, performance and service orientation, accountability) is uneven. On one hand, Ireland has a comprehensive set of business-related e-government services, and the use of regulatory impact assessments is sophisticated. On the other hand, the internal management methods of Ireland's public administration are traditional, in particular in human resources.

Further development of e-government services is outlined in the 'eGovernment 2012-2015'[157] plan, requiring that information and transactional services are easily identifiable, and that e-procurement, e-invoicing and e-payment facilities are expanded to new devices. The Government is will also make data (e.g. on environment, transport, education and crime) held by public bodies available and easily accessible for reuse and redistribution.

Despite past cases of corruption and fraud, currently indicators do not point to problems in this area. The perceptions-based indicators on irregular payments and on the diversion of public funds are better than the EU average and individual corruption has been experienced in only 2 % of the cases.

Ireland also performs well in starting up a business and obtaining licenses. The time required to start a company is 12.3 days (World Bank measure), which is slightly below the average (13.7 days), and the costs are substantially lower (0.4 % as compared to the average of 5 % of income per capita). In line with this, the overall licensing complexity is low despite the fact that there is not yet a fully operational one-stop shop.

Public procurement procedures are efficient and it takes 15 person days per firm and per tender to participate, which puts Ireland above the EU average of 16.6 days. The typical cost of taking part in a tender is smaller (0.13 %) than the EU average (0.19 %). The average payment time is 13 days compared to the EU average of 28.3 days.

On tax compliance and tax administration Ireland is among the top performers. The average time to prepare and file tax returns is 76 hours (EU average is 208 hours). The administrative costs of taxation per 100 units of revenue collected are 1.1 % (EU average is 1.3 %).

The civil justice system score is better than average but there is scope for improvement. Both the time (650 days) and the costs (26.9 % of a claim) of enforcing contracts are high[158]. However, resolving an insolvency only takes 0.4 years, which is significantly faster than the EU average (1.95 years). The perceived independence of the judiciary is high.

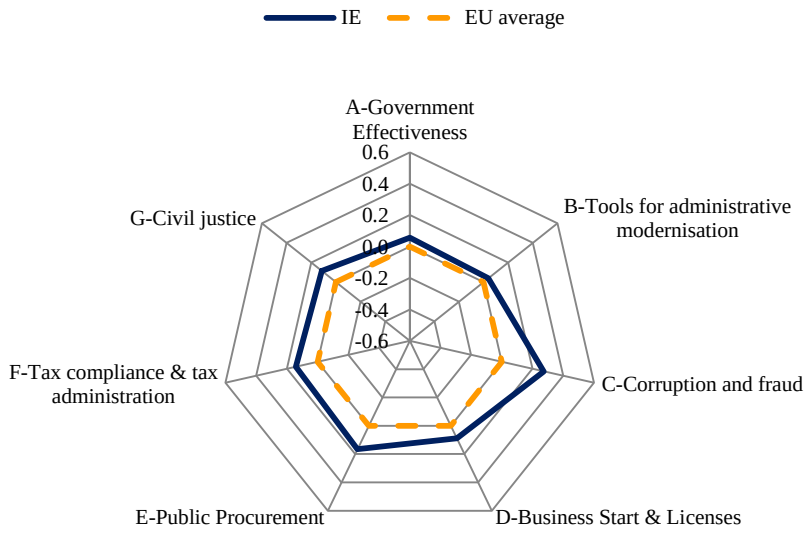
The costs and uncertainty of using the judicial system, including many courts' limited understanding of business issues have been identified as problems by SMEs. As part of its Euro Plus Pact commitments, the Government has proposed liberalisation of the legal profession, likely to be enacted in 2012. Taken together with a price transparency initiative, this could over time lead to lower costs and more efficient legal procedures[159], including the time and costs of contract enforcement. In addition, the Government has drafted a 'Mediation Bill' to promote mediation as an alternative to court proceedings, reducing legal costs and speeding up dispute resolution.

[157] http://per.gov.ie/wp-content/uploads/eGovernment-2012-2015.pdf .

[158] World Bank indicator in 'Doing Business' — here Ireland is weighted down by the duration of the due diligence performed by the lawyers of the contracting parties. On the other hand, high-value commercial cases are dealt with by specialist judges in the Commercial list of the High Court, which can be quick.

[159] More competitive legal services should reduce the time spent in registering property (World Bank indicator).

Overall profile of public administration



Source: WIFO

The Government's plans for reforming the public service[160] are largely driven by the need to reduce the number of public servants so that gross pay expenditure would be 15 % lower in 2015 than it was in 2008. The plan also is to rationalise state agencies, use shared and e-services and otherwise streamline the public administration. It is important that this is done without detrimental effects for users of the public services.

3.7.7. Conclusions

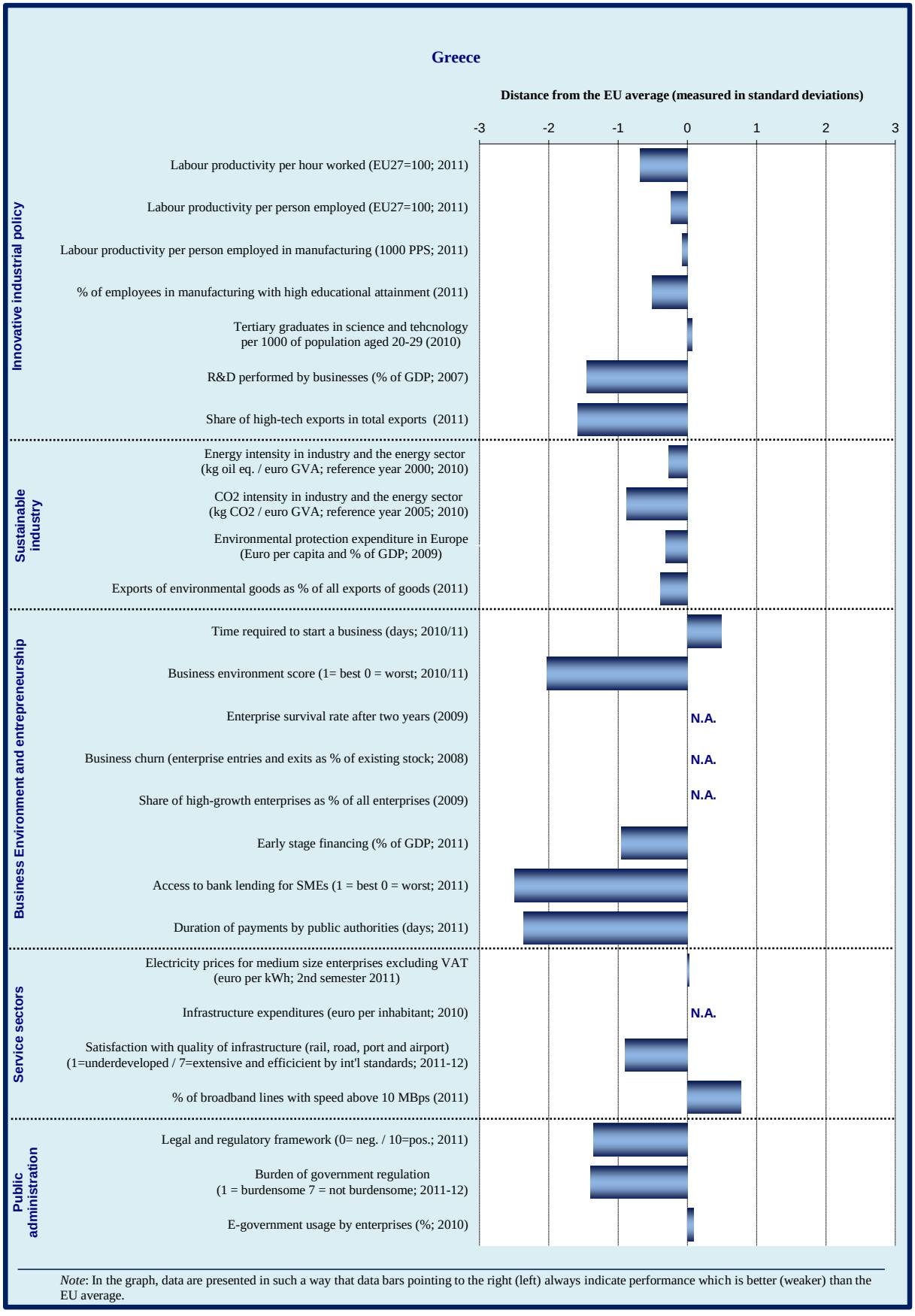
Ireland has made good progress in achieving the goals of the Memorandum of Understanding guiding its adjustment programme, and despite the remaining challenges, these efforts have contributed to the improving business prospects and strengthening competitiveness.

The Government faces the challenge of improving the prospects of the domestic sector. The indigenous sector is held back by weak domestic demand, relatively weak innovation, problems with access to finance, and rising costs of doing business at local level. The government should keep a close eye on access to finance, as improvement in this area is crucial for future growth.

The Government's answer has been the 'Action Plan for Jobs 2012' that contains over 270 actions, a detailed timetable for their implementation and quarterly implementation reports. The breadth of the plan, and the way implementation has started are promising signs that Ireland is making a determined effort to reduce the differences in the competitiveness of the domestic and multinational sectors. The challenge is to avoid the fragmentation of efforts, and increasing policy focus on the most promising initiatives enhancing innovation and growth.

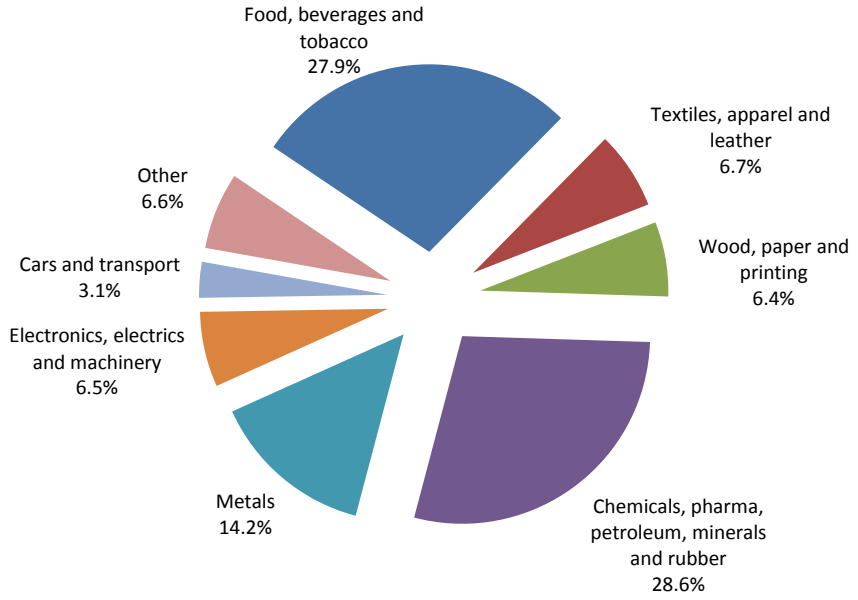
[160] ' Public Service Reform', Department of Public Expenditure and Reform, 17 November 2011.

3.8. Greece



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Greece (2009)



Source: Eurostat

3.8.1. Introduction

The service sector is the primary sector in the Greek economy. Tourism is one of the key sectors both in terms of economic growth and employment. Travel and Tourism supported directly 332 000 jobs or 8.0 % of the country's total employment (3.2 % in the EU), and 768 000 jobs or 18.4 % of total employment if indirectly supported jobs are added (8.4 % in the EU). Manufacturing contributes 9.9 % of the total value added (EU average 15.5 % in 2011), where Greece features strong specialisation in the food processing industry (manufacture of vegetable oils, processing and preserving of fruit and vegetables). Other important sectors are metal, chemicals, cement and textile. The Greek merchant fleet is the largest in the world. Greek ship owners control 15 % of the world's shipping capacity.

Greece has been in recession since 2008, one of the most severe ever experienced by a Member State. 150 000 jobs were lost in SMEs in 2011. In 2012 it is estimated that a further 240 000 jobs will be lost. Unemployment has soared to over 20 %, with youth unemployment above 50 %. 6 out of 10 firms saw deterioration in their earnings in 2011 compared to 2010.

Difficult economic conditions and continuing uncertainty are taking a heavy toll on Greek businesses.[161] Structural reform is a key priority of the Greek government's strategy for economic recovery. The Memorandum of Understanding for economic adjustment includes several commitments which aim to address concerns on the Greek business environment. The recession, aggravated by austerity measures, has made efforts to reduce the deficit ever more challenging.

According to the World Economic Forum Competitiveness Report 2011-2012[162], the three most problematic factors for doing business in Greece are:

1. Inefficient government bureaucracy
2. Access to finance
3. Corruption

The World Bank 'Ease of doing business 2012 Report' [163] ranks Greece 100 out of 183 economies. There are a number of well documented weaknesses of the business environment. Progress has been made with newly adopted legislation, in the context of the adjustment programme, which has addressed competitiveness weaknesses.

The reform impetus, reinforced by the current crisis, has been underlined by the OECD in its report 'Economic Policy Reforms 2012: Going for Growth' according to which Greece has achieved the most considerable progress in promoting reforms from 2008-09 to 2010-11. However, an effort is still needed to open up the economy and continue implementing much needed structural

[161] Entrepreneurship in Greece 2010-2011 – 'Small' Entrepreneurship in a period of crisis, Foundation for Economic & Industrial Research (IOBE), 2012.

[162] http://www.weforum.org/reports/global-competitiveness-report-2011-2012 .

[163] http://www.doingbusiness.org/reports/global-reports/doing-business-2012 .

reforms. Change is essential because the private sector is crucial to re-start the economy and spur growth.

3.8.2. Innovative industrial policy

The dominance of the low-tech sectors, lower value added production and reluctance of the financial sector to finance innovation under the current difficult financial situation, are hindering increased investments in R&D. Greece has fallen to 20th position of the Innovation Union Scoreboard 2011[164]. Based on their average innovation performance, the EU Member States fall into four performance groups. Greece belongs to the third performance group which is below that of the average of the EU27. It is a moderate innovator. The Innovation Scoreboard notes that relatively strong elements in Greek innovation include human resources and entrepreneurship. Greece is lagging behind in finance, firm investments and intellectual assets. To improve its innovation performance Greece would need a new orientation of policies and an environment which is more innovation-friendly.

Due to the difficult economic situation, R&D investments both from the public and private sectors have decreased. EU structural funds are the most important funding source for Greek innovation. In order to bring innovation closer to the market, the General Secretariat of Industry launched in May 2011 the programme 'New Innovative Entrepreneurship". The main objective of the Programme is to encourage a shift from necessity-driven to opportunity-driven entrepreneurship by supporting young companies in the development of both product and service innovations. 1 170 project proposals of EUR 192.9 million were submitted to this Programme. 439 have been positively evaluated, out of which more than half are start-ups.

In addition, during the period 2007-2011, EUR 622 million has been granted to Greek organisations from the Seventh Framework Program for Research and Technological Development. The economic crisis has further weakened the production sector and squeezed access to finance leading to a negative impact of the innovation performance. Many well educated Greeks have moved abroad looking for better work opportunities. It relieves pressure on the job market but some fear it will create a brain drain.

3.8.3. Sustainable industry

Although Greece has a favourable climate, only a small fraction of energy production is attributed to renewable energy sources. Project Helios is a plan for an expansion of Greece's solar power production from 206 MW to 2.2 GW by 2020, and then 10 GW by 2050. The project aims to attract up to EUR 20 billion in investments and is expected to create thousands of jobs.

Several projects have been launched to encourage improved environmental performance, e.g. programmes to promote the development of green products and services as well as improved waste management treatment.

A new law[165] simplifies procedures for environmental licencing. and should reduce the time needed for issuing permits. It introduces specific deadlines for each of the administrative steps in the authorisation process, reduces the number of projects for which an environmental impact assessment is required and the number of signatures needed have been decreased from 3 to 1. Several implementing decisions are still needed for full implementation of the law.

3.8.4. Business environment

Greece has some recognized weaknesses of the business environment. Legislation which is burdensome has been set up to protect certain interest groups and bureaucracy hampers entrepreneurship. In addition, the lack of competition holds back productivity and competitiveness, as noted by the Task Force for Greece. The focus of further efforts should be on the removal of regulatory and administrative restrictions that close markets and stifle opportunities. Greek public authorities and agencies need to be organised and equipped to design and implement growth-friendly business policies. [166] In 2010 and 2011 a number of laws were adopted to improve the business environment. They address well-known deficiencies, such as starting-up a company, licensing of manufacturing activities, investment authorisations and administrative burden to exports.

Economic reforms have addressed the liberalisation of several closed professions, which are a major cause for inefficiencies in Greece. Legislation aims, inter alia, to abolish fixed prices or compulsory

[164] http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/innovation-scoreboard/index_en.htm .

[165] Law 4014/2011, adopted on 13 September 2011.

[166] Second Quarterly Report (March 2012), Task Force for Greece, http://ec.europa.eu/commission_2010-2014/president/news/speeches-statements/pdf/qr_march2012_en.pdf

minimum fees and reduce geographical restrictions and fixed profit margins. In this respect, new legislation[167] aims at lifting restrictions on entry and exercise of regulated professions. Notaries' fees have been cut by almost 30 %, although they still remain above the level of fees charged in other euro area countries with the same notarial system. The rules governing minimum fees of lawyers, engineers and architects still need to be streamlined.

Law 4072 was adopted on 11 April 2012 on Business-Friendly Greece. The Law contains several policy actions to remedy barriers to entrepreneurship. It includes provisions on company law, starting up, establishment and winding-up of a business, simplification of license procedures, public procurement, taxation and the absorption of EU Structural funds.

In 2010 a fast track procedure for strategic investments was adopted (3894/2010). The fast track procedure curtails the licencing process with shorter and binding deadlines and the elimination of overlapping or repetitive acts by the public administration. On 1 February 2011 a new Investment Incentives Law was voted by the Greek Parliament (3908/2011). The Investment Law provides incentives for investment plans exceeding EUR 100 000.

Greek companies are confronted with more administrative hurdles to company registration than observed in other Member States.[168] According to the World Bank Ease of Doing Business Report 2012, Greece is ranked 135 of 183 countries on the ease of starting up a company. Given the severe recession, the high rise in unemployment and the freeze of public sector hiring, simplified procedures for start-ups are crucial elements to create the right environment for growth. To simplify start up procedures, in April 2011 the one-stop shop system for registering new companies was launched. The system aims to facilitate registration by reducing the number of procedures as well as time and costs. The one stop shop service is provided by 59 chambers of commerce and 3 200 notary offices. To date, over 7 000 companies have started through the new procedures. Lawyers are not required for companies with a share capital of less than EUR 100 000. Notaries are still needed for Public Limited Companies and Limited Liability Companies.

The General Commercial Registry, GEMI, became operational in April 2011. It will include all established companies. With the development of the registry, online completion of procedures for company formation and for administrative procedures should be ensured. In accordance with the Memorandum of Understanding, by July 2012 all companies established in Greece should be able to publish relevant company data through GEMI.

Law 3982/2011 on simplifying and accelerating licensing of manufacturing activities has three parts:

1. Fast track procedures for licensing manufacturing activities
2. Development of business parks
3. Modernization of licensing procedures for technical professions

The law aims to remove bureaucracy and to strengthen the role of the public service to effectively control the obligations of enterprises. Specific reduced deadlines are set within which the administration must reply to requests.

For business activities that do not disturb others *('low nuisance actitities')*, which represent up to 80 % of requests, the licence is first issued and then checks are carried out. The licenses for such activities are issued by a statutory declaration. For *medium nuisance level activities*, there is the possibility to obtain the license through the submission of guarantee letters. For *high nuisance level activities* there is no change in the procedures.

Greek companies face serious problems in obtaining access to finance due to the severe recession and the difficult situation for the banking sector which has seen outflows of deposits and a rise in non-performing loans. The main public tool for facilitating SME access to finance is the Hellenic Fund for Entrepreneurship and Development (ETEAN). It is financed from public means and the EU structural funds and addresses financial gaps through loan guarantees, counter-guarantees, co-investments and subsidised loans to SMEs. ETEAN SA will provide revolving engineering financial instruments through the creation of funds as defined by the EU Regulations (such as holding funds, loan funds, guarantee funds, etc.). ETEAN SA will co-invest funds with banks for the provision of loans to small and medium sized enterprises with favourable terms (e.g. very low interest rate). Such funds are:

- The Fund for Energy Efficiency in households and
- The Entrepreneurship Fund, amounting to EUR 460 million, which is used to establish loan funds and guarantee funds.

[167] Law 3919/2011, in force since 2 July 2011.

[168] Second Quarterly Report (March 2012), Task Force for Greece, http://ec.europa.eu/commission_2010-2014/president/news/speeches-statements/pdf/qr_march2012_en.pdf.

A new SME Guarantee Fund has been set up and signed on 21 March 2012. The Fund is a joint initiative between Greece, the European Commission and the European Investment Bank. Established by using EUR 500 million from unabsorbed Structural Funds for Greece, the Fund will guarantee EIB loans to SMEs via partner banks in Greece totalling up to EUR 1 billion.

3.8.5. Services sector

The service sector is the most important sector in the Greek economy. It contributes to more than 70 % of the economy. Greece is traditionally associated with tourism where hotels and restaurants make a substantial contribution to the economy. Over the last decade the service sector had a strong growth with tourism and shipping taking the lead. The Greek merchant fleet is the largest in the world. Greek ship owners control 15 % of the world's shipping capacity.

Barriers to entry can still be found in Greek legislation, in particular in the retail and education sectors, e.g. in the retail sector priority to obtain a licence is given to specific categories of persons and in the education sector Greek nationality is required for founders of private schools and the majority shareholding should also belong to Greek nationals.

3.8.6. Public administration

Improving the effectiveness, accountability and integrity of the public administration is a key priority reform to be implemented in Greece. The structural reforms needed by the country can only be delivered by a well functioning administration which is built on stable, coordinated and empowered structures, providing the basis for the necessary ownership and accountability for the reforms. Equally important, the administration must be supported by civil servants having clear responsibilities. The key objectives of the administrative reform in Greece are:

(1) to improve the effectiveness, accountability and integrity of the administration and to simplify the administration's decision-making processes;
(2) to have a strong centre of decision-making with real inter-Ministerial coordination;
(3) to create the necessary structures in each line Ministry for effective monitoring of procedures including expenditure, internal control and audit, human resources management and information and communications technology.[169]

Greece's overall public administration performance, as depicted by the World Bank's Government Effectiveness Indicator, is well below the EU average. Perceived quality of public services, including quality of the civil service and policy implementation in Greece are very low (0.52 compared to 1.18 in the EU). Overall low scores of Greece are common, as illustrated in the diagram.

The use of tools to improve public administration performance (e-government, impact assessment, performance and service orientation, accountability) is equally far below the EU average. Especially the availability of business related e-government services is particularly low, and so is the use of impact assessment.

The corruption and fraud indicator shows a problematic situation in Greece as compared to the EU average. The irregular payments and bribes index is especially low and a strong gap can be observed in comparison with the EU average. Diversion of public funds is also problematic, while the corruption sub-indicator is closer to the EU average.

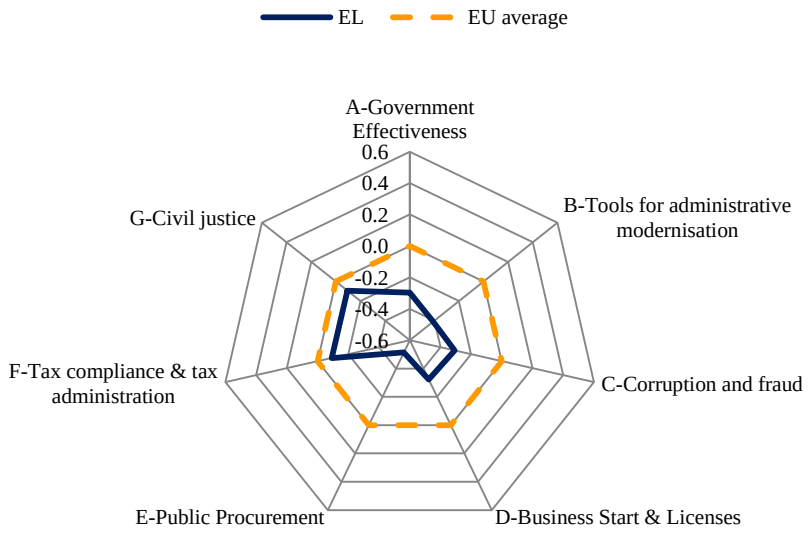
Composite summary indicators for the efficiency of the civil justice system and for tax compliance and tax administration are both below average. The time to enforce contracts is problematic as it takes 819 days for enforcement as compared to 556 days in the EU-average. The delay in payments is also very high compared to the EU average. Due to the difficult financial situation of the Greek state, payment delays have risen to 114 calendar days, 4 times longer than the EU average. The performance in terms of public procurement is also well below average.

With regard to the tax compliance and tax administration index, all the sub-indicators are slightly below the EU average. The situation is similar for the civil justice system, even if the cost for enforcing contracts is above the EU average.

[169] Second Quarterly Report (March 2012), Task Force for Greece, http://ec.europa.eu/commission_2010-2014/president/news/speeches-statements/pdf/qr_march2012_en.pdf.
For more details, see the OECD functional review of the Greek public administration (Dec 2011).

Starting a business and licensing indicator is below average in Greece, mainly due to the cost to start up a business which is especially high (20 % of GDP per capita which is 4 times higher than the EU average). One exception is the time required to start up a company: in Greece it takes 10 days to start up a company which is 3 days faster than the EU average.

Overall profile of public administration



Source: WIFO

Improved efficiency of the public administration needs to be ensured to fully implement the Economic Adjustment Programme, to increase accountability and improve effectiveness. The implementation of the reform programme becomes complex due to the fact that responsibilities are dispersed across a wide range of ministries and agencies.

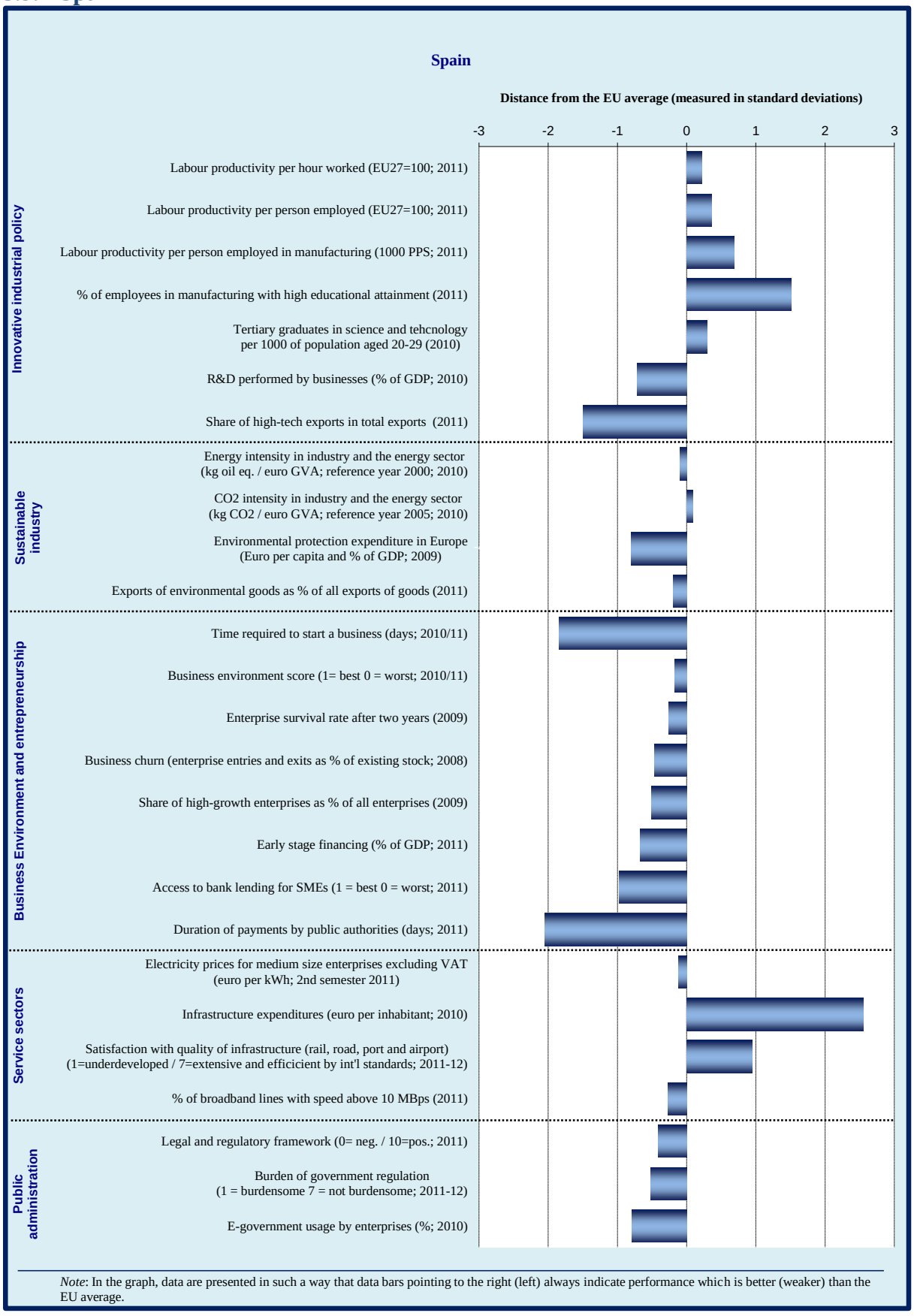
The Memorandum of Understanding provides for the setting up, by December 2012, of a high-level transformation steering group, chaired by the PM, which will supervise, monitor and ensure the implementation of administrative reforms. On 6 January 2012 France and Greece in collaboration with the Task Force for Greece, signed a memorandum of understanding paving the way for the implementation of the *central administrative reform*. The German government has started providing technical assistance for *administrative reform at local and regional levels*.

3.8.7. Conclusions

An effort has been made, over a very short period of time, to simplify procedures and to boost competitiveness. Measures introduced so far aim, among others, at the simplification of licencing procedures, fast-track investment authorisations, the creation of a unique Business Registry (GEMI) and a one stop shop system for all registration procedures.

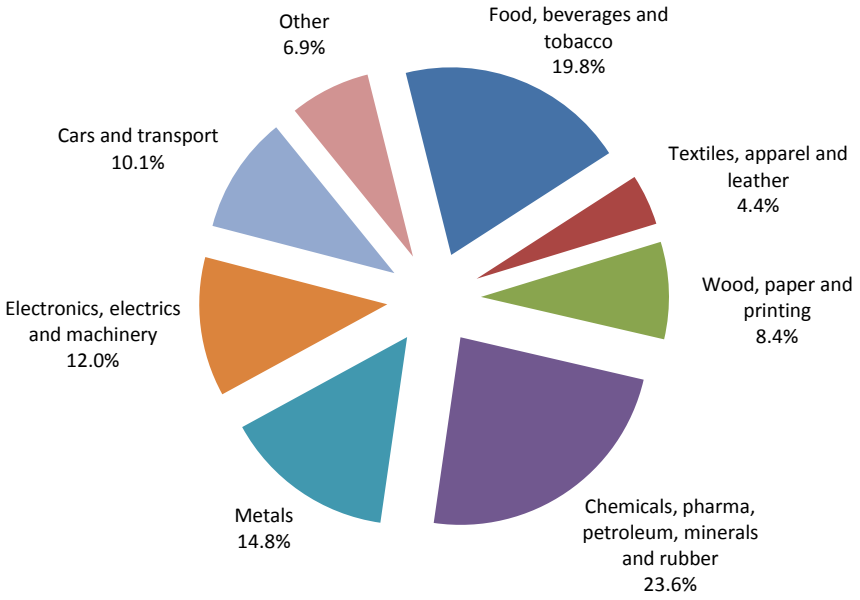
Overall, the implementation of the newly adopted laws has been slow. Responsibilities fall under different Ministries that are reluctant to loose competence and certain laws face strong opposition from different interest groups. Streamlined collaboration across ministries is necessary to ensure swift implementation of adopted laws. The reform of the Greek public administration therefore remains an important task because it can contribute to raising the overall efficiency of the economy by enhancing the state's capacity to implement newly adopted legislation and thereby improving the business environment. In addition to the difficulties with regard to the implementation of much needed structural reforms, with a contraction of the GDP of up to 18% since 2008, the lack of economic growth has made it challenging for Greece to meet its fiscal targets.

3.9. Spain



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Spain (2009)



Source: Eurostat

3.9.1. Introduction

Manufacturing plays a slightly smaller role for Spain than for the EU in total (13.5 % of total value added versus 15.5 % for the EU). Spain is specialised in marketing-driven industries, capital-intensive and labour-intensive industries. At the more aggregated level, Spain is specialised in low innovation and low education sectors (manufactures for construction, wearing apparel), however in exports it also specialises in medium-high innovation sectors such as motor vehicles and in low technology sectors such as non-metallic mineral products.

Very low productivity growth and high growth of wages over the period of 1999-2008 lie behind the deterioration of price competitiveness. During the boom period, growth in Spain was driven mainly by increase in labour utilisation, while productivity measured by TFP had a negative contribution. Since 2007, Spanish labour productivity per person employed has been improving. It stays above the EU average and reached the euro-area average in 2009. However, a significant part of this improvement comes from the sharp reduction in employment since in low value added sectors and longer working hours. To achieve a long-lasting re-balancing of the economy, Spain must tackle the structural problems that are hampering growth and limiting competitiveness.

3.9.2. Innovative industrial policy

According to the Innovation Union Scoreboard 2011, the performance of Spain in innovation is still below the EU27 average, classifying the country in the group of moderate innovators. The considerable increase in R&D expenditures since 2000 until the beginning of the crisis has not resulted in a clear improvement of the innovation capacity in the country. Contrary to the trend of other economies of its group, Spain has not experienced a catching-up process towards a more innovative model of production. Indeed, only modest progress has been observed in the introduction of innovative product processes and services.

A number of reforms have been recently introduced to improve the Spanish research and innovation system, namely the Spanish innovation strategy (e2i) adopted in 2010 and the Law of Science approved in 2011. These initiatives still need to be fully implemented and their coordination with the regional innovation strategies of the Autonomous Communities is important in order to achieve more coherence and synergies. The current on-going revision of the Integral Plan on Industrial Policy (PIN 2020) may also be a good opportunity to pursue a structural change towards a more knowledge-intensive economy building on existing sectors as well as potential new growth areas.

Furthermore, Spain has set up the INNCORPORA programme, which provides support to private companies with a view to contract highly qualified workers, thus fostering knowledge and technology transfer and business innovation.

Nevertheless, the current cuts of public investment, together with the still low R&D investment performed by businesses, may represent additional challenges for the coming years. This may request a review of the efficiency of the public expenditure and introduce a more performance-based financing system, linking a proportion of institutional funding to progress in scientific excellence, level of internationalisation and public-private cooperation. A refocus of the Structural Funds for the 2014-2020 programming period towards innovation and competitiveness could contribute to this aim. Also, an evaluation of the R&D tax credits of the last years may be helpful to analyse why business R&D activities remain so low. As part of a deeper reform of university financing and governance, there is also a need to reinforce incentives for the cooperation for innovation between universities and the private sector.

3.9.3. Sustainable industry

Spanish energy infrastructure has been upgraded in the last years and has now levels above European averages in the production and distribution of electricity and gas. The energy sector should focus now in improving efficiency and offer a competitive cost for industry. In the past, Spain put forward an ambitious policy mix of measures concerning energy efficiency and support to renewable energy sources which is currently being discontinued. Increasing competition in the energy sector and completing the interconnections with neighbouring countries would improve functioning of the energy market.

A reform of the regulatory body for energy (*Comisión Nacional de la Energía*) has been recently proposed to merge it with other sectoral regulatory bodies and the competition authority following the Dutch model. The aim is to reduce the number of bodies and simplify their structure and functioning. The impact of this reform remains to be seen. In any case, the regulatory framework would benefit from transferring tariff setting powers from the ministry to the sectoral regulator, allowing for a more robust, transparent and predictable tariff setting process with a lower degree of political interference.

Although Spanish manufacturing industry has become more energy efficient in recent years, it still has room for improvement compared to its equivalents in other Member States. The risk of future increases in electricity prices for medium-sized industrialists, in particular, due to the on-going efforts of the government to reduce the financial deficit of the energy system may represent a strong incentive for that.

In spite of the efforts since 2009 in fostering internationalisation of Spanish enterprises in sectors related to energy and climate change, Spain still scores below the EU average in the percentage of exports of environmental goods. Some improvements have been achieved in green public procurement with the Law on Sustainable Economy which has recently introduced a system to identify the carbon print of products of public procurement.

3.9.4. Business environment

Inadequate access to finance remains the first area of concern for Spanish enterprises, especially SMEs. According to the Spanish Statistics Institute (INE), 60 % of SMEs will need financing for their working capital until 2013. Credit supply is still limited and has been scarcer since last year. Other alternative financial instruments are still underdeveloped, for lack of both demand and supply. Reinforcing the system of government backed guarantees and loans to SMEs may be a good opportunity to help in this area, including the use of Structural Funds under the JEREMIE initiative[170]. Spain has already three JEREMIE funds in place and is developing a fourth JEREMIE with the Chambers of Commerce which should be operational by the end of the year. Late payments by public authorities remain a central issue of concern in Spain. The recent measures on Late Payments has not shortened public payments periods yet. In fact average public payment periods have increased in 2011. The current on-going process of fiscal consolidation presents an additional element of risk. In the beginning of 2012, the government has put in place an ambitious programme to pay out the stock of bills held by the local administrations. This will help alleviate the liquidity problems of smaller enterprises but its implementation needs to be monitored in detail.

Strong investments in recent years, many co-financed by Cohesion Policy Funds, have significantly upgraded Spanish transport, telecommunications and energy infrastructure. The transport infrastructure deficit of the past has, to a large extent, already been addressed. The resulting extensive network of motorways, high-speed railway lines, airports and ports requires high on-going maintenance and renewal costs. Spain should limit new infrastructure investment to those projects for which there is genuine demand and which are affordable, taking into account the high opportunity cost of public funds. Priority should be given to freight rail transport, given its current

[170] Joint European Resources for Micro to Medium Enterprises: initiative of the European Commission together with the European Investment Fund to promote the use of financial engineering instruments to improve access to finance for SMEs via Structural Funds operations.

underdevelopment and environment-friendly character. While the EU average is almost 20 % of total freight transported by rail, Spain accounts only for 4 %.

In recent years a growing number of highly productive Spanish companies have been competing successfully in key global sectors of high-added value. However, Spanish SMEs (which have a higher presence than in other big countries of EU on total production) are less internationalized than their European counterparts. Indeed, only 40 000 firms export regularly and of those only 20 000 export more than EUR 50 000 per year. Moreover, Spanish exports are still mainly directed towards the European internal market and less to high-growth world markets, the exception being some Latin American markets where Spanish telecommunications, banking and civil construction have a strong presence. Spain counts with a wide national, regional and sectoral structure of internationalisation support to SMEs which may help in expanding the base of exporting companies and consolidating a higher number of regular exporters. The Spanish economy is less oriented to exports than EU27. The increase of its base export appears to be necessary in the current context of required external surplus in order to reduce its external debt. The government has recently reviewed the status of ICEX, the Agency serving Spanish companies to promote their exports and facilitate their international expansion, in order to increase the scope and breadth of its activities. A new programme ICEX-Next has been put in place in the beginning of the year which will take over the PIPE which is in phasing out. PIPE has been an extremely successful programme which can inspire similar practices. Spain should consider strengthening the links between internationalization and innovation by developing joint programmes covering both aspects or even a unified agency. Furthermore, a deeper integration of the regional and central government export agencies would contribute to greater cost efficiencies and stronger policy coordination.

3.9.5. Services sector

According to recent studies[171], the services sectors (both business and local services) have the greatest development potential for the Spanish economy both in terms of growth and jobs for the coming years. Spain has created far fewer services jobs (5 %) than have been created in the rest of Europe (15 %) during the period 1995-2005. The still low productivity of these sectors may be enhanced by fostering competition, improving efficiency and upgrading the skills of the labour force.

Despite progress, significant restrictions exist in retail trade (in particular for large-scale outlets in certain regions) and in professional services by means of reserved activities, obligatory membership in professional associations and regional fragmentation of the market. However, the government is currently working on a law on professional services.

3.9.6. Public administration

Compared to other EU Member States, Spanish overall public administration performance scores low regarding the effectiveness and the quality of public services and policy implementation as perceived by entrepreneurs[172]. High fluctuations and politicisation in the public administration together with a heavy bureaucracy may explain these results.

Indeed, the legal and regulatory framework for businesses in Spain is one of the most burdensome of the EU. Although the cost to start-up a company is fair in comparison to the average, the time needed to start up a company is still 28 days which is double the average number of days in the EU.

The time needed to obtain an operating licence is the longest in the EU with 116 days. The current government has decided to tackle this issue with ambition and is working on a number of initiatives framed in the so-called Law on entrepreneurs (*Ley de Emprendedores*). These initiatives encompass rationalising and improving the efficiency of the multiple one-stop shops systems, generalising the positive silence in licensing procedures, etc. Royal Decree 19/2012 of 25 May has recently eliminated the need of municipal license regarding environment and public health for retail outlets of less than 300 square meters.

In addition to the heavy bureaucracy, the proliferation of divergent regulation stemming from regional and local layers of the administration further compiles the problem by obliging enterprises to fulfil different criteria for the same activity to operate in different regions or municipalities. There is evidence that this regional fragmentation comes along with an increase in absolute terms of the regulatory *acquis* in the country that could be seriously hampering productivity growth. The Spanish government has acknowledged this issue in its latest National Reform Programme submitted to the Commission in April 2012 and intends to issue basic legislation to counter the high level of regulatory fragmentation of the Spanish internal market in

[171] A growth agenda for Spain, McKinsey and FEDEA, 2009.

[172] World Bank's Government Effectiveness Indicator.

order to harmonize and simplify the regulatory framework.

With the exception of e-government, the use of tools for enhancing administrative modernisation is globally deficient compared to EU average. Evidence-based instruments (impact assessments for new legislation, fitness checks for existing legislation) are not used as intensively as in the EU on average. The systems of human resources management in the public administration also indicate that Spain still follows predominantly a more traditional model compared to EU average.

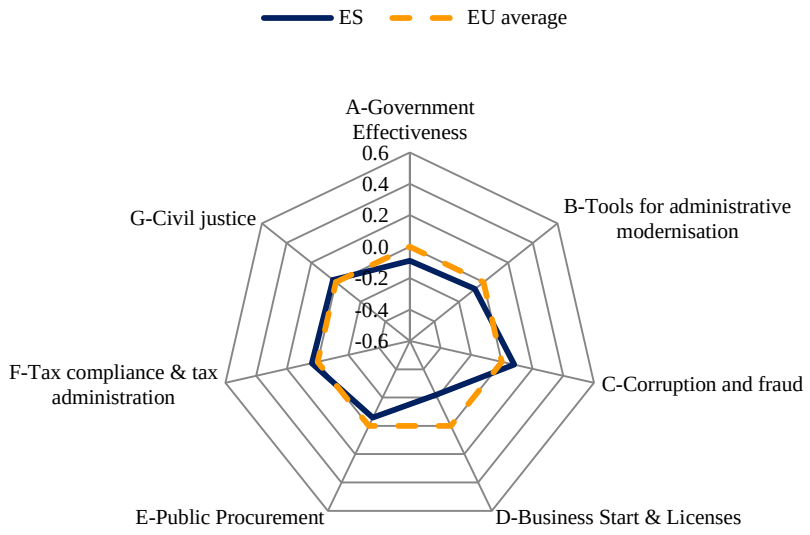
Although Spain ranks globally well in e-government, the use of e-government by small enterprises in Spain is still below EU average. The administration has taken several initiatives to turn many procedures online in the recent years but more efforts can be done to publicize and promote its use among enterprises and citizens.

The performance of Spain in fraud and corruption is almost similar to EU average. Individual experiences of incidents relative to corruption reported are clearly below average (3 % as compared to 10 % in the EU). However, diversion of public funds and irregular payments and bribes are perceived to occur more often in Spain than in other Member States.

Regarding *public procurement* issues, Spain is also slightly below average, with some scope for improvement, especially in reducing the time of payment from public authorities, which is much longer than average. In Spain the average delay in payments from public authorities is 80 days nowadays which makes it one of the worst performing countries on this indicator. The costs indicators per competition however are both better than average.

Tax compliance and tax administration are slightly better than EU average. In Spain it takes annually 21 hours less *to prepare and file tax returns and to pay taxes.* Administrative costs of taxation are also below EU average.

Overall profile of public administration



Source: WIFO

Spain has been recently working on three areas to improve tax compliance procedures: 1) improving coordination between the different layers of the Public Administration which collect taxes; 2) increasing the use of e-government; 3) accelerating the payments by the Administration. The government has prioritized two areas for the coming year: the swift implementation of the VAT directive and the compensation of debts/credits between administrations. Both measures may help alleviating the liquidity problems of SMEs. Additionally, some academics and business organisations demand the introduction of a single tax account for all taxes and administrative level (national, regional, provincial and local). This would greatly simplify tax compliance and would permit tax and debt compensation.

Civil justice is slightly more efficient in Spain than EU average. Indeed, enforcing contracts indicators, as well as the *time for resolving insolvency* indicators show better performance than EU

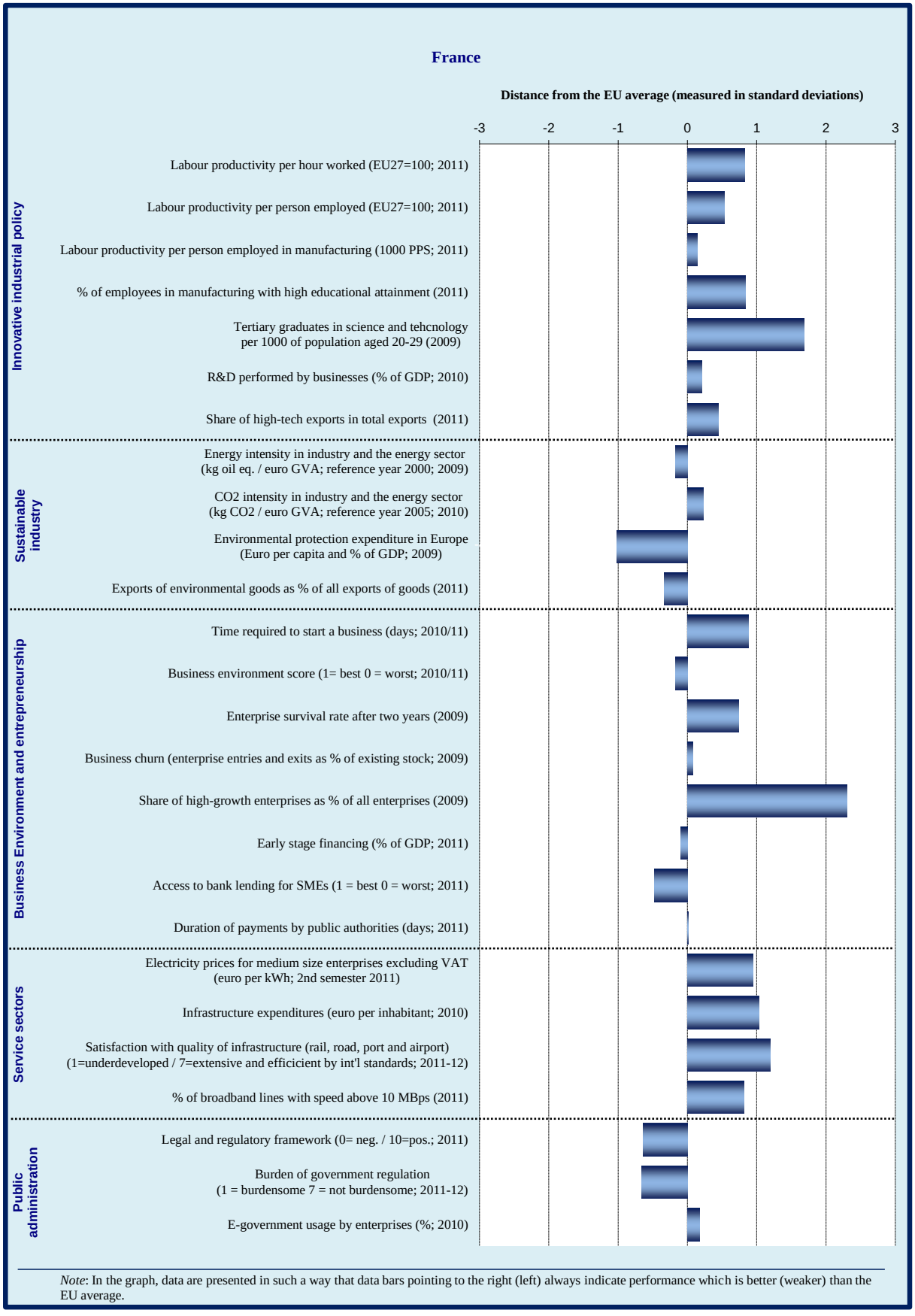
average. The recently adopted labour law (RDL 3/2012) has introduced a number of instruments in view of improving the resolution of labour related disputes. Spain has also taken measures to promote mediation as an alternative to judicial litigation by means of the Royal Decree Law 5/2012 on mediation in civil and commercial matters. According to WEF-Global Competitiveness Report 2012, low *independence of judiciary* is a point for improvement.

3.9.7. Conclusions

Among the large economies of the EU, Spain has been the country hit the hardest by the economic crisis both in macroeconomic terms (sharp increase in unemployment, slow recovery of GDP growth) and at firm level (worsened profit margins, number of closed businesses) . The worsening business environment and the difficult access to finance for firms may have contributed to this bad performance. Also, some characteristics of the Spanish enterprises may explain their lower resilience, such as a smaller size of the Spanish average firm compared to countries with a similar development level, a lower productivity and a lower degree of innovation and internationalization.

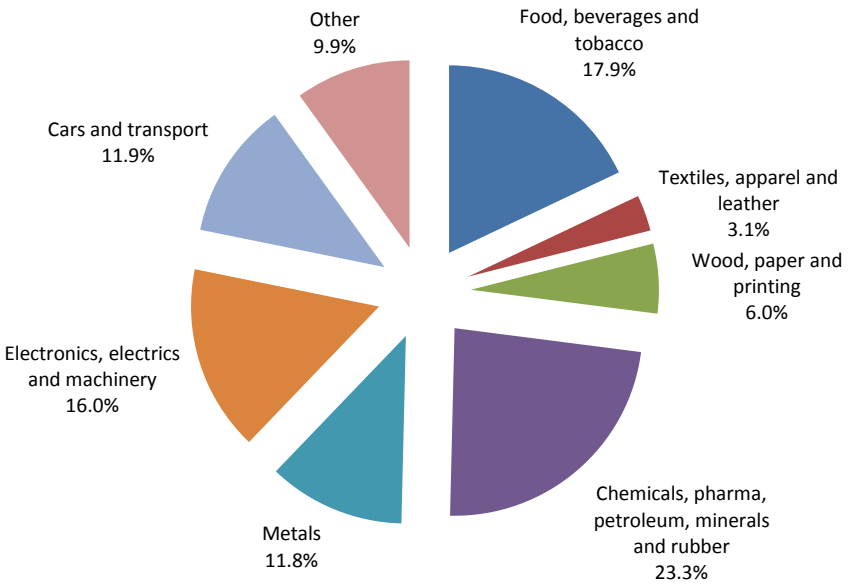
The government is working on a number of initiatives to improve the business environment. However, important structural challenges still exist to increase growth and productivity of firms such as the excessive and slow bureaucracy, the low level of internationalisation of enterprises, difficult access to finance, low innovation activity and lack of competition in certain sectors.

3.10. France



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – France (2009)



Source: Eurostat

3.10.1. Introduction

Manufacturing plays a smaller role for France than for the EU in total (10.1 % of value added in 2011 vs. 15.5 % for the EU) and its share is declining. France is specialised in medium-innovation and high-education sectors (e.g. transport equipment such as trains and aeroplanes, business services), but less in high innovation sectors, notably due to its lower specialisation in machinery and computers. It has experienced a rapid deterioration of its trade deficit, especially marked for manufacturing sectors.

France belongs to top group of EU countries in terms of productivity levels, although the competitiveness gap vis-à-vis to the best performers is growing. France has increased its industry specialisation in technology-driven industries (air- and spacecraft), while considerably decreasing its relative share of capital-intensive industries (cement, refined petroleum). In exports, France the relative share of technology-driven industries has decreased and the share of marketing-driven industries has increased. The relative share in sectors with high education (business services) has increased considerably while the share in high innovation sectors has decreased (computers, communication equipment). France has climbed further up the quality ladder, in particular in labour-intensive industries.

The external competitiveness of France has deteriorated over the past decade. This can be seen in the export market share that has dropped 19 percentage points between 2005 and 2010, and in the growing trade deficit that reached a record EUR 70 billion in 2011. This deterioration stems from both cost and non-cost factors.[173] To improve non-cost competitiveness, significant reforms have been undertaken to promote research and innovation, and such reforms should be continued and strengthened in the future. However, the increasing labour costs have contributed to the deterioration of firm profitability, damping investment, productivity and innovation. Over the last decade, the real compensation per employee has increased more rapidly in France than in the euro area on average, whereas productivity increase has only kept pace with the euro area average. This has led unit labour costs to rise faster in France than in the euro area.

France has experienced a moderate appreciation of the real effective exchange rate over the last decade, indicating nevertheless a loss in cost and price competitiveness. Nominal unit labour costs have increased by 23 % between 2000 and 2010, compared to an increase of 14 % in the EU27 and 20 % in the Euro area. The employment legislation remains very protective and the minimum wage is among the highest in Europe. Labour productivity is about 27 percentage points above the EU27 average and about 13 percentage points above the Euro area average, but still slightly lower than in other advanced economies, reflecting the lower specialisation in high innovation sectors.

[173] Commission Staff Working document 'In-Depth Review for France', SWD(2012) 155 final, http://ec.europa.eu/europe2020/pdf/nd/idr2012_france_en.pdf .

3.10.2. Innovative industrial policy

France is the EUR15 'innovation follower"[174] whose performance has improved faster in 2008-2010, notably as regards non technological innovation and the propensity of enterprises (including SMEs) to commercialise innovation (including abroad). This progress may be due to the numerous measures taken in the field of innovation and industrial policy, in particular the reform of universities, the considerable budget dedicated to support R&D expenditures both in the public and private sectors (including *Investments for the future* programme, whose impact will be observed in the coming years), the clustering policy (*Pôles de compétitivité*[175]), and the creation of *France Brevets*[176]. But this has not allowed catching up with 'innovation leaders' yet.

Business R&D expenditures have been maintained in 2009[177] despite the crisis and have slightly increased in 2010[178]. This is largely attributed to public financial support, in particular the *Research Tax Credit*. However, business R&D expenditures have not significantly increased over the last decade and remain insufficient overall. The business R&D intensity is slightly above the EU average, but as a whole the weight of medium and high-tech sectors in the economy and the number of mid-tier enterprises with high R&D intensity remains insufficient.

Enterprises below 500 employees have markedly increased their R&D expenditures in 2008-2009. SMEs and mid-tier enterprises do benefit from public support to business R&D, such as funding of innovative projects by the Innovation Agency OSEO. The R&D expenditures by high-tech sectors have also markedly increased in 2008-2009, and the share of medium to high-tech sectors in total exports is significantly higher than the EU average.

In terms of financial support to business R&D, the priority was given to technological expenditures in the past few years. Non R&D innovation expenditures and the number of trademarks and designs are much lower than the EU average. Non technological innovation remains a challenge, notably in the services sector. This raises the question of the dissemination of innovative techniques to the entire economic fabric, for example through clustering and training policies. International openness of innovative companies may deserve special attention too. Apart from high-tech sectors, the propensity to commercialise technologies and knowledge abroad appears to be much lower in France than in Member States which are categorised as 'innovation leaders". This translates for example into a lower share of knowledge-intensive services in total exports and less licence and patent revenues from abroad.

Despite notable progress, more will be necessary to catch up with 'innovation leaders", including in particular further public-private collaboration as regards research and innovation but also education and training (with a view to ensure stronger consistency between the skills taught, career guidance, business developments and societal challenges).

3.10.3. Sustainable industry

Energy intensity in industry and the energy sector is relatively low. However, the number of patents related to societal challenges (climate change, ageing) is well below the EU average, as well as intra-EU exports of 'green' products and services. The trade balance of environmental goods is negative, although France is a successful exporter of water processing and waste management technologies. The current sustainable industrial policy includes in particular the ***Investissements d'Avenir*** programme[179], the ***Pôles de compétitivité***[180], and the steering committee for eco-industries set up in the aftermath of the ***États Généraux de l'Industrie***. These measures, whose impact will be observed in the coming years, are totally relevant in terms of green specialisation strategies, but they do not reflect in statistics yet. They should favour in the next years investments devoted to low carbon technologies and may require complementary demand-side policies, in particular in the fields of public procurement and information to consumers and SMEs.

Besides, reaching the national 2020 targets in terms of greenhouse gas emissions and renewable energy will require a considerable transition from the

174 2011 Innovation Union Scoreboard .

175 Between 2008 and 2011, EUR 5.4 billion were invested in R&D projects accredited by Pôles de competitivité. On average, 900 projects have been funded each year between 2008 and 2010, with almost 800 projects being funded in 2011. During this four-year period, 2 500 innovations and almost one million patents have been generated by Pôles de competitivité.

176 France Brevets is a EUR 100 million investment fund specialised in industrial property. It builds upon the existing financial system of valorisation of patents. The objective of France Brevets is to enable research laboratories and SMEs to rapidly bring their inventions to market, to organise patents by technological clusters, and to make them more widely available to enterprises.

177 Contrary to what was observed in most Member States.

178 The 2010 increase has been less strong in France than in the EU on average and in comparable Member States such as Germany and the United Kingdom.

179 EUR 5.1 billion out of 35 can be considered to benefit to 'green' projects.

180 18 out of 71 of these 'competitive clusters' are specialised on eco-technologies and resource efficiency (energy and natural resources).

whole economy, far beyond the ETS sector, and not least from the transport and construction sectors.

A relatively large number of electrical car models are available on the market since 2011. Sales increase very rapidly but account for less than 0.5 % of the market, despite financial incentives. To allow mass production, several bottlenecks need to be eliminated, in particular adequate financing to allow sufficient battery-charging infrastructures (including quick charging), standardisation (plugs, battery packs), R&D (e.g. charging terminals powered by renewable energy sources, autonomy of batteries, management of consumption peaks, wireless charging). Governmental plans are adequate but need to be fully implemented.

Satisfaction with the overall quality of transport infrastructures remains the highest in the EU, even if it is decreasing. However, France could have better exploited its geographic position to play a central role in the shift to non-road freight in Europe. In particular, rail freight volume is diminishing while entry of new operators is hindered by various competition barriers since several years. The freight potential of French ports is underexploited, notably due to insufficient interconnection of most ports with their hinterland and with other non-road transport modes, in particular rail.

Coherent national and local strategies, including infrastructure planning, and taking into account all transport modes in a coordinated manner, could help exploiting the green and competitive potential of the transport sector.

Ambitious national targets are established for energy efficiency in buildings. The challenge is now to ensure their achievement, notably through sufficient financial means, but with a high effectiveness of public spending. This could include for example continued financial support to renovation by private households, including in co-owned properties, with minimum quality control of works; a major renovation programme in state-owned buildings and tertiary buildings; targeted information for SME owners, including for example through billing and smart metering; increased number of graduates and apprentices in the construction sector and adequate professional training.

3.10.4. Business environment

Access to finance

As a whole, access to credit has improved between 2009 and 2011, with a catch-up effect since the cyclical trough, and is relatively easier than in most Member States, even if it remains relatively difficult. Existing mechanisms such as mutual guarantees, public guarantees and the *Credit Ombudsman* seem effective. Credit conditions have temporarily tightened in the last quarter of 2011, especially for short term cash facilities (in particular low amount overdrafts) and small or very small enterprises.

In 2012, access to credit for investment projects[181] could get more difficult (higher interest rates, stricter collateral requirements). Given the structural lack of equity financing in France, especially for SMEs, and the downward pressure on margins, even a slight tightening of credit conditions may have a direct impact on bankruptcies and corporate investment, in particular investment in non-fixed assets and other 'non-compulsory' expenditures such as R&D, commercial prospection abroad, or non technological innovation. This may be particularly acute for (independent) SMEs and mid-tier enterprises and enterprises operating in high-tech and other innovative sectors.

Regulatory and support environment

In recent years France has introduced a number of reforms to limit the increase in labour costs, targeting in particular low-skilled workers. These reforms have sought to limit the rise in the minimum wage and to reduce the tax burden on labour. Regarding the minimum wage, discretionary increases on top of the regulatory adjustments were stopped since July 2006. In 2008, the procedure for the annual review of the minimal wage level was improved by the creation of an advisory committee of independent experts. In order to reduce the tax burden on labour, one of the highest in the EU, the French authorities have adopted a number of measures, in particular social security exemptions for lower salaries. However, further steps are needed to shift the tax burden from labour to other forms of taxation that weigh less on growth and external competitiveness. Unfortunately three recent measures taken by the new government tend to increase labour costs: (a) a lowering of the retirement age to be financed by social contributions on labour; (b) the abolition of a decrease in social security contributions that was to be coupled with an increase in the standard VAT; and (c) the 0.6% increase of the minimum wage in real terms.

Overall, the *Loi de Modernisation de l'Économie* (2008) has had a positive impact on the duration of payments in the private sector. The average duration of payments by the public sector has been

[181] In particular, credit > 1 year and EUR 50 million.

over 60 days in 2010 and 2011, with particular delays by some local authorities or some specific institutions such as hospitals.

Some notable measures to promote entrepreneurship include the auto-entrepreneur statute and the individual entrepreneur statute (EIRL). Procedures for starting up a business have been considerably simplified and shortened. The cost to start-up a business is 5 times cheaper than the EU average, and the time needed to start-up a business is twice shorter than the EU average. However, despite regular batches of simplification measures, the regulatory environment of businesses remains characterised by its complexity and instability, and administrative procedures to run a business remain very burdensome overall. 'Gold plating' of EU laws is recurring, especially in the environmental field.

3.10.5. Services sector

The services sector is characterised by a limited and diminishing commercial deficit between 2006 and 2010, although there is still room for fully exploiting the export potential of knowledge-intensive services and environmental services. Electricity prices for medium-sized enterprises are still among the cheapest in the EU.

The number of regulated professions is in line with the EU average. Some progress has been made with regard to certain professions such as lawyers and taxi drivers, although restrictions remain in professions, such as lawyers, veterinaries and accountants. The entry of a new operator in mobile telecommunications is an important step, but the competition framework is far from being optimal in the energy and transport sectors.

3.10.6. Public administration

The performance of public administration scores above the EU average. As a whole, the quality of public services and policy formulation and implementation, and the credibility of public servants' commitment to policies are positively perceived.

Overall, tax compliance and tax administration score slightly above the EU average. The time required to comply with taxes and the number of tax payments are both low in international comparison and several tax procedures are available on line. It takes 132 hours yearly to prepare and file tax returns and to pay taxes, against 208 hours in the EU on average. However, the total tax rate (over 65 % of commercial profits) is 30 % above the average of high income economies in the world and 20 % above the EU average (France ranks 26 out of 27 Member States)[182].

There is less corruption and fraud in comparison to other Member States. The individual experience of corruption (3 % of all cases) is clearly lower than the EU average (10 %).

The efficiency of the civil justice system is higher than in the rest of the EU, even if time for resolving insolvency and judiciary independence are very close to the EU average. Time to enforce contracts is significantly shorter than the EU average (it takes 331 calendar days as compared to 556).

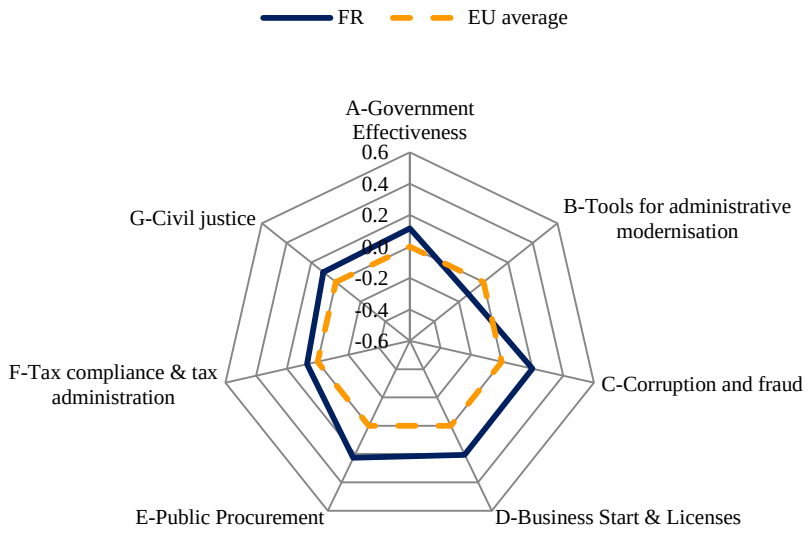
A noteworthy simplification effort was conducted in 2011. This effort led to the vote, in March 2012, of the 'simplification and reduction of the administrative burden Law". This act includes several measures aimed at simplifying administrative procedures for enterprises, such as the simplification of the pay roll, an electronic strong-box and an advanced social ruling.

On-line availability of basic public services to businesses is in line with the EU average. An electronic one-stop shop is in place for starting up a business in the services sector, but the number of administrative procedures fully available on line remains limited. The interfaces between businesses and government at regional level have been streamlined in 2010, but there is significant scope to further streamline administrative structures, in particular at local level, and to ensure easy access to public authorities for all enterprises, including SMEs.

The use of new tools to improve public administration performance (e-government, impact assessments, performance and service orientation, accountability) is slightly below the EU average. As regards the elaboration of legislation, practices for ex-ante evaluations have been harmonized by a circular issued in February 2011. However, there is still room for improvement as concerns stakeholder consultations, in particular in terms of explaining how the results were taken into account in the relevant proposal. As a whole, by international comparison, very high public spending and tax rate does not translate into significantly higher government effectiveness or better public services for businesses.

[182] The total tax rate measures the amount of taxes and mandatory contributions payable by businesses after accounting for allowable deductions and exemptions as a share of commercial profits. Taxes withheld (such as personal income tax) or collected and remitted to tax authorities (such as value added taxes, sales taxes or goods and service taxes) are excluded. Source: the World Bank http://data.worldbank.org/indicator/IC.TAX.TOTL.CP.ZS.

Overall profile of public administration



Source: WIFO

3.10.7. Conclusions

Overall, France remains among the consistent performers, although its external competitiveness has significantly deteriorated over the last decade, with trade deficits reaching record levels (EUR 70 billion in 2011). Apart from the recent rise in energy prices, this is due to the persistent rise in labour costs over the last decade that has lowered firms' profitability to the detriment of their innovation capacity and their ability to invest in R&D. As a consequence, exports of knowledge-intensive manufacturing industries have suffered.

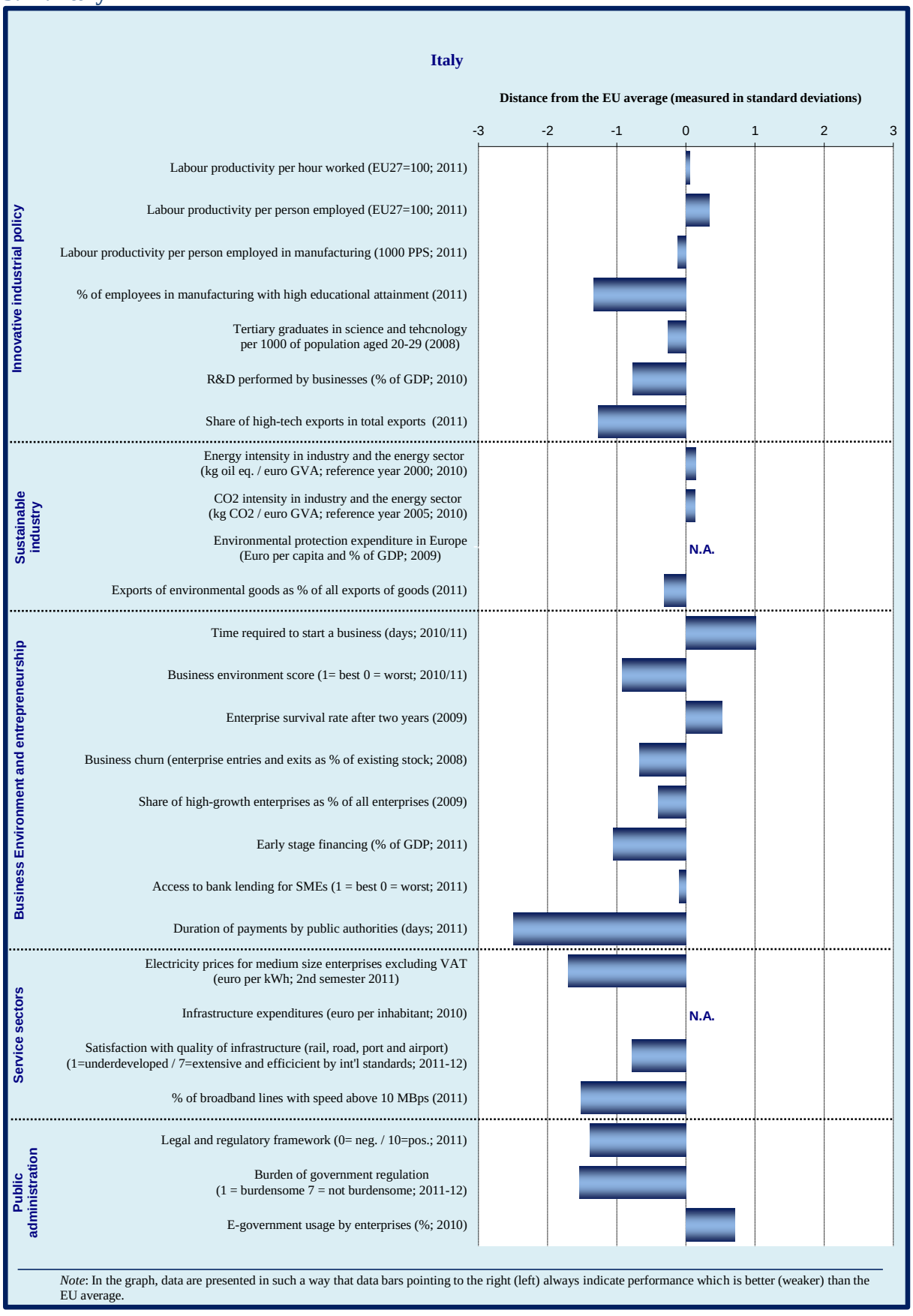
As regards non-cost factors, significant reforms to promote research and innovation have already been undertaken and this momentum should be maintained and strengthened. However, the measures taken so far on the cost side, mainly lower social contributions on low wages, have proved to be insufficient. Furthermore, some recent measures have tended to increase labour costs.

The relatively low business R&D intensity in France reflects the sectoral composition of the economy, with high-tech manufacturing sectors accounting for only a modest share (despite a relatively high R&D intensity in individual economic sectors). The economic fabric would benefit from a higher number and stronger growth of companies of medium and intermediary size (which still undertake limited research activities). Overall, the propensity of SMEs to innovate, commercialise knowledge and technologies and invest in non-technological innovation remains significantly lower than in Member States which are 'innovation leaders". Further public-private collaboration in research, innovation, education and training could help mitigate these weaknesses.

Tightening credit conditions, when combined to the lack of equity financing and the downward pressure on profit margins, could lead to shrinking investment by businesses, in particular SMEs. This could weaken in particular investment in non fixed assets and other expenditures such as R&D and non technological innovation, commercial prospection abroad and marketing, which are though crucial for non-price competitiveness.

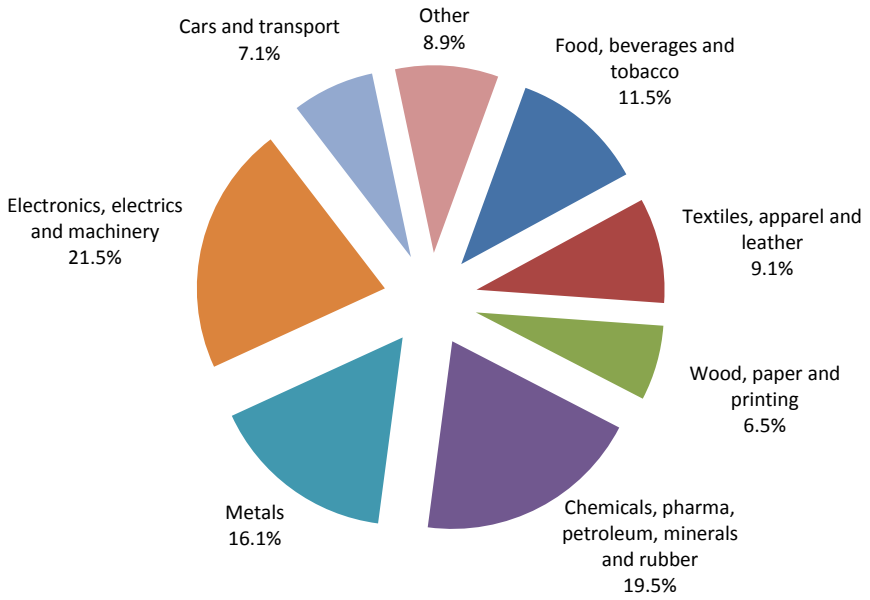
As a whole, the performance of public administration is better than the EU average, notably as regards tax compliance. However, despite notable improvements in particular as regards cost and time to start up a business, the regulatory environment for businesses remains complex and burdensome overall.

3.11. Italy



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Italy (2009)



Source: Eurostat

3.11.1. Introduction

Italy has a relatively large manufacturing sector (in 2011contributing 15.9 % of its value added, compared to 15.5 % for the EU average) and shows high indices of specialisation for sectors such as leather products, textiles, machinery, and metal products. In terms of exports, the three main sectors are those of machinery (which also records the largest trade surplus), metal products and transport equipment. Looking at technological specialisation, Italy is relatively more specialised in low tech and low intermediate tech sectors than the EU as a whole. It should be noted that Italy has the largest number of enterprises in the EU. With its 3.8 million SMEs, Italy has almost twice as many as Germany. These small businesses could become more competitive global players if remaining obstacles to their growth were removed, and the existing facilities for clustering and networking were more widely used.

Italy has been recording declining competitiveness since the end-1990s, due to both cost and non-cost factors. The current account balance moved from a surplus of around 2 % of GDP in the late 1990s to a deficit of 3.2 % in 2011, mainly reflecting a deteriorating trade balance, as the surplus on manufacturing goods has not compensated the large deficit in energy products. Stagnation in productivity is the key factor behind Italy's loss of cost competitiveness since the euro adoption. With an export product mix partly similar to that of some emerging economies, Italy has been relatively more exposed to increasing global competition. As a response to these competitive pressures, restructuring started already in the pre-crisis years; while maintaining its specialisation in labour-intensive sectors, Italy's exports moved up the quality ladder, both by Italian companies pursuing upgrading strategies and by less-efficient firms exiting the market (in the less knowledge-intensive sectors).

3.11.2. Innovative industrial policy

The latest Innovation Union Scoreboard confirms Italy's position in the group of moderate innovators with performances below the EU average. In particular, investments in R&D are relatively low (in particular by the private sector), as are venture capital investments, patent applications (though the situation is better for trademarks and designs), and exports of knowledge-intensive services. There is good progress in the indicators related to human resources (e.g. new doctorate graduates) and to entrepreneurship (e.g. SMEs collaborations).

The National Reform Programme announces the intention to consider the possibility of introducing an 'automatic' and permanent tax credit mechanism to ensure a more predictable and favourable framework for private investments in R&D. The actions taken in the past were in fact too fragmented. The main supporting programme ("*Industria 2015*"), organised around five thematic Industrial Innovation Projects, has been quite successful in identifying the main competitive challenges, in launching new initiatives and in favouring public-private partnerships (and, indirectly, in supporting a reform of vocational

training) but has been quite disappointing as far as expenditures are concerned, also as a result of the general credit squeeze in the economy. The administrative procedures linked to '*Industria 2015*' have been very time-consuming (considering that partnerships often involve between 20 and 25 actors).

Programmes to help companies to improve valorisation of intellectual and industrial property rights have been launched (*Fondo nazionale d'innovazione*).

A number of existing programmes managed by the Ministry for Education, University and Research support both fundamental and industrial research in Italy. The main ones are the Fund for the promotion of research (FAR), in the Centre-North of the country, and the Research and Competitiveness Operational Programme 2007-2013, for convergence regions in the Mezzogiorno. In recent months, new calls for proposals for the development and reinforcement of national technological clusters and on the 'smart Cities and Communities' theme have been published.

Following the major universities reform of 2010, the system is continuing to be modernised, and future performance could be improved thanks to the role of ANVUR, the new agency in charge of evaluating research and the quality of the R&D in universities. In particular, ANVUR opinions should be taken into account in the allocation of funds to universities. Results of the evaluation should be available by mid-2013.

3.11.3. Sustainable industry

Italy continues to register one of EU's best performances for energy intensity of the industry and energy sectors. This is partly related to high electricity prices and high import dependence that have provided a strong incentive for investments in energy efficiency throughout the industry. There appears to be some progress towards the EU energy and climate change targets for 2020, especially with regard to the development of renewable energy sources, while progress towards the reduction of greenhouse gas emissions remains modest.

The incentives for renewable energy have been extremely successful, especially for solar photovoltaic energy, but have been less effective in supporting the emergence of a national industry in the sector. Actually, it appears that in 2010-11, imports of photovoltaic cells accounted for around 0.5 % of GDP of the increase in Italy's trade deficit. Measures for energy saving and energy efficiency have been established or confirmed, notably a successful tax credit for energy savings in buildings (extended to the end of June 2013) and 'white certificates' (tradable Energy Efficiency Certificates issued to energy distributors and energy service companies that certify the reduction of consumption achieved through measures and projects of energy efficiency improvement).

In the framework of initiatives to favour the environmental restoration and industrial reconversion of local areas in difficulty, such as those of Porto Marghera in Veneto and of Porto Torres in Sardinia, there is an attempt to favour the emergence of a more sustainable industry (e.g. through the promotion of 'green chemicals'), stressing that restructuring processes can also provide opportunities.

Concerning the diffusion of Green Public Procurement in Italy, the implementation of the 2008 national Action Plan is in progress. New Ministerial Decrees have been adopted defining minimum environmental standards for a number of goods purchased by public administrations (food, buildings' cooling and heating). Further decrees for transport and cleaning services are in preparation.

3.11.4. Business environment

Access to finance is a key concern in Italy and the situation has worsened in the last year. Firms, especially SMEs, are facing tightening credit conditions. At the same time, banks have reported a sharp slowdown in the demand for loans from businesses in the first half of 2012, due to the general slowdown and low growth prospects. As a result, according to the Bank of Italy, loans to non-financial corporations have dropped significantly in December 2011 and again between March and July 2012.

The Central Guarantee Fund for SMEs is the main public tool to support companies in this area and has registered an increase in applications in the latest years (especially for SMEs' liquidity needs rather than investments). It has been refinanced and its scope has been increased.

A new tax instrument (Allowance for new Corporate Equity - ACE) will be also be used to improve companies' capitalisation. It allows companies to deduct part of the notional return on new injections of equity capital from taxable income. It is expected to encourage firms, including small and medium enterprises, to increase their capital base, while overcoming the debt bias of the tax system regarding investment financing decisions.

The risk capital market is still relatively small. The recently-established Italian Investment Fund,

focusing on mid-caps companies, is playing a big role in increasing the supply of risk capital in Italy (with around EUR 1 billion, it represents 60 % of the total risk capital market). As of June 2012, the Italian Investment Fund has made direct equity investments in more than twenty companies, mostly in the manufacturing sector. The possibility to use 'network contracts' among SMEs (the *contratti di rete* were established in 2009 and allow companies, while remaining independent, to aggregate in order to implement projects of common interest in areas such as innovation and internationalisation) to improve access to credit is being considered. Concerning late payments, a key problem in Italy where average duration of payments is one of the highest in the EU and the existing stock of commercial debt is estimated between EUR 60-80 billions, a mechanism to certify existing credits vis-à-vis the public administrations and to allow for their compensation with tax debts has been defined at the end of May 2012 with specific ministerial decrees. An agreement was also signed between government, business organisations and banks, to ease the conditions for cash advances from banks totalling at most EUR 10 billion.

Italy has put in place a structured governance system to follow-up the implementation of the Small Business Act. A dedicated 'permanent dialogue' (*tavolo permanente*) involving the relevant actors has been set-up after the adoption of the SBA while the implementation of the SBA has been formally included in the law on Company Statute adopted in November 2011. An annual law on SMEs will be adopted starting from this year, possibly including an extension of the 'network contracts' also to professional bodies and universities. The national SME Envoy closely monitors the process.

3.11.5. Services sector

The services sector in Italy is quite heavily regulated and insufficiently open to competition, although there has been progress in the last years, notably in retail trade and the energy market – especially in electricity, although the lack of an adequate infrastructure leads to a suboptimal use of the generating capacity. Combined with the market shortcomings, this leads to higher energy prices for consumers. The transport sector and local public services (including water distribution and local public transportation) appear to be lagging behind in this process.

The government's strategy is very much focused on increasing competition across the board and numerous measures have been introduced, notably by the so-called 'Cresci Italia' ('grow Italy') decree-law of January 2012, for example in the fields of professional services, petrol stations or pharmacies. Also, a new Transport Authority is to be established with a wide scope of competence covering both transport services and infrastructure, including highways, railways, airports, ports and local public services. Its mission is to promote competition, reduce costs, improve quality standards and fix methodologies for procurements and concessions.

The new Transport Authority is, potentially, an important step forward in sectors where much remains to be done. However, there are still services sectors where further interventions could be considered, notably the reduction in the scope for professional orders' legally reserved activities, as this has a cross-cutting impact. A reform of professions was adopted in August 2012, but this only focused on entry, promotion, insurance and training requirements. In general, full implementation of the pro-competition measures is crucial. The wider competence granted to the Competition Authority with regards to local public services and to restrictions of economic activities can also be considered steps on the right direction.

3.11.6. Public administration

Italy's overall public administration performance, as depicted by the World Bank's Government Effectiveness Indicator, is well below the EU average. Both the time needed (1210 days) and the cost (29.9 % of claims) for resolving commercial disputes through the courts are matters of concern for the Italian Authorities, together with a more general problem, the slowness of the Italian justice system, which arguably damages the country's competitiveness performance and its capacity to attract new foreign investments. This is likely to be partly linked with organisational problems within the judiciary system that are also being currently addressed by a review of the territorial organisation of the courts of first instance.

In general, Italian administrative procedures are particularly burdensome for business. A more general burden for Italy is the time to implement all sorts of infrastructure projects such as in transport, which has obvious implications for industrial competitiveness and is highlighted, for example, by surveys on the satisfaction with the quality of infrastructure where Italy is in the worst performing group within the EU.

Even if Italy is performing below average in the field of public procurement, Italy has recently adopted several measures to simplify public procurement rules, notably in the 'salva Italia' ('save Italy') law of December 2011. In particular, measures to facilitate SMEs access to tenders

through e-procurement, reduction of administrative burdens, division of contracts into lots, simplification of conditions for joint bidding have been established.

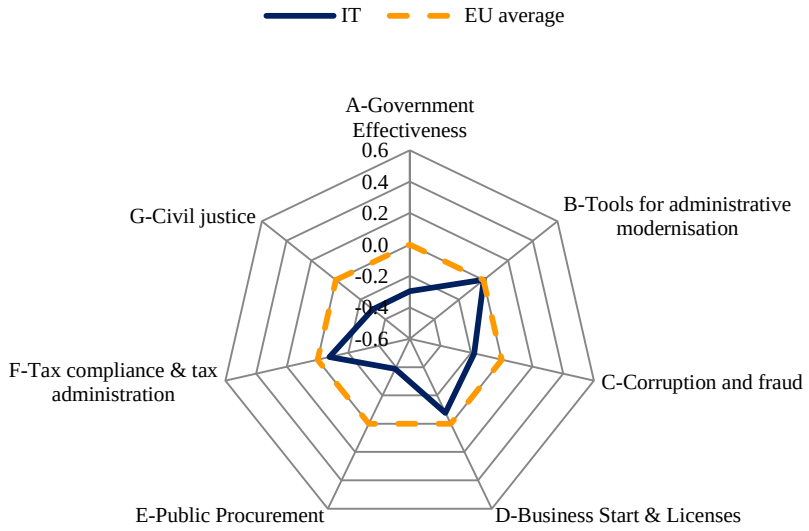
The fights against corruption, tax evasion, the shadow economy and undeclared work are a priority for the Italian Government. In this regard, an initial set of measures has been established on the organisation of administration's decision making processes, on levels of transparency within the public administration and on technical training for civil servants. A draft anti-corruption law is still being discussed in the Parliament – the swift implementation of this law could have a large beneficial effect on the business environment.

Italian tax system is quite burdensome for companies and heavily weighs on labour in particular. Once again, time is an issue as 285 hours per year are estimated to be necessary in average to comply with the major taxes, compared to 187 hours in Spain for example. The tax system is also quite unstable as it is regularly amended through urgent measures (Decree-Laws).

Italy performs relatively well with regard to the operation of one-stop-shops to start up a company and time required to start-up a company. Most one-stop-shops for start-ups are now operative at municipal level. Online services and payments are available in parts of the country but there are delays in implementation.

To encourage entrepreneurship, the Grow Italy decree-law has created the possibility for people under 35 to create a simplified limited-liability company, with fewer formalities and less capital. Some simplifications were extended to all entrepreneurs in the growth package adopted in August 2012.

Overall profile of public administration



Source: WIFO

In order to improve the effectiveness of the public administration and to eliminate unnecessary costs without reducing services to citizens, the Government has launched a spending review and nominated an extraordinary commissioner for the rationalisation of expenditures. In July 2012, a decree-law was adopted aiming at saving a total of EUR 26 billion in 2012-2014. Further initiatives have been announced for the following months.

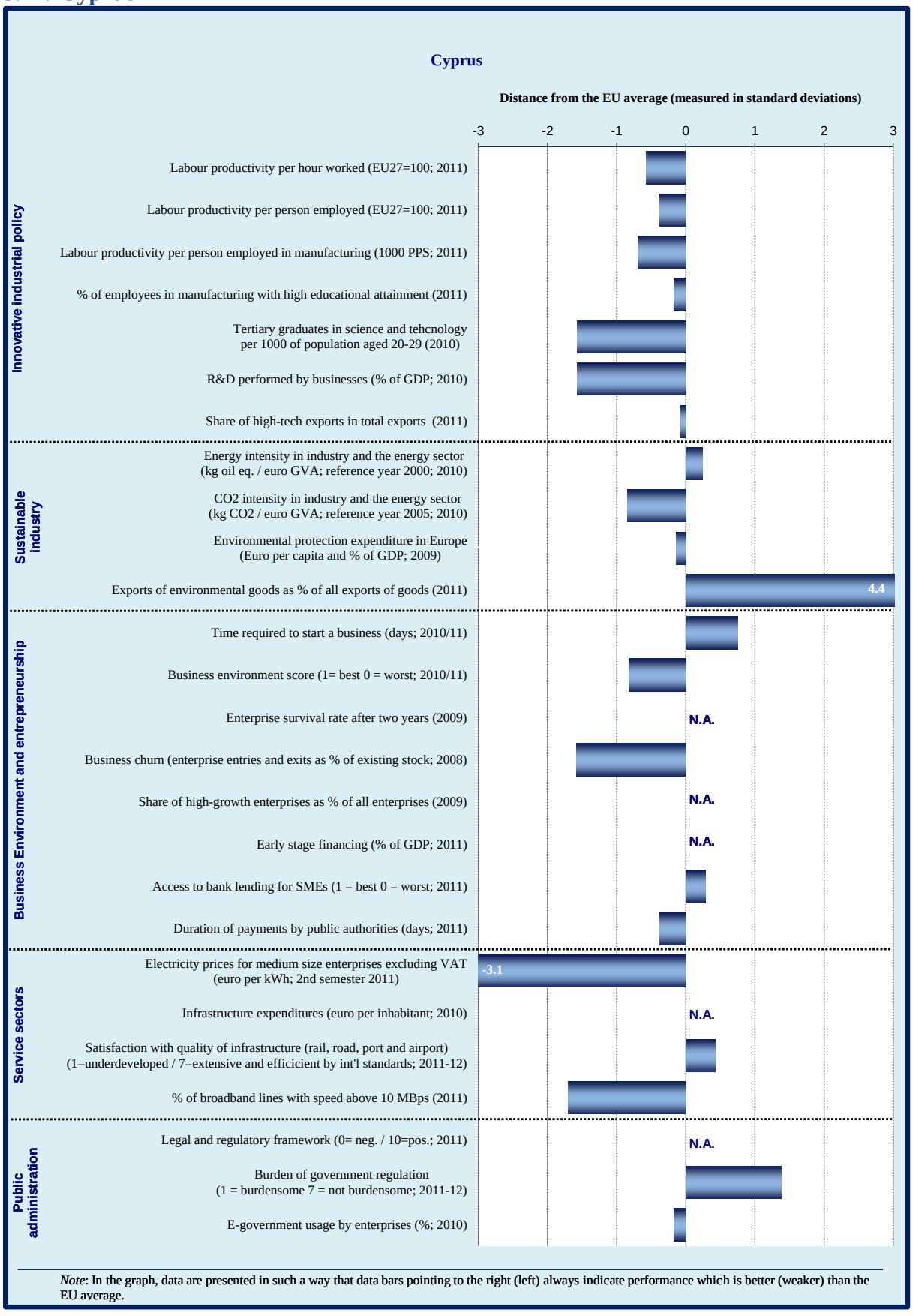
3.11.7. Conclusions

The economic crisis is having serious negative effects on the Italian industry while, at the same time, public resources are scarce. This follows a period of declining competitiveness since the end-1990s, due to both cost and non-cost factors.

In this context, Italian industrial policy focuses on four priorities: access to finance, SMEs, industrial restructuring, research and development. The new government, in place since November 2011, has broadly confirmed these priorities, and has also emphasised the importance of the Digital Agenda.

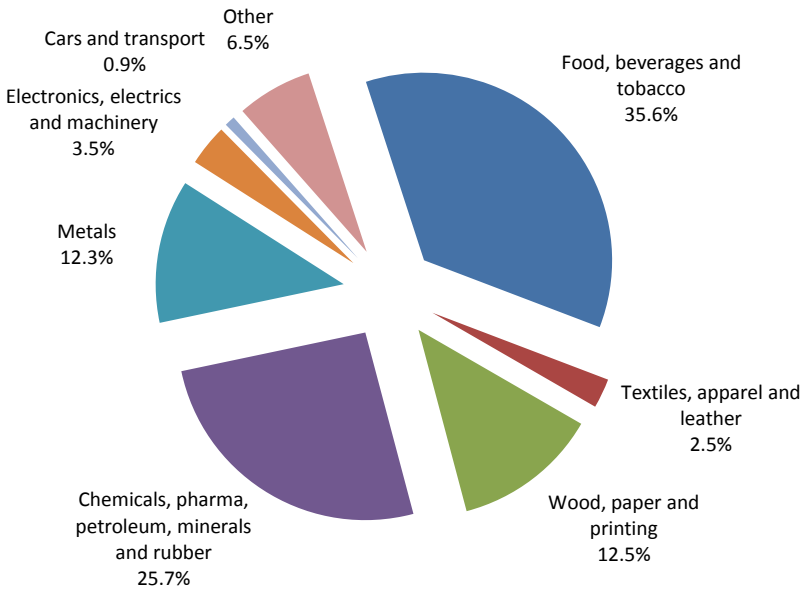
There is relatively more progress on the improvement of the business environment and on the opening of services sectors to competition and less on promoting an innovative industry, where implementation of previous measures has been somewhat disappointing and more ambition would be required given Italy's competitive position. Also, access to finance remains a particularly problematic issue in Italy. Finally, Italy still has a large potential to develop a more sustainable and competitive industry.

3.12. Cyprus



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Cyprus (2009)



Note : No data available for sectors C12 (tobacco products) and C19 (coke and refined petroleum products)
Source: Eurostat

3.12.1. Introduction

Manufacturing plays a less important role in the Cypriot economy than in the EU on average (6.1 % of total value added against 15.5 % for the EU). Slightly more than 10 % of the total workforce is employed in this sector (EU average: 17.5 %), which is the lowest in EU. The most successful manufacturing exports are pharmaceuticals and photosensitive semiconductors devices, which accounted for 22.5 % and 12 % respectively of domestic exports in 2009. However, the revealed comparative advantage of Cyprus is concentrated in low and medium-to-low technology sectors, namely food, beverages and tobacco.

Cost competitiveness of the Cypriot economy significantly deteriorated over the last decade, reflected in the increase of real effective exchange rate. Indeed, while labour productivity grew slightly faster than the average of the euro area, not only is it more than 25 points below EU average, but it has also been offset by a faster growth of prices and wages. Rising production costs are among the causes of the gradual decline of the Cypriot manufacturing sector.

3.12.2. Innovative industrial policy

The performance of Cyprus in terms of R&D and innovation remains weak, in spite of the notable progress in building a research system and in creating a vision for its transition to a knowledge-based economy. Cyprus has a very low level of R&D expenditure as a percentage of GDP (0.50 %), which is in line with its national commitments under the Europe 2020, but far from the EU average (2.0 %). Moreover, the innovation system relies mainly on public expenditure as investment contribution of businesses to R&D is among the lowest of all Member States (0.09 % of GDP against an EU average of 1.23 %). Partly because of the structure of the economy (service sector dominance) and partly because of the characteristics of the productive sector (small companies in traditional sectors), industrial research in Cyprus is virtually absent and the approach taken by industries is to obtain technology by licensing or to buy knowledge incorporated in new machines and equipment.

In addition, the financial crisis is further weakening an already unfavourable situation, both because consolidation efforts of the Government may result in a reduction of R&D budget, and because of the absence of a venture capital market which, along with the credit crunch, is limiting the access of R&D companies to high-risk bank loans, when business expectations allow for the relaunch of investments.

In such a context of limited resources, policy makers are concentrating their efforts in selected areas with high-tech potential. This is one of the pillars of the new National Strategy for Research and Innovation 2012-2015, which is in its final stage of preparation.
The strategy foresees supply-side and demand-side measures. Besides traditional direct funding schemes, such as incentives for innovative product development, an initiative on financing innovation

in business calls the public sector to lead the development of technologically innovative solutions addressing its specific needs. The new innovation policy aims also to foster cooperation among public, business and research organizations; to encourage the creation of local platforms and clusters; and to promote cooperation with European platforms such as Manufuture.

However, raising the involvement of businesses in research implies also addressing the weaknesses in the governance of the research system. Firms that have a high R&D intensity, for example, claim that their limited participation in government programmes, despite the incentives offered, is due to time-consuming bureaucratic procedures. Indeed, the success of an innovation policy presupposes also the active participation of businesses both in the design and in the implementation of innovation policies. Cyprus should strengthen the involvement of industrial community in the governance bodies of the academic and research institution, which should naturally improve the university-industry cooperation.

3.12.3. Sustainable industry

Investments in power generation using natural gas have succeded through the recent discovery of seven trillion cubic feet of natural gas in the Economic Exclusive Zone of Cyprus. According to estimates, this is enough to cover the energy needs of the island for the next 200 years and creates opportunities to become an energy hub and exporter. A pipeline carrying gas to Cyprus is expected to be operative by 2016, while the government is tendering licenses for the exploration of hydrocarbon reserves in another 12 offshore blocks.

However, there are risks associated with a small and isolated energy grid. These, and the dependency on imported oil for energy generation was illustrated by the explosion at the Vassiliko power station in July 2011. In order to meet the resulting power deficit, the Electricity Authority of Cyprus (EAC) was forced to use its old and less cost-efficient generators and to rent a large number of small-scale diesel generators from abroad.

Apart of the opportunities to build a diversified, secure and sustainable energy system, the reserves have implications for industrial policy. A smart exploitation of the gas fields has the potential to create new impetus to the economy of Cyprus, in addition to the direct exploitation revenues. However, this process needs to be properly managed by the Government, when considering the impact in terms of influx of foreign companies and workers, along with the environmental risks posed by the exploitation of gas. Thus, it is of utmost importance to design measures that minimise risks for the tourism and secure benefits for Cypriot economy in the long term. The exploitation of the gas offers also the opportunity to promote R&D in the energy sector in Cyprus and enable development of new industries to exploit the energy resources of Cyprus.

Those developments should not be detrimental to pursuing ambitious policies and concrete measures for renewable energy sources and energy efficiency. The Government provides grants and subsidies for energy efficiency investments and feed-in tariffs for electricity generated from renewable sources. The energy efficiency of the industrial sector has improved by 25 %, mainly due to improved technology in the cement industry. In addition, there has been systematic training of industry managers and engineers in energy management, good practices and energy auditing. Cyprus has exceeded the first indicative target on the contribution of renewable energy to the gross final energy consumption, as the target of 4.92 % set for 2012 was already exceeded in 2010 (5.8 %). It is also one of the few Member States where the share of environmental goods exports exceeded 1 % of total exports, reflecting the relative strength of its photovoltaic production.

3.12.4. Business environment

Access to finance

Conditions of access to credit have deteriorated, reflecting the exposure of Cyprus's banking institutions to Greece (175 % of GDP). Recent downgrades of the three main Cypriot banks' ratings to non-investment grade, has reduced the banks' ability to access international markets and has caused liquidity constraints in the Cypriot financial system.

The consequent credit crunch can be seen in the sharp tightening of credit standards. Combined with anecdotal evidence of interest rates at nearly 8 %, and collateral demands at 140 %, this has squeezed an economy where SMEs mostly cover their financial needs through loans from banks and financial institutions.

Although the banks are not expecting credit standards to change much, after four quarters of consecutive decline, the net demand for loans by enterprises is expected to grow in the second quarter of 2012.
In this context, the Government is preparing a financing mechanism to facilitate SMEs access to finance, by providing guarantees to stimulate growth and job creation. The mechanism will

involve the creation of a holding fund managed by the European Investment Fund (EIF), which provides guarantees to commercial banks to grant loans at competitive rates to SMEs. It is expected that this mechanism will improve the financing conditions for SMEs in the form of lower interest rates, longer repayment term and a grace period.

Regarding the implementation of two JEREMIE instruments, the 65.8% (€13.1m) of the total portfolio of the "Funded Risk Sharing Product" (FRSP) has been disbursed to the SMEs up to the end of August. More problematic is proving the implementation of the "First Loss Portfolio Guarantee Product" (FLPG) for which there seems to be a reduced demand for loans due to the fact that SMEs are currently much more interested in lower interest rates (like in the case of FRSP) than reduced collateral requirements (like in the case of FLPG).
Another source of concern for Cypriot entrepreneurs is late payments, either by Government and private sector. For instance, in 2010 it took more than three weeks longer (73 versus 54 days) for a Cypriot firm to get paid than EU average. The national law transposing the late Payment Directive is expected to be approved by the parliament by September.

Regulatory burden

In general, Cyprus offers a favourable business environment. Entrepreneurship capacity is good and the burden of government regulation is low. Satisfaction with administrative requirements is above the EU average.

Nonetheless, there are areas where there is room for improvement. Major sources of complaint among stakeholders are in the length to comply with building regulations (677 days); and, as a consequence, to get electricity; the inefficiency of the judicial system in enforcing the contracts (735 days); and the severe restrictions in key transport sectors in terms of working hours (e.g., ports, warehouses). To improve the functioning of the judicial system, Cyprus is evaluating the establishment of commercial courts to resolve trade disputes.

One of the main reasons for the loss of competitiveness in the economy is the system of wage indexation (cost-of-living-allowance – COLA), which is a twice-a-year automatic adjustment of wages linked to the average percentage changes in the consumer price index. The application of this mechanism has caused loss in costs and prices competitiveness and rapidly growing trade deficit, as wages adjustments does not reflect similar increase in labour productivity. In addition, the uniform application of the system does not allow wages to reflect productivity differences across sectors, with a consequent inefficient allocation of resources. In the context of fiscal consolidation efforts undertaken by the Government, there has been a two-year suspension of the system in the public service, which seems to be occurring also in the private sector, though this is at discretion of each employer. However, negotiations to modernise COLA are under way and the aim is to reach an agreement the soonest possible.

3.12.5. Services sector

Despite the liberalisation of the market, the Electricity Authority for Cyprus (EAC) remains the only domestic provider; The small size of the market and the high initial investment costs have made it difficult for new companies to enter the market. Hence, the demand faced by EAC is inelastic and any price increases are borne by the consumers. Since 2007, Cyprus has constantly been within the top three in the rankings for electricity prices within the EU.

The possibility that the discovery of natural gas will lead Cyprus to have a more diversified and international energy sector in the long run does not remove the short-term disincentives for investment. Given the prospects of the gas resources for the island, Cyprus needs to promote the development of a competitive energy market, in line with the requirements of the Third Energy Package.

Some restrictions remain in those regulated professional services where fixed or minimum tariffs exist (such as lawyers and architects), and these play an important role in a variety of contractual and legal obligations for businesses (and citizens). Improving the quality and reducing the cost of professional services could have a multiplier effect on the economy in the medium term.

3.12.6. Public administration

The public administration of Cyprus performs close to the average of the sample of Member States. The World Bank's *Government Effectiveness* measure that can be interpreted as a comprehensive assessment of the quality of a public administration in a very broad sense indicates a public service quality that is better than the EU average.

Compared to the other Member States, Cyprus lags behind in the adoption of *tools of administrative modernisation* (e-government, impact assessment, performance and service orientation). In addition,

all of the most important public services for enterprises are not yet online (although 75 % are), whereas their take-up rate has increased to 74 %. On the other hand, both the provision for (42 %) and take-up by (25 %) citizens are among the lowest in EU. The reliance on instruments of a modern human resources management (performance-related pay, flexibility, skills development) is also below the EU average.

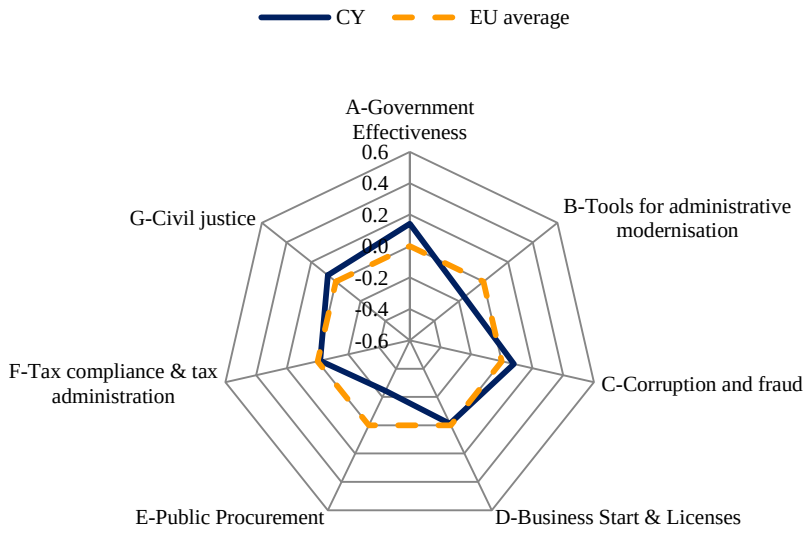
Corruption measures also indicate an average performance of the administration. The index values for irregular payments and for diversion of public funds are very close to the EU average. Individual experience with corruptive public suppliers occurs slightly less than the average, i.e. in about 6 % of all cases.

The indicators for *starting a business and licensing* point to some scope for improvement; this holds especially for the cost for starting up a company. In Cyprus, it costs about 13.1 % of income per capita to start-up a (model) company. This is much higher than the EU average of 5 %. However, the time needed for registering and starting up a business is only 8 days, which is substantially less than the EU average of 13.7 days. Further, Cyprus is one of the Member States that have already implemented a fully operational one-stop-shop to start a business.

The *public procurement* system has some weaknesses in comparison with the other Member States. Although payment delays of public authorities (23 days) are slightly shorter than average (28.3 days), the typical cost and time used up in the procurement process are substantially worse than average cost and time. Public tenders can be submitted electronically via a system of e-procurement.

Cyprus offers a generally favourable tax system for enterprises, characterised by low tax (23.2 %) rates and a broad tax base. In terms of tax structure, Cyprus relies heavily on consumption taxes, while the tax burden on labour is low. Overall, Cyprus is among countries that have a fairly low share of distortionary taxation, i.e. labour and capital taxation.

Overall profile of public administration



Source: WIFO

While the administrative burden of complying with taxes in Cyprus is fairly good (on average, firms spend 149 hours a year filing, preparing and paying taxes and pay total taxes amounting to 9.1 % of profits), the administrative cost of tax collection (the expenditure on *tax administration* as a percentage of tax revenues) is the highest in the sample with 7.4 % of total receipts[183]. Further, personnel expenditures on core administration (without the military) are highest among the Member States.

[183] In June 2012, the Cypriot authorities revised the method of calculation of this figure. The new data would point to a value of 2.7%, which, although lower, is still higher than the EU average.

Despite that the estimates of the size of black economy in Cyprus do not suggest that income tax evasion is higher than that of other countries, the Government is set to strengthen the prevention and inspection of combating illegal and undeclared work.

Efficiency of civil justice in Cyprus is a slightly better than EU average. Costs of enforcing contracts (16.4 % of the claim) and the time required for resolving insolvency (1.5 years) are slightly lower than the respective EU averages, whereas the time of contract enforcement is higher than on average (735 days as compared to 556 days). The overall perception of independence of the judiciary is a somewhat better than at the EU average.

Cyprus has taken significant steps to better serve the citizen and to enhance the productivity and the effectiveness of public services. The Citizens' Service Centres (CSC) enable the provision to citizens of over 50 services of six government departments. The Companies Registration System (e-filing) was introduced to allow for complete online registration of companies, and is also expected to partly address the cost of setting up of a business, which is higher than the EU average. Additionally, the system of 'e-procurement' was implemented enabling the performance of public procurement competitions using electronic means.

Furthermore, Cyprus has committed to reducing the administrative burden of the national legislation by 20 % by 2012. To achieve this target, a sectoral baseline project was created for the reduction of administrative burden in all legislation relating to enterprises, based on eight priority areas. A number of proposals have been submitted in each of these priority areas on the basis of recommendations proposed by a consultancy and after a consultation with relevant government services and the private sector. It is expected that implementation of all recommendations will lead to a total reduction of 22 % of administrative burden.

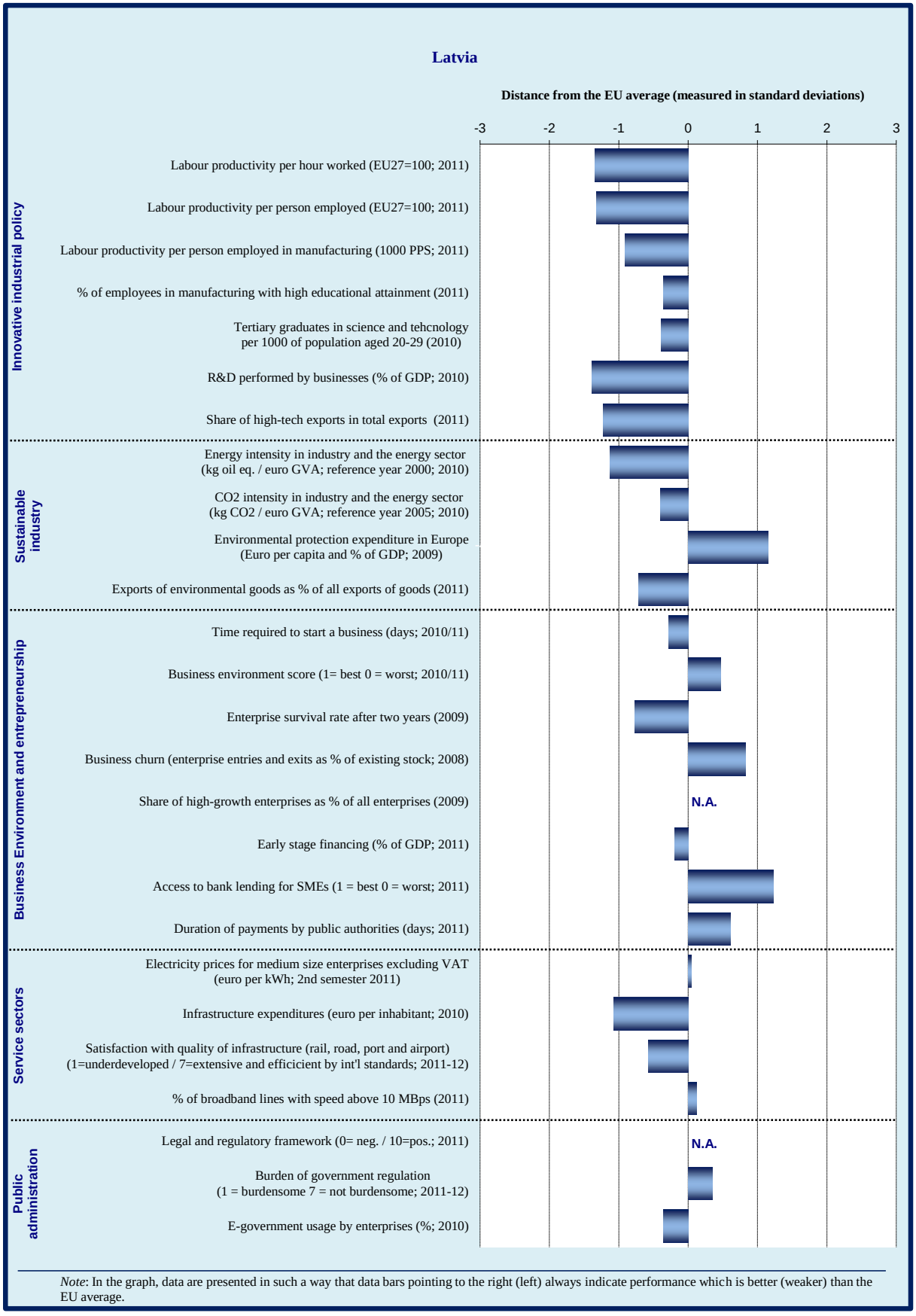
Regarding e-government, a horizontal proposal was also submitted aiming at promoting the use of existing electronic systems in the Public Service.

3.12.7. Conclusions

Increasingly negative trade balance of goods indicates a lack of competitiveness in the Cypriot industry, which is a serious problem for a small open economy that relies on export-driven growth. Indeed, surpluses in the services balance have only partially offset it, resulting in average current account deficits of six percent of GDP since 1995.

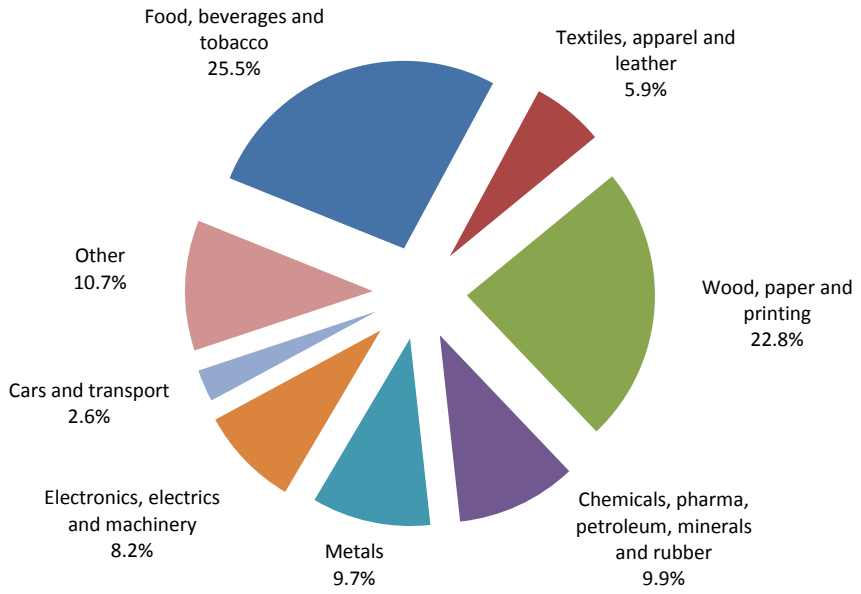
The shortcomings of the cost of living adjustments have also become more evident in the current low-growth environment. The Government has started on a serious effort to modernise the system. If the wage indexation system will be reformed to better reflect sectoral productivity gains, it could improve the economy's ability to respond to the current economic downturn. Good prospects have been created by the discovery of natural gas however the current high electricity prices damage competitiveness. Despite the small size of the domestic market, there is room for improvement. Finally, Cyprus should accelerate its effort to overhaul its R&D and innovation policies to adjust the structure of the economy towards more knowledge-intensive and high-growth activities.

3.13. Latvia



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Latvia (2009)



Note : No data available for sectors C12 (tobacco products), C22 (pharmaceutical products and pharmaceutical preparations) and C32 (other manufacturing)
Source: Eurostat

3.13.1. Introduction

Latvia is one of the countries that are catching up: while it cannot yet be described as a knowledge-based economy, it has made progress in terms of sustainability, and manufacturing production now exceeds pre-crisis levels. The manufacturing sector accounts for 14.1 % of total value added versus 15.5% in the EU on average. However, Latvia has very low R&D intensity and a business culture that is not yet mature; it has relatively lower income levels and a predominant specialisation in labour-intensive industries. In general, Latvia has improved its competitiveness, especially in terms of specialisation.

The manufacturing sector is focused on food processing, wood processing, and mechanical engineering. Latvia's main trading partners are the other Baltic countries, Russia, Germany Poland, Sweden, Belarus and the rest of the EU. At the more aggregated level, Latvia is specialised in both high and medium high sectors like electrical and optical equipment, chemicals and sectors with low and medium-low intensity, such as metal processing and machinery, wood, food production, and services sector. Latvia has been climbing the technology ladder to medium-to-high tech exports.

3.13.2. Innovative industrial policy

Latvia's poor innovation performance could impair its long-run competitiveness: Latvia has been consistently ranked amongst the last by the *Innovation Union Scoreboard*. The *Latvian Competitiveness Report 2011* highlights its poor innovation performance as one of the main weaknesses. While R&D intensity recovered somewhat in 2010, reaching 0.6 % of GDP, it remains one of the lowest in the EU, which makes the national target of 1.5 % by 2020 rather ambitious. Latvia's innovation policy has so far been characterised by rather disparate measures, over-dependent on structural funding, and whose effectiveness has not been thoroughly evaluated. Latvia needs a comprehensive industrial policy to provide support for the development of an entire infrastructure for innovation. The work that has started on the elaboration of a modern industrial policy is only a first step in this direction.

There is little R&D investment by both domestic companies and foreign affiliates to support trade specialisation towards knowledge-intensive and innovation-driven sectors. Latvia has one of the lowest business R&D expenditure in the EU (0.22 % GDP in 2010); in part due to the poor innovation performance of SMEs. Most of the support programs for innovative companies are financed from EU structural funding, with state co-financing. In order to help enterprises develop new products or more efficient production processes, the following support programs have been designed: '*Development of New Products and Technologies",* '*Introducing New Products and Technologies in Production", 'support for protection of industrial property rights*", '*support to Science and Research*' and '*High Value Added Investment' programme*". Two new programmes are in the initial phase: the

'*Development Programme of New Products and Technologies by Micro-, Small and Medium-Sized Enterprises*, and a programme for the development of innovative green products (supported by a Norwegian financial instrument). Under the '*EUREKA programme",* businesses may submit projects to apply for assistance. In addition, a '*Market oriented research programme'* is in place to support cooperation between scientists and entrepreneurs. The achievements of all these programs should be closely evaluated against their goals.

The cooperation between business and academia continues to be weak and research commercialization is rather low. Companies do not use enough of the research potential of universities and their participation in the 6 competence centres (aiming at bringing together innovative enterprises and research institutions) is rather limited. The technology transfer contact points operating in several universities have modest results, in part due to the incomplete IPR legal framework, which does not encourage universities to patent their inventions. In 2011, seven clusters were created in areas like electronics, chemistry and pharmacy, space or logistics, but their added value remains uncertain. Latvia has made a first attempt at modernization by creating nine national research centres, which seem to focus disproportionately on academic research. In addition, 381 companies have been incubated so far, out of which 79 have stayed operational; it remains to be seen if the remaining companies will survive once incubation is over.

The innovation vouchers program, intended to encourage SMEs to invest in R&D, has been developed but is not operational yet. The value has been set at LVL 10 000 /voucher, with a limit of one per company. The list of R&D providers has been limited to universities and research institutes, product certification institutions, testing and calibration laboratories as well as patent attorneys and the Latvian patent office. This program will need to be closely monitored by checking if the benefiting SMEs actually continue with R&D activities.

The skills mismatch continues to be a problem. There continues to be a lack of scientists, engineers and technicians. Many Latvian scientists chose to pursue their careers abroad. To address this, Latvia is making efforts to modernise the vocational education system: six out of the 38 vocational education institutions have become vocational education competence centers, with ERDF support. The number of doctoral students having received scholarships in priority areas (STEM) increased by 38% in 2011, with ESF support. The adopted amendments to the Law on higher education institutions stipulate, inter alia, the obligation to attract foreign academics in universities, and the recognition of study achievements obtained outside formal education.

Overall, Latvia has to put considerable effort into developing and implementing a systematic and effective research and innovation strategy, which could encourage more firmly the innovation activities of companies.

3.13.3. Sustainable industry

Latvia has made progress on the sustainable dimension but is yet to adopt a long-term strategy for energy. While most of the energy in Latvia is generated by gas, biofuel and hydropower, the industry represents 14.3 %[184] of the total GHG emissions. Its energy intensity is more than double the EU27 average, which is mainly due to its specialisation in energy-intensive sectors. . While the energy intensity in wood processing has significantly worsened, affecting the whole manufacturing sector, sectors like cement, metal, food processing, and textiles have decreased their energy consumption. There are some environmental standards in place and companies that switch to alternative sources of fuel or are involved in technological innovation thus obtain a surplus of ETS allowances.

Latvia's energy efficiency is significantly below the EU average – the intake of energy relative to GDP was 80% above the EU average in 2010. There are not enough incentives for shifting consumption towards energy efficient products. In particular, energy efficiency is low in the transport sector, which is the largest emitting sector in Latvia (with 25.9% of the country's GHG emissions in 2009); the public transportation network could be further consolidated and the use of renewable energy and further railway electrification could be envisaged.

In terms of renewable energy, Latvia has committed to reach a target of 40 % of renewable energy sources in final energy consumption and a 10 % share of renewable energy in the transport sector by 2020. However, progress is lacking in developing a coherent and stable renewable energy policy; the adoption of the new Renewable Energy Law seems to have been delayed indefinitely. Given this situation, stakeholders complain about the instability of legislation that cripples the market and creates unfair competition. The Ministry of Economics has prepared the draft of the long-term policy planning document Energy Strategy 2030 and plans to submit the strategy to the Cabinet of Ministers in 2012. Renewable energy and energy

[184] In 2010.

efficiency projects are financed through structural funding and through the Climate Change Financial Instrument (CCFI).

The liberalisation of energy markets is undermined by the limited interconnectivity of the main network industries and the relative isolation of Latvia from the EU gas and electricity networks. In the electricity generating sector, Latvenergo has a dominant position. The National Regulatory Authority has become legally independent since August 2011. Interconnectivity with the other Baltic countries is being improved. Given that the Latvian electricity network is also interconnected with those of Belarus and Russia, a synchronisation with the EU electricity system would require negotiations with Russia and Belarus on the technical operation of the networks.

The structure of the waste management system is still not in line with the principles of resource efficiency. Latvia still landfills 90 % of municipal waste, with a low level of landfill taxes, compared to other countries. Separate waste collection and recycling are rather limited, in part due to a lack of appropriate investments and incentives. Industrial recycling is also in its incipient phase and is benefiting from state aid. Progress has been made with establishing water treatment stations in small and medium size towns. In an effort to re-start EMAS registration, which dropped dramatically during the crisis, the biggest pollutants have been offered incentives to join EMAS. In spite of this, SMEs have little incentives/possibilities to join EMAS.

3.13.4. Business environment

While Latvia has made efforts to reduce the administrative burden on business, increased focus on real efficiency gains is still needed, as most of the initiatives taken are fragmented, thus less effective. The government lacks a comprehensive strategy on supporting enterprises and improving the business environment, as it is narrowly aiming at improving international rankings – especially the World Bank's *Doing Business* Report where Latvia is much better ranked than in the *WEF Competitiveness Report*.

The Support Measures for Micro Enterprises can be considered a 'best practice' for introducing simpler procedures and supporting start-ups. This measure reduced the state fee for registering an enterprise by 50 %, cut the costs of business start-ups, reduced the equity capital requirement to a minimum of EUR 1.43, and introduced a special reduced tax rate of 9 % for micro-enterprises.
In spite of the recent improvement in the availability of bank loans, access to finance still remains a problem. The cost of capital is relatively high, hindering both debt and equity financing, mainly due to: low level of information disclosure, weak corporate governance and entrepreneurial culture, poor quality of business ideas, and unwillingness to dilute ownership to attract equity investment. Companies involved in the informal economy and tax evasion are unable to secure financing, as banks refuse any candidate with 'double accounting sheets'.

It seems that the support programmes available for enterprises, financed mostly via EU structural funding, are rather fragmented. The creation of a financial development institution is not finalized yet. Of the capital instruments available for microenterprises and SMEs, only a few investments have been made[185]. Of the measures targeting the manufacturing industry, the programme for improving the competitiveness of enterprises has granted approximately two thirds of the available loans for 2011-2013. A new venture capital initiative targeting seed and start-up financing is under discussion – from the Baltic Investment Fund, supported by the European Investment Fund (EUR 40 million) – but the commitments of Latvia and Lithuania are not yet entirely clear.

The Strategy for attracting FDI targets sectors like machinery and metal working, wood processing and the creation of a 'shared service centre". Latvia has 13 Foreign Economic Representative offices in charge of promoting export and attracting FDI, but their results are yet to become concrete, especially in the face of competition from the other Baltic countries and Poland.

In terms of support for entrepreneurship, there are some measures for people who are just starting their business, such as free consultations and training. Students who submit a good business plan can obtain financing through the Innovation Motivation programme. These initiatives need to be evaluated against the survival rate of the supported start-ups.

The poor condition of infrastructure is being slowly addressed with the support of EU financing. In order to modernise regional and national roads, the quality standards for road construction need further improvement. Further, a commitment to the 'Rail Baltica' project, which foresees a double track electrified railway connecting Poland, Lithuania,

[185] The seed and start-up capital instrument has made approximately a quarter of the investments proposed for 2010-2016, whereas the venture capital instrument has invested 21 % of the funds planned for 2010-2016. Of the mezzanine instrument launched in November 2011, 2 applications have been approved (approximately 6.3 % of the total financing). The micro-credit programme granting loans for current assets and/or investment has disbursed about 38 % of the available funds to SMEs.

Latvia, Estonia and Finland, would increase the modal share of a more sustainable rail freight and passenger transport.

3.13.5. Services sector

The competition climate could be improved, especially in sectors like: construction, healthcare and pharmacy, public services and food supply,which is dominated by two big chains. Licensing restrictions on opening pharmacies have been relaxed, but the market power of wholesalers still remains. There is only one big supplier on the sugar market, which is problematic. In terms of public services, port authorities occasionally run commercial-like activities that prevent private companies from offering their services, leading to legal disputes.

The number of restrictions on regulated professions seems to be moderate, except for construction where regulations are heavier, and entry requirements for notaries, as Latvia refused to repeal the nationality requirement.

The Competition Council has sufficient discretionary power in implementing the current law: the Council uses in medium less than one year to adopt a decision. However, the capacity of the Competition Council needs to be strengthened, in order to allow it to make market investigations more actively.

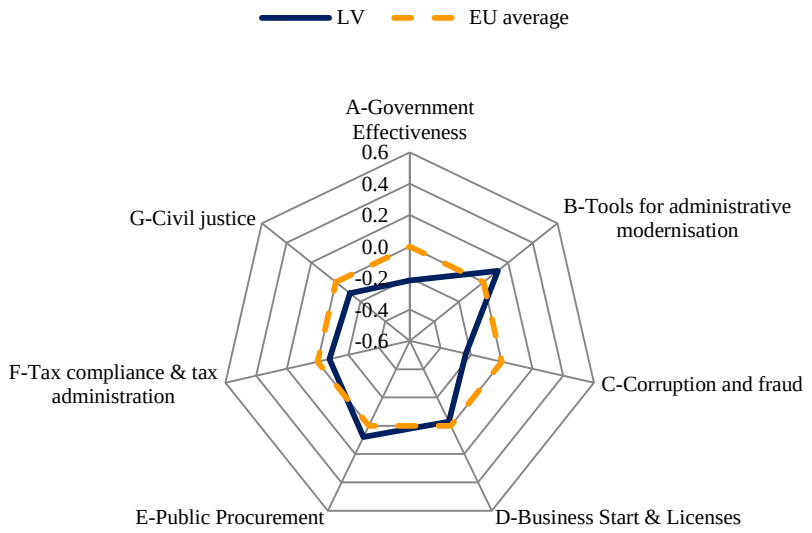
3.13.6. Public administration

In terms of the overall performance of public administration, Latvia ranks considerably lower than the EU average, as measured by the World Bank's Government Effectiveness Indicator (see graph below). The perceptions of the quality of public services show a notably inferior performance when compared to the EU average. On the other hand, Latvia scores better than the EU average in terms of tools for administrative modernisation, which is mainly due to the full implementation of 8 business related e-government services, and some use of flexible recruitment and a tenure system for public service employees.

As for licenses and starting a business, Latvia is at the EU average: while the time needed to start a business is higher than the EU average and the one-stop-shop is not yet fully operational, the costs for starting a business are significantly lower than the EU average; licensing procedures are assessed as being more convenient than the EU average. In terms of public procurement, Latvia's performance is above the EU average: payment delays from public authorities are of 18 days, compared to 28 days for the EU average, and the time to participate in tenders is considerably lower than the EU average. Further, Latvia is slightly below the EU average in terms of tax compliance: it takes 290 hours per year to pay taxes in Latvia, compared to the EU average of 208 hours, whereas tax administration efficiency is above the EU average.

Compared to the EU average, corruption is an important issue in Latvia. The *Global Competitiveness Report* (WEF 2011-2012) identifies corruption as the third most problematic factor for doing business, and shows relatively high levels of wastefulness of government spending, diversion of public funds, and favouritism in decisions by officials. A majority of surveyed respondents reported as common the 'diversion of public funds' due to the political influence of vested interests, as well as a high frequency of undocumented payments and bribes by firms in relation to public services; 16% of respondents report having experienced corruption, as compared to an EU average of 10%. Further, the *Latvian Competitiveness Repor*t (2011) identifies corruption as being highly correlated with underdeveloped financial markets, weak corporate government and inequality in Latvia. In terms of recent progress, criminal liability for private sector bribery has been expanded and public sector bribery has been criminalized. According to the *2012 Report of Transparency International*, the Corruption Prevention and Combating Bureau – well-resourced and independent – has been a critical player in the fight against corruption in Latvia.

Overall profile of public administration



Source: WIFO

Recent studies[186] suggest that the informal economy is quite sizeable in Latvia, considerably larger than in peer group countries, and concentrated in sectors like construction, services and retail. The government is stepping up its efforts: after several initial delays, the Action Plan to Combat Shadow Economy is being implemented; the law on reporting undeclared income has been adopted recently. However, the law on lobbying has not been adopted yet and regulatory processes are still exposed to political capture by private interests. According to the *2012 Report of Transparency International*, the protection of whistle-blowers is still piecemeal, as the current legislation does not provide adequate protection for those who report on cases of bribery or abuse of office.

As for the efficiency of civil justice, Latvia performs worse than the EU average: while the time needed for the enforcement of contracts – 369 calendar days – is significantly lower than the EU average, the cost for the enforcement of contracts is notably higher than the EU average, the time needed to resolve insolvency significantly exceeds the EU average, and the independence of the judiciary is well below the EU-benchmark. In general, Latvia's weak corporate governance structure generates a high number of business disputes, thus hurting its competitiveness. There is a large backlog of proceedings in the first and second instance courts in civil and commercial cases, especially as regards contractual obligations. While the authorities are working towards improving court infrastructure and the efficiency of procedural law, there is a need to further strengthen judicial independence as well as the professional performance of judges, especially regarding knowledge of EU law. The amendments to the Insolvency Law decreased the duration of the insolvency process from three years to one year and one month and the costs of insolvency were cut to half the previous amount; however, the law has some loopholes, for instance in terms of possibility of appeal and further improvements are being discussed.

While the first electronically registered enterprise was created in 2010, the one-stop-shop e-registration for companies is not fully operational. The government intends to introduce the one-stop-shop in the registration of real estate and real estate property rights. While the government is planning to have approximately 150 e-services in 2012, only 46 have been introduced on the portal latvija.lv; the platform is not very user-friendly, very few services are available in English, and entrepreneurs seem to have little knowledge that it actually exists. At the same time a good example is the Electronic Declaration System (EDS), which allows the submission of declarations, reports and tax calculations to the State Revenue Service (SRS) electronically; it is currently possible to submit 95 % of all the reports and declarations foreseen in normative acts.

In terms of public procurement, there are significant delays due to long tendering and appeal procedures. The number of applying SMEs is still low, as rules seem to be targeting bigger enterprises. While the

[186] See Sauka, A. and Putniņš, T. (2011), Shadow Economy Index for the Baltic countries 2009 and 2010, Stockholm School of Economics in Riga, May 2011.

government plans to introduce a one-stop-shop for local government services, the Plan for Improving the Application of the Electronic Procurement System and the guidelines for local government procurement are still not fully implemented. According to the 2012 *Report of Transparency International*, a large proportion of contracts are still awarded using negotiated or restricted procedures, which can reduce competition and protect certain interests.

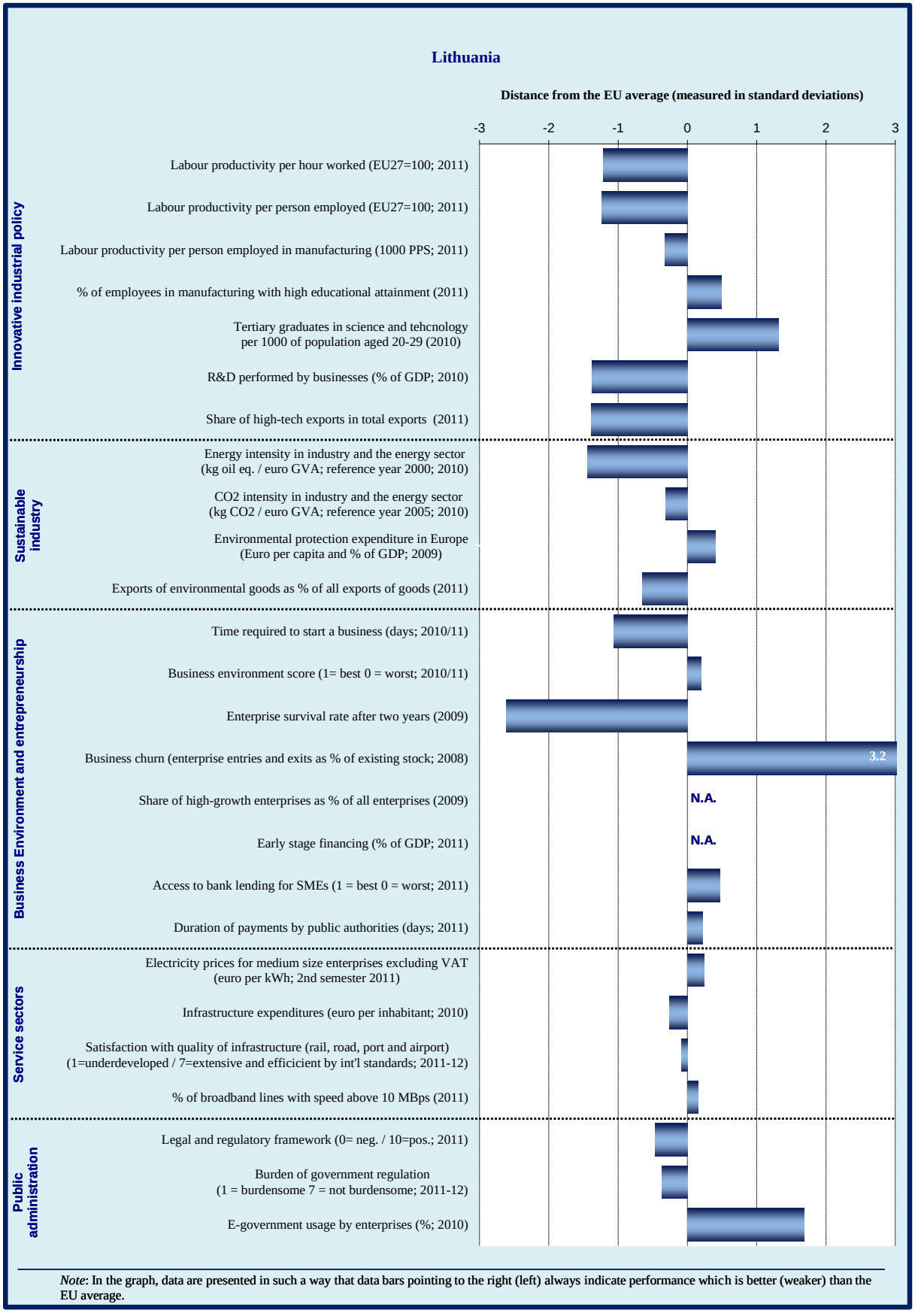
The new Construction Law was supposed to reduce the time necessary to obtain construction permits to 69 days and the approval of architectural specifications to 6 procedures, but it has been delayed in Parliament at the second reading stage. Nevertheless, the Cabinet of Ministers approved changes to the General Construction Guidelines, which reduced the deadlines from 30 days to 10 days. However, it is still necessary to visit 11 institutions in person in order to obtain a construction permit.

3.13.7. Conclusions

In order to improve its competitiveness and move further towards a knowledge-based economy, Latvia could benefit from a further strengthening of the growth potential of its economy through a range of structural reforms. Particular attention could be paid to the following: promote a coherent industrial policy, further improve public procurement and the performance of public administration, continue to reduce the administrative burden, and improve the absorption of EU funds.

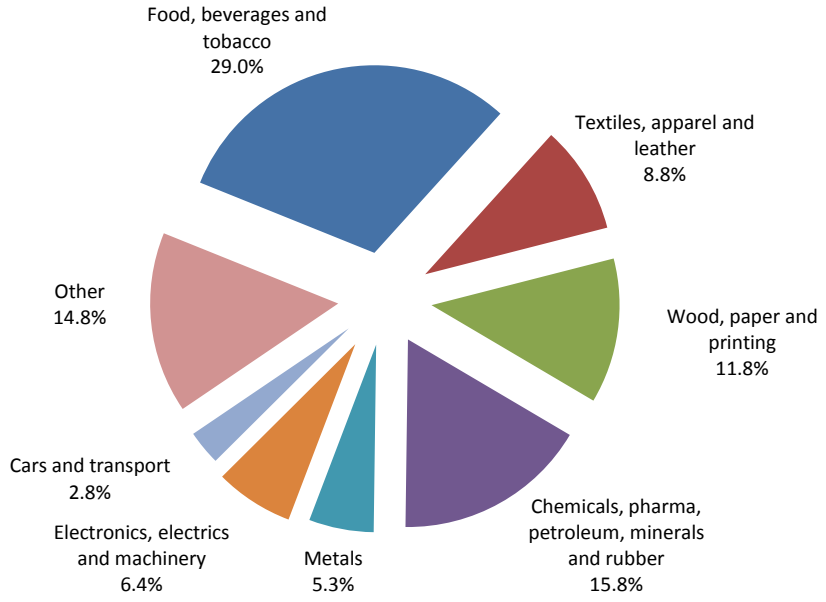
While the support for microenterprises is considered a best practice, the business environment could be further improved by encouraging companies to innovate and better exploit the resources offered by universities, improving access to finance, creating a more competitive environment, increasing the supply of high-skilled labour and improving (re)training schemes. Moreover, Latvia would benefit by promoting greener growth through continuing to improve energy efficiency and increase the share of renewables, and modernise the infrastructure, including roads, railways and public transportation. Finally, cooperation opportunities in the Baltic region could be exploited in a more fruitful way.

3.14. Lithuania



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Lithuania (2009)



Note : No data available for sectors C12 (tobacco products) and C19 (coke and refined petroleum products)
Source: Eurostat

3.14.1. Introduction

Lithuania has a large manufacturing sector accounting for 20.4 % of value added compared to the EU average of 15.5 %. The economy is specialised in market-driven manufacturing industries (e.g. food products); medium-technology sectors (chemical products); and labour-intensive industries (e.g. wood and furniture products). Exports include both low-to-medium technology sectors (e.g. mineral products) and medium-to-high technology sectors (e.g. chemical products and textiles). Partly on account of its industrial structure, Lithuania's R&D intensity is below the EU average, although the share of high value added production is increasing and the country is moving towards exports with higher added value.

Lithuania belongs to the group of 'catching up' countries. Closing the gap with better performing economies is hindered by competitiveness and business environment weaknesses. Lithuania experienced a strong real effective exchange rate appreciation over the last decade which led to a partial loss in price competitiveness. However, an internal correction has occurred since 2008 and export markets have been diversified. While labour productivity has increased over the same period, it is still significantly below the EU average. An important challenge for Lithuania is to continue to raise productivity to catch up with regional peers. Increased investment in research and education would be beneficial, in this respect, as well as a business environment that fosters more innovation.

3.14.2. Innovative industrial policy

The Lithuanian economy compares poorly against other EU member states based on the Innovation Scoreboard 2011 indicating that it is only a 'modest innovator'. Lithuania is comparatively weak in the categories of 'open, excellent and attractive research systems', 'linkages and entrepreneurship', 'intellectual assets', and 'innovators and economic effects'. In particular the crisis has contributed to a strong decline in innovative SMEs collaborating with other enterprises and in license and patent revenues from abroad. Lithuania has the lowest share of knowledge intensive services in the EU. Annual R&D expenditure has remained stable since 2004 at around 0.8 % of GDP. This has the potential to hamper the development of high-technology industries and can lower long-term growth potential. Lithuania has set an ambitious target to raise annual R&D expenditure to 1.9 % of GDP per annum by 2020. This would require a significant effort on the part of the private sector and national authorities and the private sector.

At the policy level, co-ordination has improved. The Lithuanian Strategy for Innovation (2010-2020) has drawn together separate initiatives aimed at increasing innovation, including those aimed at strengthening support infrastructure; developing institutional capacity; improving cooperation between academia and the private sector, raising human capital and promoting innovative public procurement. Lithuania is also continuing to reform its science base, in particular through the development of five integrated Science, Research

and Business Centres ('Valleys'). Lithuania has introduced financial incentives, including R&D tax credits and innovation vouchers, in order help businesses procure R&D services and contract technical feasibility studies from universities and research institutes.

The main policy challenge remains to significantly increase the level of government R&D funding. The efficiency of financial support could also be improved by targeting those scientific areas where Lithuania is most competitive. To develop human capital, entrepreneurship programmes should be widely introduced into higher education curricula, and more incentives should be provided for academic researchers to cooperate and collaborate with enterprises. On the demand side, obstacles should be progressively removed to support the creation and development of innovative companies, and public support should be considered for prototyping, feasibility studies and start-up financing.

3.14.3. Sustainable industry

The energy intensity of Lithuania's industry is twice the EU average. To comply with the EU Climate Change regulation, Lithuania is required to restrict the rise in carbon dioxide (CO_2) emissions to 15 % between 2005 and 2020 in the non-EU ETS sectors, but based on current trends CO_2 emissions are set to rise by more than 20 %. Action is required to improve the efficiency of household heating, particularly in apartment blocks, and the emission-intensive transport sector. Waste management could also be improved: 86 % of municipal waste is landfilled, and Lithuania has one of the lowest re-cycling rates, at 11 % (in 2010 5 % of municipal waste was recycled domestically and 6 % abroad), in the EU. Finally, Lithuania's energy infrastructure would benefit from more competition and greater interconnectivity in order to bring down energy prices and better support economic development.

Lithuania has made limited progress with respect to improving the energy efficiency of buildings; only an estimated 1 000 buildings have been upgraded through the EU supported JESSICA Holding Fund. The government introduced a new version of the Multi-Apartment Building Modernisation Programme in December 2011 but it is more modest than its predecessor and is not likely bring about significant efficiency gains. Although additional financial support is foreseen for renovation projects with strong energy saving potential, the targeted number of projects has been reduced. Other aspects of energy policy may also affect the success of the programme. Lithuania currently applies a 9 % reduced VAT rate to residential heating and subsidies are provided to low-income households to cover increases in energy prices; both of these measures reduce the incentives to improve residential energy efficiency. Given that there are more than 30 000 apartment blocks with very low energy efficiency, greater efforts are needed to bring about significant gains in energy saving. This could also imply a review of fiscal incentives.

3.14.4. Business environment

Lithuania's slipped two ranks to twenty-seven in the 2012 World Bank's Doing business report. Despite this marginal decline of Lithuania's comparative ranking, several measures have recently been implemented to improve the business environment, described below and in the section on *public administration*.

In order to improve operating conditions for businesses, the government raised the VAT registration threshold, from LTL 100 000 to LTL 155 000, and the threshold up to which firms are eligible for 5 % profit tax, from LTL 500 000 to LTL 1 million. With respect to tax administration, an electronic declaration system was introduced enabling the direct on-line submission of documents, and an electronic VAT return system was established allowing companies to apply electronically for their VAT return on goods/services acquired in other EU countries. A new law on the restructuring of enterprises was introduced on 1 October 2010 providing more favourable conditions for enterprises experiencing financial difficulties, offering an enterprise the possibility of restructuring in order to avoid bankruptcy.

Credit to enterprises started to rise again in the last quarter of 2011 after declining since 2009 when the credit bubble burst. This proved to be temporary, as it declined again in 2012 and lending remains low due to continuing deleveraging and persisting uncertainties in the economic outlook. Foreign owned banks, particularly subsidiaries of Swedish banks, play an important role in the financial sector: foreign subsidiaries manage nearly 90 % of bank assets, of which over two thirds are controlled by the three largest banks.

The banking system was badly hit by the financial crisis, and required action taken by the Lithuanian authorities and support from the foreign parent banks. Financial soundness indicators have gradually improved since the crisis although the number of non-performing loans remains high. Weak demand and a lack of good projects appears to be restraining lending rather than supply constraints, and the government continues to support financing for SMEs through the EU

structural funds[187]. The venture capital market is embryonic and not a significant source of finance for SMEs.

3.14.5. Services sector

The services sector is the largest sector in the Lithuanian economy making up just under two-thirds of GDP and attracting around a half of total FDI. The Lithuanian Government has set a strategic goal to become the Northern European Service Hub by 2015, when services are expected to make up around a half of Lithuania's exports. One of the most important sub-sectors is information and communication technologies (ICT); Lithuania has well-developed ICT infrastructure which has helped it attract business outsourcing services from some of the EU's largest corporations.

The Lithuanian tax system suffers from a significant degree of tax evasion; administrative efficiency could also be improved. The size of the shadow economy is estimated to be larger than the EU-average. There is also a large VAT compliance gap (i.e. the difference between VAT receipts and the theoretical net VAT liability for the economy given the VAT rate structure) implying substantial lost revenue. Administrative costs per unit of tax revenue are relatively high and the time taken for businesses to pay their taxes could be reduced by improving administrative procedures.

The Lithuanian government has recently adopted a comprehensive tax compliance strategy and a programme of measures for 2011-2012. Cash registers have been introduced for food products in markets and border controls have been strengthened. These measures are bringing results, helping to improve tax compliance and administrative efficiency. However, further steps are still needed to reduce the size of the large shadow economy, which is acting as a drain on public finances.

3.14.6. Public administration

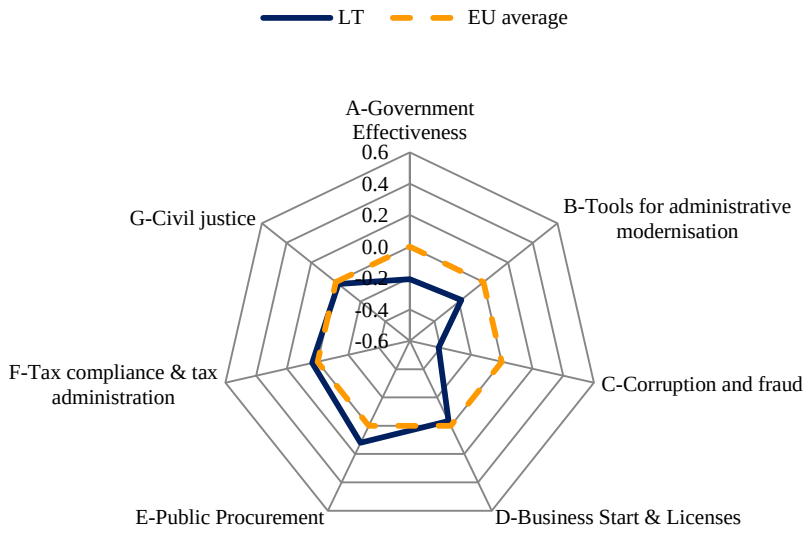
Lithuania's scores considerably below the EU average for *overall public administration performance*, as measured by the World Bank's Government Effectiveness Indicator, and below the EU average on the use of *tools for administrative modernisation* (e-government, impact assessment, performance and service orientation, accountability). The latter is due to relatively lower availability of business related e-government services as well as shortcomings in the application of modern and flexible human resource management tools for public service employees. Lithuania also scores well below the EU average on *corruption*, in particular due to many reported incidents of corruption when dealing with public administration: 27 % of respondents in Lithuania compared the 10 % EU average.

On *starting a business and licensing*, Lithuania performs broadly in line with the EU average. The costs of starting a business are lower than the EU average while the procedure for obtaining licenses is comparatively more complex. After recent reforms, the time taken to set up a business is only slightly more than the EU average. On *public procurement*, Lithuania performs better than the EU average including lower costs incurred and less time taken to apply for tenders.

Tax compliance and tax administration is slightly better than the EU average; the time necessary to prepare and file tax returns in Lithuania is 175 hours per year and administrative costs of taxation are 1.18 per 100 units of revenue collection, compared to EU averages of 208 hours and 1.32 units, respectively. On *efficiency of civil justice*, Lithuania scores similar to the EU average. Although the time taken to enforce contracts is much less, the costs are slightly higher than average. Beyond that, the perceived level of judicial independence is significantly lower than the EU average indicating greater vulnerability to the influence of members of government, firms and citizens.

[187] Currently, there are two holding funds in operation funded by the ERDF with a total allocation of EUR 228 million, one fund administered by the EIF (EUR 170 million from ERDF) and one administered by INVEGA (EUR 58 million from ERDF). Implementation on the ground started to take off already in 2011 and further progress is expected in 2012. Based on stakeholder consultation, the products offered through the INVEGA-managed holding fund have been well received by industry.

Overall profile of public administration



Source: WIFO

The government has undertaken several recent initiatives aimed at improving public administration. The authorities have taken measures to reduce the administrative burden on enterprises. The target for administrative burden reduction is 30 % by 2012. The authorities estimate that if current legislation is approved the administrative burden will be cut by around 27-28 %. The authorities are undertaking a major regulatory reform project aimed at streamlining business inspections, which are currently carried out by more than seventy public institutions. The reform aims to produce legislative acts and guidelines on inspections with a view to reducing their frequency, making them less burdensome and more targeted. The number of inspection agencies will also be reduced through consolidation. Checklists are being introduced to standardise inspections, inspection agencies are being encouraged to introduce risk-assessment systems and telephone consultations. The Ministry of Economy and the Ministry of Justice are closely coordinating the reform process, so that usage of these tools becomes standard practice for inspection agencies.

Start-up conditions for enterprises have been improved: the estimated number of days required to start-up a company has been reduced as well as the associated costs. The time to register a Private Limited Company (PLC) as a VAT payer was reduced from 6 to 3 days. In 2010, legislation was implemented making it possible to register a PLC online, which usually takes around 1 day. The associated costs of registering a PLC were reduced from LTL 773 to LTL 254 – (approximately 67 %). If a PLC is registered online no notary approval, which normally taking 2 days and costs LTL 500, is required, and there is the possibility of opening a bank account with the minimum required capital. Overall, the number of procedures was reduced from 6 to 3, and the time for PLC registration reduced from 22 to 6 days. There has also been some improvement in the delivery of construction permits: the number of procedural requirements was reduced from 15 to 13 and the time to deal with construction permits was reduced from 142 to 71 days.

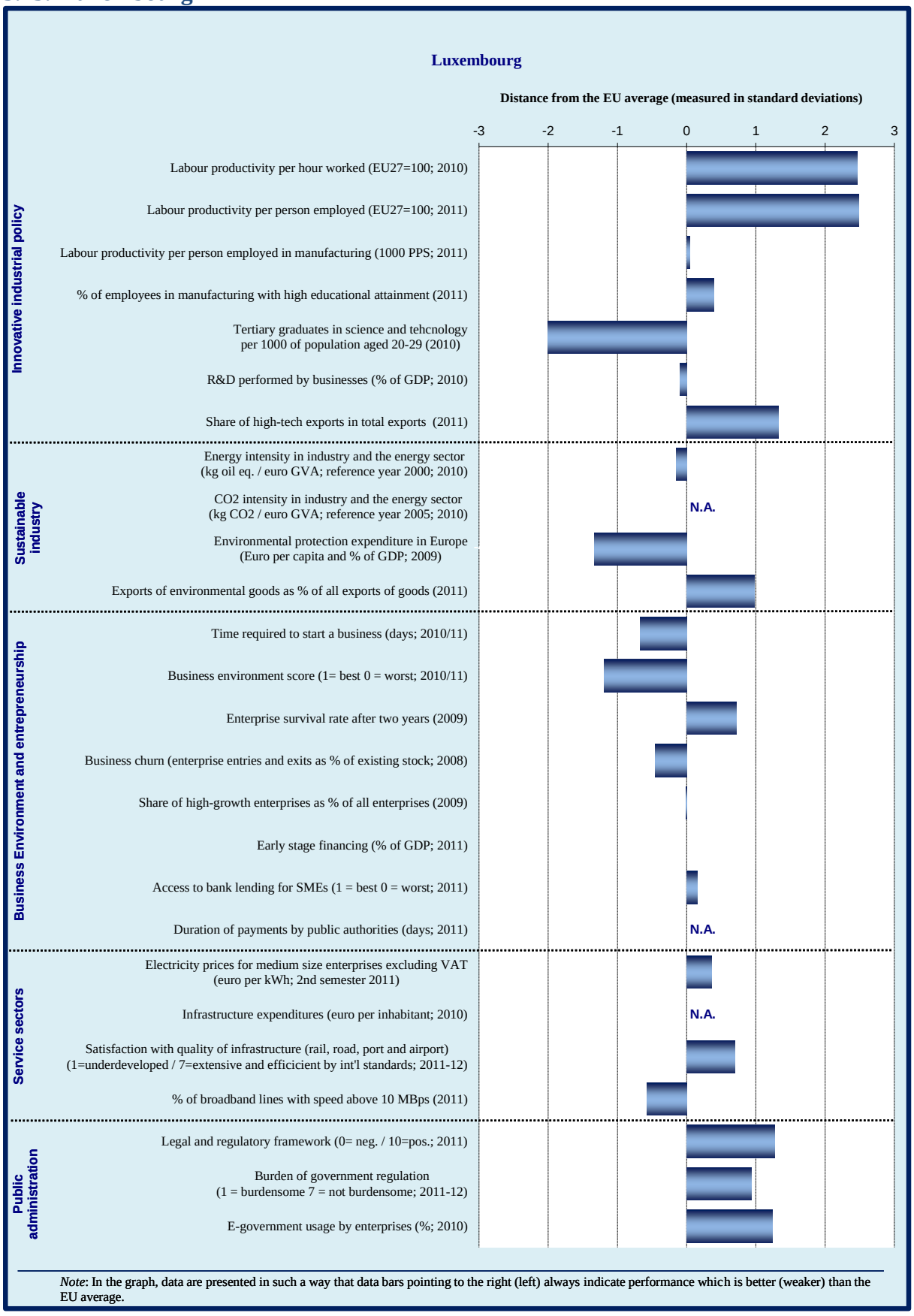
3.14.7. Conclusions

Lithuania has taken action in several areas in order to boost competitiveness while the economy still faces a number of important challenges. Efforts should be made to significantly increase the level of R&D spending in order to encourage greater innovation; support should also be targeted in the scientific fields where Lithuania is most competitive. In relation to the goal of promoting innovation, the reforms to higher education system should also help to match the demand and supply of skills. There is a need to further develop entrepreneurial skills. Lithuania's energy infrastructure would benefit from more competition and greater interconnectivity in order to bring down energy prices and better support economic development. There are also improvements to be made in energy efficiency.

Although measures have been taken to improve tax compliance, the Lithuanian tax system still suffers from a high degree of tax evasion which is a drain on public finances and holds back public spending

in growth enhancing areas. Administrative efficiency could also be improved. The Lithuanian authorities have introduced recent reforms in public administration which will improve the environment for businesses. The reform of the state owned enterprises should be completed and further efforts should be made in areas where Lithuania compares less favourably against EU peers.

3.15. Luxembourg



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

3.15.1. Introduction

Manufacturing plays a less important role in the Luxembourg economy than in other Member States, as it accounts for only 6 % of added value in the economy[188]. Luxembourg specialises in mainstream manufacturing industries (rubber products) and capital-intensive industries (basic iron and steel, cement, basic non-ferrous metals). It also has technology-driven industries (radio and TV transmitters). Manufacturing production recovered in 2010 after the crisis, when it fell around 33 %, but has again declined since the second quarter of 2011, especially with a number of important iron and steel plants temporarily closed.

Luxembourg belongs to the group of higher-income Member States with specialisation in labour-intensive industries, which is due to the very low value-added contribution from technology-driven industries and innovation-intensive sectors, as well as to its mixed quality performance.

Cost competitiveness of the Luxembourg economy remains a challenge because of high nominal unit labour costs. These continue to increase faster than in the neighbouring Member States, especially in manufacturing, mostly because of low productivity growth. Luxembourg has temporarily modified the automatic indexation of wages by a minimum interval of 12 months between each revision round. However, from 2015 onwards the automatic indexation will again be applied.

3.15.2. Innovative industrial policy

The Innovation Union Scoreboard 2011 ranks Luxembourg as an innovation follower with innovation performance above the EU27 average. Relative weaknesses remain in firm investments and linkages & entrepreneurship. Relative strengths are in human resources and innovators. Open, excellent and attractive research systems, finance and support and intellectual assets are well above average.

Luxembourg has made substantial efforts in developing research and innovation policies and has made good progress in its transition towards a more knowledge-intensive economy, for example by strengthening links between higher education and businesses.

The project 'Cité des Sciences' (City of Science) is a practical implementation of a concept of the 'triangle de la connaissance' (the knowledge triangle), aiming at reinforcing relations between research, education and innovation. The project progressed well in 2011, the objective being to host on one site all the major public R&D institutes of Luxembourg, as well as private and start-up companies, a new technical school, an university campus, the National Archives and cultural centres. Under the 'Biotec' initiative, two institutes have been established: Integrated Biobank of Luxembourg (IBBL) and the Luxembourg Centre for Systems Biomedicine (LCSB). In autumn 2011 LCSB opened on the site.

Programmes like 'ATTRACT' and 'PEARL 2008-2013' of the National Funds for Research (FNR-Fonds national de la recherche) aim at attracting and keeping researchers in the country, were allocated EUR 3.8 million for the years 2008-2010. A further EUR 13.7 million is foreseen for 2011-2013. In 2011, the 'Aides à la Formation-Recherche' programme 2008-2013 of the FNR supported 442 young researchers in their PhD studies, and 106 in their post-PhD studies.

National efforts on R&D concentrated on limited number of priority fields notably through the CORE programme 2008-2013 of the FNR. In 2011, the programme funded 28 projects for EUR 16.2 million.

The Luxembourgish portal for innovation and research provides a guide on support for innovative projects and setting up innovative businesses. The start-up innovative firms may call for subsidies or loans, for example an equipment loan ('crédit d'équipement') and a start-up/takeover loan ('prêt de création-reprise'). Special aid targets apply for small enterprises or small private research organisations which were created less than 6 years.

The 2012 National Reform Programme confirmed the targets for R&D spending (by 2020: 2.3-2.6 % of GDP, with 1.5-1.9 % from the private sector and 0.7-0.8 % from the public sector).

Though Luxembourg aims to concentrate R&D efforts on a limited number of priority fields, especially through the CORE program of the FNR, it seems that they are not selective enough to allow critical mass to be gained in all the domains identified.

3.15.3. Sustainable industry

According to a mid-term report on the implementation of the National Energy Efficiency Action Plan (September 2011), the intermediary target of 3 % for 2010 has been achieved. The 9 % target by 2016 could be reached, if all measures that are so far proposed and planned would be timely implemented. Luxembourg intends to continue the

[188] Source : Statec.

support for upgrading the energy efficiency of old buildings and the construction of energy-efficient new buildings.

Reaching the 11 % target of renewable energy sources in final energy consumption by 2020 (2.7 % in 2009) will be challenging. Therefore, the timely implementation of cooperation mechanisms (for an amount estimated by Luxembourg to 0.5 to 3.5 TWh) with other Member States will likely be necessary. Luxembourg imports the major share of its electricity and is totally dependent on imports for gas. Further interconnections with neighbouring countries could foster import of electricity from renewable sources and foster security of supply for gas. The reflection is ongoing on investment in electricity and gas infrastructure. A 10 % share of renewable energy in the transport sector is planned to be attained by 2020.

The most challenging objective, however, is the national target for the reduction of greenhouse gas emissions for sector that are not included in the EU emissions trading scheme (ETS). The tareget reduction is -20 % by 2020, when compared to 2005 levels. In order to reach the target, it is expected that Luxembourg will need to either design additional policies reducing greenhouse gas emissions or make use of costly flexibility mechanisms.

There are currently four voluntary agreements signed between the Government and companies from non-ETS sector which aim to improve energy efficiency in the participating industrial companies by 1 % per year. In March 2012, the Luxembourg authorities also announced a plan to increase the share of electric vehicles to 10 % of the car park, with the objective of reaching 40 000 electric cars by 2020. Subsidies for the purchase of electric cars have increased, while CO_2 thresholds for subsidies for the purchase of low-emission automobiles have been lowered.

With regards to eco-technologies, it should be emphasized that the 240 new aid applications motivated by Luxinnovation between 2011-2013 refers to not only those under the law dated 5 June 2009 for promoting RDI, but also covers those submitted based on the law dated 18 February 2010 on the protection of the environment and the rational use of natural resources.[189] However, the country experiences lack of the critical mass and visibility with regard to eco-technologies. Therefore there is intention to set up an action plan defining priorities for development in specific areas. It is worth mentioning that Luxembourg has a high share of high-tech exports in total exports, and the share of environmental goods appears to be one of the highest in the EU (1.62 % of all exports of goods in 2011).

3.15.4. Business environment

Lending conditions have remained restrictive after the continuous tightening in 2007-2009. Nevertheless, credit tightening has been less pronounced in Luxembourg than elsewhere in the euro area, and SMEs continue to enjoy reasonable conditions for access to finance. It seems, however, that there were fewer requests for bank loans in 2011 than in previous years.

A set of different loan schemes for enterprises continue to apply (equipment loan; start-up/takeover loan) as well as a 'vaccin anti-crise' which provides counselling services to companies suffering from financial difficulties.

Luxembourg has several entrepreneurship schemes, including on female ambassadors, business mentoring, young entrepreneurship (including activities like an innovation camp), and a TV programme called 'success Stories'.

The transfer of business are continuing to apply through the Companies Exchange based at Chamber of Commerce and Chamber of Trade and Crafts, for transfer of business and putting buyers in contact with sellers and through the Cross-border Companies Exchange, for selling and transfer companies in France, Luxembourg and Belgium.

In addition, with regard to the impact of legislation on enterprises, a simplification programme 2010-2014 is being implemented. A form to assess the impact of each legislative measure on businesses has recently been amended in order to simplify it and add SME and gender tests to the form. Issues on administrative burden can be signalled through a dedicated website of the Simplification Department of the State Ministry.

3.15.5. Services sector

The institutional competition framework was modified by the law on Competition in October 2011. Two competition bodies were merged into a single Competition Council, which is independent of the executive power. The Council must now be consulted on any draft law or regulation which may affect competition, namely leading to quantitative restrictions, exclusive market zones or standard pricing and sales practices.

New legislation was adopted in September 2011 on simplified administrative procedures for the

[189] National Reform Programme 2012, p.33.

development and operating conditions of classified establishments, notably by introducing some tacit authorisations and an obligation for the administration to respect specific deadlines.

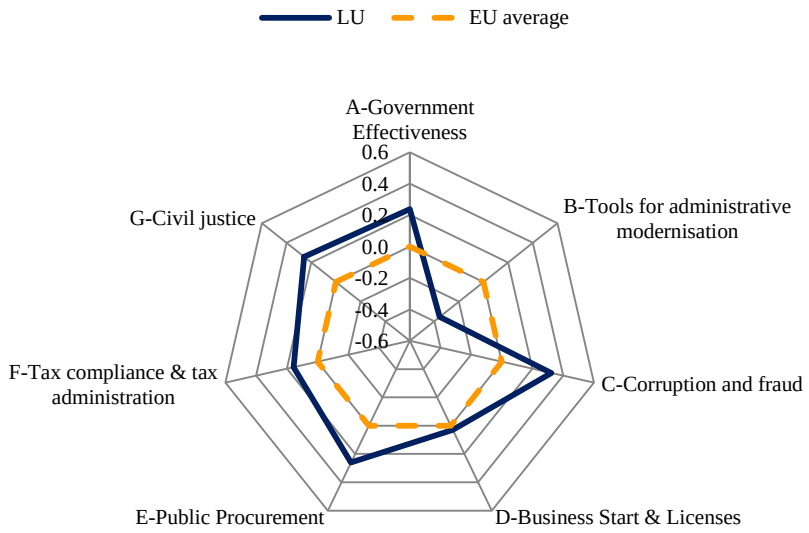
3.15.6. Public administration

According to the World Bank's Government Effectiveness Indicator (EU-wide average is calculated without Malta), in terms of overall public administration performance, Luxembourg is well above the EU average. Perceptions indicate a high quality of public services and a high quality of policy implementation.

The take-up of e-government services by citizens and enterprises is one of the highest in Europe (67 % and 90 % respectively). One-stop-shop and e-government services are multilingual and available to businesses mainly through the 'Guichet Enterprises", which is one of the two main sections of a national website 'Guichet.lu'.

'Guichet Enterprises' is edited by the two ministries in partnership with the Chamber of Commerce, the Chamber of Trade and Crafts and the Business Federation Luxembourg (FEDIL). The information is structured around the life cycles of a company (creation, exploitation, R&D, environment, international trade, etc.). The website also offers the possibility to download forms and to submit them online and electronically signed to the competent administration. Though not all business related e-government services are already available online, this website for businesses is an example of good practice. It is also worth mentioning that firms or those who consider setting up a company are entitled to free legal advice at the Chamber of Commerce and the Chamber of Trade and Crafts (the membership to these Chambers is mandatory but they are highly subsidised by the State).

Overall profile of public administration



Source: WIFO

The time required to start up a company in Luxembourg is above the EU average (19 days in 2011 against the EU average of 6.5 days), but this score is balanced by a high enterprise survival rate after two years which places Luxembourg at the third position among Member States.

Corruption indicators show a better performance than the EU average. Performance is especially good regarding irregular payments and diversion of public funds which both occur almost never.

Tax regulation in Luxembourg is identified as one of the best performing in terms of administrative burden[190], especially thanks to the very short time to prepare and file tax returns and to pay taxes (59 hours per year as compared to the EU average of 208 hours). The structure of the Luxembourg tax system, in terms of the share of total revenue raised by the different taxes, is also relatively favourable to growth. Almost one third of tax revenue is raised from consumption taxes. Both capital and labour taxation are among the lowest in the EU.

In terms of efficiency of the civil justice system, Luxembourg is more efficient than in other

[190] World Bank Doing Business 2012.

Member States, mostly because lower costs and shorter time to enforce contracts, which are about half the EU average.

The performance of Luxembourg in the field of public procurement is also well above the EU average. Contracts below the thresholds are subject to specific procedures with lighter requirements. The cost for firms per competition, expressed as a per cent of per capita GDP is particularly low in Luxembourg (0.08 % compared to 0.19 % in the EU). A national procurement portal where publication of tenders is mandatory provides for a wide dissemination of procurement opportunities to potential tenderers and also for the electronic download of tender documents.

In order to enhance the efficiency of the public administration in the above areas, the reform of public administration is in preparation, notably in view of increasing the efficiency of public services.

3.15.7. Conclusions

Luxembourg scores well in the overall competitiveness of its economy. It however faces decreasing productivity gains and increasing unit labour costs, which may harm the long-term potential of its economy. Luxembourg also faces the challenge of achieving its national target for the reduction of greenhouse gas emissions.

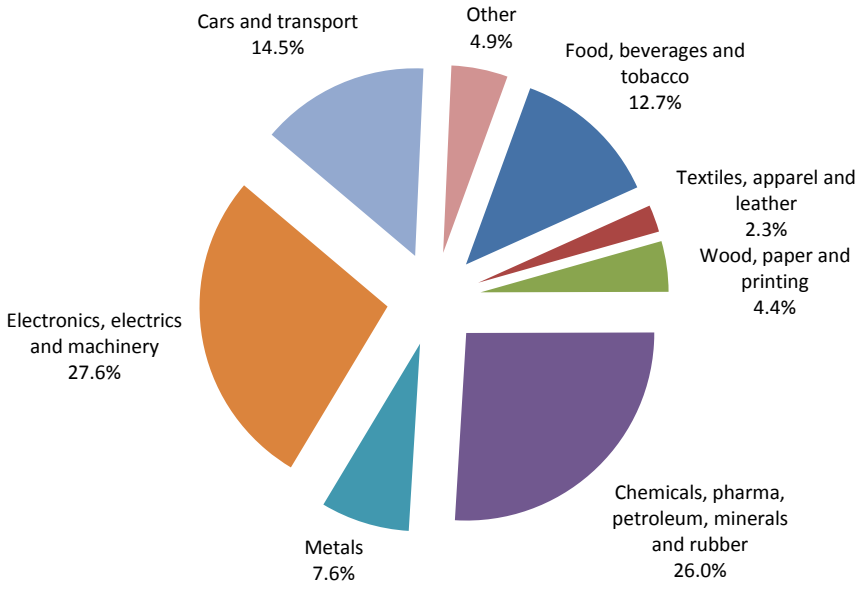
Good progress was made towards a more knowledge-intensive economy, for instance by implementing the knowledge triangle project (education, research and innovation) and by strengthening links between higher education and businesses. However, the domestic absorption capacity of research and innovation results is limited, and further prioritisation of research and innovation activities would be necessary.

Important measures have been adopted in order to improve the business environment, for instance through the simplification of administrative procedures. As a whole, the performance of public administration is better than the EU average.

3.16. Hungary

Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Hungary (2009)



Source: Eurostat

3.16.1. Introduction

The manufacturing sector plays a more important role in the Hungarian economy than in the EU on average. The value added in manufacturing accounted for 24.3 % of the total value added in 2011 at current prices (EU25: 15.5 %). About 21 % of the total workforce is employed in this sector (EU27: 15.2 %). Hungary is specialised in technology-driven industries (production of transport equipment, computer, electronic and optical products, food, and machinery equipment) both in value-added and export terms and in capital-intensive industries (petroleum refining). With respect to services, wholesale and retail trade, real estate activities, transportation, and information and communication are the most important market services in the Hungarian economy.

Cost competitiveness of the Hungarian economy deteriorated over the last decade, as reflected in the increase of the real effective exchange rate. Labour productivity per hour worked increased again slightly after the crisis, but it is still about 40 percentage points below the EU average – in manufacturing the gap is much smaller. After a rebound from the trough of 2009, there has been a stagnation in industrial production since early 2011. Exports of manufacturing goods have contributed significantly to the GDP growth for several years.

3.16.2. Innovative industrial policy

Based on the Innovation Union Scoreboard 2011, Hungary belongs to the moderate innovators, representing a below average performance. As most important weaknesses the funding of innovation, the number of innovative SME businesses, the insufficient inter-company cooperation in the area of innovation and a low patent activity have been identified. On the other hand, human resources and economic effects, such as medium-high and high-tech product exports are considered as relative strengths. The 2012 country-specific recommendations for Hungary called for providing specific targeted incentives to support innovative SMEs.

The Government elected in 2010 identified science and innovation as priorities in the New Széchenyi Strategy Plan. The STI system went through a reorganisation in 2010-2011. Currently, the resource allocation and strategy making responsibilities are separated at ministry level which makes the system somewhat fragmented. This organisational instability affects policy formation negatively which is well reflected for instance in the significant delay of the New Innovation Strategy (2013-2020) and the reduced public support for innovation purposes.

Among the negative developments it should be mentioned that the budget of the Research and Technological Innovation Fund - the main domestic financial source to support RTDI activities - was blocked. The two most important revenues of this fund were the contributions from medium and large enterprises[191] and the government central budget

[191] Until 2012, as an incentive to encourage R&D activities firms were allowed to reduce their so-called 'innovation contribution' to the central budget by the amount of direct

(which has not been in place any more since January 2012).

Similarly to some other NMS, the Structural Funds represent a dominant share of research and innovation policy financing. Currently, the largest support schemes are provided in the frame of the Economic Development Operational Programme (EDOP), where the main form of funding is through non-refundable grants: most importantly support to market-oriented R&D activities, cluster development, cooperation between research institutes, universities and enterprises etc. should be mentioned. Other financial tools are also in place for innovative enterprises, such as microloans, guarantees and venture capital schemes under the JEREMIE scheme of the Structural Funds.

Partly due to the changes in the funding system, negative developments can be observed in public R&D financing: total R&D appropriations (GBAORD)[192] decreased significantly in 2010 (0.36 % in 2010 vs. 0.47 % in 2009). Public R&D expenditure accounted for 0.44 % of the GDP in 2010, which is lower than in the two previous years. On the other hand, mainly due to the rising R&D activity of large multinational enterprises, business expenditures on R&D grew significantly during the 2000s and reached 0.69 % of the GDP in 2010. (EU27 %: 1.23 %). Nonetheless, the total R&D expenditure didn´t grow on yearly basis (in 2010: 1.16 % relative to GDP) and is still far from the national Europe 2020 target (1.8 %).

Patent activity in Hungary is relatively low in European comparison. In contrast, considering another R&D output indicator, Hungary performs well above the EU average in terms of high-tech exports. However, this performance is mainly linked to the activity of foreign multinationals. Innovation activity is largely concentrated at these companies and in the most advanced regions. While in the EU 30 % of SMEs innovate in-house, in Hungary less than 15% do so. The ratio of innovative SMEs collaborating with others is also small in international comparison; however this showed a slight increase last year.

The industrial strategies (comprising 12 sectors, including automotive, electric, medicine, industry logistics etc.) prepared by the Ministry for National economy last year, recognize the importance of R&D in these fields and emphasize actions in this context.

In Hungary, similarly to the majority of the European countries, also limited attention is paid towards demand –side innovation. Alhough there have been some initiatives in this area, for example the pre-commercial procurement initiative, no concrete support measures have been launched yet.

Also in terms of human resources for R&D and innovation Hungary faces some bottlenecks. The share of science and technology graduates increased gradually from the middle of the 2000s, however it is still well below the EU average (in 2009: HU: 7.5 %, EU27: 14.3 %). The higher education reform, which takes effect as of 1 September 2012, ensures significant increase in the number of students in the fields of technical, information technology and natural sciences in the coming years.

3.16.3. Sustainable industry

Environmental sustainability of the Hungarian industry is poor. The energy intensity in industry has decreased but it is still relatively high in European comparison. In the last decade high growth can be observed in resource productivity, however significant efforts are still needed to ensure more efficient material consumption. The share of renewable energy (estimated at 8.79 % in 2010) sources in gross inland energy consumption has also grown during the last decade and exceeded the national target (7.4 % in 2010) and the trajectory of growth suggests meeting the 2020 target (14.65 %).

The new National Energy Strategy 2030 was adopted in 2011 and provides guidance in resolving energy challenges.

Measures in this policy domain can be divided into three groups. The first set of measures is designed to reduce greenhouse gas emission. Hungary´s Decarbonisation Pathway 2050 is currently under public consultation. It will determine the proposed schedule for greenhouse gas emissions by 2050. This pathway will be part of the National Climate Change Strategy (2008-2025), which is currently under review. The wider use of environmentally friendly modes of transport, such as development of fixed track transport is supported by the Transport Operational Programme co-financed from EU funds.

The second set of measures aims to increase the share of renewable energy sources. The regulatory environment for the feed-in tariff system for renewable sources is expected to change in 2013.

costs of in-house R&D activities, as well those of commissioned from public research and non-profit institutes, or universities financed by own sources of enterprises. It is likely that some of these activities were fictitious.

[192] Government budget appropriations or outlays on research and development (GBAORD) are funds allocated to R&D in central government or federal budgets and therefore mean budget provisions, not actual expenditure.

The Government intends to reallocate resources from the Transport Operational Programme (TOP) to the Environment and Energy Operational Programme (EEOP) in order to launch new calls for investments in renewable energy sources.

Third, the energy efficiency programmes provide non-refundable sources for business and households, as well as public institutions in order to reduce their energy costs. Similarly to the second set of measures, Hungary asked the reallocation of sources for this target under the Cohesion and Structural Funds. Thanks partly to the EU co-financing environment protection expenditures in the manufacturing sector have increased in the recent years.

3.16.4. Business environment

Access to finance

According to the Global Competitiveness Report 2012, access to finance has been the main bottleneck for Hungarian enterprises. This can be explained by several factors. Firstly, the credit supply has decreased significantly since the crisis. Tight credit conditions and high interest rates hamper SMEs to receive loans from commercial banks. On the other hand, partly due to the unfavourable business climate in general, demand for credit has been also decreased.

In order to restore normal lending to the economy several actions have been taken in the past two years. The Széchenyi Card programme, extended in 2011, provides credit-card based, low-interest loans for micro-, small- and medium enterprises. Interest and guarantee fee subsidies are also offered. So far more than 150 000 cards have been issued with a credit line of about EUR 3.5 billion, and in 2011 the contracted amounts increased by more than 8 %. Other financial tools such as the micro credit programme for start-up companies and loan guarantee programmes have been also quite successful. The Hungarian Development Bank provides sector-specific direct loans and guarantees, e.g. for the agriculture and the food industry.

Among the most positive developments the reallocation of the sources available from the EU Structural Funds in favour for SMEs should be also mentioned. The JEREMIE programme was modified during the course of 2011 in order to reach better leverage effects. New calls are available in the area of venture capital. As a result of this, investments financed from venture capital more than tripled in 2011. New, combined microcredit calls offering non-refundable grants (maximum of HUF 10 million) combined with credit (maximum of HUF 20 million) to micro-enterprises are also available.

Regulatory and support environment

Institutional aspects rank high among the most problematic factors for doing business in Hungary[193]. The low level of economic confidence is linked to a number of considerable changes in the policy environment and legal and institutional systems.[194] Hungary is clearly below the EU average on business environment indicators, such as the legal and regulatory framework.

The high administrative burden on enterprises, such as the wide range of reporting obligations and other requirements have negative effects especially on SMEs. The administrative burdens on the private sector amount to 10.5 % of the GDP, which is almost three times higher than the European average. Yet, clear progress has been recorded in the recent years. For example, the costs of starting a business dropped from over 100 % of income per capita in 2002 to under 10 % in 2011. In general 4 days is needed to start up a company, which is very close to the target set by the Council in 2011. However, costs of establishing a business have remained high (about EUR 400). Although in the average number of days to get licences Hungary performs better than the EU average, it is still far from the best performing Member States.

In order to further improve the business environment a comprehensive programme was launched in 2011. The Simple State programme[195] is expected to ensure administrative burden reduction on enterprises by 25 % by 2012, in total worth of some HUF 500 billion. It contains 114 measures in ten areas of intervention. Some of the measures have been applied already and the bulk of the measures will have been implemented by the end of 2012. The Government set up a high level committee led by the Minister of Public Administration and Justice that monitors the progress. An assessment on the impacts of the first measures is not yet available, however the first evaluation should have been prepared already. This might suggest a slowdown of reform efforts in this area[196]. The country-specific recommendations of 2012 call for measures to reduce the administrative burden.

[193] Global Competitiveness Report 2012.
[194] SWD (2012) 157, In-depth Review for Hungary.
[195] Government Decree 1405/2011 XI.25.
[196] SWD (2012) 157, In-depth Review for Hungary.

3.16.5. Services sector

While manufacturing is dominant in the Hungarian economy, the service sector plays an increasingly important role in terms of value added and employment, especially in information and communication and business services.

Regarding network services, the electricity and gas sectors have been liberalised. The market share of the largest generator in the electricity sector is above 40 %, in the gas sector it is above 30 %. Yet, import of electricity increased significantly during the 2000s, while domestic production didn´t grow. This implies regulatory and competitiveness problems of the domestic electricity market. Increase of the cross-border capacities of the electricity network would ensure independence of the energy regulator.

Several postal services remain significantly shielded from competition, particularly in the letter mail segment, despite gradual market opening introduced by the Postal Services Directives and implemented by the Postal Act in Hungary. The full opening of the postal market is scheduled for 2013, but it should be noticed that to achieve the full benefits of liberalisation, a considerable amount of commitment and market monitoring is required.

The Hungarian telecom sector is characterised by strong infrastructure based competition driven by bundle offers from the incumbent and cable operations.

The Hungarian telecommunications sector is characterised by competition driven by bundle offers from the incumbent and cable operators. The structure of the mobile market has been stable with the incumbent Magyar Telekom's subsidiary having a 45.3% share in 2011. In 2012, a fourth mobile operator, state-backed consortium called MPVI Mobil, received its license. Incumbent telephone operators (Magyar Telecom, Invitel, UPC) hold a strong position in the fixed line market, but competition is increasing. Especially cable operators provide products that are substitutes to fixed line services. Intensified competition has led to the share of 'voice over internet protocol' operators to reach 18% at the end of 2010[197].

Competition is lacking in many professional services and is under threat from new regulations. Among the Member States included in the OECD regulatory index on professional services, Hungary is ranked fourth from the bottom. Despite the judgment of the Court of Justice, Hungary has rejected the demand to abolish the nationality requirement for notaries. The roll-back of pharmacy liberalisation has also been announced recently, and in general the government seems prone to support measures protecting domestic incumbents.

Regarding the retail sector, Hungary has temporarily imposed a general ban on the establishment of new large-scale retail stores (above 300 m^2) until 31 December 2014. Exemptions may be granted on a case-by-case basis by the relevant minister, based on the advice of an interdepartmental committee.

3.16.6. Public administration

Public administration reform is essential in Hungary, since the effectiveness of the government has been rather poor in international comparison[198]. In terms of overall public administration performance, the score of Hungary is considerably below the EU average[199]. In addition a continuous decline can be observed since 2006. Perceptions indicate a lower quality of public services, policy formulation, its implementation and the credibility of public servants' commitment to such policies.

A significant gap can be observed for the indicator of tools for administrative modernisation (e-government, impact assessments, performance and service orientation, accountability) in comparison to other Member States. For instance, four out of the eight business-related e-government services haven't been yet fully implemented. The use of e-government services has remained slightly below the EU average[200]. In addition, reliance on tools for modernisation of human resource management such as the implementation of flexible modes of public employment is also low.

Corruption is also considered as a problematic factor in Hungary.[201] According to the Government Effectiveness Indicator bribery is still a major issue with a share of 20 % of respondents reporting an incidence whereas the EU average is only 10 %. For this reason the Government approved and launched a new anti-corruption programme[202] on the integrity approach with the involvement of all partners.

197 'Hungary – Telecommunication Market and Regulatory Development', DG Connect, 2011.

198 IMD World Competitiveness Yearbook 2011.

199 World Bank's Government Effectiveness Indicator.

200 For businesses the figure was 71% (EU 76%), for privete citizens 38% EU : 41%).

201 According to Transparency International, Hungary ranks 54th out of 183 countries in the corruption perception index list. Furthermore, in 2011 no or little enforcement was reported on the progress of the OECD anti-bribery convention. .

202 Government Decree 1104/2012 (IV.6.)

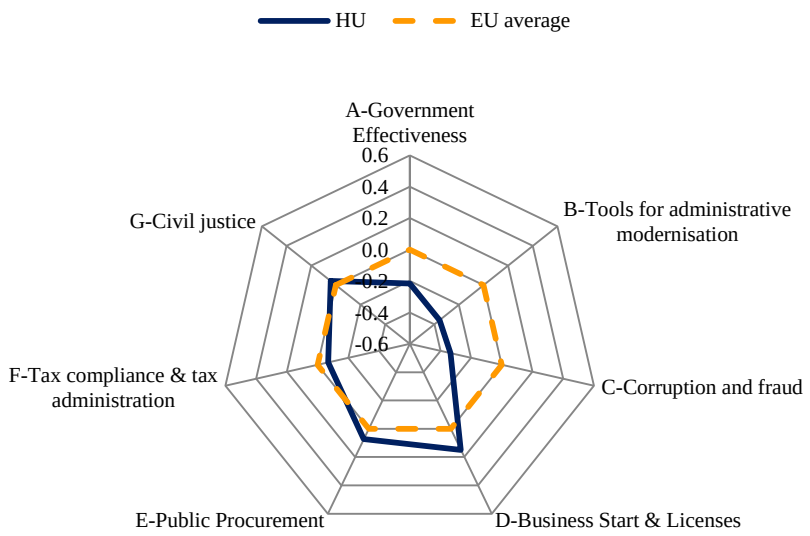
Tax regulation in Hungary is identified as one of the main problematic factors. For the business sector, the time it takes to prepare, file and pay corporate income tax, value added tax and social contributions is 277 hours per year. According to the 'World Bank Doing Business 2012', on average firms need to make 13 tax payments a year. On the other hand, Hungary's tax administration operates more efficiently than the EU average. The Simple State administrative burden reduction programme aims to improve electronic tax submission and reduce the number of tax obligations.

A new public procurement law was adopted in July 2011 with the aim of streamlining the rules making the framework more transparent. The law also aims to improve the chances of SMEs to successfully participate in the public procurement procedures. However, the requirement that small-value contracts are exclusively reserved for SMEs seems to break Hungary's WTO commitments and harms competition.

Hungary also exhibits a slightly better score in terms of payment delays from public authorities than the EU average. The same holds true for the indicator of starting business and licencing.

In terms of efficiency of civil justice Hungary shows a performance marginally above the EU average. Whereas costs and time necessary for the enforcement of contracts are significantly lower than the EU average, in terms of the perceived level of judicial independence Hungary's judicial system is assessed as less independent compared to the EU average.

Overall profile of public administration



Source: WIFO

In order to enhance the efficiency of the public administration in the above areas, several initiatives have been launched recently. After the change of the government in 2010 as a first step, the total number of public administrative bodies was reduced significantly, mainly through integration. The Magyary Programme launched in 2011 initiated several measures to improve the efficiency of the public administration sector. For instance, it simplifies administration for citizens, including establishment of one-stop shops for citizens, it introduces an anti-corruption programme and develops a new career model for public servants. Electronic government is considered a key tool for modernising the Hungarian public administration. In order to support official administration with IT solutions, provide remote and electronic access to services and create comprehensive customer identification and delivery system several projects have been launched in 2012. Further developments will be gradually implemented from 2012 on.

3.16.7. Conclusions

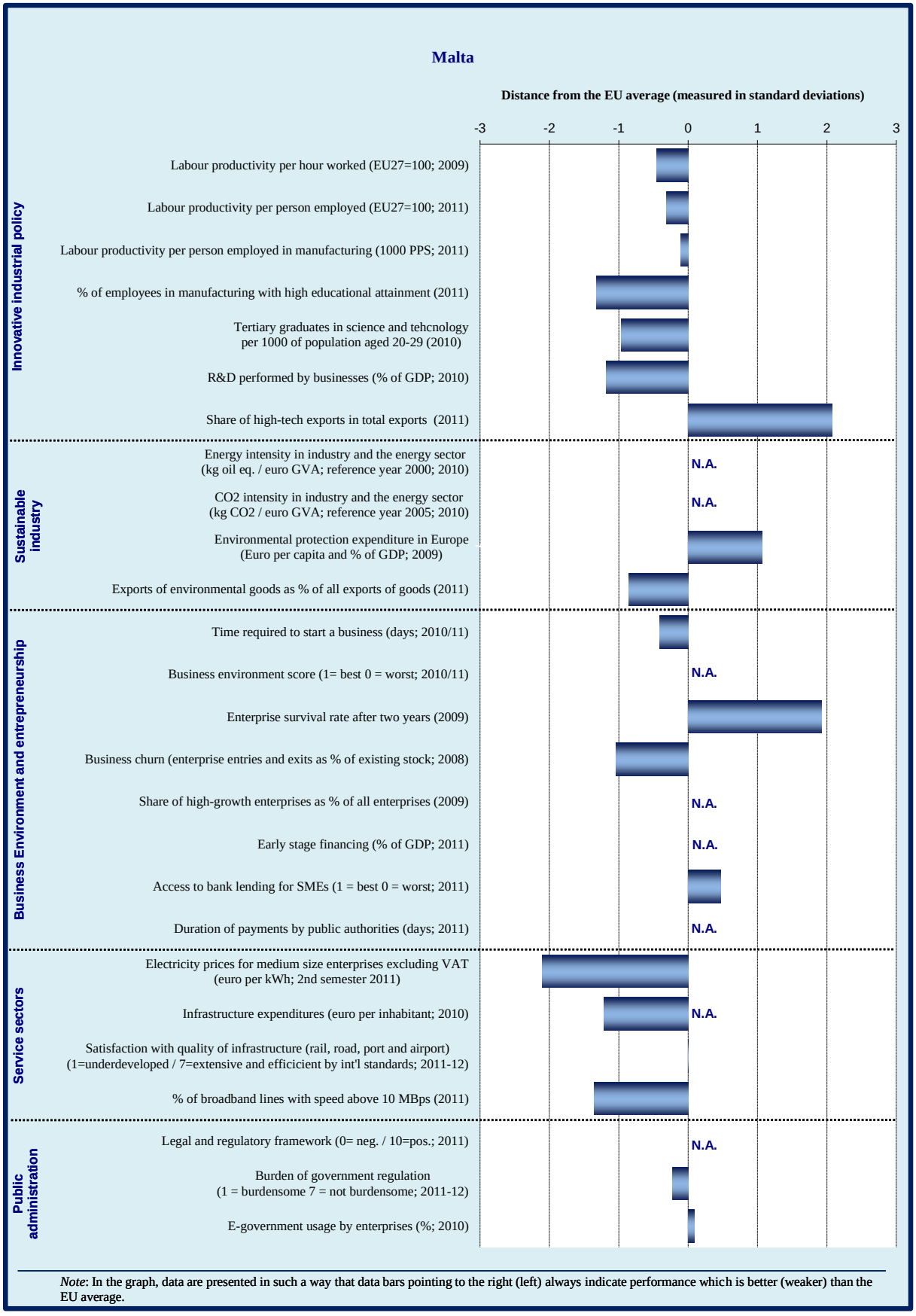
Several factors harm the industrial competitiveness of Hungary. These include tight credit conditions, in particular for SMEs, low level of innovation in SMEs, weak competition in certain services, and low effectiveness of the public administration.

While there have been positive developments in some of these areas (government sponsored SME financing, adopting a National Energy Strategy, decreasing the administrative burden and increasing

the government's effectiveness), frequent changes in policy, and legal and institutional systems have created an unpredictable economic environment for enterprises, which reduces investment and growth. It also reduces the ability of the financial sector chanel savings to the most productive uses.

In addition to the urgent need to create a stable and predictable economic policy framework, further efforts are required in a number of areas including the reform of public administration and in reducing the administrative burden. Access to finance for SMEs also remains a major challenge. To achieve the Europe 2020 targets of R&D investment, and employment, policies that create a more business-friendly environment, and support for innovative SMEs are also essential.

3.17. Malta



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

3.17.1. Introduction

Over the past decade, the Maltese economy has diversified from manufacturing to services. The manufacturing share of value added decreased from 22.4 % in 2000 to 12.9 % in 2011, although some segments of it recorded significant growth, in particular pharmaceuticals (chemical products above) and the aviation maintenance industry (transport or electrical equipment, and other manufacturing above).

The services economy, traditionally dominated by tourism (about one third of GDP) is now significantly more diversified as other activities are growing among which financial intermediation, business services (including auditing and legal services), entertainment (film production), on-line gaming and other computer-related activities. Export market shares in a number of these emerging industries are also increasing.

Growth in Malta is strongly driven by foreign investment and exports. Thus improving external trade as well as a pickup in business investment contributed to a strong rebound in economic activity in 2010, after a relatively mild GDP contraction in 2009. In 2011 as a whole, real GDP is estimated to have expanded by 2.1 %, compared to 1.5 % in the euro area.

The performance of the Maltese economy is conditioned by competitiveness challenges. The authorities are aware that efforts towards attracting more investment in high value-added activities (including in manufacturing) are a key to improve Malta's productivity record. Growth relies strongly on SMEs (73 % of value-added in 2010, against 58 % for the European Union) for which access to finance, access to foreign markets, enhanced entrepreneurial skills, operating in a business-friendly environment, as well as efficient relations with public administrations are essential ingredients of prosperity.

3.17.2. Innovative industrial policy

Health and biotechnology, value-added manufacturing, environment and energy resources and ICT were identified as national research priorities in Malta's National Research & Innovation (R&I) Strategic Plan 2007-2010.

One of the largest projects aimed at fostering life science innovation in Malta is the BioMalta campus. This EUR 38 million project is co-financed between the Government of Malta, Malta Enterprise and the European Regional Development Fund (ERDF). It will seek to attract foreign direct investment into research, technological development and innovation in the biotechnology and life sciences sectors as well as support the development of the local industrial community helping them to grow and internationalise. It is also aimed at creating a knowledge cluster. Investment is backed by a business angel investment fund working closely with the University of Malta and with Malta Enterprise as well as by a Malta-based private investment fund.

3.17.3. Sustainable industry

The Maltese economy heavily depends on oil supplies for the provision of energy, which is an issue for the competitiveness of Maltese businesses. Electricity prices for medium to small size firms in Malta are among the highest in the European Union. To improve the situation, the country-specific recommendations of the 2012 European Semester for Malta include the need to prioritise the completion of the electricity link with Sicily.

The interconnection to the European Energy Grid via the laying of a submarine cable linking Malta to Sicily was originally expected to be completed by August 2012. The project has been delayed for administrative reasons and the new target for commissioning the interconnector is end 2013.

The completion of the Delimara power station extension project by May 2012 was delayed essentially due to permit procedures. The project is expected to supply the expected electrical output power to the Maltese electrical grid in the summer of 2012.

Malta intends to achieve its 2020 renewable energy targets through a couple of identified major projects of large scale wind, and waste to energy projects. However a great share of renewable energy will be generated from a relatively higher number but smaller capacities of renewable energy sources distributed across all the Maltese Islands. The contribution from photovoltaics could potentially be much larger than that estimated in the National Renewable Energy Action Plan especially if the costs of this technology continue to decrease.

3.17.4. Business environment

Malta is engaged in a number of structural reforms and measures that foster the importance of SMEs in order to enhance growth and competitiveness.

Malta's Small Business Act

Malta is one of the few EU countries that have enacted a Small Business Act (SBA – in June 2011,

within a package of Euro-Plus pact measures). Parts of the Act that are now into force include the setting up of an Enterprise Consultative Council (EEC), created with the aim to hold a regular dialogue between the regulatory authorities and business organisations in order improve the business environment, particularly for SMEs. The setting up of the EEC has been welcomed by business organisations. They regard it in particular as a potentially effective tool to improve access to markets to SMEs, provided that it can meet regularly and take the time to take into account specific sector-related issues. In the view of government authorities stakeholders should be proactive in defining the agenda of the Council. In promoting the role of SMEs, The Malta envoy has a natural key role to play in it.

Parts of the Act still having to come into force include (i) a vetting of all new proposed legislation to identify potential impact on enterprise and suitable measures taken to mitigate or remove any identified negative impacts especially on the smaller firms, as far as possible ("SME test") as well as (ii) time compliance with new legislation (standstill period of eight weeks between the publication and the coming into force of such legislation).

These two proposals are expected to come into force in the third quarter 2012. The implementation of the SME test requires putting in place an independent entity which would assist government authorities in analysing and interpreting the economic impact assessment of new legislation, - in particular mitigating possible negative effects on SMEs and minimising administrative burden - taking into account consultation with SME representatives. The central entity has been set up and has been given a wider role as indicated by its name – Small Business Act Implementation Unit – although the main role will be that of overseeing and assisting in the application of the SME Test.

Stakeholders have welcomed the forthcoming introduction of the SME test from which they expect substantial improvement towards more business friendly legislation.

Consultation exercises with stakeholders on new legislation

In 2011, Malta also introduced guidelines for the Maltese public administration for consultation exercises with stakeholders (Directive no. 6 'Consultation Exercises with stakeholders in terms of Article 15 of the Public Administration Act). The Directive makes reference to the document 'Parameters for Consultation Exercises with Stakeholders' which stipulates that each new secondary subsidiary legislation text is to consider its effect on SMEs. This action is backed by an on-going training programme for public employees in consultation exercises and the Maltese impact assessment framework.

Access to finance

SMEs in Malta can be considered to have adequate access to finance. Business representatives commend government for coming up with a good portfolio of enterprise support schemes that facilitate access to finance, such as micro finance, loan guarantees and JEREMIE.

The Micro Credit Scheme (another commitment under the Euro Plus Pact), facilitates the financing of new start-ups through the provision of a government guarantee of up to 90 % of the total loan value.

In addition, through the MicroInvest tax credit scheme (also a Euro Plus Pact commitment), enterprises benefit from a tax credit of up to 40 % (with a limit of EUR 25 000) when investing in innovation implementing compliance directives and/or expansion, including through new hires. The take-up of the scheme so far has exceeded expectations and this has been linked to the low level of bureaucratic requirements. Following its success, the scheme has been extended to the end of December 2012. It is flanked by a number of other financial instruments including a micro-guarantee scheme.

Under the JEREMIE initiative, a First Loss Portfolio Guarantee instrument that caters for loans from EUR 25 000 to EUR 500 000 was launched under an agreement signed between the European Investment Fund and Bank of Valletta. JEREMIE was well received by SMEs and take-up steadily increased over time. In April 2012, about a year after the first loans were granted, total investment amounted to approximately EUR 35 million with a loan amount of approximately EUR 23 million.

The implementation of the late payments directive in Malta has been delayed due to legal issues. These delays are considered to be a serious problem by stakeholders, but last June the implementation of the Late Payments Directive (recast) in Malta was nearing completion and was to be transposed within a few weeks following submission to the Cabinet of Ministers.

Improving industrial infrastructures

With an investment of EUR 16 million, the Malta Industrial Parks (MIP) agency has started an extensive programme of upgrading works in a

number of industrial zones, comprising upgrades of the road network and general service infrastructure, establishment of community facilities and the improvement of estate environment. This investment is a key requirement to the daily operations of enterprises and is expected to enhance Malta's competitiveness as an industrial location and to sustain its growing knowledge based economy.

3.17.5. Public administration

Malta committed, under the Euro Plus Pact, to reduce administrative burden on businesses by 15 % by 2012. In this respect a number of simplification initiatives have already been implemented to date resulting in a EUR 7 million p.a. reduction in administrative burdens. Additionally, a number of further simplification initiatives have been identified.

The government is developing a Code of Practice for Regulatory Institutions so as to improve the regulatory framework and ensure more consistency and collaboration between different regulators. The Code of Practice is expected to be officially launched before the end of this year.

Court procedures on trade litigation are perceived by some business stakeholders as a bureaucratic burden for SMEs in particular.

Malta Enterprise launched its one stop shop 'Business First' at the end of January 2012. Apart from the schemes and services offered by Malta Enterprise, more than 50 services from various Government departments and entities are being provided through Business First (some of which though on-line forms), with the aim of facilitating the day to day operations of local enterprises, whether starting or being in operation. The authorities are committed to a delivery time frame of 10 days maximum for most cases submitted to 'Business First". Smaller offices are expected to be eventually opened in Gozo and at Smart City Malta.

Business representatives have welcomed the operation of this new government service which has received good feedback from its first users.

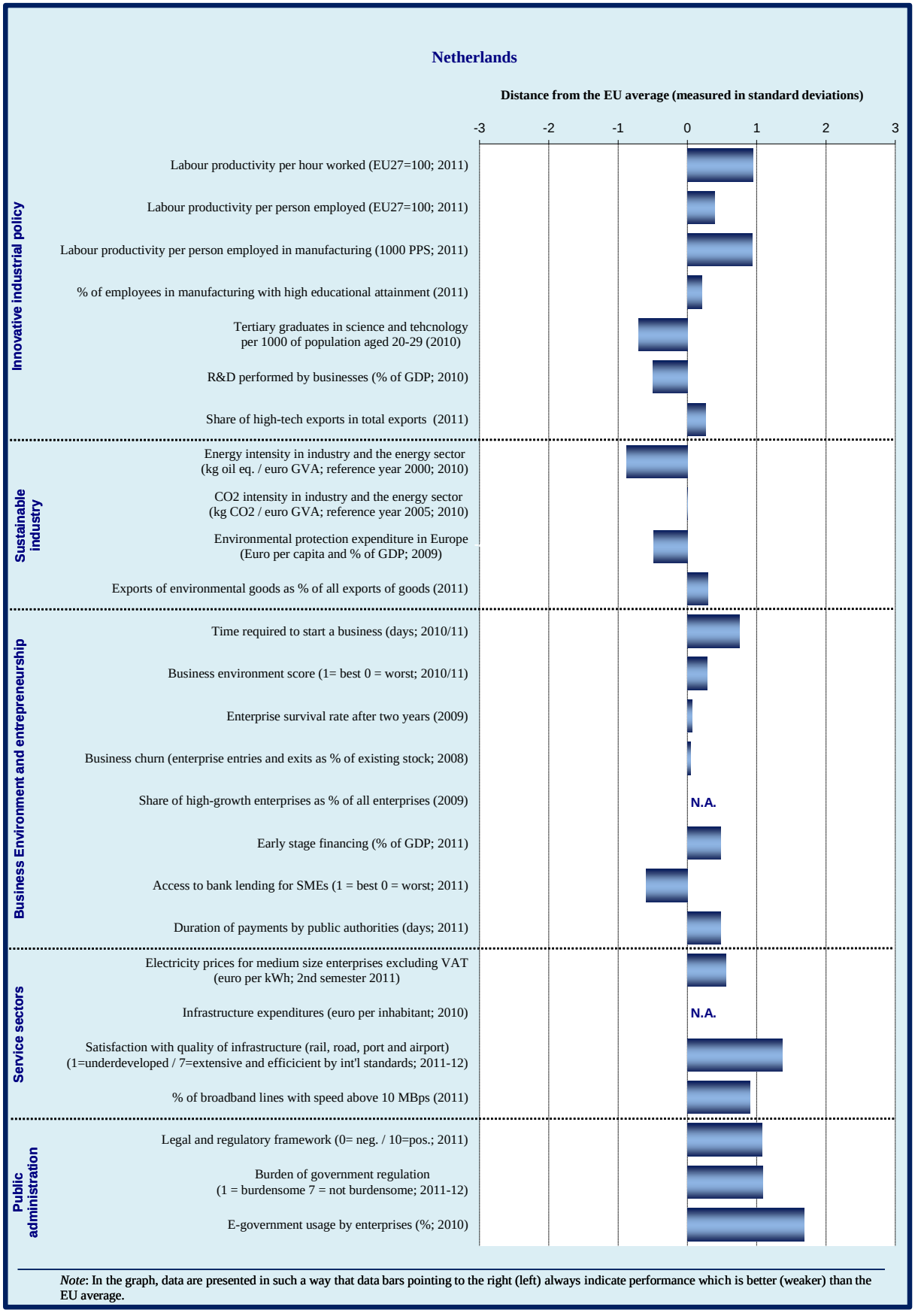
Malta already provides a number of government services on-line and has launched its next platform at the end of 2011. The Management Efficiency Unit advises on priorities for offering new services (including paying bills) on the platform.

As regards Business Statistics on Malta and most notably those on Malta's SMEs, the situation is bad and has not improved since the last visits of the Commission in 2009 and 2010. This hampers adequate policy monitoring. A business register unit has recently been created with a view to improve data compilation and to make better use of administrative data. In addition, Malta will join the annual Doing Business survey of the World Bank in 2013.

3.17.6. Conclusions

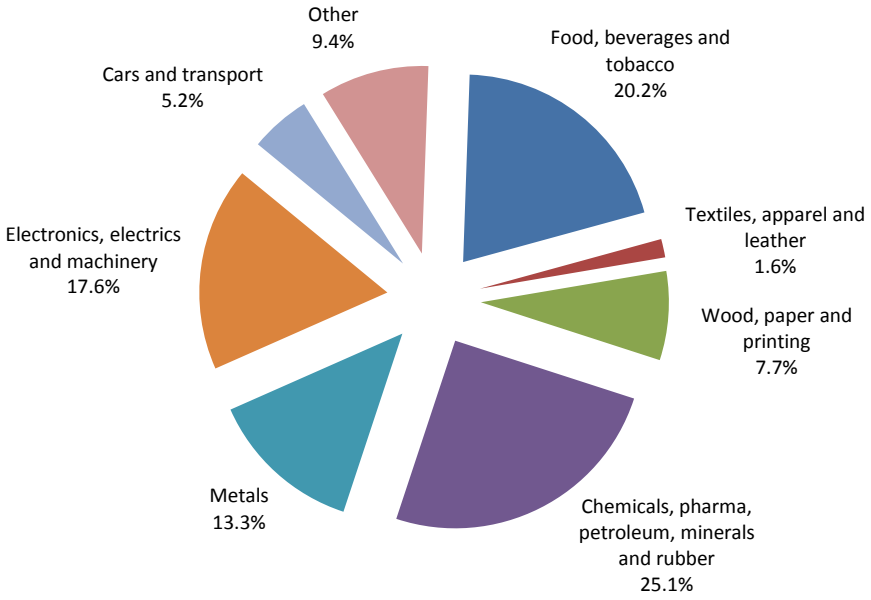
A number of positive developments with positive feedback from stakeholders have occurred since the last version of this chapter. Delays are still experienced in a few areas (for example oil dependency) and the new services provided to businesses (Enterprise Consultative Council, one stop-shop) will have to be adjusted with time in cooperation with the stakeholders. Progress with making regulation more business friendly will have to be sustained in the coming years.

3.18. Netherlands



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Netherlands (2009)



Source: Eurostat

3.18.1. Introduction

While the manufacturing sector plays a significant role in the Netherlands, with 12.9 % of total value added, it is slightly below the EU average (15.5%). The Netherlands is specialised in capital intensive manufacturing such as man-made fibres and refined petroleum as well as industries such as prepared animal feeds and tobacco. With respect to exports, the main manufacturing industries are technology driven industries such as computers, radio and TV transmitters. Other important high value added industries relate to computers, software, R&D and business services.

3.18.2. Innovative industrial policy

According to the Innovation Union Scoreboard 2011, the Netherlands is an 'innovation follower' with above-average performance. It excels in terms of frequently-quoted scientific publications and patent revenues from abroad. It is quickly catching up regarding non-R&D innovation expenditure. However, SMEs are still less innovative than the EU average.

The Dutch government reaffirmed its intention to reach an R&D intensity of 2.5 % of GDP in 2020, in spite of a slight cut in the public R&D budget in 2012/2013 due to gradual expiration of temporary crisis measures. The main challenge for the Netherlands is to increase private R&D expenditure.

The new enterprise policy 'To the Top' has three main pillars: a sectoral approach for public-private partnerships in the area of research and education ('top sector approach'), generic measures to stimulate private R&D-expenditure (tax deductions of R&D-costs as well as access to risk capital via a revolving Innovation Fund) and further administrative burden reduction and additional mechanisms for innovation.

The 'top sector approach' addresses a weakness in the Dutch innovation system by bringing researchers closer to businesses and putting businesses in the drivers' seat for designing public-private partnerships for innovation. 'Top teams' involving various stakeholders from nine top sectors have developed sectoral 'innovation contracts' (including human capital agendas) which have been signed between the government, research organisations and the top sector associations in April 2012. However, a coherent rationale that would support such a sector-based approach has not been provided.

The top sector approach is promising as it could constitute a 'smart specialisation' strategy on the basis of the most innovative sectors which can create positive externalities for the rest of the economy. It recognises that innovation also can take place in sectors without traditional 'white coat R&D personnel' and fosters the economic use of publicly funded research results in market-related innovation activities. There is potential to mobilise additional private R&D funding, but the effectiveness of the approach chosen is difficult to assess at this stage.

The impacts of the top sector approach should be carefully monitored. It is important to clarify whether additional private R&D investments are mobilised, as intended, rather than a re-labelling of current R&D expenditures under the new headings of the top sectors. So far, industry has committed EUR 1.8 billion for private R&D under the top sector approach which is no more than a first step towards the 2.5 % target.[203] It should also be monitored whether difficulties arise within fast-growing industries that do not participate in one of the 'top sectors'. Finally, it remains to be seen whether the top sector approach will be able to address possible skills gaps. By international comparison, the Netherlands has a relatively low share of graduates in math, science and technology.

The strategy implies a 10 % shift in R&D investment to the specified themes as defined by the teams. As this approach has the potential to bring needed focus to research efforts, create cross-discipline synergies, and improve the commercialisation of research, it can enhance the societal benefits of R&D investments without endangering the long-term growth prospects of the economy.

However, the focus on top sector regions has the potential to widen regional disparities and new skills gaps could arise in other sectors. Fast-growing firms that do not fall under one of the top sectors might find it difficult to benefit from the approach. Although medium-sized enterprises are prominently represented in all top teams, it is unclear how effectively individual small and micro-enterprises will be involved.

A more general concern is whether shifting specific subsidies towards generic income and profit tax deductions for R&D expenditure is effective to promote SME innovation. Although the approach significantly reduces administrative complexity, enterprises may not generate sufficient profit to benefit from tax reductions in the same way as from a subsidy scheme.

It is particularly important for the Netherlands to continue investing in education and research. Although nominal education budgets have slightly risen in recent years, real expenditures for education are under pressure, threatening the quality of future human capital resources which are a precondition for sustainable growth.

There is close co-operation between Dutch authorities and the European Investment Fund for a pilot project involving pension funds in the provision of venture capital for innovative enterprises.

3.18.3. Sustainable industry

Environmental sustainability does not feature prominently in the policy initiatives of the current government, but the topic is officially mainstreamed in all 'top sectors' and taken up by the cross-cutting theme of 'bio-economy'.

The main sustainability initiatives of the current government are (i) in the 'top sector approach' activities regarding the 'energy' sector, (ii) the specific subsidy scheme SDE+ for renewable energy investments (electricity and heat) and (iii) 'green deals' for energy efficiency and other environmental projects.

In the 'top sector' approach, SMEs confronted with a dominance of large enterprises in the renewable sector may find it hard to see how to benefit from the sectoral approach. A level-playing field between renewable energy and fossil fuels regarding sustainability criteria and indirect subsidies is absent. Currently, there is a policy debate on whether public support for Carbon Capture and Storage (CCS) technologies should be phased out to ensure that these costs are borne privately in line with the polluter pays principle.

In a broader sense, the effectiveness of the integration of environmental aspects and resource efficiency in all top sectors and in the cross-cutting theme of a 'bio-based economy' needs to be evaluated.

The Netherlands' share of renewable energy in total energy use is much lower than the EU average (only 3.8 % in 2010, compared to an EU average of about 12 %). The SDE+ subsidy incentive scheme promotes the use of cost-effective technologies, including renewable sources of heat. It is meant to help the country catch up quickly with the cheapest available technology to reach about 8 % of renewables by 2015. A midterm review of the renewable energy policy is planned in 2014 and various options, including a mandatory quota system for energy suppliers, are studied by the government and in parliament. It is recognised that

[203] According to the innovation contract signed on 2 April 2012 between the top sector representatives and the government: http://www.rijksoverheid.nl/onderwerpen/ondernemersklimaat-en-innovatie/nieuws/2012/04/02/innovatiecontracten-ondertekend-2-8-miljard-naar-topsectoren.html. For details see http://www.rijksoverheid.nl/onderwerpen/ondernemersklimaat-en-innovatie/documenten-en-publicaties/kamerstukken/2012/04/02/kamerbrief-over-het-bedrijvenbeleid-in-uitvoering.html and http://www.rijksoverheid.nl/onderwerpen/ondernemersklimaat-en-innovatie/documenten-en-publicaties/convenanten/2012/04/02/nederlands-kennis-en-innovatie-contract.html.

the current measures are probably not sufficient to reach the 2020 target of 14 % renewables.

The SDE+ scheme has a maximum of EUR 1.4 billion Euro available annually from 2015 onwards to support investment in renewables. It can also be used in the second round in 2012 to invest in renewable heat which is highly cost-effective.

Some energy-intensive or emissions-intensive sectors and activities (e.g. vans, red diesel and the partially free allocation of CO_2 emission allowances) benefit from subsidies. Phasing out environmentally harmful subsidies could improve energy efficiency, reduce emissions and increase government revenues.

A positive development is that nearly 60 'Green deals' have been signed since 2011 according to the National Reform Programme 2012. The scheme has now been broadened beyond energy issues. However, a simplification of rules that would also help SMEs could be a more effective way to overcome the obstacles arising from stringent rules on environmental permits.

The Netherlands is one of the few countries in the EU with a non-negligible contribution of pollution taxes to overall tax revenue, based on a tax on pollution of surface waters and sewerage charges (0.7 % of GDP, EU27 0.1 %).

3.18.4. Business environment

Regulatory and support environment

The Netherlands ranks among the Member States with a legal and regulatory environment that highly encourages the competitiveness of enterprises. Starting a company will become even easier, once a law reducing the minimum capital requirements for limited companies enters into force, expected early 2013. Yet, the Netherlands records the second highest costs in the EU when it comes to starting a business[204].

Ambitious administrative burden reduction programmes are in place since 2003. Since 2007 the Netherlands gradually enlarged the scope to incorporate other regulatory costs (such as substantive compliance costs and inspection costs) and qualitative service-oriented indicators (such as ICT related measures). Inspections are now more risk-based, relaxing the frequency of controls for those enterprises which were found in good compliance in previous inspections. In 2011 the Dutch Government formally introduced one single national ex-ante framework to systematically assess substantial impacts of new policy and legislation for a better decision-making process. A new Impact Assessment Commission started in 2011 as coordination and quality control body, chaired by the Ministry of Economic Affairs, Agriculture and Innovation.

With respect to resolving insolvency, the key philosophy of the government seems to be preventive, by encouraging entrepreneurs to be cautious in their expansion plans and to set up a good credit and debit management. While this might come at the price of having less fast-growing companies, the slower growing cautious enterprises are expected to be more stable and less at risk of insolvency. In case of imminent insolvency, entrepreneurs can turn to an informal sounding board of retired entrepreneurs which offers advice to entrepreneurs in serious difficulty.

A major review of the Insolvency Act started in 2007 has not advanced much. Some stakeholders argue that the rights of creditors could be improved and that legal curators in simple bankruptcy cases are not needed because the costs are not proportionate.

An important development is the new draft SME-friendly public procurement law which has passed Parliament and is now discussed by the Senate. It encompasses all public procurement rules in one single document. A key aspect of the draft law is that SME access is made easier due to a ban on clustering smaller lots into bigger bundles, with limited exceptions. The draft also promotes the award criterion of 'best value for money' rather than cheapest price, which should help high-quality SMEs.

Green public procurement criteria have been revised in 2011 upon the advice of MVO, the main Dutch corporate social responsibility organisation. For simplicity, the number of environmental aspects for award criteria has been reduced from 85 to 45. The use of functional requirements instead of detailed technical requirements is encouraged, but requires qualified public procurers and evaluators. By 2015, all Dutch public authorities aim to purchase 100 % sustainable products.

Access to finance

Access to finance for innovative SMEs seems to be problematic. While the government is studying access to finance problems in detail, it is working on opening the SME loan guarantee scheme BMKB

[204] The conclusions of the Competitiveness Council of 31 May 2011 included a call for Member States to reduce the start-up time for new enterprises to 3 days at a cost of EUR 100. While the Netherlands adheres to the target to set up a company within the stipulated time frame (currently 2 days), the cost to start up a company is EUR 1 050.

for financers other than banks, and opening the guarantee facilities GO and Groeifaciliteit to also finance new providers of SME-finance. Also a loan will be provided for the start-up of Credit Unions in the Netherlands, and the innovation fund Innovatiefonds MKB+ has been introduced, which will also consist of a fund-of-fund for the later stage market that is now under construction. A recent evaluation suggests that the scheme is very effective.[205]

The Ministry has set up an expert group in 2011 to study key problems based on surveys among 1 500 enterprises. One key result is that more than 80 % of enterprises have no extra financing needs. Small enterprises, young enterprises and high-grow enterprises encounter problems, in particular regarding loans between EUR 500 000 and EUR 3 million. The top sector agenda should provide further insight into the sectoral problems of access to finance and may envisage sector specific solutions.

New policy ideas currently studied by the government aim to tap the potential of pension funds for venture capital. Some pilot projects with pension funds could start in 2012 while mapping credit unions and crowd financing are further ideas.

The new revolving innovation fund (Innovatiefonds MKB+) was launched in January 2012 and can provide innovation loans of EUR 95 million in 2012 (twice the amount of 2011) for SMEs and mid-cap companies. The total budget is EUR 500 million until 2015.

The Business Loan Guarantee Scheme (GO) is continued in 2012 and 2013, although initially intended as an anti-crisis measure. However, the maximum guarantee of 50 % will be lowered from EUR 75 million to EUR 25 million.

3.18.5. Services sector

Several important components of the services sector are included in the 'top sector' approach and therefore receive significant policy attention (e.g. energy, transport/logistics and creative industries). However, most regulation and competition policy in services is largely governed by EU legislation, including emission trading and transport liberalisation.

Competition policy in the area of electricity seems to work well in the Netherlands. Changing the supplier is relatively easy, unbundling has worked well and the information provision by suppliers to consumers is carefully supervised by the Competition Authority NMa. Still, the rate of consumers switching supplier is quite low (about 10 % per year). A review of the certificate system could lead to more innovative investment in the national green energy market.[206]

The Netherlands has managed to maintain a very good network infrastructure and a high level of service quality in public transport, without overtly high levels of subsidies. Further, consumers have a large choice among telecommunication providers and different formulas. However, for consumers the market lacks transparency due to frequently changing service packages and prices.

The regulation of professional services is not a major bottleneck for competitiveness in the Netherlands.[207]

3.18.6. Public administration

The overall public administration performance of the Netherlands, according to the World Bank's Government Effectiveness Indicator, is better than the EU average. Perceived quality of public services, including quality of the civil service and policy implementation in the Netherlands is relatively high.

The use of tools to improve public administration (e-government, performance and service orientation, accountability) is more widespread than average in Member States. This is mainly due to the use of impact assessments, as well as to the use of monitoring and assessment instruments.

Corruption and fraud indicators show a significantly better than average performance. Perceptions based measures for 'diversion of public funds' as well as for 'irregular payments and bribes' indicate that corruption-related problems are very rare. This is confirmed by the individual experience of corruption, only 1 % of all cases, which is a very good score compared to the EU average of 10 %.

The composite summary indicator for the efficiency of the civil justice system is above the EU average. While the days to enforce contracts is slightly below the EU average, measuring 514 calendar days as compared to 556 days in the EU, the cost for enforcing contracts is 3.3 % higher than the EU

[205] http://www.rijksoverheid.nl/documenten-en-publicaties/rapporten/2011/06/20/evaluatie-borgstellingsregeling-voor-het-midden-en-klein-bedrijf-bmkb.html

[206] http://www.ecn.nl/nl/nieuws/newsletter-nl/archief-2008/november-2008/groene-stroom/

[207] http://ec.europa.eu/europe2020/pdf/nd/swd2012_belgium_en.pdf

average. The time for resolving insolvency is well below the EU average and the judiciary is considered as highly independent.

The performance of the Netherlands on the tax compliance and tax administration indicator is better than average since it only takes 127 hours yearly to prepare and file tax returns and to pay taxes as compared to 208 hours in the EU average. The administrative costs of the taxation sub-indicator are slightly below the EU average.

The Dutch tax system is rather complex, due to many possibilities for exemptions and deductions to cater for special circumstances and ensure social justice. SMEs complain that often, several rounds of questions from tax authorities need to be answered. The current administrative burden arising from the tax system is estimated to be EUR 3.5 billion annually, mainly due to VAT rules, wage taxes and income taxes. The government's aim is to reduce this by 25 % by 2015. One step is the abolishment of seven smaller taxes from 2012/2013 onwards. Another step is the introduction of one single point of contact, with different units for SMEs and for bigger companies.

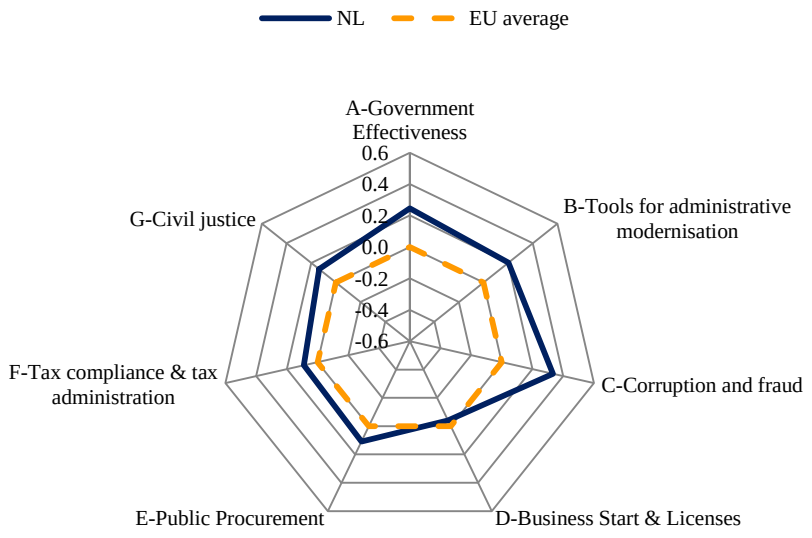
Further recent positive developments are slightly simpler income tax rules, the frequent use of digitalised tax forms, e-invoices and recycling of financial information for statistical purposes ("Standard Business Reporting"). Tax inspections will in the future be more risk-oriented.

The government is verifying whether the payments of taxes and social security contributions can be merged, to save administrative burden. This would mean that the tax authorities would in the future also collect the social security contributions. The idea of a block payment of social security contributions for all employees in one single, easy to calculate, monthly payment is envisaged for 2016.

The performance indicator for starting a business and obtaining the necessary licenses in the Netherlands is slightly below EU average, as opposed to its performance in the other indicators of the spider diagram. This is mainly due to the fact that the one-stop shop to start up a company is not fully operational. While the time required to start a company is well below the EU average, the costs are higher than the EU average. The index of total licencing complexity is similar to the EU average.

The composite public procurement index is slightly above average. The average delay in Government payments is almost 10 days less than in the EU average and the average cost per firm per competition is equally lower than the EU as a whole.

Overall profile of public administration



Source: WIFO

The Netherlands has a tradition of policies promoting reliability of the public administration and reductions in the administrative burden. Over the last decade, the Netherlands has been a front-runner in terms of e-government, and it scores well

above the EU average in the share of business using e-government services.

Since 2010 the government has merged several ministries, centralised functions for public procurement and human resource management and improved its IT systems. In the future, a single agency (Agentschap NL) will be responsible for administrating the few remaining subsidies for enterprises. The collection of any fines for disregarding legal obligations will also be done by a single agency.

The government wants to reduce the number of public officials in central government by 10-15 % and announced further cuts in operational and programme budgets. About 20 inter-ministerial committees were set up to discuss possibilities for further streamlining and budgetary savings. Out of the total consolidation effort foreseen over the government term, at least a third will be achieved through savings in the size of the government and administration. Although this reduction has a potential for efficiency gains, it may pose a risk to retaining the high quality standards of public services.

3.18.7. Conclusions

In the area of sustainable industry, the official ambition of the government is not very high. The current measures are probably insufficient to reach the legally binding 14 % renewable energy target in 2020. A national energy efficiency target has not yet been set.

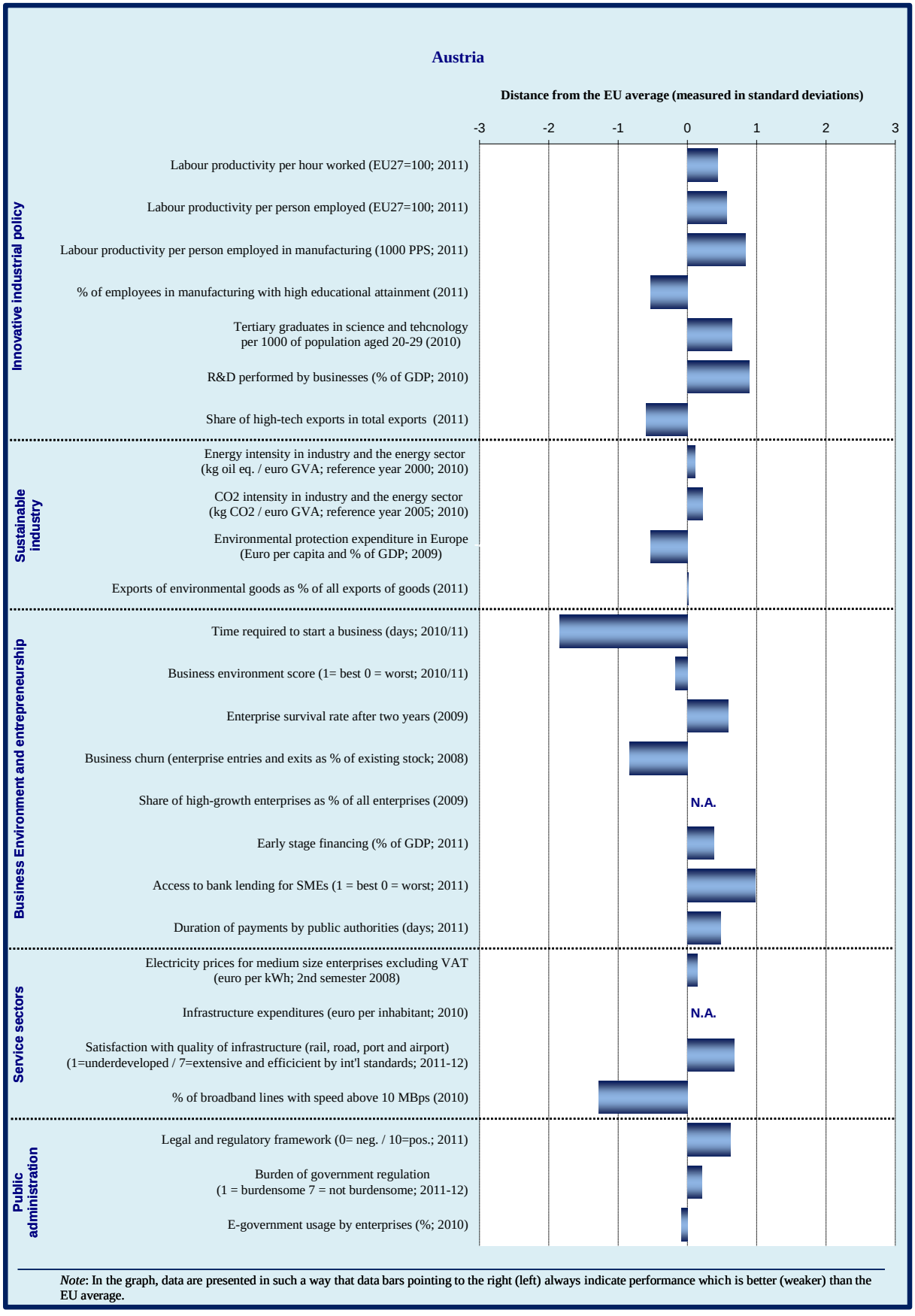
As regards short-term fiscal efforts, it is crucial to safeguard investments in long-term growth drivers like education and research from possible additional spending cuts.

Although the Dutch research and innovation system has managed to maintain and in some areas improve its innovative capacity, resting on a historically strong educational base, the underperformance of the Netherlands in private R&D expenditure may reduce future economic growth and weaken the competitiveness of the Dutch economy to an extent that cannot be offset by the use of licences and know-how transfer from other countries.

The revised policy recommendation of the Council of the European Union is to promote innovation, private R&D investment and closer science-business links, as well as foster industrial renewal by providing suitable incentives in the context of the enterprise policy, while safeguarding accessibility beyond the strict definition of top sectors and preserving fundamental research.[208]

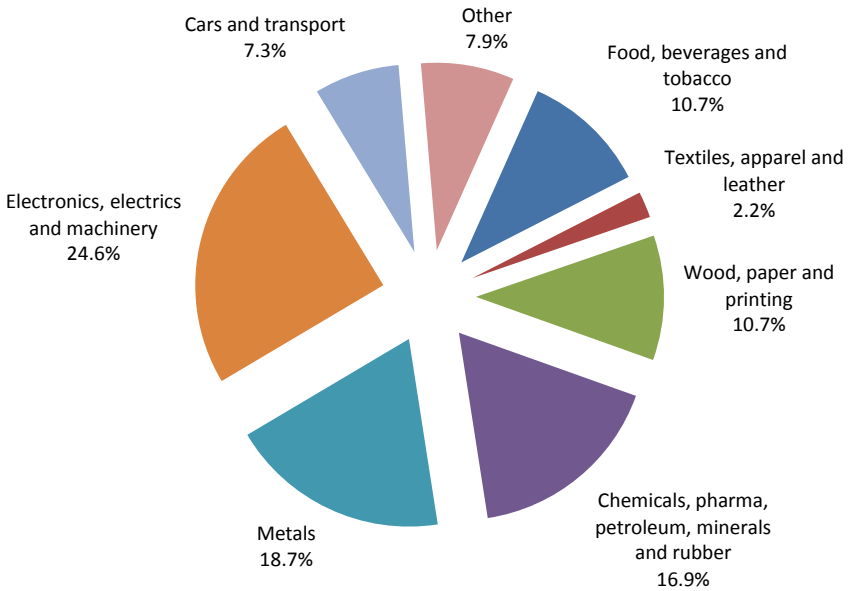
[208] http://register.consilium.europa.eu/pdf/en/12/st11/st11275.en12.pdf

3.19. Austria



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Austria (2009)



Note : No data available for sectors C12 (tobacco products) and C19 (coke and refined petroleum products)
Source: Eurostat

3.19.1. Introduction

Manufacturing contributes 18.7 % to the total value added in Austria against 15.5 % in the EU on average and labour productivity is clearly above the EU average. At the detailed manufacturing industry level, Austria features value added and export specialisation in mainstream manufacturing (manufacture of railway and rolling stock, electric motors) and labour-intensive industries (builders' carpentry and joinery, sawmilling, machine-tools) as well as in capital-intensive industries (man-made fibres) regarding value added and in marketing-driven industries (sports goods, beverages) regarding exports. At the more aggregated sector level, Austria is specialised in highly innovation-intensive sectors such as machinery and, in exports, in medium-innovation sectors (such as wood, basic and fabricated metals), but also in sectors with low innovation and education, such as in hotels and restaurants and auxiliary transport activities. Austria's R&D intensity considering its industrial structure is very high and its position on the quality ladder is high across industries and quality segments. Overall, Austria shows that competitiveness can be sustained in structures which are not markedly knowledge-intensive, if sectoral upgrading in terms of R&D and quality takes place, i.e. if a country moves to the knowledge-creating parts of the value chain.

3.19.2. Innovative industrial policy

According to the Innovation Union Scoreboard 2011, Austria stays an innovation follower, with a developed innovation system and an above average innovation performance.

Austria's economy exceeds the EU average in R&D intensity. The overall investment in R&D grew from 1.93 % in 2000 to 2.76 % of GDP in 2010, which was faster than in most other EU countries. The share of private sector amounted to a remarkable 60 % of the total, including a significant portion of R&D investment coming from abroad.

The share of Austria's innovative businesses accounts for 2/3 of total enterprises with most of them specialising in sectors demanding high and low-intermediate labour skills. After several years of incremental improvement, the number of science and technology graduates nearly reached the EU average in 2009 (14 % vs. 14.3 %). Nonetheless, Austria gradually begins to face shortage of skilled workforce and the number of researchers seems insufficient. To facilitate immigration of highly qualified labour the government introduced the so-called 'red-white-red card' as from July 2011. An initial analysis of applications seems to indicate a good uptake and a wide range of professions and countries of origin. Since September 2011 applicants can access information through a new migration website in German and English[209].

[209] www.migration.gv.at.

A recent measure to increase indirect public R&D expenditure is the increased tax bonus on corporate R&D investments (from 8 % to 10 %; with no conditionality of profits made through the investment) since January 2011, with an expected impact of EUR 100 million. This incentive is particularly important for the sizeable investments coming from abroad and for companies with high R&D investments relative to turnover. Another measure which is working well is an innovation voucher scheme for SMEs[210].

In view of the recent decline in the private sector share of R&D expenditure from 49 % in 2007 to 44 % in 2010 the relative underdevelopment of venture capital (VC) for financing innovation appears as a weakness. This seems to be the result of a strong tradition of bank financing of enterprises but also of a comparably unfavourable legal framework and fiscal treatment of VC.

In terms of governance the Austrian system suffers from a complex division of competences involving several ministries plus a number of public and semi-public agencies and bodies. A high-level inter-ministerial Task Force for Research, Technology and Innovation has been established recently to coordinate the activities of government bodies, discuss reform projects and consult stakeholders.

The strategy document from March 2011 'Becoming an Innovation Leader' outlines a series of challenges of the Austrian innovation system, such as strengthening links with the education system, increasing the share of tertiary graduates, promoting high quality research infrastructure and fundamental research and using public procurement to promote innovation. The strategy addresses all major challenges and formulates feasible objectives. Though, an effective implementation and in particular a stronger prioritisation of R&D&I activities and corresponding streamlining of the governance structure will be crucial to achieve higher returns on the considerable investments.

3.19.3. Sustainable industry

The energy and carbon intensity of Austrian industry has been declining over the last decade and remains below the respective EU averages for 2010. While sectors falling under the ETS will reduce CO_2 emissions by 21 % by 2020 Austria is aiming at a 16 % reduction for the other sectors.

The key policy document to address this and other challenges in the area of energy is the national Energy Strategy from 2010 with three pillars aiming at increasing energy efficiency, energy security and the share of renewables; the latter with an ambitious target of 34 % by 2020.

The Strategy sets out a mix of horizontal and sector specific measures of regulatory, financial and information campaign nature. About 18 out of a total of 42 measures have so far been implemented. Two of the funding measures appear particularly effective: one for the 'greening of industries' supporting sustainable management measures in enterprises with funding of about EUR 90 million in 2011 and a reinforced and prolonged instrument for thermal insulation of residential (70 %) and industrial (30 %) buildings with an annual budget of EUR 100 million until 2014. In 2011, more than 18 000 projects (residential and industrial buildings) with a total investment volume of EUR 860 million have been funded. A key measure to increase the share of renewables is the 'Green electricity act' that will enter into force in July 2012.

Since October 2010 an action plan for Green Public Procurement is implemented at federal, state and municipal level. It foresees among others stronger inclusion of social criteria. There are 16 groups of procured goods and services with different criteria. They are fully applied since May 2011, e.g. for electricity.

Several environmental tax measures (increased mineral oil tax, airline ticket tax, and car registration tax reform) have entered into force recently and are expected to substantially reduce CO_2 emissions; first evaluations are expected in late 2012.

Based on a broad consultation process in 2011 and the reports of 9 working groups a strategy paper with a number of short term measures has been prepared to promote electromobility and to exploit the related opportunities for businesses and technology development in Austria. Austria has adopted in 2010 a plan on primary raw materials and recently in 2012 a resource efficiency action plan (REAP) as well on secondary resources. A challenge for its implementation is that territorial planning is a Länder competence with the latter having to integrate the mineral resources plan into their respective regional laws.

3.19.4. Business environment

Austria has a favourable business environment and scores well in the overall competitiveness of its

[210] Innovationsscheck.

economy[211]. To further facilitate running a business Austria continues to implement its administrative burden reduction program after the intermediate target of a reduction of EUR 564 million has been achieved in 2010. The largest envisaged reduction measures in the pipeline to achieve the full EUR 1 billion reduction target by 2012 are the second phase of the one-stop e-government portal for businesses Unternehmensserviceportal (estimated reduction of EUR 200 million; see also below), the introduction of e-billing (making them legally equivalent to paper bills; as well estimated reduction potential of up to EUR 400 million) and the so called SME initiative including measures in trade law (e.g. establishment of a new trade register). During the second and third quarter of 2012 a package of measures should be adopted by the Government and presented to the Parliament.

The initiative on the reduction of administrative burdens on citizens is as well progressing with about one third out of 183 planned measures in implementation (i.a. on the register of births, marriages and deaths and introduction of electronic tickets for pupils for school buses). These account for a reduction of about 4.5 million hours out of estimated 8.9 million for all measures.

Austria's SME sector resembles the EU average, both in terms of employment (67.1 %) and contribution to valued added (61.4 %). As regards its structure though, the small and medium-sized companies play a more prominent role. The business demography indicators show, on one hand, lower-than-EU-average birth and exit rate of enterprises, and one of the highest survival rates after two years on the other hand.

There is room to further improve start-up conditions. In spite of gradual reduction over recent years, the number of administrative procedures (8 among which licensing, registration, certification, announcement), minimum capital and time (28 days for a limited liability company[212]) required for setting up a business is far above EU average for most of these indicators and would benefit from further reduction. A reform of the limited liability company has been discussed since several years but is still not proposed. It would foresee a reduction of the required (paid-in) minimum capital and of the costs for notarial certification in certain cases. Though, the announcement requirements and other procedures would remain unchanged.

In most aspects of access to finance, Austria continues to fare better than the EU average. Building upon a diverse and overall stable banking system, Austria maintains particular strengths in debt financing for SMEs. On the other hand, weaknesses persist as regards access to and supply of equity finance. The relatively underdeveloped stock market and venture capital industry do not generate sufficient alternatives of raising capital, and notably the size and depth of the venture capital market remain well below the EU average. Improving the legal framework for venture capital thus remains a challenge for 2012, e.g. by increasing the attractiveness and transparency of legal forms used for (i) venture capital funds and for (ii) investments vehicles, including measures mitigating possible tax disincentives.

3.19.5. Services sector

Austria has progressively reduced restrictions in service professions over the past years[213]. Though, there is still room for improvement for more competition and better choice for businesses and consumers in professional service, apothecaries and some medical professions (e.g. optometrists, dental technicians). In particular possibilities to set up 'interdisciplinary' companies including notaries and lawyers are still limited and more restrictive than in many other Member States. Such services from a 'one stop shop' would offer substantial efficiency gains and reduction of transaction costs for professional and private clients. Demand for them has been confirmed by a survey conducted by the Chamber of Commerce among businesses and their associations in 2009.

In some of the network services and industries there is room for further market opening. High network access prices and distortive behaviour by incumbent firms that deter market entry, competition and innovation can still be observed. For rail freight services the degree of competition is among the lowest in the EU. As regards rail market opening, the market share of new entrants in total transport performance (December 2010) amounts to 14.6 % for freight transport and 5.8 % for passenger transport. The infrastructure manager and the incumbent rail transport operators are controlled by the same holding. The market shares of the state-owned railway carrier OeBB are still 80 % in freight and 93 % in passenger services[214]. Similarly access to postal infrastructure still remains an issue. Considerable progress with the replacement of delivery boxes has been made and further is planned for 2012; though many such boxes are still

[211] Austria ranked 19th in the 2011-2012 Global Competitiveness Report of the World Economic Forum, and 32nd in the 2012 Doing Business Survey of the World Bank.

[212] 2012 Doing Business Survey of the World Bank; according to information provided by Austrian authorities the required time across all types of companies is 11 days.

[213] See for instance OECD data on Product Market Regulation from 1996, 2003 and 2008.

[214] Rail Market Monitoring Survey 2012.

only accessible to the incumbent operator. Competition in electronic communications would benefit from increased flexibility in spectrum management and access to spectrum.

3.19.6. Public administration

Austria's overall public administration performance, as depicted by the World Bank's *Government Effectiveness* Indicator, is well above the EU average.[215] Perceived quality of public services, including quality of the civil service and policy implementation in Austria are high.

The use of *tools to improve public administration* (e-government, impact assessment, performance and service orientation, accountability) performance is slightly more intense than the average in the Member Countries. This is mainly due to the comprehensive provision of business-related e-government solutions, where Austria is well above the EU average. On the other hand, reliance on *human resources management instruments* such as performance-related instead of seniority pay or measures to increase the internal flexibility of the civil service, is slightly below the EU-average, i.e. Austria still follows predominantly a more traditional role of steering and managing its administrative staff.

Corruption indicators show a slightly better than average performance. Perceptions based measures for 'diversion of public funds' as well as for 'irregular payments and bribes' indicate that Austria is not free of corruption-related problems but that it still fares better than the average. As regards the individual experience of corruption (11 % of all cases), it is worse than the EU-mean (10 %), albeit only to a minor degree.

The composite summary indicators for *tax compliance and tax administration* are better than average. The time required for preparation of tax files is 170 hours per year, as compared to the EU-mean of 208 hours. Administrative costs of taxation in percent of total revenue amount to 0.85 % as compared to 1.32 % across the EU Member Countries.

Two composite link-level indicators show figures below the EU-average. As regards the link *starting a business and obtaining licenses*, this is due to especially to the longer it takes time to start up a business, as measured by Doing Business model company procedures. Although Austria already provides a fully operational one-stop shop for starting up a business, the time required to start up the model company is higher than the EU-mean of 13.7 days. While the costs of starting up are slightly below the average, licensing procedures appear to be more complex than average.

The composite *public procurement* index is also signalling some scope for improvement for reducing the time but especially for cutting the cost to take part in government procurements. Whereas on EU average the typical costs of taking part in a tender amount to 0.19 % of the respective domestic GDP per capita, participation in Austria causes cost of 0.26 % of GDP per capita. Payment delays of public authorities are less problematic than at the EU-average, as payment delays amount to 14 instead of 28.2 days (EU-mean)[216].

The efficiency of the *civil justice system* is better than average. All sub-indicators of this link are better than the mean so that there are no notable weaknesses. For example, the time of enforcing contracts is 397 days in Austria as compared to the EU mean of 556 days. Resolving insolvency issues takes 1.1 years as compared to an EU-mean of almost 2 years.

Austria scores about average at EU level for the time needed by businesses to comply with tax obligations (67 vs. 68 hours for a benchmark model company[217]) as well as the number of payments to be made (14 AT vs. 17 EU average[218]). The portal 'Finanz online' that will be integrated in the e-Government Business Service Portal[219] (see below for details) exists already for many years; it has been progressively extended and is widely accepted by enterprises and the public. It offers a one stop shop for all kinds of taxes for businesses and also the possibility to submit individual questions online. An example for extension is the property acquisition tax (Grunderwerbsteuer) that used to be paid via the notary and has recently been integrated in 'Finanz online'.

While about 95 % of all taxes are calculated and raised through the federal tax administration some tax payments have to be made to the regional (Länder) or municipal level, such as the municipal tax (Kommunalsteuer).

[215] As many data are unavailable, we decided to calculate EU-wide averages without Malta.

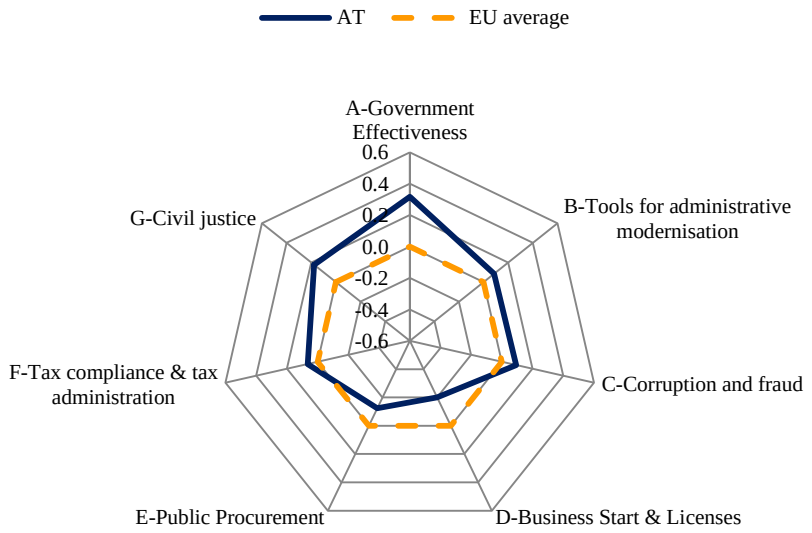
[216] Source: Study on Excellence in public administration for competitiveness in EU Member States (WIFO, ZEW and IDEA consult 2012; not yet published).

[217] Paying taxes Survey of the World Bank.

[218] dito.

[219] www.usp.gv.at .

Overall profile of public administration



Source: WIFO

While there have been no recent initiatives for a major institutional reform to change the distribution of competences between federal and state level with a view to better aligning management of public spending and revenues there are examples of more limited reforms. The reform of the system of administrative courts[220] was announced in June 2012. It would streamline the system to one with only two instances (9 first instance courts at state level plus 2 at federal level) with the aim to speed up procedures. The administration of long term care benefits has basically been federalised since January 2012, reducing the number of involved administrations from more than 300 (280 at state and 23 at federal level) to 8. Construction law (a state competence) remains a difficult area for businesses. In order to lighten burdens on them the procedures for construction permits and licenses for production facilities (Betriebsanlagegenehmigung) are done in parallel where possible, e.g. for construction of waste treatment plants. The planned reform of the federal competition authority (BWB) can as well be regarded as an administrative reform.

Austrian administrations offer a broad and increasing range of e-government solutions to businesses which contributes positively to the latters' environment. Since May 2012 the e-government one-stop-shop Business Service Portal (USP)221 is offering its full functionality based on a single-sign-on for the most important administrative procedures at federal level, e.g. tax declarations (FinanzOnline), e-billing to federal public authorities, management of a virtual company dossier, data exchange with social insurance bodies. One focus of the next phase envisaged until 2014 is the avoidance of multiple declarations, which also contributes to administrative reform. Key advantages for businesses are also less paper use and partly direct interfaces between the USP and companies' software. The reduction in administrative costs is estimated at up to EUR 300 million depending upon the services provided.

From 2013 Austria is planning to introduce a more comprehensive impact assessment system consisting of seven tests focusing on different types of impacts (budgetary, administrative burdens, SMEs, gender equality, consumer protection, climate change etc.). Through an IT tool which is under development all relevant test modules will be selected for a given case and the results integrated in an output report that will be attached to the policy proposal (Vorblatt).

3.19.7. Conclusions

Austria scores well in the overall competitiveness of its economy, labour productivity remains clearly above the EU average, and it need not cope with any major bottlenecks in the short run. In the context of a developed high-income country however, it faces relative structural weaknesses in some areas, which may harm the long-term potential of its economy.

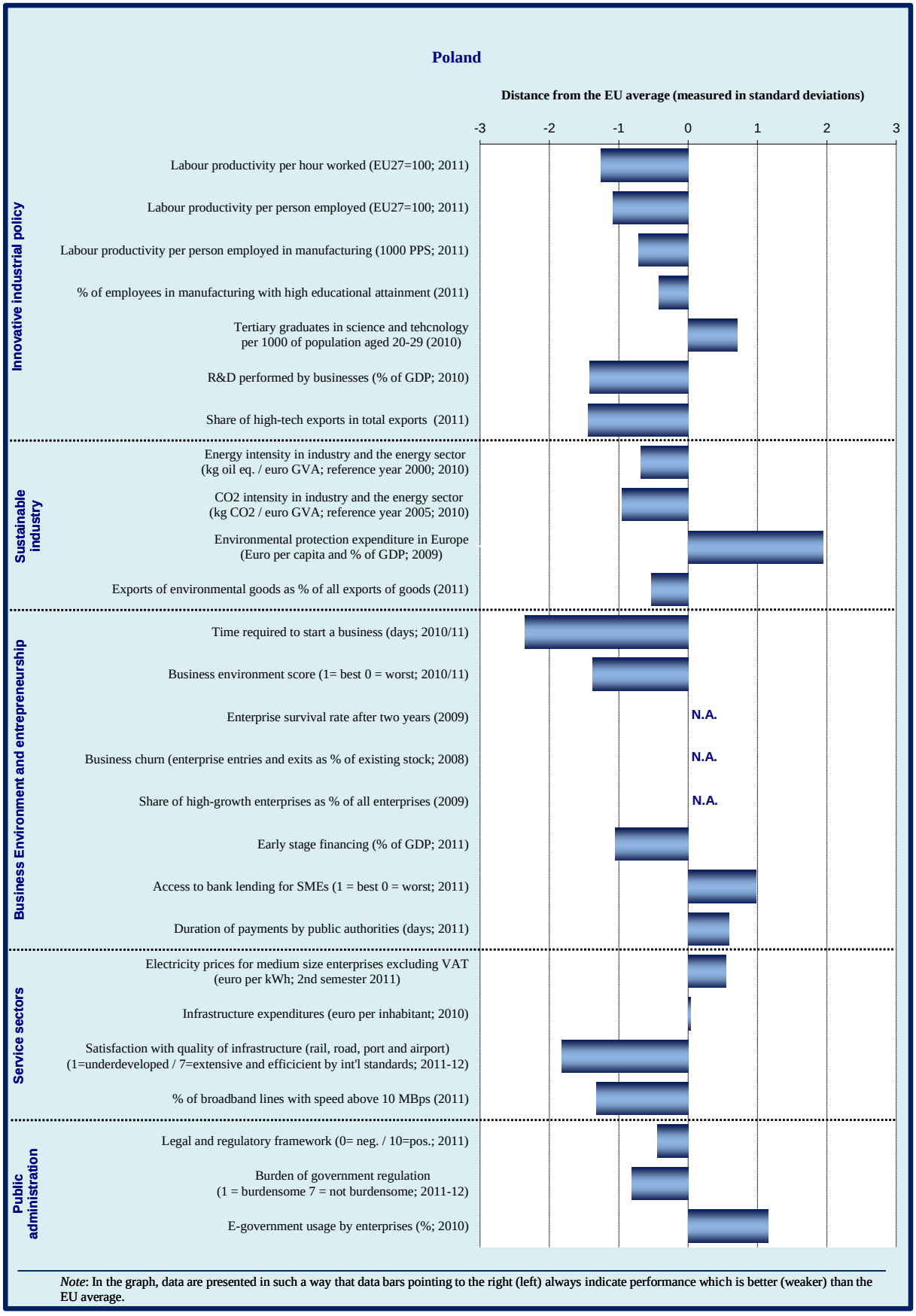
The knowledge triangle (education, research and innovation) is one of the areas in need of priority action as appropriately reflected in the 'Becoming

[220] BGBl. I Nr. 51/2012.
[221] Unternehmensserviceportal (USP) — http://www.usp.gv.at .

an Innovation Leader' strategy. A dedicated implementation of this strategy, better interaction with the education system, and more prioritised and thereby more efficient public spending in these policy areas will be instrumental to fully exploit the potential contribution of R&D to the competitiveness of its economy, and thus facilitate the structural shift towards more skill-intensive higher-value-added activities.

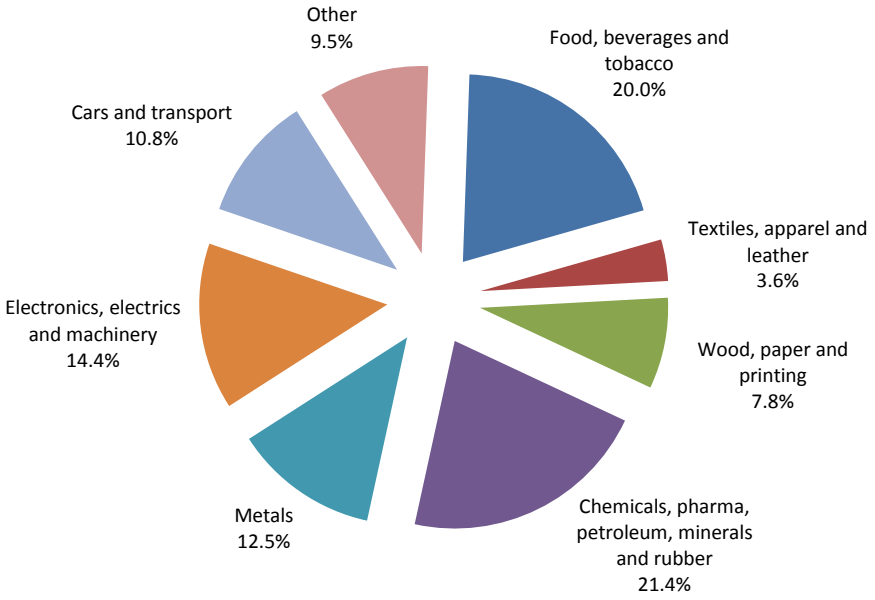
The favourable business environment could be made even more attractive by streamlining administrative procedures for start-ups and by increasing availability of non-banking financing.

3.20. Poland



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Poland (2009)



Source: Eurostat

3.20.1. Introduction

Manufacturing is relatively more important in Poland than in the EU, accounting for some 18 % of GDP (EU average 15.5%). However, Polish industry is still more specialised in marketing-driven, labour intensive and mainstream manufacturing sectors. Consequently, the shift to more R&D intensive and knowledge based economy that would offer more sustainable growth in the future is an outstanding challenge which the Polish government tries to address in its various policy proposals.

Due to relatively strong internal demand and good export performance (facilitated by currency depreciation) Polish companies managed to fare through the crisis and even continue to grow. However, the future performance of industry will to a large extent depend on boosting innovation and technological specialisation of companies.

3.20.2. Innovative industrial policy

The latest Innovation Union Scoreboard 2011 ranks Poland among the weaker performers in the 'moderate innovator' group of countries. In addition, the annual growth in innovation performance of Poland was very moderate and translated into a very modest improvement in the last five years.

Poland has maintained its target for R&D intensity at 1.7 % of GDP by 2020. Over the last years R&D expenditures have grown continuously, but nevertheless the level of R&D expenditures in 2011 was at 0.75 % GDP which is one of the lowest in the EU. The 2012 research budget was increased by around 10 % and is the highest annual budget for R&D so far. This increase, though, is mainly funded through structural funds and national co-funding. What remains to be the most concerning issue is the underinvestment of private sector in R&D which accounts for less than one third of all Polish R&D expenditures (with the continuing downward trend). It creates the main challenge related to feasibility of achieving the national target which assumes equal contribution from public and private funding sources.

There is a strong awareness of this challenge at national level and many support mechanisms have been launched recently to induce science-industry cooperation. However, all these efforts have still not led to a creation of well functioning, innovation-friendly framework conditions that would stimulate collaboration of public institutions with private business and stimulate growth of innovative companies. In addition, investments from the structural funds in innovation have been mainly directed towards purchase and absorption of new technologies, which has enabled some catching-up, but also left more necessary support for indigenous innovation projects underdeveloped. What is more, also the measures to support demand side have been very limited.

Concerning the framework conditions, Polish R&D system has undergone major restructuring in the last years. The recent reforms of the science and higher education systems spurred significant

changes, including the move towards competitive funding, creation of two R&D agencies for applied (NCBiR) and basic research (NCN) and efforts on tackling fragmentation through concentration of funding on strategic projects and best performing institutions. The two research agencies are now fully operational and have seen increases of their budget and competencies. Still their successful functioning will require coherent strategic management as well as clear evaluation procedures of projects.

In 2011 the 2020 National Research Programme (KPB) was adopted listing seven strategic R&D priority areas that are to be implemented by the NCBiR in its strategic programmes. In parallel, the technological foresight for industry *InSight 2030* was also completed, identifying key lead markets and technologies. Much as these documents are important for further actions, the outstanding issue is linking entrepreneurship, innovation and science policies to have common priority areas and instruments supporting whole innovation cycle.

The currently developed Strategy for Innovativeness and Effectiveness of the Economy is an attempt at an integrated approach to research and innovation embedded in a wider economic context. As the Strategy is rather general and requires follow-up implementation plan, the currently prepared Enterprise Development Programme will be crucial for assuring coherence between science and industrial policies. It is supposed to propose a coherent and more effective set of instruments aimed at supporting all the stages of the innovation process and all the stages of a company development. The Programme should also introduce measures incentivising private research and innovation investments, in particular for young innovative companies and SMEs.

3.20.3. Sustainable industry

Polish economy has managed to reduce its energy intensity, but has still not reached the European average. The biggest improvements in energy efficiency have been registered in industry and the lowest in transport. Consequently, Poland exceeded its intermediate target for energy efficiency in 2010 of 2 % reaching a 6 % reduction. The main potential for further efficiencies is in construction, industry and households sector, but a 20 % reduction in 2020 will be difficult to achieve. The Energy Efficiency Plan adopted in 2011 set a new scheme of white certificates that are the main instrument to stimulate further efficiencies also in the end user sectors. There is a visible rise in social awareness reflected in the improvements mainly taking place in households' sector. However, Poland has still not fully transposed the energy labelling directive which is a key for the promotion of energy efficient behaviour among consumers.

With some effort Poland is likely to reach its target of 15 % share of renewables in the total consumption of energy in 2020. In 2010 it already reached a 10 % share. The main source of renewable energy is bio-mass, including co-firing, and wind. Nonetheless, Poland has not managed up to now to fully implement the Renewable Energy Directive which led to an infringement procedure being launched by the Commission in 2012. The new national legislation that should also set some support mechanisms for investments in renewables for SMEs has been delayed due to controversies around the proposed support mechanisms for investments in renewable energy sources.

There are several initiatives prepared by the government aiming at modernisation of energy sector, such as improvement to energy networks, economic support to diversification of energy sources and non-legislative measures to promote use of local renewable energy sources. Moreover, the National Programme for the Development of Low-Emission Economy is under preparation, following the adoption of the Programme's guidelines in 2011. The comprehensive action plan, referring to all sectors of the economy, with a time frame up to 2050, should be ready by mid-2013. By now however, the incentives to encourage the uptake of low-carbon emitting technologies in the energy sector seem still insufficient. Furthermore, in spite of the fact that road freight emissions are rising sharply (increase by 33 % from 1995 to 2007), there are no specific measures to reduce emissions in this area.

Furthermore, despite gradual modernisation, underdeveloped transport infrastructure continues to be a serious obstacle for industry's growth. There is still a lot to do in rail transport where poor condition and aging network is not sufficiently accompanied by urgently needed investments. Poland has not fully used cohesion funds available for this purpose due to lack of experience and properly elaborated projects. Continuation of road network's upgrading remains one of the government's priorities, but despite significant progress made in the last 5 years and constructing over 1 000 km of new motorways and expressways, the network remains fragmented. Air transport infrastructure has been improving following a number of investments, but still lacks effective connections to other transport modes, especially railways. Similar situation also concerns port infrastructure. Some progress has been made, especially in modernization of transport connections between the neighboring countries and the host cities of the 2012 European Football

Championships, but more investments are needed to remove the infrastructure gaps.

In 2010 Poland had a small negative trade balance in environmental goods and the balance has been marginally deteriorating since 2006. In order to foster development and international transfer of Polish innovative environmental technologies an Accelerator of Green Technologies (GreenEvo) was initiated end of 2009. As a part of the project an analysis of the Polish potential and of foreign markets for environmental technologies has been conducted. A selection of companies to be supported by the programme was completed in 2010 (28 companies selected in total), but the final impact of the project is still not known.

Aging infrastructure, limited competition in the energy market and domination of coal in energy mix continue to pose a potential threat of undersupply and increases of energy costs for industry. There are still some uncertainties around the currently developed nuclear programme and the potentials of the shale gas extraction. Current low CO_2 prices have reduced the pressure from coal generation facilities, but the situation might change in the future. On the positive side, the progress in construction of the LPG terminal in Świnoujście is according to schedule and it should be open in 2014. Besides a new gas interconnection with the Czech Republic has been opened and new ones are planned with Germany.

3.20.4. Business environment

According to the World Bank Doing Business 2012 report Poland continues to be among the worst performers in the EU concerning business environment. The main issues are high administrative compliance costs, slow legislative processes and unstable legislation. As regards judicial and other legal actions, both the duration of procedures and their number are relatively high.

The Polish government sees the improvement of business environment as its priority, but the pace of the reforms is rather moderate. The reforms proposed up to now go in the right directions but are not ambitious enough. More reforms are expected, but the frequent changes in legislation, even if positive, are not well received by business organisations that would welcome a holistic and well-thought reform of regulation. Better implementation of impact assessments and timelier stakeholder consultations of proposed regulatory changes are required to improve the entire law making process.

In 2011 three legislative packages were adopted to improve the business environment. The first package focussed on the freedom of entrepreneurship act (entering into force 1st July 2011) has made one-stop-shop more operational and reduced the time of starting the business. Next, the act on reduction administrative barriers (so-called deregulation Act I, entering into force 1st July 2011), has limited the administrative constraints on business activity, decreased significantly the number of procedures and administrative obligations imposed on businesses, and replaced administrative certificates with own statements. The third package (so-called deregulation Act II, adopted on 16th September 2011, mostly entering into force on 1st January 2012) aimed at reducing information obligations and administrative barriers for citizens and businesses. Currently, a proposal of draft legislation guidelines to the next deregulation act is being discussed within the government. It will concentrate on the solvency enhancement and investments support as well as further reduction of the information obligations and reduction of the cost of running a business.

There has also been some progress in the simplification of legal procedures involved in enforcing contracts. In September 2011 separate legal proceedings for business cases were eliminated and rules on the submission of evidence are to be simplified. The effects of these changes are still to be seen in future. Besides, the government plans to move forward the digitalisation of courts which should shorten the duration of proceedings.

Poland performs similarly with the EU average in access to finance. Decline in demand and number of loans to SMEs has been observed following the crisis. However, the latest ECB lending survey shows that in 2011 net change in willingness of banks to provide a loan improved in Poland in contrast to the negative developments in the majority of the Member States. It also seems that Poland is one of the few countries where collateral requirements for loans to SMEs have not increased much. Thus restoring normal lending to the economy is not a major issue for the government to deal with at the moment.

Nonetheless some challenges still remain. SMEs also complain about the high collateral requirements that limit their ability to get a bank or other type of loan. The venture capital market is still not very developed which limits availability of risk capital for innovative companies at early stages of development. The National Capital Fund only became operational in 2010 so it is too early to assess its impact on development of start-ups and seed capital funds. On the positive side – the Polish growth stock market NewConnect continues to be a best practice example on the European level. It is

important for growth oriented SMEs as a direct financing source or as en exit possibility for the venture capital funds investing in SMEs.

3.20.5. Services sector

Over-regulation in the field of professional services is a significant regulatory barrier for economic growth. Poland has notified to the Commission 368 regulated professions (32 % in construction and industry, 21 % in the transport sector and 20 % in the health sector). Recently, Poland has announced a plan to scale down by 50 % regulation in professional services regarding both educational requirements and licensing. Two legislative initiatives are to be adopted in 2012 following ongoing public consultations.

Concerning services provided by network industries, the functioning of telecommunication market is positively assessed by the majority of the institutional customers. A strong position of the Office of Electronic Communications (UKE) helps maintaining access to infrastructure and competition on the market.

Rail freight services are among the most liberalised markets in Europe, but there are still obstacles to an efficient functioning of the internal market. Poland is working on full implementation of the railway package and on the ways to decrease the current level of railway infrastructure charges which is posing a substantial obstacle for operators. It also intends to strengthen the position of the rail regulator (UTK). Additionally, the existing problems with access to the freight terminals and rail-related services by new entrants have negative impact on the functioning of the market.

In contrast, the liberalisation of the gas market is not progressing fast enough. The government plans to facilitate the competition on the market by introducing gas release programme on commodity exchange. The withdrawal of obligation to approve tariffs for commercial customers is expected in 2013. The relevant legislation is under consultation, but with no specific adoption day has been set. There are still no plans for liberalisation of the market for households or proper impact assessment of liberalisation on prices.

3.20.6. Public administration

As measured by the World Bank's Government Effectiveness Indicator, the *overall public administration performance* scores for Poland are considerably below the EU average. Perceptions of the respondents to the World Bank survey point to a relatively lower quality of public services, policy implementation and commitment of public servants compared to the EU average.

In terms of *tools for administrative modernisation* (e-government, impact assessment, performance and service orientation, accountability) the composite indicators also highlight a performance slightly below the average for Member States. Various initiatives to improve electronic contacts with administration have been undertaken, but the general problem is insufficient coordination of these initiatives resulting in a lack of integrated system. A major change was the introduction of the central electronic register (CEIDG) in July 2011, which allowed electronic registration of a business for natural persons. However, the government itself has noticed that the system required improvement and further extension of functionalities, and announced to upgrade the register still this year. Registration of limited liability companies (registered in the National Court Register) is also to be improved, following amendments to the legislation that are envisaged for the second half of 2012.

The composite indicator on *corruption* exhibits a notably lower score compared to the EU average indicating that corruption is still an issue in Poland. Whereas diversion of public funds due to corruption and the commonness of irregular payments and bribes by firms are assessed at similar level to this of EU average, the experience of corruption in interaction with public authorities is more common.

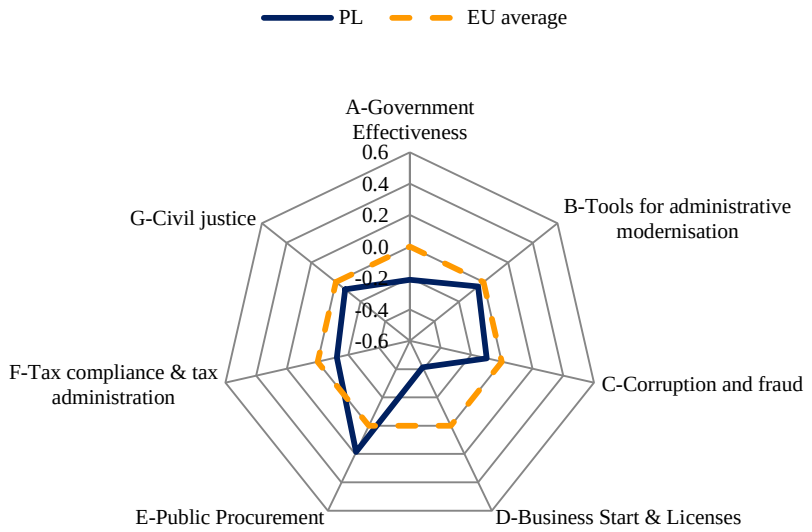
Measured by the composite indicator on *starting a business and licensing*, Poland's performance is significantly worse than EU average. It is mainly a consequence of relatively much longer time as well as higher costs needed for incorporation compared to the EU average. Furthermore, Poland still lacks a fully operational one stop shop for start-ups and obtaining licenses is assessed as more complex than the EU-benchmark.

Concerning *tax compliance and tax administration* our composite indicator reports a score that is lower than the EU average. This holds true for both the time requirements to prepare tax returns as well as tax administration costs which are substantially higher than on average in the EU. Although tax burden on labour is relatively low compared to other EU countries, it is the complicated tax system that is perceived as a serious burden by Polish companies. What is worse, the World Bank Doing Business Report 2012 indicates that there has been no improvement in the Polish Paying Taxes indicator compared to 2011.

In terms of *efficiency of civil justice*, Poland again performs slightly below the EU average according to the World Bank analysis. While the costs of enforcing contracts are estimated to amount to 12 % of the claim, which is below the EU average, the time requirements exceed by some 50 % the EU average for both enforcing contracts and resolving insolvencies. Moreover, the WEF's Executive Opinion Survey indicates that the judiciary is also perceived to be less independent from political influence compared to the EU average.

In contrast, the composite *public procurement* index shows a significantly better performance than the EU average. This holds true for all three aspects covered in the composite indicator. For instance, while on average time requirements for the competition for public tenders amount to more than 16 days and payments by public administrations are delayed up to 28 days, for Poland these values are only 11 and 19 days, respectively. Nonetheless, Polish companies complain about restrictive criteria, stringent conditions and inefficient appeal procedures in the area of public procurement.

Overall profile of public administration



Source: WIFO

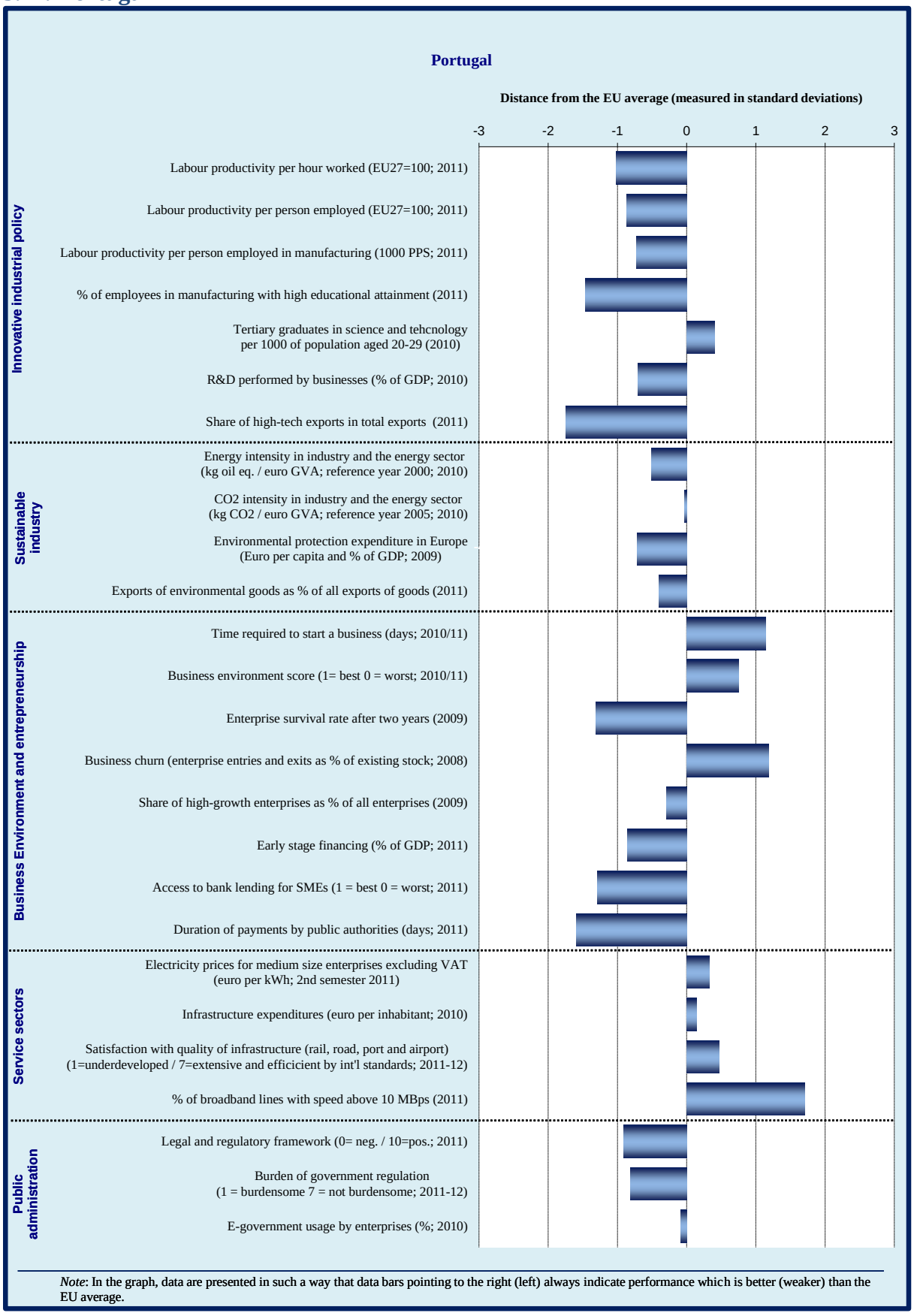
3.20.7. Conclusion

In 2011 Poland managed to prepare and implement some additional reforms that should lead to an improvement of business environment and help industry boosting its competitiveness. Thanks to relatively good situation of the economy and the implementation of the EU cohesion funds Poland has also been able to maintain its growth and investments in infrastructure. What is more, despite the underdeveloped capital market, Poland has avoided credit crunch and access to finance is not as serious problem as it is the case in some other member states.

However, there are concerns that without further structural reforms the current growth model might not be sustainable. Despite the reform of education and science system, the innovation performance of companies is poor. Without better strategic linkages between industrial, education and innovation policies the existing instruments might not improve the situation. Furthermore, sustainability needs to be better incorporated in the energy and transport policies to avoid future adjustment costs and encourage companies to adopt environmental technologies.

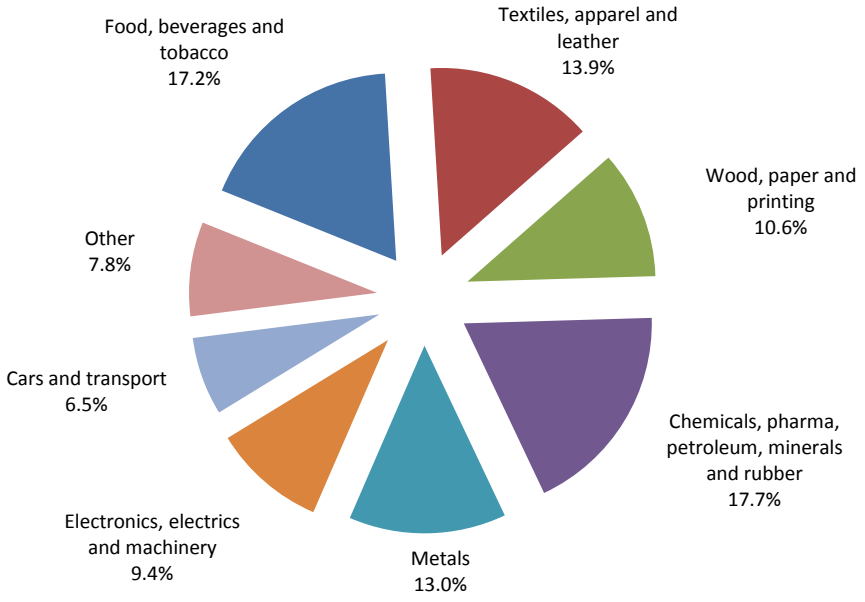
In addition, the approach of public administration to regulation and law making does not sufficiently engage and consider the voice of business stakeholders. While the proposed changes seem to be relevant, lack of efficient control and monitoring mechanisms weakens the chances of proper implementation. Similarly, the deployment of e-administration and e-services is rather slow and lacks coherence. Finally, despite recent deregulation proposals there is a clear need for a better regulation agenda that would be implemented in a more elaborated and systematic manner.

3.21. Portugal



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Portugal (2009)



Note : No data available for sectors C12 (tobacco products), C19 (coke and refined petroleum products) and C21 (basic pharmaceutical products and pharmaceutical preparations)
Source: Eurostat

3.21.1. Introduction

Manufacturing plays a broadly similar role in Portugal than in the EU as a whole (13.1 % against 15.5 %). At the detailed manufacturing industry level, Portugal has a relatively high degree of specialisation in low-skills (labour-intensive) industries (wood and cork, cutting and finishing of stone, made-up textile articles) as well as in capital-intensive (cement, refined petroleum) and marketing-driven industries (footwear). Sectors of medium and high technological intensity are still under-represented in parallel with a still relatively high specialisation in low technology sectors.

The series of economic reforms that are being implemented should facilitate and speed-up structural change and contribute to foster productivity and competitiveness. Portuguese exports are relatively concentrated in the EU markets. The share of exports to the BRIC countries is low but it is increasing, taking advantage of the opportunities offered by these and other high-growth emerging economies.

3.21.2. Innovative industrial policy

R&D expenditure weakened slightly (from 1.64 % in 2009 to 1.59 % of GDP in 2010) but Portugal continued to be one the leading countries in the group of 'moderate innovators' in the IUS 2011, reinforcing its relative strengths in areas such as the research system or the number of SMEs introducing innovations. Main relative weaknesses are still in business R&D and in the outputs and economic effects of innovation (measured e.g. by the relative importance of exports of high tech products and knowledge intensive services or intellectual assets).

A new strategic programme promoting entrepreneurship and innovation '+ e + i ' was adopted in December 2011 and some measures have already been implemented such as: the National Council for Entrepreneurship and Innovation was created for policy coordination and steering at the highest level of the government; R&D and innovation vouchers were merged into a single instrument (an incentive of up to EUR 25 000 is granted for innovation and R&D projects done by micro and SMEs in cooperation with a number of universities and research institutes) and new competitions were launched for this instrument.

Standards on innovation management systems and manuals on best practices for the protection and valorisation of Industrial Property and for the evaluation of Intangible Assets are being developed by the Standards and the IPR offices, in cooperation with COTEC. A 'highway' project streamlining decision making for bilateral patent applications was agreed between the Iberian countries.

Portugal is committed to implement the Digital agenda 2015 (adopted in 2010) and will align it with the forthcoming mid-term review of the Digital Agenda for Europe.
Portugal needs to sustain and improve the efficiency of the research and innovation

investments and their contribution to foster productivity and speed-up structural change, fully exploiting budget and project re-allocations and the temporary high EU co-financing rates.

3.21.3. Sustainable industry

A number of contracts were signed and new competitions launched for the exploration of several metallic minerals (Portugal has known important deposits of copper, silver, uranium and several critical raw materials such as tungsten).

The National Plan for Dams involves six investments and projects (including the capacity reinforcement of some existing hydropower plants). Smart grids and other innovative eco-products and services are being promoted (within an energy technology and competiveness pole and other 'eco-clusters"). The pilot project ("InovGrid") in the city of Évora reached 30 000 households and businesses in 2011 and was chosen by the Commission and Euroelectric as a case study for smart grids in Europe.

The Energy Audit Scheme and rationalisation action plan in industry covers more firms and energy intensive industrial installations. On-line energy audit tools and a study with technical industrial/sectoral energy efficiency measures were made available. The '+ e + i' programme foresees several eco-innovation actions (such as an 'energy voucher' promoting energy efficiency and green business models). Awareness and communication campaigns on eco-innovation were organised, trainings and certifications were given in the management of energy in industry and buildings and 500 'energy and carbon local managers' were nominated for public administration installations (within the ECO.AP programme promoting energy efficiency in public administration, aiming to reduce the State's Energy bill in 30 % by 2020).

The green public procurement programme is being revised (raising the number of green categories, the use of green awarding criteria, the green coverage target -from 50 % to 65 %- and the coverage of regional and local entities).

The powers and independence of the water and waste-treatment regulator are being reinforced and the state-owned enterprises in these sectors will be rationalised. The national low carbon roadmap to 2020-2050 is being finished and the two National Action Plans i) for renewable energy and ii) for energy efficiency were revised.

The revision of the National Renewable Energy Action Plan included reviewing the weight of the objective of each renewable energy source in the national energy mix to achieve in 2020 and estimate, per renewable energy source technology, the stages of adoption, promotion and entry into the system.

The revised National Energy Efficiency Action Plan has the horizon 2020 and establishes targets in terms of primary energy (namely a 25 % reduction of energy consumption until 2020).

The effective improvement of energy efficiency in industry remains an issue.

3.21.4. Business environment

Access to finance

A series of measures have been adopted to mitigate the increasing constraints on credit and lending conditions faced by SMEs: extension (for an additional year, until December 2012) of the existing credit insurance instruments for exports; deferral of capital reimbursements by one year – from October 2011 to October 2012 (for existing PME INVESTE credits, potentially involving EUR 1.85 billion and more than 50 000 SMEs); creation of a new credit line 'PME CRESCIMENTO' (of EUR 1.5 billion, primarily for SMEs); adoption of a plan for the gradual normalisation of late payments in the public sector.

Remaining Structural Funds have also been reprogrammed to facilitate access to finance. Over EUR 500 million will be allocated to this purpose, in particular by using a significant part of a framework loan of EUR 1.5 billion from the ECB.

Some other actions can help in lowering SMEs high leverage levels and dependency on bank loans: the public system of venture capital was reorganised into a single fund (allowing for a greater coordination of public intervention and offering SMEs new, innovative forms of finance); there are plans to develop the stock exchange for small caps, 'the Alternext Lisbon"; commitment in the MoU for presenting a proposal aimed at diversifying the financing channels of the corporate sector.

Regulatory and support environment

Business conditions and the functioning of markets are improving through the implementation of a large number of structural reforms, encompassing labour and products markets, network industries and business services[222].

[222] See http://ec.europa.eu/economy_finance/publications/occasional_paper/2012/pdf/ocp95_en.pdf and http://www.portugal.gov.pt/media/424132/compromisso_crescimento_competitividade_emprego.pdf.

The performance of Portugal on the share of fixed broadband lines at 10 Mbps and above was 77.5 %, the 3rd highest in the EU. Portugal is addressing broadband with a national plan, under which tenders were signed by the Government for the deployment of NGA networks in rural areas (providing a minimum guaranteed download speed of 40 Mbps. The roll out of the contracted services started in December 2011 and is underway until December 2013[223].

Many other reforms are targeted at improving competition and insolvency laws or the efficiency of the judicial system. Competition law procedures and enforcement regimes were strengthened and two new specialized courts were created for competition and IPR cases (respectively). Court fees were simplified and harmonised (penalising frivolous litigation and promoting voluntary out-of-court settlements). A new law was adopted on voluntary arbitration and fast-track resolution of debt enforcement cases (close to ¾ of the total number of pending cases in courts). Forthcoming reforms include the revision of the Code of Civil procedure (aimed at simplifying and accelerating court procedures) and introduction of mediation.

The conciliation framework facilitating early (extrajudicial) corporate debt restructuring and the insolvency laws and procedures were streamlined and a 'second chance' mechanism was introduced (aimed at proactively enhance rescue and firm restructuring; e.g. firms are granted protection from creditors for 60 days).

On-going simplifications of administrative procedures include: the 'Zero Authorisation' project (offering simplified/tacit licensing and services for setting up businesses such as shops, restaurants and bars) and the 'sistema de indústria responsável' (a simplified licensing regime for a large number of industrial activities) are being implemented; a simplified uniform regime for mobile retailers is being drafted; the 'simplex Autárquico' reached a 75 % implementation rate (complete coverage of all 308 municipalities is foreseen for 2013); the 'simplex Export' programme simplifying export procedures for firms is almost completed.

Further actions are being planned such as: extension of the 'Zero Authorisation' project to other sectors; a new 'simplex Export' with additional simplifications; a 'simplex Mar' for sea related activities; a 'Guichet Ambiente' for environmental protection services and authorizations.

Exports and the internationalisation of SMEs continued to be promoted by QREN and by a large set of measures (e.g. visits of importers; participation of SMEs in trade fairs and missions and information about IPR protection and enforcement in some high growth markets).

Following the adoption of '+ e + i' programme, a national entrepreneurship competition ("concurso INOVA") was launched for lower and upper secondary students; there is an action plan for developing a common platform for entrepreneurship education and its inclusion in the curricula; the program 'Academia das PME' organizes training courses and workshops for the development of managerial skills in SMES (and had targeted actions in specific sectors such as creative industries or agro-businesses).

3.21.5. Services sector

A series of measures are being implemented to liberalise services, easing barriers to entry and restrictions to cross-border activities. A Commission was created in order to review and reduce the number of regulated professions (around 120 regulated professions had been analysed until March 2012). An ambitious draft framework law has been prepared to remove unjustified restrictions on the access to and the exercise of highly regulated professions (where professional bodies are involved, such as lawyers or doctors). The draft has been submitted to the Parliament following a public consultation. The proposal aims to ensure that the national rules are in conformity with EU rules.

3.21.6. Public administration

As measured by the World Bank's Government Effectiveness Indicator, the *overall public administration performance* scores for Portugal are lower than the EU-average. Perceptions point to a relatively lower quality of public services, policy implementation and commitment of public servants to those when compared to the EU-benchmark.

The use of tools to improve public administration (e-government, impact assessments, performance and service orientation, accountability) is close to the average use in the Member States. On the one hand, all eight *business related e-government services* are available in Portugal and the use of evidence based instruments is quite widespread, but there is some scope for improvement by using modern human resource management tools (performance-related pay, flexibility, skills development) as these are not used to the same extent than in most other Member States.

[223] http://ec.europa.eu/information_society/digital-agenda/scoreboard/countries_2012/country_pt.html.

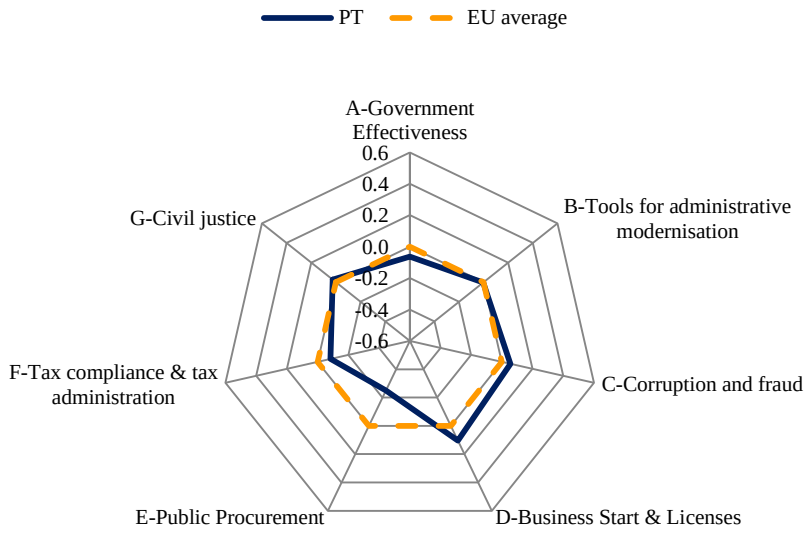
On the dimension *corruption and fraud* Portugal is performing slightly better than EU Member countries on average, although irregular payments and bribes and diversion of public funds are to a minor extent more common than average. This is however in contrast with the individual experience or respondents of corruption, which is better in Portugal than in the EU.

The *civil justice system* is almost similar to the EU average in terms of global value. Both the time to enforce contracts and to resolve insolvency is very close to the EU-average, but the cost to enforce contracts (as a percentage of the claim) is almost 8 % lower in Portugal. However, the judiciary system is considered to be less independent than in other EU countries.

The performance of Portugal on the *tax compliance and tax administration* indicator is slightly worse than average. In Portugal it takes 275 hours yearly *to prepare and file tax returns and to pay taxes* as compared to 208 hours in the EU. The performance of Portugal on the a*dministrative costs of taxation* sub-indicator is equally situated slightly below the EU average level.

The tax compliance costs for firms, in particular for SMEs, are high due in great part to the complexity and the too frequent changes of the tax code provisions and procedures. However, the tax administration has been progressively developing e-government procedures: a large number of services is available on-line; an 'electronic invoice plan' was adopted aimed at fighting the informal economy and easing tax compliance costs for firms; a specific accounting regime was introduced in 2012 exempting micro-entities from filing certain VAT tax forms, but a simplified corporate tax regime for SMEs was abolished (the simplified taxation scheme was kept only the self-employed or micro-firms subject to the personal income tax, with up to EUR 150 000 of annual income) and certified invoicing software was made mandatory. Further, an integrated reform and simplification of the tax codes are issues to consider for the future.

Overall profile of public administration



Source: WIFO

Starting a business and obtaining licenses is globally slightly easier in Portugal than in the EU on average. One stop shops to start up a company are fully operational and the time required to start up a company is clearly better than average (5 calendar days as compared to 14 calendar days in the EU). To a lesser extent, the cost to start up is also more than half of the average amount in the EU (expressed as a percentage of GDP per capita). Nevertheless, licensing complexity is higher in Portugal than on average in the EU.

The performance of Portugal on the *public procurement* indicator is well below EU average. It is mainly due to important payment delays from public authorities (79 days in Portugal as compared to 28 days in the EU, being almost 3 times higher than the EU average. The typical cost of competition in terms of percent per capita GDP for firms in competition is also 6 percentage point higher than average. The cost in terms of person-day units per individual firm is however slightly above EU average.

A comprehensive set of measures has been adopted or is being implemented to reform Public Administration. Many of these reforms were set out in the MoU and encompass central, regional and local Administrations and in some cases state-owned-enterprises (examples of horizontal measures involving all these sectors include reductions in the number of management positions and administrative units -avoiding duplications and inefficiencies-; adoption of a rationalisation program for ICT and e-Government infrastructures and ICT services; a public consultation was launched for reducing the number of parishes).

Many other reforms are targeted at specific parts of the public sectors, such as the tax administration, the judicial system, network industries and state-owned enterprises. An independent Fiscal Council and a new 'Autoridade Tributária e Aduaneira' (merging the tax, customs, and IT services) were created and a plan to fight Fraud and Evasion for 2012-2014 was adopted. Tax compliance management was reinforced with the creation of a large tax payer office and the creation of a task force of judges to speed-up and clear high-value tax cases in courts. Transparency will increase with the decision to publish quarterly reports on recovery rates, duration and costs of tax cases in courts and an annual report on tax expenditures.

A roadmap for improving efficiency of the court system is being implemented, reducing the number of court districts and closing down underutilised courts and improving personnel management systems and the mobility of court officials.
A comprehensive set of measures are being taken in order to rationalise transport enterprises and networks, promoting competition, energy efficiency and integrated logistic conditions (for road, rail, ports, airports).

Vocational training and employment services are being reformed enhancing job-skills matching and employability outcomes of active labour market policies.

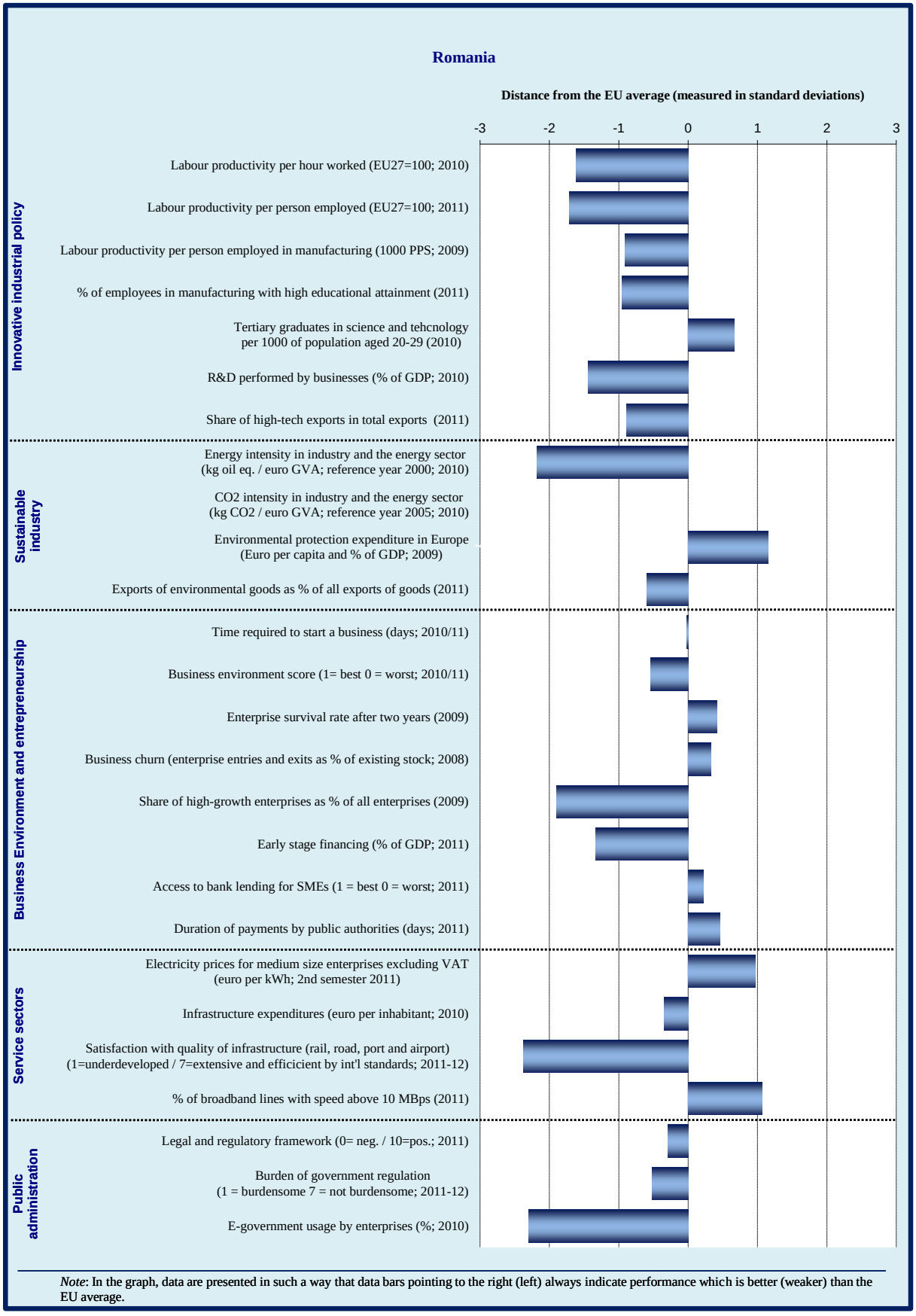
Portugal has a track record of sustained investment in a number of simplification and E-government programmes. Some landmark examples include: the *Simplex Program* (with around 2 250 simplification projects as from 2006); the '*Enterprise Portal*' (providing about 670 services on-line by 100 public entities, including the 'Enterprise Online", a one-stop- shop for the creation of enterprises); the *Port and Logistic Single Window* (for port and logistic services); the *Public Procurement System* (a best practice example in E-procurement, leading in the EU with a rate of 75 % in 2010).

3.21.7. Conclusions

Portugal is actively engaged in the implementation of a series of reforms, improving key areas such as competition and the functioning of labour and several product markets, business conditions, efficiency in public administration and the stability and resilience of the financial sector.

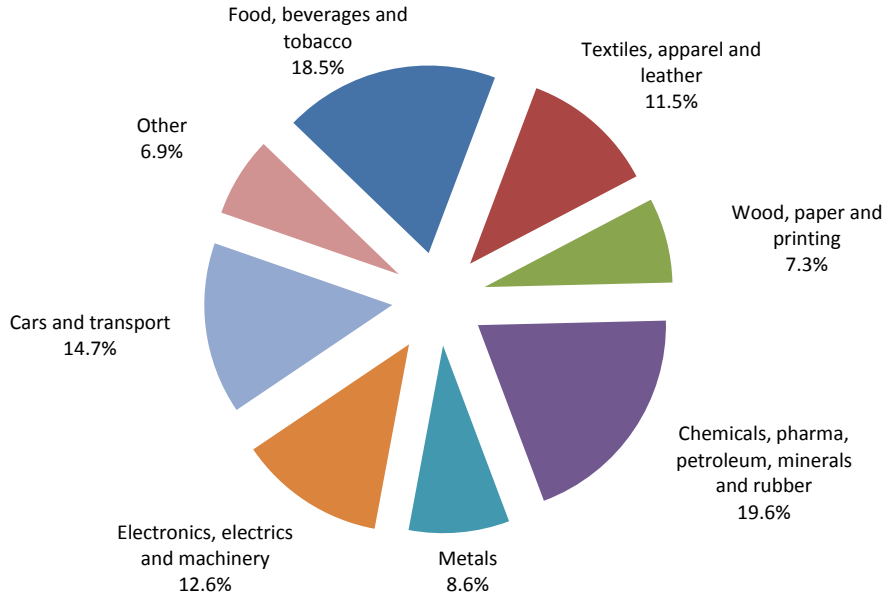
It is important to complement these reforms with the development of effective alternative funding and recapitalisation mechanisms for firms, easing credit constraints for SMEs and facilitating the reduction of their high leverage levels and dependency on bank loans.
It is equally important to sustain and improve the efficiency of the investments in research, innovation, entrepreneurship, education and overall skills development.

3.22. Romania



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Romania (2009)



Note : No data available for sectors C12 (tobacco products) and C19 (coke and refined petroleum products)
Source: Eurostat

3.22.1. Introduction

Manufacturing plays a bigger role in Romania than in the EU on average (22 % vs. 14.5 % of total value added in 2009). As a consequence, Romania ranks among the EU Member States with the highest share of manufacturing in GDP and the lowest share of market services. At the detailed manufacturing industry level, Romania is highly specialised in labour-intensive industries (preparation and spinning of textile fibres, sawmilling, wearing apparel and accessories), as well as in capital-intensive industries (cement), and marketing-driven ones (value-added only; footwear). At the more aggregated sector level, Romania features specialisation in low innovation and education sectors (wearing apparel, leather), but also in medium-high innovation sectors (textiles, basic metals). Overall, Romania is catching up with respect to competitiveness, but needs to pay attention to sectoral upgrading in terms of quality and R&D.

3.22.2. Innovative industrial policy

Romania is classified as a modest innovator according to the Innovation Union Scoreboard 2011, with a performance well below the EU average (24 out of 27 EU Member States). Still, its growth rate makes Romania one of the growth leaders in the 'catching–up' group of countries.

This situation is due to a large extent to chronically low public and private R&D and innovation expenditures. At the same time, innovation and industrial policies are not coordinated and integrated due to the absence of national strategies as well as to the insufficient cooperation and consultation at inter-institutional level between the institutions responsible for policy design and implementation in these fields.

A functional review of the Romanian R&D and innovation system was performed by the World Bank in 2011, in the framework of the IMF/EC assistance. The review identified four key priorities to improve the performance of the R&D and innovation over the short and medium term: strengthening the governance of the R&D and innovation system, improving the management of public R&D, accelerating the transmission of R&D, and encouraging the demand for R&D.

While steps are being taken to improve the performance of R&D activities within the public sector, more efforts should be directed to foster private sector R&D and innovation, which is key for the country's longer term competitiveness and growth.

In this respect, the functional review undertaken by the World Bank identified several key challenges. To improve the climate for private sector R&D and innovation, targeted fiscal and regulatory actions are needed, as well as a revision of the overall intellectual property rights framework with the view of removing the barriers for the private sector to undertake research and innovation activities and attracting R&D-intensive FDI. Another key aspect is the support of knowledge-based start-up companies. Nurturing services (consultation,

business and technologically related services) are of particular importance to facilitate the transition of ideas to the market. Also, funding for innovative product development and launch – almost non-existent in Romania - should be adequately addressed. Moreover, the private sector should be better connected to the public research efforts to accelerate the translation of R&D into innovation, and the existing emerging clusters should be supported to develop into fully fledged industrial clusters.

A cross-cutting problem is the shortage of a medium and highly skilled labour force. The relative high share of science and technology graduates compared to other EU Member States and the quality of math and science education are not converted into competitive advantages, partly due to the higher-education system suffering from repeated institutional changes, and substantial brain drain. Therefore it is fundamental to improve the R&D and university career prospects to retain and repatriate human capital.

3.22.3. Sustainable industry

The sluggish restructuring of the industrial base which, prior to 1989, was characterised by a high-share of energy-intensive and non-sustainable industries and a poor energy-saving culture, has resulted in out of date technologies and equipment which does not meet contemporary environmental standards. In addition, foreign direct investment in manufacturing industries has shown a clear preference for low-technology and energy-intensive sectors. As a consequence, the environmental performance of the Romanian industry remains relatively poor. Although considerable improvements can be noted, energy-intensity in industry is still the second highest in the EU.

The main funding instrument for environmental policy is the *OP Environment*. Funding for the development of eco-efficient production, for increasing energy efficiency and for promoting renewable energy sources is also provided through the *OP Increase of Economic Competitiveness*. Recent measures with direct relevance to industry are the state aid scheme to promote high efficiency cogeneration operation since April 2011, the support scheme for the promotion of electricity produced from renewable energy, and the information and raising awareness campaigns on the importance of increasing the energy efficiency. Also, the *2011 – 2013 National Energy Efficiency Action Programme* was adopted in May 2012.

On an institutional level, main developments include the government decision to implement the various Regulations and Directives on eco-design requirements for the energy performance of energy-using products as well as the on-going development of the *National Climate Change Strategy for 2013-2020*. The *National Action Plan on Green Public Procurement* (GPP) setting multi-annual green procurement targets for different categories of products and services was planned to be finalised by the end of 2011, but no specific measures have been taken so far, partly because a more thorough knowledge of the green products and services available on local market would be needed.

Several controversial foreign investment projects – such as the cyanide gold mining at Roșia Montană, the planned sale of the copper mining company 'CupruMin Abrud', or the projects to exploit the shale gas – are currently being discussed by the Romanian government. Projects approvals have been delayed as they raise serious concerns in terms of environmental consequences as well as huge environmental costs.

As one of the most energy-intensive economies in Europe, improving energy efficiency and developing complementary actions in energy efficiency and renewable energy should be a key priority in Romania. Moreover, complying with environmental standards, which is essential for industrial competitiveness, will require significant financial efforts to support the adoption of standards, upgrade productive processes, and implement environmentally friendly, eco-efficient technologies.

3.22.4. Business environment

Romania has a cumbersome business environment, characterised by a lack of transparency in the decision-making process, insufficient cooperation and consultation at the inter-institutional level and with the relevant stakeholders, and significant red tape. At the same time, the underdeveloped road (particularly motorways) and rail infrastructure act as a drag on economic competitiveness.

Institutionally, reform efforts are underpinned by the functional review of the Ministry of Economy, Energy Sector and Business Environment (MECMA) led by the World Bank in framework of the IMF/EC assistance. The review, finalised in 2011, identified the fragmented institutional set-up and the rapidly changing governance arrangements for business environment as being the major bottlenecks to a sound business environment. The nomination of a minister delegate for business environment in May 2012 should contribute to increasing the high level political support to the business environment issues. However, further efforts are needed to improve coordination at inter-

institutional level and consultation with stakeholders, in particular SMEs.

Access to finance

In a general context dominated by uncertainties in financial markets and sovereign debt developments in the euro-area periphery, access to finance is a pressing problem facing Romanian SMEs. Financial support to SMEs is primarily being provided via multi-annual national programmes and guarantee instruments. The risk facility of the JEREMIE programme became operational at the end of 2011, but its success is rather limited. Other recent initiatives started in 2011 include the *Mihail Kogalniceanu Programme for financing the SMEs*, aiming at facilitating the access of SMEs to guarantees and credit by granting a credit line with subsidized interest and, if need be, partially guaranteed by the state under certain conditions, and the *Programme for Young Entrepreneurs*, aiming at stimulating young entrepreneurs to set up and develop small business, with a target group of young entrepreneurs under 35. However, existing public measures should be made easier to obtain, in particular through providing assistance on the application procedures and cutting red tape.

Entrepreneurship

A number of measures have been taken to promote entrepreneurship. During the school year 2011-2012, a new curriculum comprising entrepreneurship learning has been introduced in secondary level. A program aiming at increasing the number of business incubators throughout the eight development regions was started in 2011. Finally, a new law regarding non-fraudulent bankruptcy and duration of fiscal criminal record was approved in 2011, reducing - in some cases and under some conditions - the period of full discharge after bankruptcy and non-payment of fiscal obligations from five years to one year.

Regulatory and support measures

In the area of regulatory tools and mechanisms to improve the business environment, no major advancement has been achieved so far. Currently, there are several strategies containing provisions for the business environment and better regulation: the *Strategy for the improvement and development of the business environment until 2014* and the *Strategy for the development of the SMEs sector until 2013* were elaborated, but not yet approved; the *Strategy for Competitiveness until 2020* is currently in work; and the *Strategy for Better Regulation 2008-2013*, the implementation of which has been very slow.

These different strategies are uncoordinated, unarticulated and overlapping; they cover some aspects of the business environment, but none of them is comprehensive and intends to align the whole administration in coordinated efforts. The challenge is to integrate the strategies currently in place in just one single, explicit, coordinated, efficient and effective strategy to deal with the business environment and regulatory reform issues, with clear principles, objectives, targets and monitoring indicators, to be applied to the whole government sector.

The need for fiscal consolidation left little room for manoeuvre to launch costly supporting measures. There are several actions, financed by the *OP Increase of Economic Competitiveness* and the *OP Regional Operational Programme*. Related to this, increasing support to enterprises, particularly SMEs, in accessing EU funds through more simple and transparent procedures remains a key challenge.

To offset the decline in domestic demand, more efforts should be made to facilitate the access of Romanian companies to markets. In this respect, using public procurement in a more proactive manner and further supporting the internationalisation of SMEs could be important steps. A *National Export Strategy for the period 2012-2016* has been drafted, but not yet approved. It identifies a number of sectors with comparative advantages (e.g. creative industries, renewable energy, ICT, manufactured products but also some raw materials). Notwithstanding this, a number of challenges remain to support SME internationalisation, in particular providing training and practical guidance on procedures as well as enabling access to financing instruments.

3.22.5. Services sector

The transition to a market economy since the early 1990 resulted in a complex change of the economic structure characterised by an increased importance of the service sector in employment and value added. The services sector grew to account for 51.6 % of the gross value added (GVA) in 2011 (from 28.8 % in 1990). The rapid growth of the ICT-related services - supported by the valorisation of local skills and the good quality of math and science education – is one of the country's major competitive advantages, making Romania an attractive location for software out-sourcing and research.

In the area of professional services, Romania adopted in February 2012 a memorandum for a one year pilot project that aims to liberalise tariffs on

public notaries, and to foster competition between notary offices.

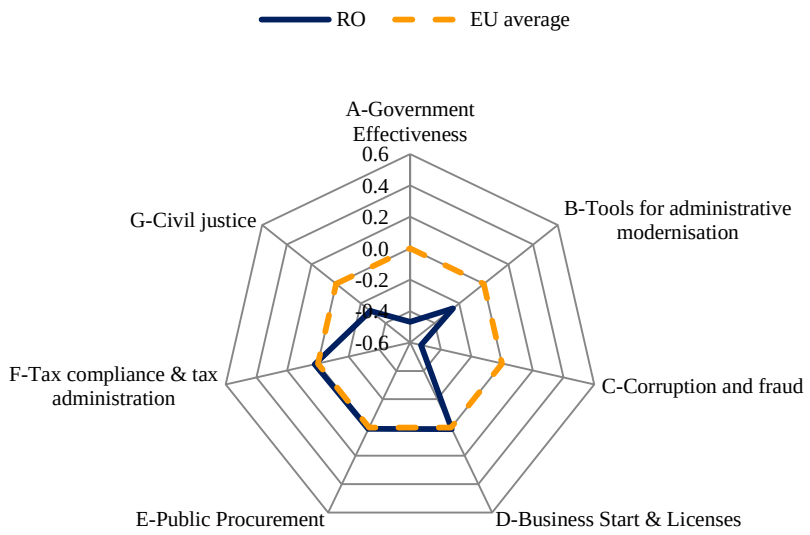
In the area of network industries, the MoU concluded in June 2011 in the framework of the precautionary EU medium-term financial assistance for Romania has a strong focus on product market reforms, in particular in the energy and transport sector.

3.22.6. Public administration

The reform of public administration is a key concern in Romania since the early 1990s. Insufficient structural and institutional reforms have resulted in a chronically weak administrative capacity for policy design, strategic planning, analysis, enforcement, monitoring and evaluation of the public policies. Under these circumstances, it is not surprising that in terms of *overall public administration performance*, Romania scores significantly below the EU average.

To improve the efficiency, effectiveness and independence of the public administration, a functional review of the central public administration led by the World Bank (and financed by the European Commission) was carried out between 2010 and May 2011. Based on its outcomes, both the government and the individual institutions under investigation have adopted action plans on how to streamline decision making processes and strengthen strategic planning. However, the implementation of the action plans remains challenging. Although an inter-ministerial group was set-up to coordinate and monitor the implementation of the action plans, there is little progress, mainly due to the lack of commitment and reform ownership.

Overall profile of public administration



Source: WIFO

In terms of the use of *tools for administrative modernisation* (e-government, performance and service orientation, accountability), Romania's performance is below the EU average, principally due to a lower availability of business related e-government services as well as to existing limitations in the implementation of modern human resource management tools.

The National Agency of Civil Servants (ANFP) is implementing several training projects to enhance the administrative capacity in areas like strategic management, human resources, and project management. However, further efforts are needed to professionalise the civil service at all the layers of the public administration, in particular through ensuring a transparent and merit-based recruitment process and improving the career prospects for civil servants (including remuneration and training), making the civil service independent from the political cycle, and combatting the political interference in the administrative practices.

Romania has committed to modernise and streamline the relations between different levels of government and between the government and citizens and businesses by greater reliance on electronic data exchange and online interfaces. Some progress has been made regarding the completion of the Point of Single Contact, tax e-

filling and online services provided by the Business Registry of Romania, so that entrepreneurs can now request for data to be sent via email. Although ambitious objectives for e-government and e-business have been set through the Governmental Strategy for Broadband Communications Development in Romania for the period 2009-2015, adopted in 2009, very little progress has been made in the implementation of this Strategy and the adoption of another strategy for broadband communication is planned for 2012.

In the area of *starting a business and licensing*, Romania's performance is fairly equal to the EU average. Although obtaining licenses is considerably more complex than the EU average, the time needed for starting a business is equivalent to the EU average, and the corresponding costs are lower.

In the area of *public procurement*, the indicator used here is driven by the average payment delays by public authorities. While short delays are a positive sign, the indicator does not capture the fundamental problems of public procurement in Romania. The Commission has noted[224] that weak implementation of public procurement legislation leads to corruption and misuse of public funds. Romania has not addressed the systematic shortcomings in this area, including institutional capacity, effective control, and conflicts of interest. Public procurement rules are often circumvented through practices like establishing the tender criteria according to the specificities of a participant company or providing confidential information to a participant to the tender[225].

In the area of *tax compliance* and *tax administration*, Romania's performance is slightly better than the EU average, mainly due to lower costs of tax administration. A number of measures were taken recently to reduce the tax compliance burden on companies. The number of taxes and tariffs in the area of para-fiscality has been reduced substantially from 491 in early 2009 to a total of 237 today. The single statement regarding social contributions and record of insured persons was implemented by January 2011. 'Ghiseul.ro', the electronic system for the payment of taxes, duties and fines, was launched in March 2011; at present it is operational only in several local administrations (and only for individuals). In spite of these developments, the key challenge remains to significantly reduce the number of payments and the time spent to pay taxes, notably through establishing an efficient and fully functional electronic filling and payment system.

In terms of *efficiency of civil justice*, Romania performs worse than the EU average. While the time required to enforce contracts is below the EU average, the corresponding costs, the perceived level of judicial independence and the time necessary to resolve insolvency all indicate a weaker performance. Furthermore, in the area of *corruption*, the performance of Romania is significantly lower compared to the EU average, the key issue being the diversion of public funds due to the influence of vested interests.

Romania has undertaken a number of measures to pursue judicial reform and the fight against corruption in response to the Commission's recommendations under the Cooperation and Verification Mechanism. In spite of these developments, further efforts are essential. [226] Improvements need to be made concerning state capture and other forms of administrative corruption, notably through establishing transparent lobbying rules, controlling the revolving doors between the public and the private sectors, guaranteeing comprehensive access to information legislation (in particular by municipal authorities), and ensuring transparency and integrity of the procurement process.

3.22.7. Conclusions

To improve its competitiveness, Romania faces the challenge of setting and implementing national strategies for industry and innovation defining clear, coherent and coordinated policies and priorities, and refocusing the scattered national resources on areas of comparative scientific and economic advantage.

Further, an effective reform of the public administration at central and local levels would be essential since weak administrative capacity limits reforms, hinders the absorption of EU funds and is dissuasive for investors. Moreover, transparency in decision-making processes and greater accountability in financial and political institutions are essential cross-cutting issues to consider.

At the same time, it is important to improve the governance in the area of business environment and the quality of regulations. Mitigating further the high financing costs and overcoming the scarcity of credit, including through developing strong and liquid local capital markets are of particular

[224] 'On Progress in Romania under the Cooperation and Verification Mechanism', COM(2012) 410 final, http://ec.europa.eu/cvm/docs/com_2012_410_en.pdf

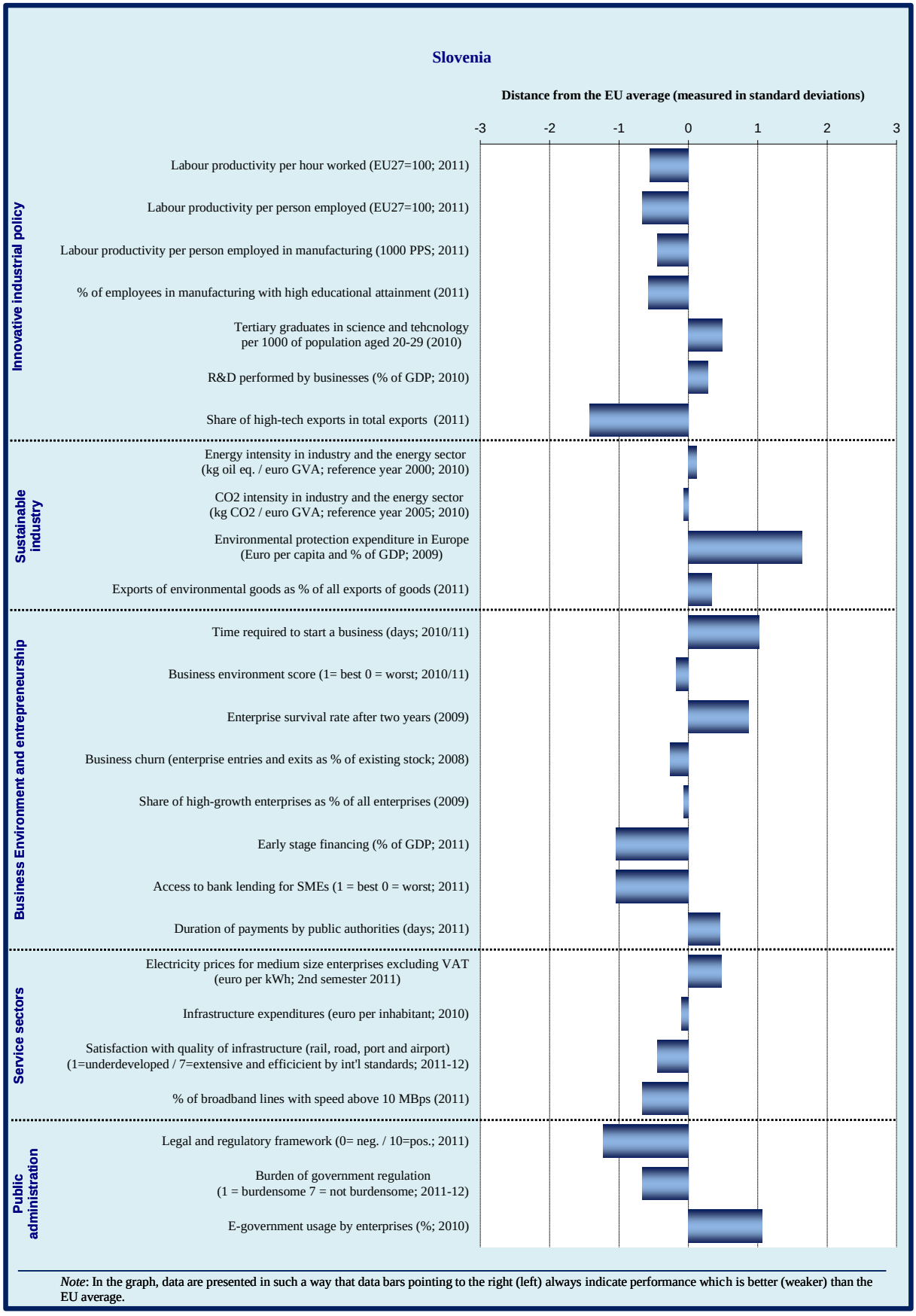
[225] Transparency International, Money, Politics, Power: Corruption risks in Europe (2012). .

[226] 'On Progress in Romania under the Cooperation and Verification Mechanism', COM(2012) 410 final, http://ec.europa.eu/cvm/docs/com_2012_410_en.pdf

importance to facilitate access to finance for businesses. Furthermore, developing the weak transport and communication infrastructure would be critical to improving competitiveness and attracting investments.

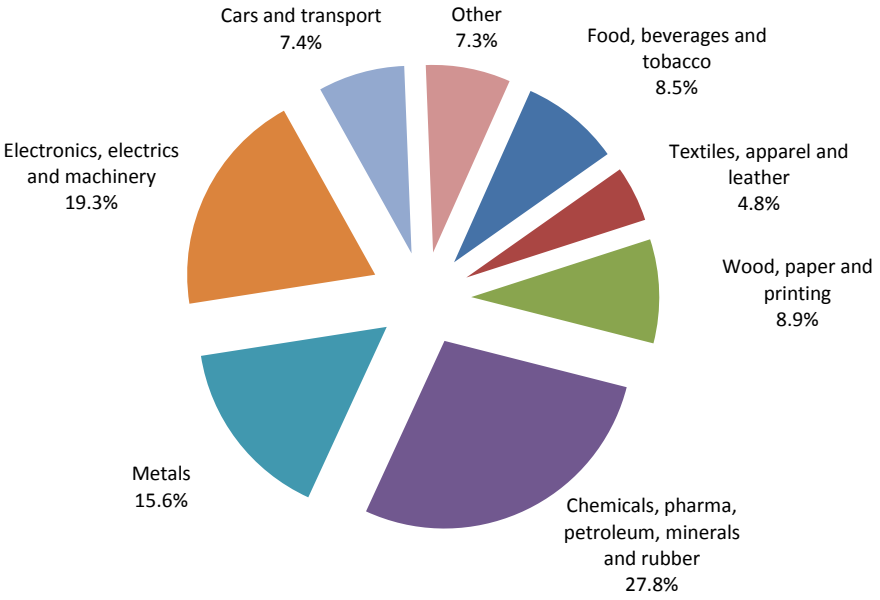
In the long term, the challenge will be to ensure a paradigm shift away from unskilled labour and energy intensive sectors towards more smart, low-carbon and resource-efficient activities.

3.23. Slovenia



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Slovenia (2009)



Note : No data available for sectors C19 (coke and refined petroleum products) and C30 (other transport equipment)
Source: Eurostat

3.23.1. Introduction

On average, Slovenian manufacturing has a higher contribution to total value added than the EU average (20.3 % compared to 15.5 % in 2011). At the detailed manufacturing industry level, Slovenia is specialised in labour-intensive industries (sawmilling and planning of wood, made-up textile articles) and mainstream manufacturing (domestic appliances, other non-metallic mineral products). Specialisation in labour intensive industries has decreased considerably in the last decade. At the more aggregated sector level, Slovenia is specialised in highly innovation-intensive sectors (machinery, electrical machinery) and in the low to medium range innovation sectors (e.g. wood and cork).

3.23.2. Innovative industrial policy

According to the Innovation Union Scoreboard 2011, Slovenia is one of the innovation followers with a below average performance. Relative strengths are in human resources and linkages and entrepreneurship. Relative weaknesses are in intellectual assets and innovators. High growth is observed for community trademarks and International scientific co-publications. A strong decline is observed for non-R&D innovation expenditure. Growth performance in open, excellent and attractive research systems and intellectual assets is well above average.

As stated in the Research and Innovation Strategy of Slovenia 2011-2020 (RISS) and in the National Programme for Higher Education (NPHE), Slovenia sees research as a key driver to economic development. Therefore, Slovenian authorities are willing to foster closer links between Public-funded Research Organizations (PROs) and private enterprises and to allow for more autonomy and responsibility of the stakeholders in the R&D area.
In this context, the civil servant status of researchers and their subsequent restrictions to being transferred to PROs represent a major obstacle to the development of synergies between research and business. Greater flexibility in the researchers' status would be a step in the right direction.

The former Ministry of Higher Education, Science and Technology together with the Ministry of Economy, following the goals RISS 2011-2020, launched the call for proposals 'strengthening the research departments in companies' in July 2011. The aim of the call was to ensure effective inter-institutional mobility of researchers, to support the employment of researchers or developers in the economy, to increase the number of PhDs and 'young researchers' in companies and to increase the number of inter-disciplinary research departments. The funding available for the call was EU 20 million. More than 60 companies and more than 500 researchers (100 PhD students) will be financed until the mid-2014.

Since the beginning of 2012, the ministries with responsibilities in innovation are going through a process of restructuring and some reorganization of the implementation agencies is also expected.

It is expected that the on-going process of reorganisation of the public administration will not have any impact on the activities of Excellence-, Competence- and Development centres, since public agencies are not directly involved in the implementation activities of these centres.

Competence Centres deal with R&D in areas considered strategic by the Slovenian government. Development Centres, on the other hand, work as networking clusters with the aim of bringing innovation to traditional industries. Finally, Centres of Excellence are defined as multidisciplinary group of researchers both from academic and business spheres. All these Centres have carried out their activities with the support of the European Regional Development Fund. Thus, for the next financial period 2014-2020, follow up of the funding could be considered.

Although the Slovenian government has reaffirmed its intention to reach an R&D ratio of 3 % of GDP by 2020, the background of economic crisis and fiscal austerity implies a lower availability of resources which can hinder the attainment of this target.

Progress has been made in 2012 with respect to stimulation of private R&D investments through changes in tax legislation. R&D tax allowance was increased to 100 % of the amount invested. At the same time a special state aid scheme was abolished. Abolishment of that scheme allowed for reduction of administrative burden connected with implementation of R&D tax allowance. Also, tax allowance for other investments has been increased from 30 to 40 % and the maximum fixed amount of the allowance per year has been abolished. It is expected that these changes, in connection with the reduction in general tax rate of corporate income tax will have positive impact on the level of new investments in general and in investments into R & D in particular.

3.23.3. Sustainable industry

Slovenia's energy infrastructure could be further improved. Its geographical location involves a central role as an area of transit. The transit of electricity flows is increasing and the national transmission grid is starting to become a bottleneck. No legal framework is in place yet for the rollout of smart metering.

For reasons of both trade and environmental impacts, Slovenia's transport infrastructure requires special attention. Existing gaps in railway infrastructure and the still low quality of the network hold back business potential. By contrast, motorway density is high compared to the EU average. Transit transport is even expected to increase due to Croatia accession to EU in 2013. It will result in a considerable rise in Green House Gasses (GHG) emissions.

GHG emissions from transport accounted for 27.6 % of Slovenia's total emissions in 2009, the third highest share in the EU. The share of renewable energy sources (RES) in transport was 1.9 % in 2009, against a target of 10 % in 2020. However, progress has been limited. While Slovenia supports new design of fuel taxation at EU level, distortions generated by differential taxation across fuel types are still in place as the new legislation has not been adopted yet.

Energy efficiency measures on the other hand seem to have yielded positive results: capital to support investors in the public and private sectors, as well as households, in order to promote efficient energy use will continue to be provided by 'Eko Sklad' and structural funds. The Decree on Green Public Procurement sets minimal mandatory environmental requirements. Currently, the decree covers environmental criteria for 11 groups of products and services that could be updated in the future. To encourage the use of wood and materials on its bases in public buildings, the decree stipulates that 30 % of materials used in the building should be made out of wood, widely available in Slovenia. As for smart grids, they will be obligatory and will be collected through the network fee.

In compliance with the EU directive and the national action plan all energy suppliers must achieve 1 % annual energy savings. In 2010 the final-consumer fuel-prices started to be charged with fees for the use of fossil energy. These fees constitute funds that are used for programs aimed at achieving energy savings. Through the new charge, available funds for efficient energy use programs have been greatly increased (to around EUR 20 million yearly).

However, Slovenia has not set any quantitative energy efficiency target for 2020, and therefore its contribution to the overall Europe 2020 target for energy efficiency remains unclear.

Investment in renewables has grown with the share of renewable energy in gross final energy consumption reaching 16.9 % in 2009 and an estimated 19.9 % in 2010, compared to a Europe 2020 target of 25 % by 2020. The total installed photovoltaic power plants in 2011 grew from 25 MW to 90 MW, representing an annual increase of 260 %. The total installed biogas power plants in 2011 grew from 11 MW to 25 MW, representing an annual increase of 127 %.

Resources needed to implement support scheme for renewable electricity in 2011, grew from EUR 48.6 million to EUR 69.5 million, representing a 43 % annual growth. The directive on the promotion of the use of energy from renewable sources has only partially been transposed.

Given Slovenia´s wealth in terms of biomass and wood, Slovenia could develop a comparative advantage in these areas. In addition, a lot of logs have been exported, which means less value added and unexploited development potential. So far, contacts and sharing of good practises have been established with Austria and Finland. An Action plan for increasing the competitiveness of forest and wood sector in Slovenia by 2020, which has been adopted by the Government on June 27, 2012, foresees many measures.

Slovenia faces challenges in the field of waste. The level of landfilling is still relatively high (58 %) but, with a recycling rate that stands at 39 %, Slovenia is making progress towards its recycling target of 50 % by 2020.

In June 2012, SID Bank (Slovene Development and Export Bank) has allocated EUR 44 million for financing of green technologies in Slovene SMEs (e.g. waste or water treatment, reducing of air pollution, renewable energy, greening the business).

3.23.4. Business environment

According to the World Bank´s 'Doing Business Report 2012', Slovenia occupies the world rank 37 in terms of ease of doing business and 28 in terms of starting a business. Indeed, Slovenia has already significantly simplified and shortened procedures for starting a business: it takes only up to 6 days and it does not cost any money and registration can be done online through well-established e-VEM portal.

Nevertheless, with the deepening of the economic crisis, some components of Slovenian business environment and its competitiveness have deteriorated. The structural aspects of the business and competition environment in Slovenia still hold back foreign direct investment. The country also does not have an active strategy for attracting foreign capital, in particular in light of worsened competitiveness. In addition, the lack of an industrial policy further weakens business prospects.

Access to bank loans is extremely difficult in Slovenia, and many viable firms – especially SMEs – face tightened borrowing conditions due to banks' past overexposures and current risk aversion. In particular, firms that lack collateral struggle to obtain funding – not only for investment projects but also for working capital. Large enterprises have enjoyed better access to credit than SMEs. However, the financial engineering products of the Slovenian Enterprise Fund (SPS) and SID Bank have worked well and have significantly helped in providing public guarantees and venture capital to innovative firms. The Slovene Enterprise Fund has also emphasised the importance of start-up firms by supporting them in the first three years of their life. The results have been promising.

On thee Small Business Act issues, implementation remains partial although an SME test was prepared in 2011 and will be integrated into the rules of legal procedures. Each legislative proposal will have to be accompanied by a special form with SME-test-checked areas (economic impact, administrative impact and financial impact). Previous tests conducted by the Ministry of Economy showed promising results. The SME test is due to be introduced to other line ministries in 2012.

Moreover, other legislative measures that should have resulted in a more efficient business regulation, like the Law on Payments Discipline and the act amending the Financial Operations, Insolvency Proceedings and Compulsory Dissolution Act, seem to have generated unforeseen side effects. In fact, criticisms have been raised that these legislative measures are not encouraging payment discipline. Lengthy judicial procedures are also hindering the revival of the business sector and are indirectly delaying cleaning of banks' balance sheets.

In addition, legal and regulatory issues such as rigid spatial planning and related lengthy permit procedures (as every municipality has its own approach to spatial planning) are working as an obstacle to investment. The renewal of legislative acts in this area is currently underway.

3.23.5. Services sector

In Slovenia, the number of regulated professions or professional activities registered amounts to 319, one of the highest rankings in the EU. A study on this topic was completed at the end of March 2012. On the basis of its recommendations, the line ministries will need to change the relevant legislation. For example, the Ministry of Economic Development and Technology has started with the process of deregulation of craft services.

3.23.6. Public administration

According to the World Bank's *Government Effectiveness* indicator, which can be interpreted as an overall assessment of perceived public administration quality, Slovenia scores slightly below the EU average.

Information on the use of novel *tools for public administration modernisation* (e-government, impact assessments, performance and service orientation, accountability) is only available on two out of three indicators.[227] Among the 8 business-related e-government services under consideration, Slovenia implemented 7, which is also the average of all Member States. On the use of modern human resources management (performance-related pay, flexibility, skills development), Slovenia's performance is close to the average.

As regards *corruption*, Slovenia also ranks somewhat below the EU-mean. Not all sub-indicators, however, point into the same direction. The individual experience of corruption has been recorded in 7 % of the cases, as compared to 10% in the EU. The most important weakness in this field is the perceived high diversion of public funds, which is related to the problem of state corruption.

In contrast, Slovenia performs reasonably well in the policy-link of *starting up a business*. A fully operational one-stop-shop to start up a company is active, the time required to start a company is only 6 calendar days (EU-average is 13.7 days). The costs to start up a business are virtually none. However, a high complexity of *licensing* procedures other than at the start-up phase of a business leads to lower composite index. In this respect, there is obviously some scope for improvement.

With respect to *public procurement*, Slovenia's administrative regulations are also strictly more business-friendly than the EU-average. Both the time and the costs required to take part in a competition are far lower than EU-mean. Payment morale of public authorities is also far better than average: In 2012, average payment delays were 15 days in Slovenia, 28.3 days in the EU. However, problems remain in public procurement implementation, notably as regards payment discipline of contractors using subcontractors to complete the public contract and the skill level of staff of the contracting authority. A Public Procurement Agency was established by the end of 2010 to professionalise and harmonise procurement, but it is now due to be abolished. Its competencies will be transferred to the Ministry of Finance.

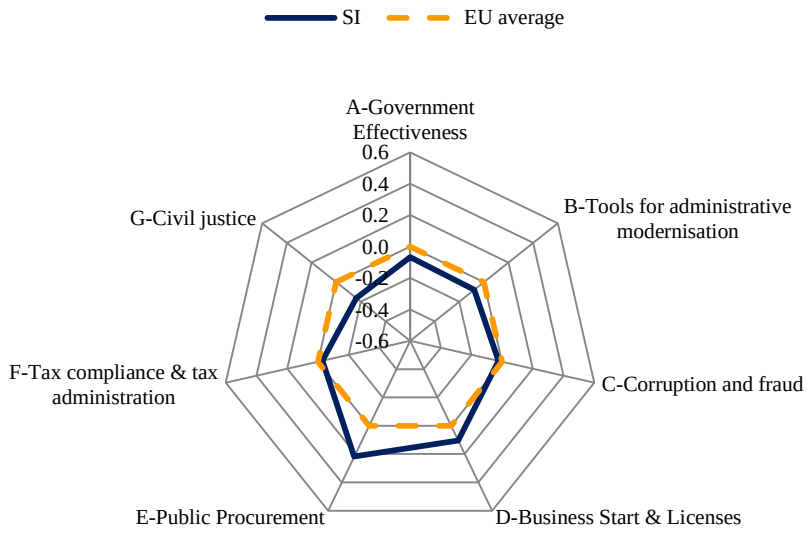
The data for *tax compliance and tax administration* show that the firms' time required to fulfil their tax duties is higher than average (260 hours per year in Slovenia vs. 208 hours on EU-average), but administrative costs of 0.9 % of total revenues are below the EU-average of 1.3 %. Regarding excessive tax compliance burden, Slovenia conducted its own study in 2010 as part of the on-going programme of '25 % reduction of the administrative burden".

As a consequence of this study, changes in procedures and legislation were implemented. For example, since October 2011, electronic tax declarations are available to Slovenian taxpayers alongside a new payment regime. Similarly, the VAT system was simplified with specific tax regimes for SMEs. Administrative burden has also been reduced in the area of application of tax allowances for R&D investments as a special state aid scheme was abolished and replaced with general allowance for R&D investments at the level of 100 % of the amount invested.

Scope for improvement also exists in the *efficiency of the civil justice* system. A major problem is the time required for enforcing contracts, calculated at 1 290 days as compared to an EU-mean of 556 days. This lack of speed in the judicial system can only in part be compensated through comparably lower costs of enforcement of 12.7 % per claim (EU-average is 20.6 %). With a time to resolve insolvency issues of 2 years, Slovenia's system of dealing with bankruptcy issues is at the EU-mean. In general, the perceived independence of the judiciary is significantly below EU-average, confirming these weaknesses.

[227] The respective composite indicator partly rests upon imputed values for the use of evidence-based instruments-indicator and should therefore only be interpreted cautiously.

Overall profile of public administration



Source: WIFO

In July 2011 legislation was passed in order to transform the *Competition Protection Office* (CPO) into an independent agency that was supposed to become operative as of 1 January 2012. However, in November 2011 an amendment to this law was introduced whereby CPO will not achieve its independent status as long as procedural conditions will not be completely fulfilled.

Due to political changes at the beginning of 2012, the directive bodies of the CPO have not been appointed, and hence the independent status has not been granted. Moreover, the CPO continues to have inadequate resources and funding for carrying out its tasks.

In other areas, policy developments have taken place that amount to a modernisation of public administration. Besides the modernisation of tax administration, mentioned above, the 'minus 25 % administrative burden' programme (co-financed from EU Social Fund), has identified areas where savings could be achieved, easing administrative burdens on businesses and citizens. This programme encompasses nearly 300 measures in 14 priority areas.

A new special web portal was set up. The portal enables a two-way communication between the users and line ministries, whereby the former can monitor impact on legislative changes.

Moreover, in reducing administrative burden for start-ups, Slovenia has achieved significant progress in establishing one-stop-shops for businesses and a well-functioning web portal eVEM that is offering several services with no costs for businesses.

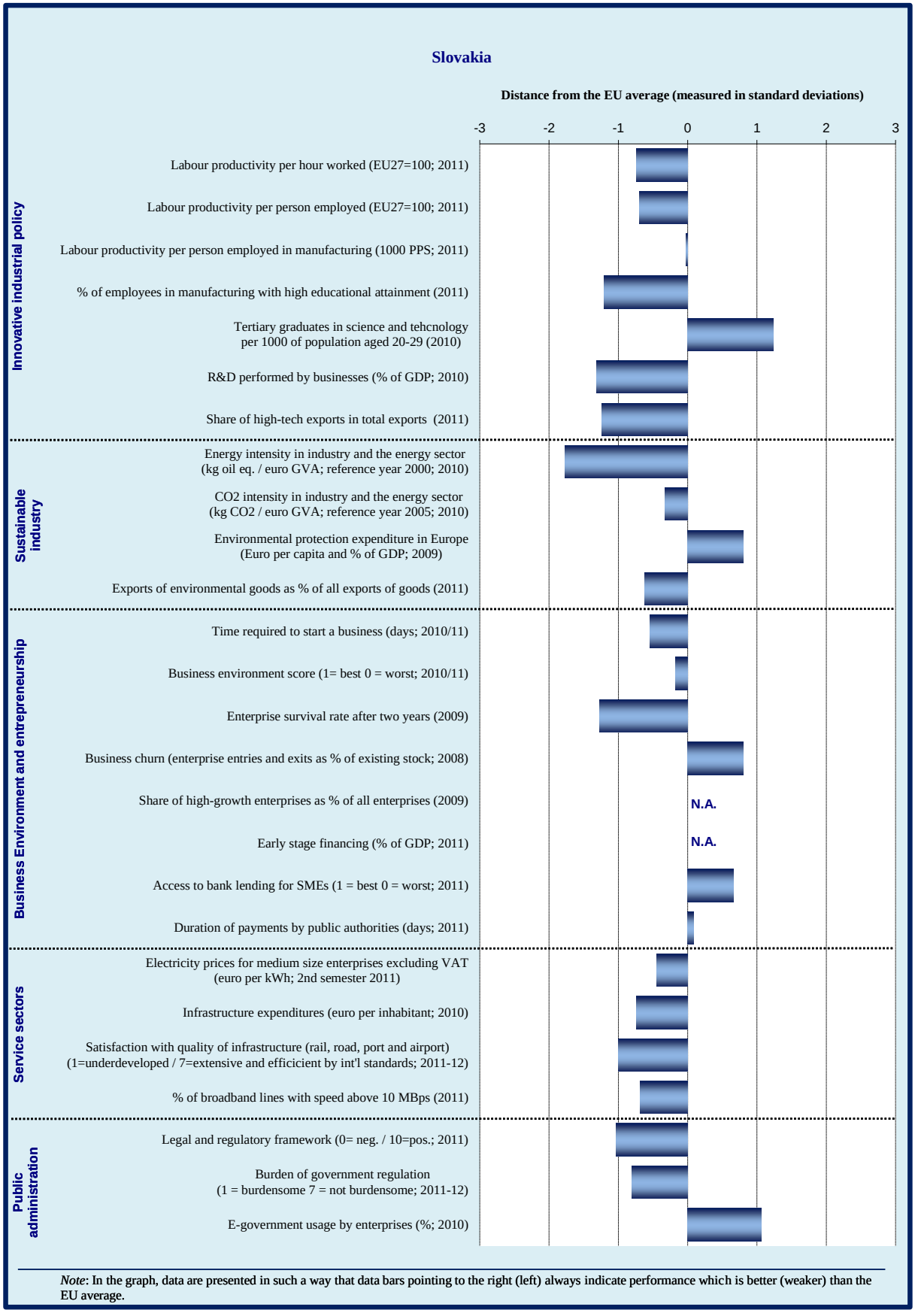
3.23.7. Conclusions

The impact of the economic downturn has clouded the perspectives of the Slovenia business sector and its competitiveness. Besides, budget constraints have the potential to slow down the development of an innovative industrial policy, including the promotion of a more sustainable economy. As required by the country-specific recommendations of the European Semester 2012, inproving the framework conditions for competition could attract investment, also from abroad, thus strengthening the internationalisation prospects of Slovenian businesses.

The deepening of the economic crisis has resulted in weaker demand and narrower borrowing conditions for SMEs. Although the financial instruments provided by the SID bank and the financial engineering tools of the Slovenian Enterprise Fund have helped in relieving the pressure faced by viable businesses and SME, access to finance remains a problem, as noted by the country-specific recommendations.

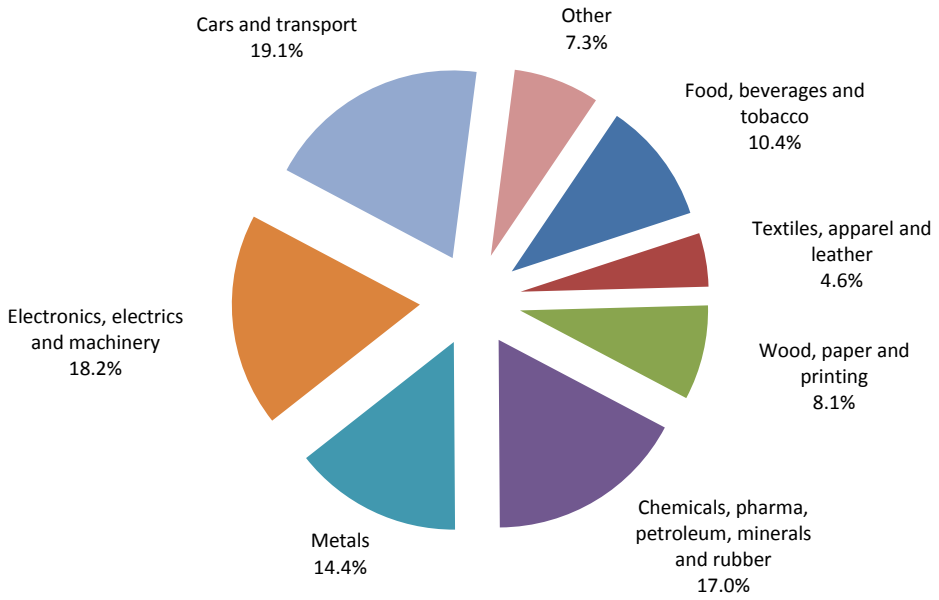
The business environment would benefit from a full implementation of the Small Business Act, including applying the SME test to all relevant legislation. Businesses would also benefit from achieving the aim of shorter payment times, and from a streamlined spatial planning system.

3.24. Slovakia



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Slovakia (2009)



Note : No data available for sectors C12 (tobacco products), C19 (coke and refined petroleum products) and C21 (basic pharmaceutical products and pharmaceutical preparations)
Source: Eurostat

3.24.1. Introduction

Mainly due to external demand and strong manufacturing activity, Slovak economy continues successfully recovering. Accounting for 25.9 % of total value added against the EU25 average of 15.5 %, manufacturing plays an important role. Specialized in capital-intensive and technology driven industries, such as automotive, electronics or steel, labour productivity is relatively high in particular when compared to its catching-up peers. However, Slovakia still has to face several challenges to complete its catching up process. In order to foster its long-term growth potential, Slovakia needs to improve innovation capacity and business environment, in particular through more efficient public administration.

3.24.2. Innovative industrial policy

As a moderate innovator, Slovakia has an underdeveloped R&D system. Since 2006, its below-average innovation performance improved only modestly. The total R&D expenditure still ranks amongst the lowest in the EU, although after a decade of gradual decline[228] it has recovered to 0.63 % of GDP in 2010. Similarly, the share of private R&D expenditure remained low. Generation of intellectual assets and patent revenues stayed at low levels, although strong growth was observed for community trademarks. As demonstrated for instance by the low number of frequently-quoted scientific publications, excellence in research and quality of tertiary education remain a major challenge.

Large companies as well as SMEs collaborate with the domestic research facilities only to a limited extent. Innovations in the production system and productivity gains have mainly been driven by technology imports. However the potential for further productivity surge is evaporating due to the declining inflows of FDIs. In recent years, Slovakia has increased its relative value added share in high innovation sectors and decreased its specialisation in labour-intensive low-skill industries. Overall however, Slovak economy has yet to significantly move towards more knowledge-intensive economic activity and employment structure.

Slovakia's innovation policy mix relies to a large extent on direct financial measures. The Innovation Strategy for 2007-2013 sets the general framework for policy intervention, while the Innovation Policy 2011-2013 specifies actions in three areas: infrastructure; quality of human resources; support for innovation. The priority 'Infrastructure' includes support to industrial clusters for which first calls are planned by the end of 2012. Funded mainly by the Operational Programme Competitiveness and Growth, the innovation support for industry is the biggest priority in financial terms. The innovation vouchers are yet to be launched.

Lack of coordinated intervention in the policy areas of research, education and innovation tends to

[228] from 0.66 % in 1999 to 0.48 % in 2009.

negatively affect the innovation system. Responsibilities are fragmented as is demonstrated by the existence of several strategic policy documents. In 2011 Slovakia adopted two strategy documents: 'FENIX and the 'MINERVA 2.0' both aimed at science, technology, and knowledge-based economy. They proposed a range of measures for increasing the quality of higher education and the research system, and connected them to knowledge-based economy. The main measures included (i) new techniques for project evaluation; (ii) re-allocation of research funding towards strategic projects; (iii) national system for technology transfers; (iv) support for new technology-based firms; and (v) co-operation with multinational companies through the creation of top-notch research infrastructure. The FENIX Strategy also proposed replacing current research and innovation priorities by a demand-driven bottom-up approach. The strategies identified the main problems in the knowledge triangle polices, and also addressed interaction between the key actors. Their coordinated implementation could bring about better innovation capacity.

In April 2012, the new government announced further measures to improve collaboration between the public and private sector. It wants to set up a scheme to attract exiled researchers, and plans an adaption of the internationally successful Small Business Innovation Research programme.

3.24.3. Sustainable industry

Structural and technological changes within the industrial sectors[229] were the main driver of reductions in energy intensity in recent years. Nevertheless, owing to the very minor progress since 2007, in 2010 Slovak industry remained the third most energy intensive in the EU.

In May 2011, government adopted the National Energy Efficiency Plan 2011-2013, targeting energy savings of 8 362 TJ. This would represent a 2.7 % reduction in final energy consumption compared to the 2001-2005 average. With priorities on technology transfers and energy efficiency, most savings are to be achieved by industry (30 %), public sector (27 %) and buildings (21 %). In early 2012, the National Energy Efficiency Monitoring System became operational. As regards energy audits, agricultural and industrial enterprises are obliged to conduct audits by the end 2011. In order to analyse possible carbon leakage, government sent out a questionnaire to 200 Slovak companies.

To work out waste management policies was included among government priorities. Apart from the recycling fund, in 2011 however there were no specific policies assisting industry to re-use or recycle their waste. Similarly, little progress was achieved in diverting waste from landfill or increasing energy recovery, as Slovakia landfills more than 80 % of its municipal waste, while recycling only 4 %.

Slovakia failed so far to implement the third Internal Energy Market package, triggering an infringement procedure in October 2011. Electricity prices for industry are the third highest in the EU and the highest for a continental Member State. This appears to be less due to taxes or production prices, but rather because of high distribution and transmission tariffs. These cover not only costs and profit margin of the state-owned grid company, but comprise support for renewable energy, domestic coal production, co-generation, and also support for the new electricity spot market. Moreover, the end price includes a levy financing the phasing out of nuclear facilities. Recent savings at the grid company enabled to lower the tariffs somewhat. In 2011, government also reduced the level of feed-in tariffs for renewables to ensure their sustainability and lesser impact on prices. In March 2011, the Network Industries Regulator (URSO) adopted the Regulatory Policy for 2012-2016, whereby it chose the price cap method as main regulatory instrument, and suggested it could stop regulating electricity prices for the SMEs.

As regards the construction works on two new reactor blocks at nuclear power plant in Mochovce, it is expected that they will be operational by the end of 2013 and 2014 respectively, with an installed capacity of 440 MW each.

3.24.4. Business environment

Business-relevant legislation in Slovakia remains complex and is subject to frequent changes. In July 2011, the government adopted the strategy 'sINGAPUR' aimed at improving the business environment. The strategy contains 94 short- and mid-term measures for the period 2011-2015, out of which 64 cover the Action programme on administrative burden reduction adopted in 2007. With many measures still to be implemented, the strategy risks to fall short of achieving the targeted 25 % reduction of administrative burdens. In 2011 the government took steps to boost the analytical capacities at ministries dealing with economic and social policies. In spite of improvements, the regulatory impact assessments are in practice often conducted formally.

As from January 2012, the electronic point-of-single-contact became operational. The administrative fees for electronic filings were

[229] e.g. the aluminium industry.

abolished. The time to start a business was shortened up from 5 to 3 days to facilitate business activity within the scope of the Trade Licensing Act. To facilitate the creation of a private limited company however further reforms are needed. In 2011, the Ministry of Economy launched the 'Economic Register of Slovak Entities"[230]. In a user-friendly fashion, this online service provides all public legal, economic and financial information[231] on entities registered in Slovakia.

The indicators measuring various aspects of entrepreneurship score clearly below EU average. The attitude of population towards entrepreneurship and school education that insufficiently encourages sense of business initiative poses the main obstacles for higher business dynamics.

As regards the access to finance, the situation deteriorated in the period 2009 - 2011[232]. The rate of rejected loan applications went up, while the number of SMEs using debt financing increased from 61 % to 74 %. Although the amount of loans to non-financial firms[233] naturally followed the downward path of the economic cycle that occurred in 2009, with the subsequent recovery it has continued growing at a moderate pace in 2010 – 2011. With an underdeveloped stock exchange and venture capital market, equity financing remained very limited.

In 2011, the JEREMIE initiative was finally set up. With a holding fund amounting to EUR 100 million, it is made of a First Loss Portfolio Guarantee scheme and a Risk Capital instrument. First calls for both instruments were launched in January 2012, whereas calls targeting SMEs should be launched later in 2012. The OP C&G is also considering a microfinance scheme for SMEs (EUR 12 million).

The specialisation in export-oriented manufacturing places increasing demands on the quality of infrastructure. In eastern regions however, the lack of adequate transport infrastructure remains an obstacle to growth, dragging the catching-up process already evident in western Slovakia. In 2010 - 2011, the government stepped up efforts to prepare motorway and railway projects. Difficulties postponing actual construction however persist, mainly due to public procurement and environmental issues.

[230] http://www.madeinslovakia.net/eng/ .
[231] e.g. statutes, ownership, tax ID and VAT numbers, payment discipline, annual accounts, ongoing insolvency procedures, bailiff executions.
[232] Commission/ECB Survey on SMEs' access to finance 2011.
[233] National Bank of Slovakia — Statistics on granted loans.

3.24.5. Services sector

With 60 % share in 2010 compared to the EU average of 74 %, the services sector is relatively less important for Slovak economy. Except tourism and network industries, services receive only little policy attention.

The competition improved somewhat in the network industries in recent years, and retail consumers start benefiting from the liberalized energy sector. The gas market is dominated by the distributor and network company SPP, which is almost 100 % dependent on imports of Russian gas. The dominance of the incumbent telecom operator slows down the spread of broadband internet. On the other hand, competition among mobile operators improved, owing to the arrival of the third operator in 2007. Following the adoption of the Postal Service Act, the postal market had fully been liberalized as of 2012.

Professional services are subject to entry and to a lesser extent conduct regulations which tend to restrict competition and push up prices. There are no quotas or economic need tests, however legal professions, architects, engineers or accountants face strict licencing and educational requirement before exercising their profession. Lawyers also cannot be partners of commercial companies and have to comply with rules prohibiting advertising or disclosure of prices. Dismantling compulsory memberships in professional chambers and removing unnecessary restrictions would increase competition in this sector.

3.24.6. Public administration

Indicators of governance and institutional quality show that Slovakia needs stronger institutions and more efficient public administration. The Government Effectiveness indicator[234] ranks Slovakia 19th out of EU27, whereas its score has been sliding since 2006. The overall functioning of public administration is impaired by weaknesses in analytical capacity, hampering policy implementation as well as the quality of public services. Slovak administration relies to a greater extent on flexible modes of public employment. However, modern human resources management (performance-related pay, flexibility, skills development) remains underdeveloped, whereby high turnover of staff impedes capacity building and policy continuity.
Slovakia has a low score on corruption. Perceptions of diversion of public funds due to corruption, and irregular payments and bribes by firms are seen as

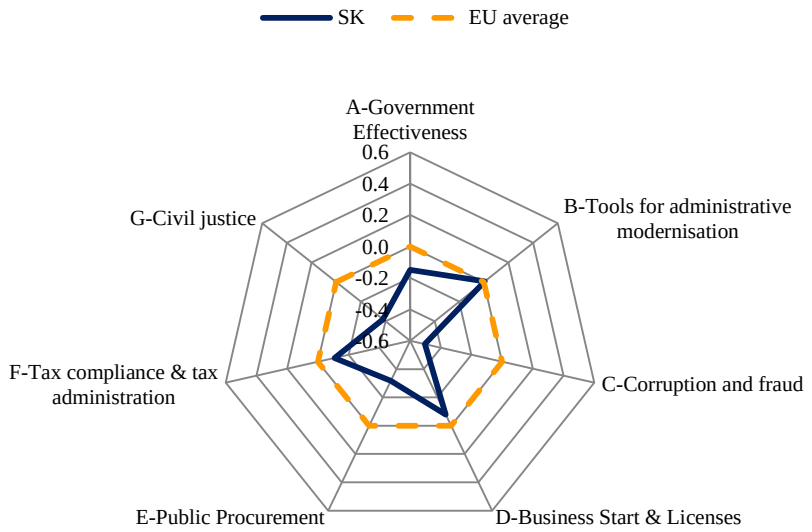
[234] Worldwide Governance Indicators 2010.

quite common. Results for the experience of corruption also indicate that it is a major issue with 27 % of respondents reporting an incidence of corruption compared to the EU average of 10 %.

Measured by a composite indicator on starting a business and licensing, Slovakia's performance is slightly below the EU average. This result is mainly driven by time requirements for incorporation, although the related costs are significantly lower. As shown by the indicator on the complexity of obtaining permits, licensing procedures are assessed as rather convenient.

The composite public procurement index for Slovakia reveals a considerably weak performance. While on average time requirements and costs for the competition for public tenders amount to more than 16 days and 0.19 % of per capita GDP, for Slovakia these values are 30 days and 0.26 % respectively. Furthermore, average duration of payments by public bodies is higher than the EU average.

Overall profile of public administration



Source: WIFO

Compliance costs stemming from tax obligations can have significant impact on enterprises. In 2011, a model business company in Slovak had to make 31 payments and spend 231 hours to pay taxes, which is slightly higher than the EU average of 208 hours.[235] Moreover, the efficiency of tax administration appears low as suggested by the ratio of costs of tax administration per revenue collected.

According to the composite indicator on the efficiency of civil justice, Slovakia again performs worse than the EU average. For instance, it takes more than twice as long to resolve insolvency, and the judicial system is perceived to be significantly less independent when compared to the EU average. Due to the existing backlog of cases in courts, the overall time needed for a trial and the enforcement of judgement impair the access of businesses to legal recourse, leaving many commercial disputes unsolved. The alternative dispute resolution systems, which could improve contract enforcement, are still underdeveloped.

In 2010/2011, the availability[236] of basic e-government services for enterprises (87.5 %) was close to EU average (89.5 %). On the other hand, the availability of e-government services for citizens remains underdeveloped (45.8 % against EU average of 80.9 %). Areas for improvement include government-to-government services and use of electronic signature that remains cumbersome.

In 2011, Slovakia successfully put in place several transparency-enhancing measures in the area of public procurement and judicial efficiency. All courts decisions in civil, commercial, and criminal cases had to be published on the internet as from January 2012. Recruitment procedures for new judges were made more transparent and regular performance assessment of judges was introduced.

[235] World Bank — Doing Business 2012.

[236] EU Digital Agenda Scoreboard 2011.

The Insolvency register and the Commercial register are now available on the internet.

In February 2011, Slovakia amended the Public Procurement Act, aiming to increase competition and transparency. The amendment significantly lowered the national limits for under-threshold contracts, which were often abused. The use of electronic auctions is more obligatory. As of late 2010, an electronic central registry of contracts and invoices has become operational. All contracts awarded and invoices paid by public authorities at all levels must be published on the online registry to be legally valid. This reform in terms of reporting can be considered a good practice that significantly increased transparency and control of public spending.

To address the problem of high tax compliance burden and to improve the overall tax collection, in 2011 Slovakia launched a major restructuring[237] of the Tax Administration. As from 2013, the tax and customs authorities shall merge into one institution – the Financial Directorate. The reform will unify the collection of taxes and customs duties and later on also social security contributions, whereby it shall simplify the filing of tax returns. In early 2012, the implementation of this reform encountered major technical problems, causing additional administrative burden on businesses. Nevertheless, if successfully implemented, the reform could bring about better tax collection as well as significantly ease the tax compliance burden.

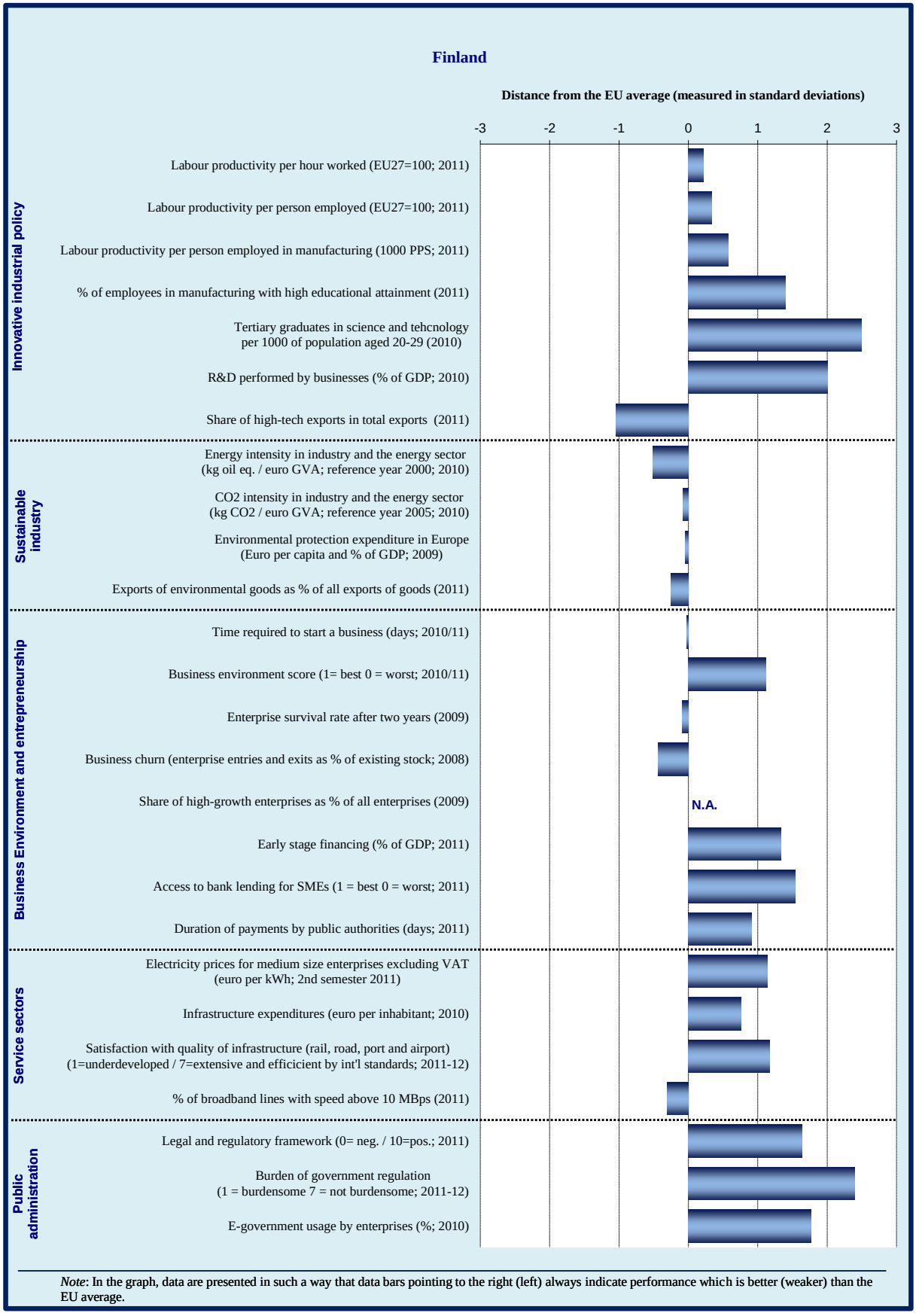
A key priority in 2011 was to set up the legislative framework for universal electronic access to basic public services, enabling uniform implementation of e-services and full electronic exchange with public authorities. The main funding source of e-government is the Operational Programme Information Society (OPIS)[238], with 71 % of its funds allocated for e-government projects. In spite of stepped-up efforts, public procurement, coordination and technical issues delay major projects, whereby overall absorption of OPIS stays very low.

3.24.7. Conclusions

Technology imports were source of major productivity gains in past years, however this potential is evaporating due to declining inflows of FDIs. Specialised in few manufacturing industries, Slovak economy could benefit from diversifying to services sectors. As innovation capacity has improved only modestly, it has yet to significantly move towards more knowledge-intensive economic activity. Transparency of public procurement and judicial authorities improved in 2011. Nevertheless, the overall efficiency of public administration still drags productivity of enterprises, and remains important priority for improving business environment. The combination of very high energy prices with one of the highest energy-intensity in the EU poses another challenge for Slovak economy. The government's policy response to many of the identified challenges was well formulated and translated into action plans with specific measures. To bring about tangible improvement, efforts need to concentrate on implementation.

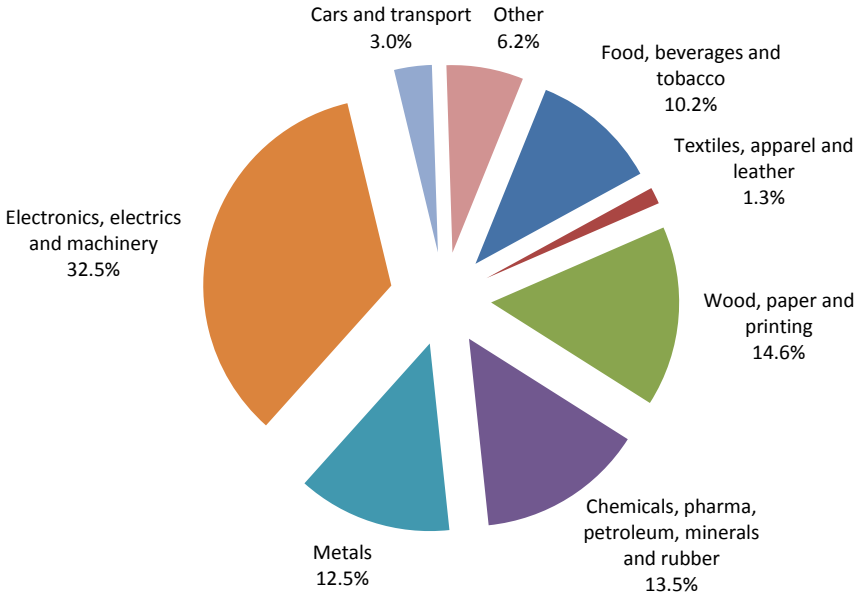
[237] project UNITAS.
[238] EUR 820 million for 2007-2013 period.

3.25. Finland



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Finland (2009)



Note : No data available for sectors C12 (tobacco products), C15 (leather and related products), C19 (coke and refined petroleum products) and C21 (basic pharmaceutical products and pharmaceutical preparations)
Source: Eurostat

3.25.1. Introduction

Finland belongs to the group of EU Member States, which is characterised by higher income and a specialisation in knowledge intensive sectors. The contribution of manufacturing to total value added is higher in Finland than in the EU on average (17.3 % against 15.5% in 2011).

At detailed manufacturing industry level, Finland is specialised in capital-intensive industries (manufacture of pulp, paper and paperboard), both in terms of value added and exports, as well as in mainstream manufacturing (agricultural and forestry machinery, electric motors) and labour-intensive industries (sawmilling and planning of wood, steam generators, building and repairing of ships).

As regards export and technology-driven industries (apparatus for line telephony), Finland specialises in high-value added activities such as design and marketing. At the more aggregated sector level (NACE 2-digit), Finland is specialised in highly innovation-intensive sectors (communication equipment) and, in exports, also in medium innovation-intensive sectors (pulp and paper, wood and cork).

Finland does not seem to demonstrate specialisation in sectors requiring high education due to the low relative share in R&D and in business services. Given its industrial structure, Finland's R&D intensity and position on the quality ladder for technology-driven industries are well above the EU average.

3.25.2. Innovative industrial policy

The Innovation Union Scoreboard 2011 ranked Finland as one of four innovation leaders in the EU showing an innovation performance well above that of the EU27 average. The Finnish national research and innovation system shows strengths in a well educated work force, R&D&I funding and support, and linkages and entrepreneurship. High growth in innovation performance is observed for community trademarks and knowledge-intensive services exports, and growth performance in open, excellent and attractive research systems, finance and support and Intellectual assets is well above EU average.

Finland is the top performer in the EU27 in terms of business R&D spending (2.69 % of GDP, 2010). Total R&D expenditure (BERD and public R&D spending combined) reached 3.87 % of GDP[239], which is well above the EU average and close to Finland's national target for 2020 at 4 %. Direct public R&D expenditure is however expected to slightly decline in 2012 compared to 2011, while the ongoing major structural change in the ICT sector may have an impact on business R&D intensity at least in the short term. The Government intends to exploit the opportunities for renewal and growth offered by the structural change and has set

[239] Eurostat, 2010.

up a high-level task force, *Finnish ICT Cluster 2015*, in 2012.

The national innovation system is being reformed and strategic steering is provided by a government working group, which has been set up to coordinate research assessment and foresight activities. The goal is to improve the efficiency of the innovation system and refocus its priorities. The most important reforms relate to streamlining, enhancing the efficiency and refocusing the priorities of the innovation system, as well as internationalisation, which was identified as a weakness in the Finnish innovation system[240]. The focus of public research and innovation funding is being shifted to growth orientated, job creating and internationalising SMEs. The current demand and user-driven innovation policy action plan 2011-2013 will be assessed in a mid-term review in 2012.

Independent evaluations of the activities of Tekes, Finnvera, SHOKs, and the Academy of Finland (to be completed by 2013) will provide additional insights into the effectiveness of the national innovation system. Important research and innovation related decisions were also taken in March 2012 in the context of Central Government Spending Limits for 2013-2016. The planned introduction of an R&D tax incentive in 2013 is representative of the on-going refocusing from direct to indirect R&D aiming at improving the leverage effect of public investments.

Finnish innovation policy and measures are in general geared towards speeding up the development, commercialisation and take up of new technologies. Key Enabling Technologies (KETs) are an integral part of the public technology and innovation programmes funded by the Finnish Funding Agency for Technology and Innovation (Tekes). The technical research center of Finland (VTT) and Finnish Universities have competencies in all KETs.

The share of science and technology graduates among 20-to-29 year olds in Finland is well above the EU average (19 % vs. 14 %, 2009). The knowledge-intensive sectors in the economy in which Finland specialises require high-intermediate skills. In view of emerging new skills requirements and the demographic changes there is however a need to ensure an adequate provision of especially STEM (Science, Technology, Engineering, Mathematics) skills also in the future.

[240] Innovation Union Scoreboard, February 2012. http://ec.europa.eu/enterprise/policies/innovation/files/ius-2011_en.pdf .

3.25.3. Sustainable industry

The Finnish industrial sector is more energy-intensive compared to the EU average. Some sectors in Finland are at risk of carbon leakage, such as, the paper and pulp, iron and steel, non-ferrous metals, chemical and petrochemical industries. Although compliance costs have not been very high during the first and the second period of the EU ETS, a majority of new investments in these industries have been made outside of Finland.

Compared to many other industrial nations Finland has low overall emissions in relation to GDP and per capita. In industry and the energy sector, CO_2 intensity is slightly better than the EU average. The power generation mix is diversified with nuclear and renewable energy as dominant sources. Electricity prices are among the most affordable for medium size enterprises in EU comparison. Regarding other costs, environmental protection expenditure in the manufacturing industry represents a small percentage of GDP, corresponding to 0.31 % of GDP for Finland and close to the EU average.

The Government's goal is to develop Finland into a leading position in environmental technology. In 2012 a new Strategic Programme for Cleantech Business Development has been initiated, which will promote growth, business activity, innovations and the internationalisation of the cleantech sector in Finland. The programme will establish strategic targets for Finland's cleantech business and coordinate operators in the sector. The growth potential of the sector is promising as the environmental technology sector in Finland has steadily been growing by 5-10 % annually since 2005. There are more than 2000 Finnish firms in the cleantech sector of which 95 % are SMEs. Since growth prospects are mainly in international markets (e.g. Russia, India, China), internationalisation of SMEs is an important issue.

Tekes provides funding for environmental technologies and a new interesting initiative in this context is the 'Green Growth Programme 2011-2015". The programme's objective is to identify potential new growth areas for a sustainable economy based on lower energy consumption and sustainable use of natural resources. Although Finland is not specialised in automotive industries, there is also noteworthy developments in electrical vehicles. In 2011 Tekes launched a programme on Electrical Vehicle Systems 2011-2015 (EVE) aimed at companies and research institutes. Another green project funded by Tekes is the Green Mining Programme, whose objective is to make Finland a global leader in sustainable mineral industry by

2020 by increasing the number of SMEs that target the export market in the mineral cluster.

A majority (87 %) of Finnish SMEs selling green products and services are active only in the domestic market.[241] Green exports are mostly destined for other EU Member States. In 2010, Finland's trade balance of environmental goods was positive reaching 0.06 % of GDP. However exports of environmental goods as a percentage of all exports of goods were clearly below the EU average (0.53 % vs. 0.77 % of GDP, 2011).

The Government has also launched a new four-year Strategic Programme for the Forest Sector, whose key objective is to promote the forest sector's competitiveness and renewal. The programme will monitor and anticipate changes in the forest sector while coordinating measures. A National Wood Construction Programme 2011-2015 will be implemented as part of the Strategic Programme for the Forest Sector.

3.25.4. Business environment

Finland scores clearly above the EU average on all business environment indicators, except high-speed broadband lines. The Finnish business environment shows strengths in a stable legal and regulatory framework and relatively low level of administrative burdens. Finland also scores high on the indicator measuring satisfaction with the quality of infrastructure related to rail, road, port, and airport facilities.

Since July 2010 Finland is implementing an ambitious national broadband strategy 'Broadband for all 2015", which pledges to connect everyone to a 100 Mbps connection by 2015. Telecom operators defined as universal service providers must be able to provide every permanent residence and business office with access to reasonably priced service by 2015. Although Finland scores below the EU average on the availability of high-speed broad band lines, e-government usage by Finnish enterprises is the highest in the EU27 (96 %, 2010).

Finland scores above the EU average on all entrepreneurship and SMEs indicators, except business churn. Finland shows strengths in early stage financing and access to finance, as well as duration of payments by public authorities.

The Finnish small businesses sector is similar in structure to that of other EU Member States. Microenterprises dominate the sector and most Finnish SMEs are active in the service sector, where SMEs account for almost 61 % of all jobs and almost 55 % of SMEs value added. The small businesses sector has been growing rapidly. The number of enterprises and the value added they produce have increased much more dynamically in Finland than in the EU in the past decade.[242]

Since 2007, a website 'Enterprise Finland' provides a one-stop shop for information on assistance available to companies and entrepreneurs, especially SMEs.[243] There is still room for improvement with respect to the Finnish point of single contact. The amount of information available through the portal is generally good, but improvements should be made to increase the possibility of online completion of procedures.[244]

Finland implements a long standing active SME policy, which is reflected in an outstanding Small Business Act profile. While Finland's performance across the ten Small Business Act principles is above the EU average in general, overall progress has been stagnating, but at a higher level than in comparison with other Member States.

The current integrated Impact Assessment system assesses the impacts on SMEs. Government plans to strengthen the impact assessments are welcome, in particular the assessment of business impacts and the cumulative impacts of legislation.

There has been considerable progress in e-procurement. A new law on electronic auctions and dynamic procurement procedures is expected to reduce bureaucracy, while speeding up public procurement procedures. Access for SMEs is promoted through guidance, which is one of the priorities for a public procurement advisory unit funded partly by the Ministry of Employment and the Economy. However, Finland scores moderately well for use of e-procurement in the stages before the award of contracts.

The overall birth rate of new firms and overall exit rate is lower in Finland than in other Member States, implying that business churn is low. Relatively few SMEs grow to become larger companies in Finland. There are less than 700 high-growth companies, predominantly in knowledge-intensive services.[245] Despite Finland's technological sophistication, its current performance in nurturing high-growth companies could be improved. Promoting innovative high-

[241] Eurobarometer on SMEs, resource efficiency and green markets 2012: http://ec.europa.eu/public_opinion/archives/flash_arch_344_330_en.htm#342 .

[242] SBA Fact Sheet 2010-2011 Finland.

[243] http://www.yrityssuomi.fi/web/enterprise-finland .

[244] SWD(2012)148 final.

[245] Kasvuyrityskatsaus 2012, Ministry of Labour and the Economy.

growth companies remains a key policy priority in the new Government Programme. Several growth venture policy measures have been taken, such as:

- A new joint service Growth Track provided by business development organisations has been established, which is intended for enterprises aiming at rapid growth and internationalisation.
- Finnvera's (Export Credit Agency of Finland) export financing schemes have been renewed;
- The Vigo Accelerator Programme has been expanded and currently covers six areas.
- Tekes new strategy is focusing one third of company funding on young innovative enterprises;
- Following the Government decision on the Central Government Spending Limits 2013-2016 in March 2012, tax incentives for growth entrepreneurship will be introduced, starting in 2013.

3.25.5. Services sector

Though manufacturing remains important as a generator of process and product innovation, export income and prosperity in Finland, the economy is increasingly a service economy. In the private services sector, especially business services account for an increasing share of growth and are expected to continue to rise in parallel with further technology developments and IT investments in the sector. In Finland public and private services amount to only about 68 % of GDP indicating that there is growth potential to be exploited. In comparison, services account for more than 73 % of GDP in the EU27 (2010).

Promoting competition in shielded service markets remains a challenge because of the need to restore productivity growth and diversify the Finnish economy. In 2011 and 2012 the Council recommended Finland to continue enhancing competition in product and service markets, especially in the retail sector. Finland has stepped up its pace of reform to address the concerns expressed by the Commission and other fora regarding increasing competition. In 2011 a new Competition Act was adopted, which brings amendments to merger control, penalties, and the procedure adhered to in the review of competition issues and damages. In 2012 the Government has launched a new programme on promoting healthy competition, which aims at identifying and addressing structural barriers harmful to competition. The programme will also evaluate impacts of purchasing power in Finnish retail trade, especially in the food sector. Retailers tend to use their strong position with respect to suppliers in several ways that may be considered questionable for sound and effective economic competition.[246] The Government is exploring merging the Finnish Competition Authority with the Finnish Consumer Agency and possibly the National Consumer Research Center, which would help increasing the impact of competition and consumer issues in Finland.

3.25.6. Public administration

Finland is one of the top performers in public administration according to the World Bank's *Government Effectiveness* Index, and displays the highest value of the EU Member States.[247] This indicates a high perceived quality of public service provision in Finland.

The country's performance is above the EU average in all tools *to improve public modernisation* (e-government, impact assessments, performance and service orientation, accountability). Finland is one of the top performers for e-government and has increased the online availability of services for enterprises considerably in the past years. Also, the usage of a comprehensive evidence-based impact assessment has been improved since its implementation in 2004, while the application of tools that facilitate a strategic management of public sector employees was slightly more intense than average.

The Finnish government is implementing an action plan to reduce the administrative burden on businesses by 25 % by 2012, where developing e-government plays a key role. Transactions between businesses and the authorities will be brought together to operate in line with the 'one-stop-shop' principle and all key business services will be covered by 2013. There has been progress in some priority areas towards the 25 % reduction target, but overall progress is slow. A follow-up study will be finalised in spring 2012 and a government decision on continuing the action plan is expected in autumn 2012.

The composite summary indicators for *corruption and fraud* are significantly above the average performance. With only 4 % of individual corruption experiences, Finland outperforms the majority of other Member States and the perception of irregular payments and bribes as well as the diversion of public funds is significantly lower than the EU average.

[246] Finnish Competition Authority http://www.kilpailuvirasto.fi/cgi-bin/english.cgi?luku=news-archive&sivu=news/n-2012-01-10.

[247] As many data are unavailable, EU-wide averages are calculated without Malta.

The composite index on *starting a business and obtaining* licenses is slightly above the average, with the exception of the time required to start up a company, which takes approximately as long in Finland as in the average Member State, as stated in the World Bank's Doing Business report. In spite of the comparatively good performance in setting up a fully operational one-stop shop to start up a company, there is still potential for improvement.

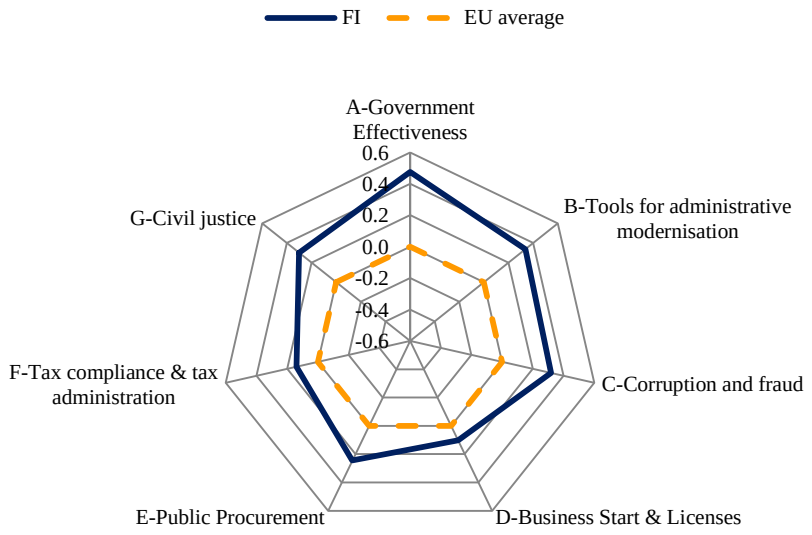
The composite link-level indicator for *public procurement* is well above average, with the average delay in payments (only 4 instead of the EU average of 28.3 days) as well as the cost to participate in government procurements (0.14 %of GDP per capita as typical costs of taking part in a competition, while the EU average amounts to 0.19 % of GDP per capita) being lower than the EU-average.

Finland also observes an extraordinary good performance as regards its *civil justice system*. The time required to enforce contracts (375 days) is far shorter than the EU average (556 days), and the costs thereof are substantially lower (13.3 % of a claim in Finland as compared to the EU average of 20.6 %). Resolving bankruptcy issues is similarly faster (0.9 years) than in most other EU Member States (average of 1.95 years). Perceived independence of the judiciary is one of the highest of all Member States with a score of 6.41 on a scale from 1 to 7.

Finland's performance on *tax compliance and tax administration* indicators are above the EU average. The good scores reflect especially a far better than average performance in the time to prepare and file tax returns and to pay taxes (only 93 days), whereas the administrative costs of taxation are only slightly better than the EU average.

Although Finland scores high on the quality of its public administration, Finland faces a number of challenges, in particular in relation to population ageing. The Finnish authorities are implementing several reforms to redesign public services structures and boost productivity at both the central and local government level.

Overall profile of public administration



Source: WIFO

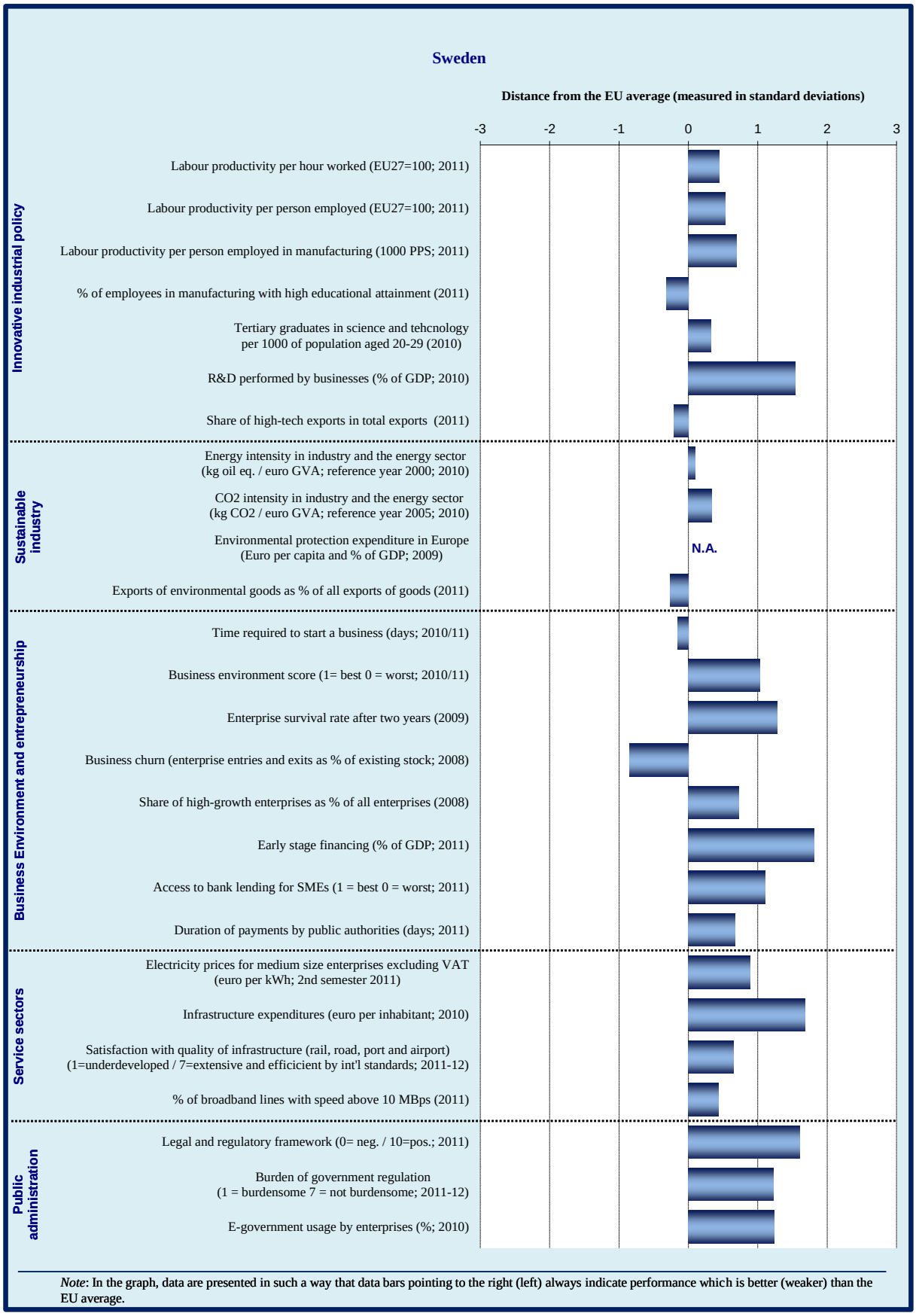
3.25.7. Conclusions

Finland remains one of the most competitive Member States in the EU and is identified as one of the innovation leaders. However the Finnish economy needs to become more diversified both in terms of companies and in terms of exports in order to develop multiple strong export-oriented firms in the future.

Notwithstanding the past strong Finnish R&D and innovation performance, without a significant increase in the number of innovative high-growth firms, Finland's ranking as an EU innovation leader risks declining. This requires facilitating innovation, enabling the transformation from R&D into marketable products, and encouraging the penetration of fast growing export markets. In the short term, it will also be crucial to exploit and disseminate the extensive ICT know-how also in other industries in Finland, including the public

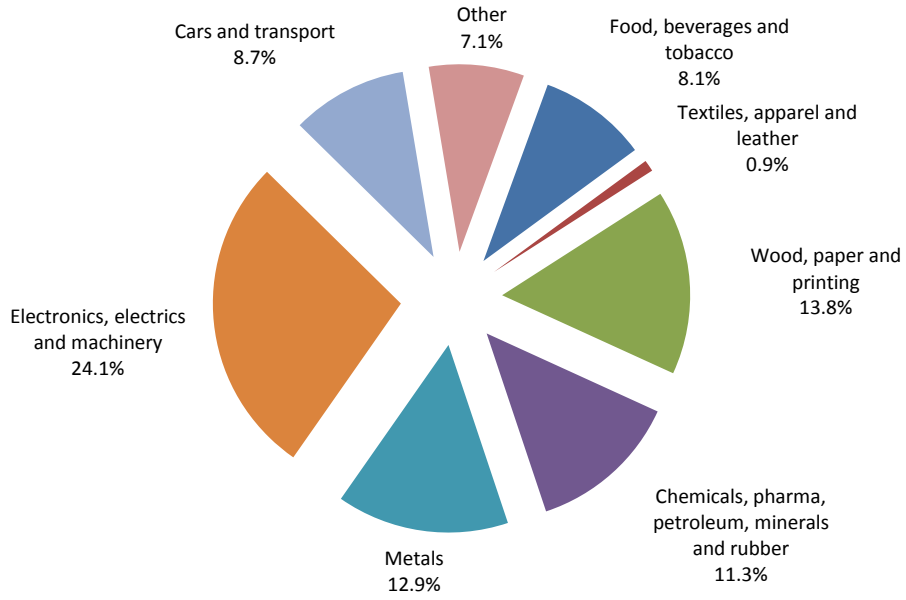
sector. Finland should also continue enhancing competition in product and service markets, especially in the retail sector, and take further measures to achieve productivity gains and cost savings in public service provision in response to the challenges posed by the ageing population. The new Strategic Programme for Cleantech Business Development is a step in the right direction in terms of endowing Finland with an explicit strategy for greener business growth and for a strategic positioning in the emerging environmental technology sector.

3.26. Sweden



Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – Sweden (2009)



Note : No data available for sectors C12 (tobacco products) and C21 (basic pharmaceutical products and pharmaceutical preparations)
Source: Eurostat

3.26.1. Introduction

While manufacturing remains important as a generator of process and product innovation, export income and prosperity in Sweden, the Swedish economy is gradually shifting away from manufacturing and towards a service economy, as it is in a number of other Member States. The contribution of manufacturing to total value added in Sweden was 16% in 2011, similar to the EU as a whole (15.5%). Swedish manufacturing specialises in capital-intensive industries such as processing of iron and steel, pulp and paper; in mainstream manufacturing such as isolated wire and cable, general and special-purpose machinery; and in technology-driven industries such as TV/radio transmitters and receivers. High relative export shares in computer and information services, research and development, and royalties and license fees, indicate that Swedish also has export specialisation in high-education sectors.

Apart from the gradual shift towards services, the last decade has also seen some important structural changes in Swedish manufacturing, notably away from motor vehicles, aerospace and other technology-driven industries. Sweden has increased its relative share of value added and exports from labour-intensive industries such as sawmilling and bodies for motor vehicles, and in high-education and high-innovation sectors such as computers, research and development, and information services.

In the first decade of the century, nominal unit labour costs rose by 16 % in Sweden, slightly more than in the EU as a whole (14 %) but less than in the euro area (20 %). Labour productivity in manufacturing is among the highest of all Member States. While Sweden continues to enjoy an enviable competitiveness position overall, there are fluctuations in the relative competitiveness position of the various sectors.

3.26.2. Innovative industrial policy

According to the Innovation Union Scoreboard 2011, Sweden remains one of four innovation leaders in the EU. Using a composite of 24 separate innovation indicators, it ranks Sweden as the best innovation performer in the EU, outperformed only by Switzerland. Sweden ranks particularly high on human resources, finance and support, firm investments and intellectual assets, but does less well on output-oriented indicators such as innovators, economic effects, linkages and entrepreneurship.

The Swedish national innovation system benefits from a stable macroeconomic environment, a well-educated workforce, appropriate infrastructures, ambitious R&D policies, venture capital, and state-of-the-art scientific performance. Until recently, Sweden also benefitted from the presence of a number of R&D-intensive multinational companies, but in recent years several of those have chosen, for various reasons, to relocate their R&D activities to other countries.

Partly because of this outflow, and partly due to the economic crisis, business expenditure on research and development (BERD) has fallen back to its lowest share of GDP in five years. Reinforced public spending on R&D has to some extent compensated for the drop, but the overall R&D intensity fell in 2010 to 3.4 % of GDP, its lowest share since 2007. Further, large investments in R&D have failed to lead to sustainably higher economic growth or levels of innovation.

Against this backdrop, the government has announced its intention to present a new innovation strategy in 2012, to coincide with the presentation of the next research and innovation bill. In parallel, the country-specific recommendations of the 2012 European Semester have urged Sweden to take further measures in the research and innovation bill to continue improving the excellence in research and to focus on improving the commercialisation of innovative products and the development of new technologies.

The new innovation strategy is expected to take a broad approach to innovation, going beyond technological development and academia-industry interaction. It will shift away from sectoral innovation policies in favour of an integrated, needs-driven and holistic policy.

3.26.3. Sustainable industry

Sweden continues to make good progress towards green growth. A comprehensive policy mix with a focus on sustainable growth, energy and transport, climate change, innovative environmental technologies, carbon taxation and other green taxes, has been gradually rolled out over several years and has proved fruitful.

Sweden has achieved one of the lowest carbon emissions per capita in the EU and is on track to meet its national target on emission reductions. Several measures have been adopted recently to further reduce emissions in the transport sector, second only to the agriculture sector in terms of emitting greenhouse gases. Sweden has set itself a target of at least 10 % renewable energy in the transport sector by 2020 and a vision of a fossil-free vehicle fleet by 2030.

Using a range of different instruments – legislative, voluntary, fiscal, financial, information – aimed at all sectors of the economy, Sweden has achieved high levels of energy efficiency and its target of a reduction in energy intensity by 20 % from 2008 to 2020 appears to be within reach.

Taxation is seen in Sweden as a powerful tool to incentivise consumers and enterprises to change their consumption and production patterns in the direction of a green economy, away from environmentally harmful alternatives. A case in point is the CO_2 tax, which Sweden was among the first to introduce and remains one of relatively few Member States to apply. Along with higher energy taxes, CO_2 taxes were adjusted up in 2011. Measures of a general scope – energy taxes, CO_2 taxes, emission trading – are widely regarded as drivers of sustainable development as well as important for the development of new environmental technologies.

3.26.4. Business environment

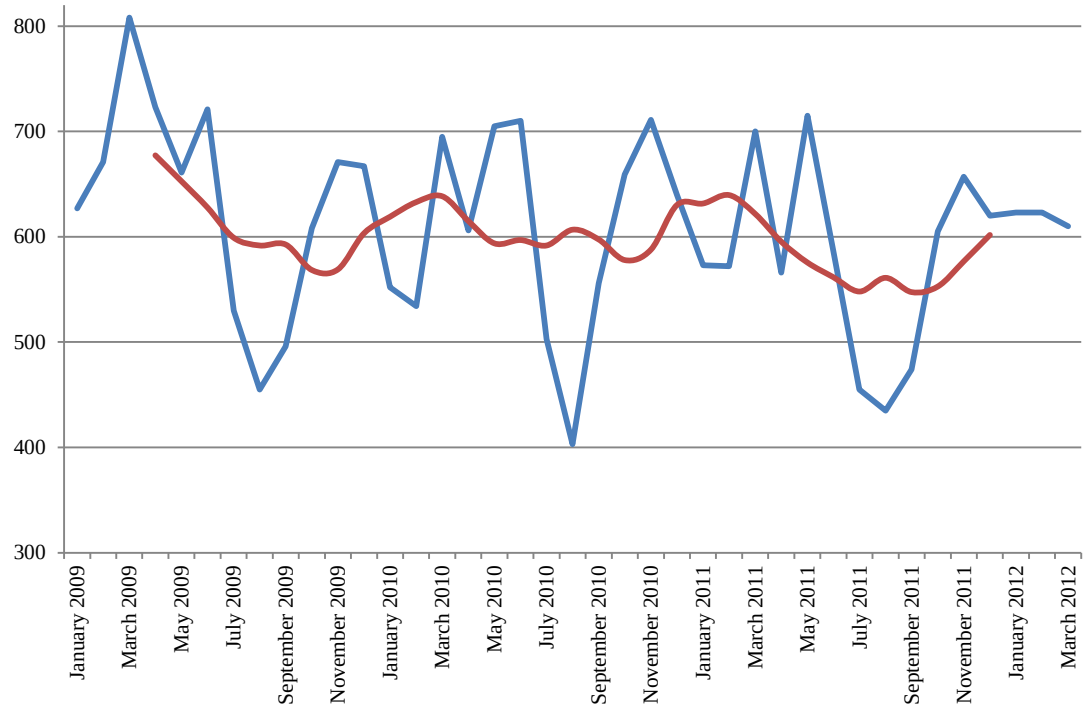
By international standards, Swedish businesses benefit from adequate access to private and public risk capital. The 2011 survey on access to finance showed that only 8 % of companies in Sweden report access to finance as being the most pressing problem. Their use of debt financing in the surveyed six-month period was close to the EU average, whereas 31 % of the Swedish companies surveyed used equity financing. This is a much higher proportion than in the EU as a whole. Furthermore, fewer Swedish companies applied for a bank loan, overdraft or trade credit than in the rest of the EU. At the same time, Swedish SMEs are more likely than elsewhere in the EU to receive the amount requested when applying for loans or bank overdrafts, and the willingness of banks to provide such loans was perceived more favourably by SMEs in 2011 than in the previous survey (2009).

Last year, the share of early-stage financing to GDP was higher in Sweden than in any other Member State, but slightly lower than in 2009. On the other hand, international comparisons suggest that early-stage financing makes up a smaller share of total risk capital in Sweden than in other countries. To address this problem, as well as some other shortcomings, the government intends to reform the public system for risk capital, including by merging Innovationsbron and Almi Företagspartner. The government also intends to streamline tasks, mandates and investment policies of existing agencies and instruments with a view to a comprehensive risk capital system with no overlapping elements.

In parallel with the reforms, the newly appointed Corporate Tax Committee will examine different alternatives for reducing the taxation of risk capital in the corporate sector and for neutralising differences between equity financing and loans. Its remit also includes the preparation of proposals to broaden the corporate tax base in order to finance a lower corporate tax rate from January 2013. Moreover, the committee will consider the possibilities of introducing tax incentives for

research and development, review the rules on group contributions and underpriced transfers, and analyse whether a withholding tax on interest payments should be introduced. In January 2012, the committee presented the first of two interim reports, concerning tax incentives for stimulating the supply of risk capital. In its interim report the committee presented two proposed models for tax deductibility of own capital additions.

Corporate bankruptcies in Sweden, 2009 to April 2012 (monthly number of bankruptcies and 7-month moving average; personal bankruptcies excluded)



Source: Statistics Sweden

Corporate bankruptcies have risen from their low level in 2010 and 2011: in the first four months of 2012 there were 2 453 registered corporate bankruptcies in Sweden, more than the same period 2010 (2 387 bankruptcies) and the first four months of 2011 (2 411 bankruptcies). At the same time, the two-year survival rate of firms started in 2007 was considerably higher in Sweden than in other Member States.

Sweden has not achieved the targets of the Small Business Act on the time and cost of setting up a business. It is in the bottom half of Member States in terms of the time needed to set up a business: 15 days is longer than the EU average and five times as long as the agreed target of 3 days by 2012. At EUR 186, the cost of setting up a company is lower in Sweden than the EU average but remains higher than the agreed target of EUR 100.

3.26.5. Services sector

Though manufacturing remains important as a generator of process and product innovation, export income and prosperity in Sweden, the economy has for some time been a service economy, both in terms of employment and value added. Services account for around 62 % of hours worked and 65 % of gross value added across all businesses. These shares are more or less similar to the shares in most OECD countries, but Sweden has a higher share of societal, personal and IT services than the OECD average, while services such as hotels, restaurants, communications, financial services and real estate services are underrepresented in Sweden.

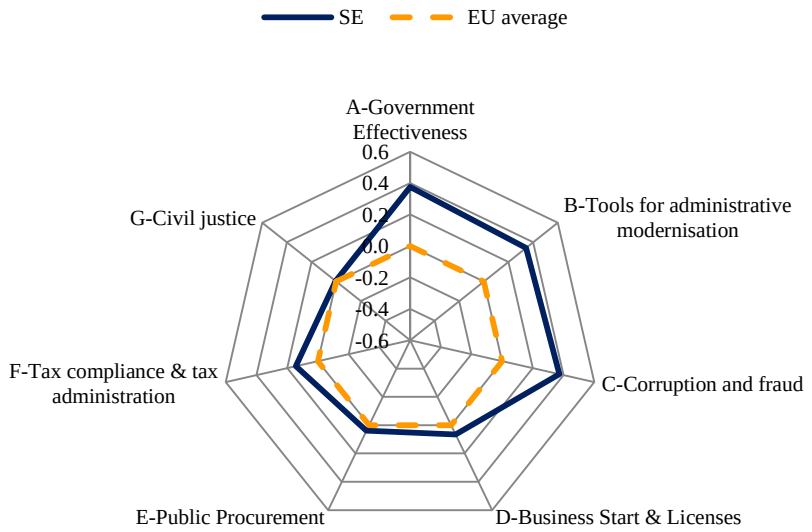
In the services sector, business services have seen the most rapid growth in recent years, followed by education, healthcare, and societal and personal services. As in other countries, the knowledge and technology content of services has risen dramatically and is set to continue to rise in parallel with further technology developments and IT investments in the sector. As a consequence,

employment in knowledge-intensive service sectors has more than doubled in the last 20 years and its share is above the median share in the EU and the OECD. These developments go hand in hand with the gradual integration of manufacturing and certain services, rendering the distinction between services and manufacturing less clear as producers offer packages of goods and services to their customers.

3.26.6. Public administration

As illustrated by the figure, Sweden's public administration is better than in most Member States, scoring higher than the EU average in six categories and around average in the seventh. According to a recent study, particularly good results were obtained for Sweden in government effectiveness, tools for administrative modernisation, corruption and fraud, and tax compliance and tax administration.

Overall profile of public administration



Source: WIFO

According to the *government effectiveness* index of the World Bank, the Swedish public administration provides better services and scores higher in user satisfaction surveys than in most other Member States.

As in neighbouring Member States, the use of *tools for public administration modernisation* (e-government, impact assessments, performance and service orientation, accountability) is widespread. In addition to a full online availability of business-related services, the use of regulatory impact assessments is sophisticated, and instruments targeting the strategic management of public administration staff are used intensely.

Also in terms of *corruption and fraud*, Sweden outperforms most other Member States. Irregular payments, bribes and misuse of public funds are perceived to be significantly less common in Sweden than on average in the EU.

Sweden has one of the most efficient *tax administrations* in the world, with high tax compliance rates and low tax collection costs. The average time needed to prepare and file tax returns and pay taxes is 122 hours per year, much less than the EU average of 208 hours. Furthermore, the cost of the tax administration is only 0.4 % of tax revenues, whereas the EU average is 1.3 % of revenues. The VAT system could be made more efficient though, notably by streamlining the VAT structure away from the current regime of reduced rates. Even where the current reduced rates (12 %, 6 % or 0 %) were originally introduced to address specific policy concerns, a reduced VAT rate is typically not the most effective or efficient policy measure to take in order to achieve a certain objective.

The only category in which the performance of the public administration is average in an EU context is the *efficiency of civil justice* in Sweden. The time to resolve insolvency cases (two years) and to enforce contracts (508 days) are around or only slightly better than the average across Member States. The cost of enforcing contracts is considerably higher in

Sweden (31.2 % of the claim) than on average in the EU (20.6 % of the claim).

The overall goal of Swedish administrative policy, as formulated by the government, is '*an innovative and collaborative public administration that adheres to the rule of law and is efficient, has well developed quality, service and accessibility and that consequently contributes to the development of Sweden and to efficient EU activity*'. To that end, the government has proposed a comprehensive use by government agencies of e-procurement by 2013; simplified contacts with public administration through better coordination at national and regional level; possible outsourcing of certain public administration support functions in order to improve efficiency and reduce administrative costs; and scaling back the provision by public entities of goods and services on markets in order to keep market distortions to a minimum and grant private sector providers a level playing field.

In order to make it 'as simple as possible for as many as possible', work is going on to step up and expand e-government. A new strategy is currently being formulated, setting out egovernment targets to be reached by 2015 and a long-term vision for 2020. To that end, the Delegation for e-government will report by March 2014 with proposals for the longer-term development of e-government. The Delegation will first analyse the implementation of e-government in other countries, such as in the 2012 study of e-government in Denmark, Finland and Norway. In parallel, the Delegation is working on a study to identify regulatory obstacles to information sharing.

The Swedish government undertook in 2006 to reduce the administrative burden for businesses by 25 % by 2010 (subsequently pushed back to 2012). The reduction achieved by 2010 was just over 7 % (approximately EUR 800 million). Recognising the need to step up its efforts, the government has taken a series of initiatives recently, notably a simplification programme for 2011-2014, the scope of which has been extended to local and regional authorities. The main focus of the programme is to intensify the work on rules perceived by companies as particularly burdensome and important. Moreover, the government has commissioned an inquiry into the scope for reducing reporting requirements for companies by more extensive cooperation between authorities, exchange of information, and shared databases. The purpose of the inquiry is to reduce the total number of information requirements from their current level (around 4 600). Ideally, companies should need to submit their information only once, possibly through a single point of entry. However, the inquiry will also look into the potentially negative consequences of such a reduction.

The Swedish Better Regulation Council, set up in 2009 with a mandate to ensure the quality of impact assessments and promote administrative burden reduction, has had its mandate extended to 2014. In addition, last year the government widened the scope of the mandate, empowering the Council to intervene at an earlier stage in the legislative process and assist in the scrutiny of impact assessments produced by the Commission. Moreover, since 2008 administrative government agencies must consult the Better Regulation Council before adopting regulations with a potential impact on the business environment or the competitiveness of companies.

As far as taxation is concerned, efforts have been made to simplify tax procedures for businesses and individuals. There have also been changes recently to simplify the taxation of foreign experts.

In order to ease the administrative burden this year, the Swedish government has decided to cancel until 2013 the annual assessment of administrative costs and in the meantime look for alternative, less burdensome ways of measuring administrative costs.

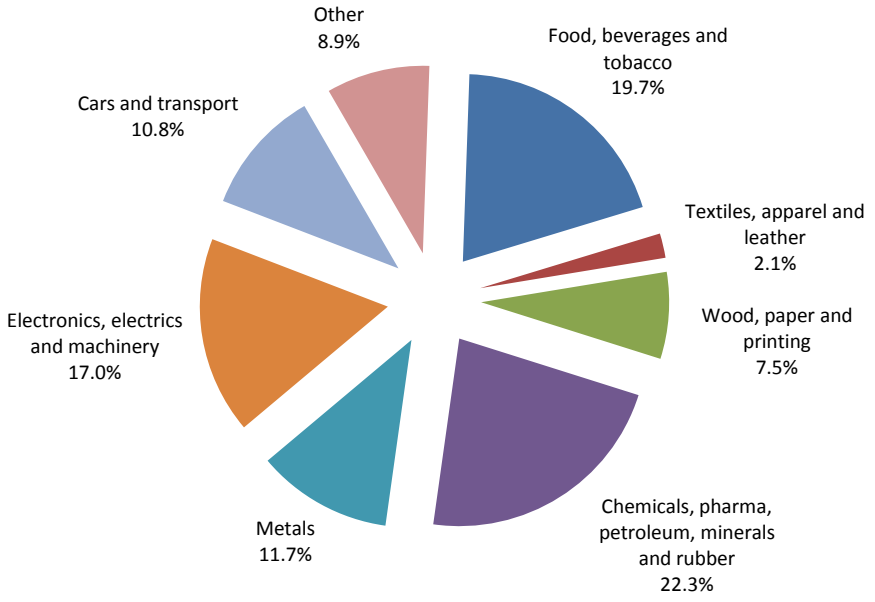
3.26.7. Conclusions

Sweden has consolidated its position as one of the most competitive economies in the world and remains an innovation leader in the EU. In the short term no particular threats to its competitive edge can be identified, but in the medium to long term it needs to consider how to address its skills needs, in particular in science, technology, engineering and mathematics (STEM) and how to avoid shortages while at the same time addressing gender imbalances among STEM graduates. Secondly, while corporate R&D investments (BERD) are still high by international standards, in recent years they have fallen as a result of the relocation of multinational corporations. Moreover, the poor take-up and commercialisation of research results remains a weakness of the Swedish R&D system. As recommended under the 2012 European Semester, the forthcoming research and innovation bill needs to address these shortcomings.

3.27. United Kingdom

Note: In the graph, data are presented in such a way that data bars pointing to the right (left) always indicate performance which is better (weaker) than the EU average.

Sectoral specialisation of manufacturing – United Kingdom (2009)



Note : No data available for sectors C11 (beverages) and C12 (tobacco products)
Source: Eurostat

3.27.1. Introduction

The manufacturing sector in the United Kingdom contributes 10.8 % of the value added, compared to the EU average of 15.5 % in 2011. The UK is specialised in high-technology manufacturing industries such as aerospace, pharmaceuticals and electronics.

The crisis has posed challenges to the growth and competitiveness of the UK economy, made more acute by the need for a simultaneous budget consolidation. However, the Government is implementing policies aiming at delivering long-term growth and increasing competitiveness.

The UK has one of the best-rated business environments in Europe, which contributes to its competitiveness. The UK service exports have continued to perform well, although a negative net export position in trade in goods continues, despite a significant fall in the pound in 2008. Currently UK firms do not export enough to the fastest-growing markets for goods. There is potential to address these challenges through policies focusing on innovation, access to finance, infrastructure, skills and planning reform that would address many of the competitiveness bottlenecks in the UK economy.

3.27.2. Innovative industrial policy

Based on the Innovation Union Scoreboard 2011, the UK is classified as the best of the innovation followers. It is ranked sixth, which places it well above the EU average performance. The indicators show that UK's strengths in the research and innovation system are in human resources, in its open, excellent and attractive research system; in finance and support; and in innovative SMEs collaborating with others. On the other hand, its position is weaker in R&D expenditure by businesses; patent and trademark applications; and the extent of innovations in SMEs.

Spending on public sector science and innovation has remained a top priority despite the Government's commitment to pursue fiscal consolidation. Consequently, public sector research expenditure has not been strongly affected by the expenditure cuts. Whilst defence R&D has fallen, the main science budget and R&D in the health services have been maintained. Moreover, private sector R&D has been maintained even in the face of slower economic growth. The Government has also increased R&D tax incentives for small firms.

The Government published its new Innovation and Research Strategy in December 2011. Key aspects of the strategy are the development of seven new technology and innovation centres – so-called 'Catapults'[248] – and a focus on developing pilot and demonstration projects. Catapult centres will be set up to create a network of world-leading technology and innovation centres and to act as a bridge between academia and businesses. Thus they should help to improve the commercialisation of the strong science base. Through the creation of

[248] http://www.innovateuk.org/deliveringinnovation/catapults.ashx.

these centres the Technology Strategy Board (TSB) aims at transforming the UK's capability for innovation in specific technology areas and to spur future economic growth. Several of these centres are in sectors that support the green economy, for example the High Value Manufacturing Catapult, opened in October 2011, and an Offshore Renewable Energy Catapult, due to open by summer 2012. The first Catapult centre focuses on High Value Manufacturing and it will attract investment from the TSB for GBP 140 million over a six years period.

The Small Business Research Initiative for pre-commercial public procurement is now in its third year and is considered to have been very successful. The programme is designed to bring innovative solutions to specific needs of the public sector by engaging SMEs in an open competition for funds to bring new ideas and undertake innovation projects.

Despite its good ranking, the UK has scope to improve its innovation performance. It should be acknowledged that the Government policies are targeting the identified deficiencies in business research and innovation, and in SMEs' ability to introduce new and innovative products to the markets.

3.27.3. Sustainable industry

Structural reforms that seek to make the economy greener are necessary to improve the sustainability of the UK economy, but they also provide important growth opportunities. The UK is well-placed to further benefit from this. Its energy intensity fell slightly between 2000 and 2010, and its energy consumption is relatively low when compared to many other Member States, which is reflected also in the slightly lower than average CO_2 emissions. This partly reflects the low share of manufacturing, and any increase in manufacturing and exports could put upward pressure on carbon emissions.

Although the UK scores well overall in the indicators related to sustainable industry, the relative performance of exports of environmental goods[249] could be examined as in 2011 their share of total exports was 0.63 % for the UK against an EU average of 0.71 %. In addition, investments in environmental protection are relatively low, though this may reflect the low share of manufacturing industry in GDP and hence be a consequence of the UK's industrial composition.

The UK Government is committed to moving the economy onto a greener footing. It has taken a range of actions to achieve this, underlining the growth opportunities available. In the publication 'Enabling the transition to a green economy'[250] the Government sets out its initiatives and emphasising the necessary dialogue with businesses to draw the benefits from the new opportunities that greening will open up.

The Green Investment Bank[251], which will have borrowing powers from 2015-16, is one of these initiatives. The overall operational remit of the Bank will be to focus on green infrastructure, including energy efficiency and subject to State Aid approval at least 80 % of the funds committed by the Bank over the next Spending Review period will be invested in the following priority sectors:

- Offshore wind power generation;
- Commercial and industrial waste processing and recycling;
- Energy from waste;
- Non-domestic energy efficiency including on-site renewables;
- Support for the Green Deal[252].

The Government emphasises that the transition to a green economy must involve the heavy industries. In order to do so, the Energy Intensive Industries package, worth GBP 250 million, will offer support to a wide range of energy intensive industries to help them to remain competitive in the UK and to reduce emissions where possible, while waiting for innovations that will significantly contribute to decarbonising the sectors.

Last year the Government published a white paper on Electricity Market Reform[253] outlining its intentions in energy policy, in particular proposing a set of policy measures to ensure an energy mix that enables the UK to achieve its 15 % renewables target, at the same time attracting investment, and limiting its impact on consumers. A large part of the existing electricity generation capacity is nearing the end of its life, or needs upgrading over the next ten years. The challenge is to install adequate new generation capacity, to meet climate change obligations, and to avoid excessive rises in energy costs for industry and consumers.

[249] According to the Eurostat definition, Eco-industries are: 'activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air and soil, as well as problems related to waste, noise and eco-systems'.

[250] http://www.businesslink.gov.uk/bdotg/action/detail?itemId=1096705244&type=ONEOFFPAGE.

[251] http://www.bis.gov.uk/greeninvestmentbank.

[252] The Green Deal is a government initiative that is designed to get business and home owners to employ more green measures in their buildings.

[253] http://www.decc.gov.uk/en/content/cms/legislation/white_papers/emr_wp_2011/emr_wp_2011.aspx .

3.27.4. Business environment

The UK is rated as the most attractive country in the EU to do business in, and the World Bank 'Doing Business' report ranks it high in almost all the areas of the business environment (including insolvency procedures, legal framework for finance, investor protection). However, a widely recognised weakness is access to finance as the crisis-stricken banks have restricted access to credit, especially for SMEs. Improving the availability of bank and non-bank financing to the private sector is therefore a priority, and it has been included in the country-specific recommendations of the European Semester 2012 for the UK[254]. At the same time, the UK's export position has remained persistently negative, reflecting the problems of external competitiveness to which the relatively low skills base, lack of investment, and problems in the planning system have contributed.

Further, a general improvement for the business environment could be also achieved enhancing the quality and the capacity of UK's network infrastructure[255], in particular in transport and energy. To this end the Government published a National Infrastructure Plan in November 2011, which establishes a new strategy for meeting the infrastructure needs of the UK economy and sets out a pipeline of over 500 public and private infrastructure projects worth in excess of GBP 250 billion.

The Government is aiming to boost private infrastructure investment, in part to offset a sharp fall in the public sector net investment caused by the fiscal consolidation efforts. The plan aims to develop appropriate financing mechanisms, improve investment confidence and to enable increased efficiencies from complementary investments. This included a Memorandum of Understanding with the National Association of Pension Funds to develop a pension investment platform and the establishment of an Insurers' Infrastructure Investment Forum. The Government is also targeting institutional investors, including Sovereign Wealth Funds and overseas pensions funds, to draw investment for major UK projects. The effectiveness of this approach in attracting private investment remains to be seen.

It is widely recognised that problems in the spatial planning system have been a barrier to investment. The long delays and suboptimal investment decisions raise both the costs for new construction and the prices of existing property. Simplifying and streamlining the planning system could make capital allocation more efficient and provide a boost for growth and competitiveness.

Access to finance

Access to finance is an area of major concern in the UK, especially with regard to SMEs. The difficult situation in the financial markets has contributed to a striking deterioration of SMEs' access to bank lending.

The Government has adopted a series of measures to tackle the problem. In November 2011 it introduced an initiative to provide up to GBP 21 billion for businesses that have no access to credit. In March 2012, it launched the National Loan Guarantee Scheme (NLGS) in order to provide cheaper bank financing to small and medium enterprises.

Furthermore, the Government is looking at restructuring the banking sector based on the recommendations of the Independent Commission on Banking (ICB). In particular, the proposals include a structural separation between retail banking and wholesale/investment banking.

In June 2012, the Bank of England and the Government announced a 'funding for lending' scheme that would provide funding to banks for an extended period of several years, at rates below current market rates and linked to the performance of banks in sustaining or expanding their lending to the UK non-financial sector during the period of heightened uncertainty.

On the equity investment side, the Government is building on the UK's pre-eminent position in the European venture capital markets by using public funds for venture capital investments, and through the Enterprise Capital Funds for capital requirements under GBP 2 million. The private sector Business Growth Fund makes investments between GBP 2 million and GBP 10 million.

Regulatory and support environment

The Government has sought to improve the regulatory environment, in particular by giving derogations for micro-enterprises and introducing the 'one in, one out' principle whereby the introduction of new regulatory burdens on business means the removal of regulations currently on the statute books which have equivalent costs to business. The Government has also launched the 'Red Tape Challenge' website, which aims to tackle the current stock of regulation by inviting the public, business and the voluntary and community sector to comment on which regulations should

[254] http://ec.europa.eu/europe2020/pdf/nd/csr2012_uk_en.pdf .
[255] As also included in the country-specific recommendations of the 2012 European Semester for the UK.

stay, be improved, or be scrapped altogether. Around 1 500 regulations have been examined through the Red Tape Challenge, over half of which will be scrapped or improved.

For micro-enterprises, the most important outcome could be that Government departments pay appropriate attention to the needs of micro-enterprises when designing legislation. Moreover, the 'one in, one out' policy was seen as being useful in getting ministries to seriously examine the burden of existing legislation whenever they were considering new measures.

Further, the new 'Growth Accelerator' programme (BCG), aims to support the most promising high-growth SMEs and boost their growth. It is designed to increase the number of businesses that achieve genuine high growth; the Government aims to invest around GBP 200 million in the programme to achieve these objectives. The programme is to be coordinated nationally but be delivered at a local level, aiming to provide high-quality coaching and support for up to 10 000 SMEs a year. The coaching is aimed, in particular, for senior management teams to help them to develop and implement their strategies. Overall, this should help SMEs with high growth potential to overcome the challenges of growth in areas like sales, finance or exploiting innovation.

3.27.5. Services sector

The UK level of market regulation in professional services is not an obstacle to entry[256]. It should be noted that the UK practice is to regulate professional titles rather than access to the professions themselves.

A Services Policy Unit has been established in the Business, Innovation and Skills Department (BIS) to work with professional and business services in order to guide government actions over the next decade. The interim report 'Professional and Business Services: a 2020 Vision for Growth' was published in March 2012, and highlights the impact and opportunities created by the changes in the global markets, climate change and sustainability, and improvements in information and communication technologies. A broad-based programme to improve the business environment for business services was set out.

3.27.6. Public administration

The UK public administration scores well above the EU average according to the World Bank's 'Government Effectiveness Indicator'. The perceived quality of the public services including the quality of the civil service and of policy implementation is also well above the EU average.

The indicator on the use of regulatory impact assessments is high above the average. In addition, all the eight main business-related services included in the index are available online. Thus, the public administration can be classified as a 'modern' public administration.

Corruption and fraud are not perceived to be major problems and individual experiences of bureaucratic corruption related to the use of public services are limited to 2 % of cases, compared to an average of 10 % across the EU.

To start a business and obtain licenses is also easier, slightly faster and far less expensive in the UK than in the Member States on average. The average cost of starting a business is a bit more than 5 % of per capita income in the Member States on average; in the UK it is only 0.7 %.

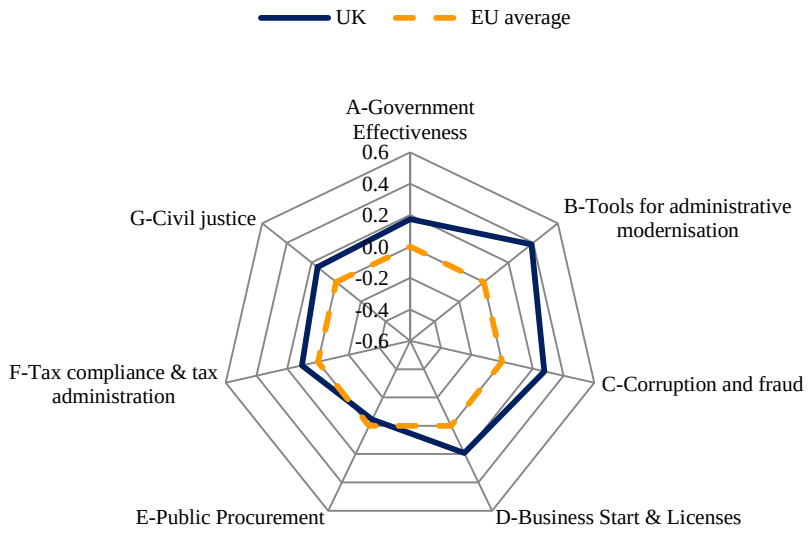
The composite public procurement index is slightly below average, signalling some scope for improvement. The sub-indices show that especially the firms' cost to take part in government procurements are higher than average.

The time required to prepare tax returns is substantially lower than the EU average. It amounts to only 110 hours per year for the model companies, as compared to the EU average of 208 hours per year. Further, the Government seeks to make taxes even simpler and easier to pay. The remit of the Office of Tax Simplification (OTS), set up in July 2010, is to address specifically these issues, particularly from the viewpoint of smaller firms. They have published a report called 'The Small Business Tax Review', providing advice on how to simplify the tax system.

The score measuring the efficiency of the civil justice system is also above the EU average. However, although the time to enforce contracts is far shorter than the EU average (399 days vs. 556 days), the typical costs are higher requiring 24.8 % of the claim value, compared to the average of 20.6 %. Insolvency procedures are substantially faster than the EU average and the perceived independence of the judiciary is very high.

[256] Product Market Regulation Database, OECD (2011), using data from 2008.

Overall profile of public administration



Source: WIFO

The Government's efforts to consolidate its budget have led to actions to reduce expenditure in the public administration and at the same to time streamline management. Public sector employment numbers have been reduced and the Regional Development Agencies have been abolished, which led to the closing of regional 'Business Link', a valuable source of information for small businesses. The replacement, the national 'Business Link' website has been launched towards the end of 2011, providing on-line support, guidance and advice for businesses; it also allows companies to register a legal status online for just GBP 18.

3.27.7. Conclusions

Overall, the UK has an excellent business environment that is strengthened by the quality of its public administration. However, the crisis that hit the UK banking sector hard has created a major challenge in access to finance, in particular for SMEs. To improve the situation, the Government has adopted a series of policy initiatives seeking to get the banks to lend again, but only time and the start of the upturn will tell how successful these efforts have been in facilitating the financing of SMEs.

The productivity is lower compared to main competitors, which is reflected in the persistently negative net export position. This reflects underlying weaknesses in skills, investment and the planning system. UK businesses could also benefit from improvement in energy and infrastructure networks. However, given the difficult macroeconomic context and the commitment to fiscal consolidation, a further decrease in public sector investment in infrastructure is expected for 2014-2015. The cumulative effects of low investment in the quality and capacity of the infrastructure have the potential to increasingly hamper the ability of businesses to rely on it in their operations and planning. To enable private infrastructure investment, as foreseen by the National Infrastructure Plan is therefore essential.

4. ANNEX: METHODOLOGY AND INDICATORS USED

4.1. Definitions of the indicators

TABLE: Indicators

Name of Indicator		Definition
Innovative industrial policy		
	Labour productivity per hour worked	Gross Domestic Product in Purchasing Power Standards per hour worked relative to EU-27 (EU-27=100) *Source: Eurostat*
	Labour productivity per person employed	Gross Domestic Product in Purchasing Power Standards per person employed relative to EU-27 (EU-27=100) *Source: Eurostat*
	Labour productivity in manufacturing per person employed	Gross value added in Purchasing Power Standards per person employed *Source: Eurostat*
	Unit labour costs in manufacturing	Development (2000=100) of the following ratio: Total compensation of employees in manufacturing (in nominal values) divided by total valued added in manufacturing (in constant prices). *Source: OECD*
	Percentage of employees in manufacturing with high educational attainment	Data are calculated from the annual labour force survey using the International Standard Classification of Education (ISCED), levels 5 and 6 – i.e. employees in manufacturing with first and second stages of tertiary education. *Source: Eurostat*
	Tertiary graduates in science and technology per 1000 of population aged 20-29	Number of new science and technology graduates (levels 5 and 6 of the International Standard Classification of Education-ISCED97) divided by 20-29 years old population and then multiplying by 1000. The term 'science' includes the following fields of education (ISCED): life sciences, physical sciences, mathematics, statistics and computing, while technology refers to graduates in engineering, manufacturing and construction. The indicator includes new tertiary graduates in a calendar year from both public and private institutions completing graduate and post graduate studies compared to the age group of 20-29 years old population that corresponds to the typical graduation age in most countries. *Source: Eurostat*
	R&D performed by businesses	The indicator covers all expenditures for R&D performed within the business enterprise sector (BERD) on the national territory during a given period, regardless of the source of funds. The data on this indicator are gathered by Eurostat which applies the guidelines laid out in the Frascati Manual, the 'Proposed standard practice for surveys of research and experimental development' (OECD, 2002). Note: Gross domestic expenditure on R&D is composed of Business

		enterprise expenditure on R&D, Higher education expenditure on R&D, Government expenditure on R&D and Private non-profit expenditure on R&D. *Source: Eurostat*
	Public R&D expenditure	The indicator covers all R&D expenditures in the government sector (GOVERD) and the higher education sector (HERD).
	Country share of total EU goods exports	International trade in goods covers both extra- and intra-EU trade. Extra-EU trade statistics cover the trading of goods between Member States and non-member countries. Intra-EU trade statistics cover the trading of goods between Member States. 'Goods' means all movable property including electricity. *Source: Eurostat.*
	Share of high-tech exports	Share (in %) of intra- and extra-EU27 exports of all high technology products in total intra- and extra-EU27 exports. High technology products comprise: Aerospace, Computers office machines, Electronics-telecommunications, Pharmacy, Scientific instruments, Electrical machinery, Chemistry, Non-electrical machinery, Armament. *Source: Eurostat.*
	Trade balance of goods (% of total exports of goods)	Net exports (exports minus imports) of goods divided by total exports of goods (all in current prices). The aggregate EU trade balance includes trade with third countries only. *Source: Eurostat.*
	Trade balance of services (% of total exports of services)	Net exports (exports minus imports) of services divided by total exports of services (all in current prices). The aggregate EU trade balance includes trade with third countries only. *Source: Eurostat.*
	Real effective exchange rate	Nominal effective exchange rate deflated by nominal unit labour costs (total economy) relative to a panel of 36 countries (EU-27 + 9 other industrial countries: Australia, Canada, United States, Japan, Norway, New Zealand, Mexico, Switzerland, and Turkey). 1999=100 for all countries. A rise in the index suggests deterioration in competitiveness. The figure for each country is calculated against the rest of the countries belonging to the panel. The EU aggregate figure is calculated against the non-EU-27 countries belonging to the panel. *Source: European Commission (DG ECFIN)*
	Key enabling technologies (KETs)	KETs are composed of six core technologies: micro-/nanoelectronics, nanotechnology, photonics, advanced materials, industrial biotechnology and advanced manufacturing technologies. *Source: Calculations by European Commission/ZEW/NIW based on Patstat and UN Comtrade data*
Sustainable industry		
	Energy intensity in industry (including construction) and the energy sector	Energy consumption in kg of oil equivalent per euro of gross value-added (chain-linked volumes, reference year 2000, at 2000 exchange rates). Energy consumption refers to: B_101800 - Final energy consumption in industry (including construction) + B_101600 - Final Non-energy consumption + B_101300 - Consumption in Energy Sector. GVA refers to NACE sections C: Mining and Quarrying, D: Manufacturing, E: Electricity, Gas and Water Supply and F:

		Construction. *Source: Eurostat ("environment and energy' and 'national accounts")*
	CO2 intensity in industry (including construction) and the energy sector	CO2 emissions in kg per euro of gross value-added (chain-linked volumes, reference year 2000, at 2000 exchange rates). *Sources:* *European Environment Agency* for the figures on the CO2 emissions. The relevant categories are 1.A.1. (Energy Industries) + 1.A.2. (Manufacturing Industries and Construction) + 2. (Industrial Processes) + 3. (Solvent and Other Product Use).*Eurostat* for the figures regarding GVA. GVA refers to NACE sections C: Mining and Quarrying, D: Manufacturing, E: Electricity, Gas and Water Supply and F: Construction.
	Environment Protection Expenditures in industry (% of GDP)	The Classification of Environmental Protection Activities (CEPA 2000) distinguishes nine environmental domains: protection of ambient air and climate; wastewater management; waste management; protection and remediation of soil, groundwater and surface water; noise and vibration abatement; protection of biodiversity and landscape; protection against radiation; research and development and other environmental protection activities. Industry excludes recycling. *Source:Eurostat*
	Exports of environmental goods	Intra- and extra-EU27 exports of goods from 'eco-industries' divided by total intra- and extra-EU27 exports of goods (in nominal values). The notion of 'eco-industry' refers to sectors whose products measure, prevent, limit, minimise or correct environmental damage. The trade codes considered to cover eco-industry goods are those identified in the Ecorys study on the 'Competitiveness of the EU eco-industry' (pages 190/191) of 22 October 2009, carried out for DG Enterprise and Industry. Due to the reclassification of the Comext products codes, please find the updated list below (TABLE: Comext eco-products codes and descriptions) *Source: European Commission (DG Enterprise and Industry) calculations on the basis of Eurostat/COMEXT data.*
Business Environment and entrepreneurship		
	Starting a business (days)	Time needed to start a business, recorded in calendar days. It is the median duration that incorporation lawyers indicate as necessary. It is assumed that the minimum time required for each procedure is one day. *Source: World Bank Doing Business.*
	Business environment score	Score calculated from Doing business data with seven indicators: Starting a business, Dealing with construction permits, Registering property, Getting credit, Protecting investors, Enforcing contracts and Resolving insolvency. Each indicator is normalised to a figure between 0 and 1, where 0 is the worst possible member State performance and 1 the best one. The country score for a given year is the simple average of the seven figures. *Source: World Bank Doing Business*
	Enterprise survival rate after 2 years	Number of enterprises started in year *t* and which still existed in year *(t+2)*, divided by the total number of enterprises that started in year *t* *Source: Eurostat*

	Business churn	Sum of the number of enterprise starts and exits ("births' plus 'deaths") in the reference period (year *t*), divided by the total number of enterprises active in year *t*. *Source: Business Demography (Eurostat).*
	Share of high-growth enterprises	Enterprises with average annualised growth greater than 20 % in the number of employees, over a three-year period, and with ten or more employees at the beginning of the observation period, divided by the total number of active enterprises at the beginning of the three year period. *Source : Eurostat*
	Early stage financing	The indicator measures early stage financing as % of GDP. Venture capital investment data are broken down into 'early stage' (seed and start-up) and 'expansion and replacement' capital. Seed capital is defined as financing provided to research, assess and develop an initial concept before a business has reached the start-up phase. Start-up is defined as financing provided for product development and initial marketing, manufacturing and sales. *Source: Eurostat, using data from the European Private Equity and Venture Capital Association (EVCA).*
	Access to Bank Lending for SMEs	Score calculated from the Eurobarometer survey data with six indicators expressed as the percentage of respondents to the following questions: Net increase in the need for bank loans in the past six months; Not applying for a loan in the past six months for fear of rejection; Applying for a loan in the past six months but being rejected, or rejecting the offer because of too high costs; Net improvement in the availability of loans in the past six months; Net increase in the size of bank loans in the past six months; Net improved willingness of banks to provide a loan in the past six months. 0 indicates the worst possible situation and 1 the best possible one. *Source: Flash Eurobarometer*
	Duration of payments by public authorities	Effective payment duration in days. *Source: European payment Index by Intrum Justitia.*
	Venture capital	Venture Capital: Data measure all venture capital investment as a percentage of GDP. *Source: European Private Equity and Venture Capital Association (EVCA)*
	Licenses	The indicator measures the time (in days) required to obtain licenses following the Commission's methodology and models, i.e.: the licenses required for 5 'benchmark' model companies: Hotel with a restaurant, Plumbing company, Wholesale or retail distributor, Manufacturer of steel products, Manufacturere of small IT devices. *Source: Graph adapted by the European Commission based on the study: Business Dynamics: Start-ups, Business Transfers and Bankruptcy, Final Report, January 2011*
	Number of Hours to Comply Across the European Union	Time is recorded in hours per year. The indicator measures the time taken to prepare, file and pay three major types of taxes and contributions: the corporate income tax, value added or sales tax, and labour taxes, including payroll taxes and social contributions. *Source: European Commission based on the study PWC, Paying Taxes 2012, The Global Picture*

Services sector		
	Electricity prices for medium-sized enterprises	Average national price in Euro per kWh excluding taxes, applicable for the first semester of each year for medium-sized industrial consumers (annual consumption between 500 and 2000 MWh). The indicator does not cover small enterprises for reasons of data availability, nor large enterprises, since the latter often have individual contracts with energy providers. Prices refer to the second half of the year. *Source: Eurostat*
	Infrastructure expenditures per inhabitant	Sum of investment and maintenance expenditures on rail, road, inland waterways, maritime ports and airports infrastructure. *Source: OECD International Transport Forum Statistics.*
	Satisfaction with the quality of infrastructure	Average mark given by business executives in a World Economic Forum survey to the quality of rail, roads, ports and airports (1 = underdeveloped; 7 = extensive and efficient by international standards). *Source: Global Competitiveness Report 2011-2012 of the World Economic Forum.*
	Availability of high-speed broadband infrastructure	Percentage of broadband lines with speed above 10 MBps *Source: European Commission, DG INFSO Communications Committee Working Document*
	Services in the overall economy	Share of economic sectors in total gross value added (at basic prices) belonging to the NACE categories: A+B; C+D+E; F; G+H+I; J; K; L+M+N+O+P+Q *Source: Eurostat, National Accounts*
Public administration		
	Legal and regulatory framework	Average evaluation (0 = negative; 10 = positive) of the statement '*The legal and regulatory framework encourages the competitiveness of enterprises*' in an IMD survey of businesspeople. *Source: IMD (International Institute for Management Development).*
	Burden of government regulation	Average mark given by business executives in a World Economic Forum survey to the question '*How burdensome is it for businesses in your country to comply with governmental administrative requirements (e.g., permits, regulations, reporting)?*' (1 = extremely burdensome; 7 = not burdensome at all) *Source: Global Competitiveness Report 2011-2012 of the World Economic Forum*
	E-government usage by enterprises	Share of enterprises using the internet to interact with public authorities (i.e. having used the Internet for one or more of the following activities: obtaining information, downloading forms, filling-in web-forms, full electronic case handling). Data are expressed in % of enterprises with 10 or more persons employed and belonging to the NACE 2.0 sections C, D, E, F, H, I, J, L, division 69-74 and group 95.1. *Source: Eurostat, Survey on ICT usage and e-commerce in enterprises*

TABLE: Comext eco-products codes and descriptions

OLD Comext code	NEW Comext code	Product description
84 10 11 00	84 10 11 00	HYDRAULIC TURBINES AND WATER WHEELS, OF A POWER <= 1.000 KW (EXCL. HYDRAULIC POWER ENGINES AND MOTORS OF HEADING 8412)
84 10 12 00	84 10 12 00	HYDRAULIC TURBINES AND WATER WHEELS, OF A POWER > 1.000 KW BUT <= 10.000 KW (EXCL. HYDRAULIC POWER ENGINES AND MOTORS OF HEADING 8412)
84 10 13 00	84 10 13 00	HYDRAULIC TURBINES AND WATER WHEELS, OF A POWER > 10.000 KW (EXCL. HYDRAULIC POWER ENGINES AND MOTORS OF HEADING 8412)
84 10 90 90	84 10 90 00	PARTS OF HYDRAULIC TURBINES AND WATER WHEELS N.E.S.; HYDRAULIC TURBINE REGULATORS
84 13 70 21	84 13 70 21	SUBMERSIBLE PUMPS, SINGLE-STAGE
84 17 80 90	84 17 80 30	OVENS AND FURNACES FOR FIRING CERAMIC PRODUCTS
	84 17 80 50	OVENS AND FURNACES FOR FIRING CEMENT, GLASS OR CHEMICAL PRODUCTS
84 17 80 10	84 17 80 70	INDUSTRIAL OR LABORATORY FURNACES, INCL. INCINERATORS, NON-ELECTRIC (EXCL. FOR THE ROASTING, MELTING OR OTHER HEAT TREATMENT OF ORES, PYRITES OR METALS, BAKERY OVENS, OVENS AND FURNACES FOR FIRING CERAMIC PRODUCTS, OVENS AND FURNACES FOR FIRING C
84 17 90 00	84 17 90 00	PARTS OF INDUSTRIAL OR LABORATORY FURNACES, NON-ELECTRIC, INCL. INCINERATORS, N.E.S.
84 19 11 00	84 19 11 00	INSTANTANEOUS GAS WATER HEATERS (EXCL. BOILERS OR WATER HEATERS FOR CENTRAL HEATING)
84 19 19 00	84 19 19 00	INSTANTANEOUS OR STORAGE WATER HEATERS, NON-ELECTRIC (EXCL. INSTANTANEOUS GAS WATER HEATERS AND BOILERS OR WATER HEATERS FOR CENTRAL HEATING)
84 21 29 90	84 21 29 00	MACHINERY AND APPARATUS FOR FILTERING OR PURIFYING LIQUIDS (EXCL. SUCH MACHINERY AND APPARATUS FOR WATER AND OTHER BEVERAGES, OIL OR PETROL-FILTERS FOR INTERNAL COMBUSTION ENGINES AND ARTIFICIAL KIDNEYS)
84 21 39 30	84 21 39 20	MACHINERY AND APPARATUS FOR FILTERING OR PURIFYING AIR (EXCL. ISOTOPE SEPARATORS AND INTAKE AIR FILTERS FOR INTERNAL COMBUSTION ENGINES)
84 21 39 71	84 21 39 60	MACHINERY AND APPARATUS FOR FILTERING OR PURIFYING GASES (OTHER THAN AIR), BY A CATALYTIC PROCESS (EXCL. ISOTOPE SEPARATORS)
84 21 39 51 84 21 39 55 84 21 39 99	84 21 39 80	MACHINERY AND APPARATUS FOR FILTERING AND PURIFYING GASES (OTHER THAN AIR AND EXCL. THOSE WHICH OPERATE USING A CATALYTIC PROCESS, AND ISOTOPE SEPARATORS)
84 21 99 00	84 21 99 00	PARTS OF MACHINERY AND APPARATUS FOR FILTERING OR PURIFYING LIQUIDS OR GASES, N.E.S.
85 41 40 00	85 41 40 10	LIGHT EMITTING DIODES
85 41 40 90 85 41 40 91	85 41 40 90	PHOTOSENSITIVE SEMICONDUCTOR DEVICES, INCL. PHOTOVOLTAIC CELLS
90 26 80 91	90 26 80 20	ELECTRONIC INSTRUMENTS OR APPARATUS FOR MEASURING OR CHECKING VARIABLES OF LIQUIDS OR GASES, N.E.S.
90 26 80 99	90 26 80 80	NON-ELECTRONIC INSTRUMENTS OR APPARATUS FOR MEASURING OR CHECKING VARIABLES OF LIQUIDS OR GASES, N.E.S.
90 27 10 10	90 27 10 10	ELECTRONIC GAS OR SMOKE ANALYSIS APPARATUS
90 27 10 90	90 27 10 90	NON-ELECTRONIC GAS OR SMOKE ANALYSIS APPARATUS

4.2. Public administration

4.2.1. Indicators used in the spider diagram illustrating the links between public administration and competitiveness (section on public administration in country chapters)

The spider diagram illustrates, for each country, a summary assessment of the performance against the EU average by public administration – competitiveness link, highlighting the weaknesses/strengths. It is based on the framework to assess the quality of public administration for competitiveness purposes developed by the 2012 Study on *Excellence in public administration for competitiveness in Member States* realised for DG Enterprise and Industry by WIFO (Austrian Institute of Economic Research).
The high number of (potential) interactions between the public administration and enterprises, as well as the various channels of transmission through which administrative quality impacts a country's competitiveness, make it difficult to fully capture the complexity of this relationship. Nevertheless, the aim was to construct an assessment framework that covers the characteristics of excellence in public administration and its links to competitiveness in a concise and comparable way with a tractable number of indicators.

Three general links were distinguished, which cover overarching influences that affect the quality of the public administration and its relation to the business environment:

A. General governance

B. Tools for administrative modernisation

C. Corruption and fraud.

'General governance' captures the multi-dimensional concept of administration quality. '*Tools for administrative modernisation'* refers to the use of instruments to enhance the capacities of the administration and maps developments in the general sophistication of service provision. '*Corruption and fraud'* captures assessments of the extent to which the powers of government and administration are exercised for private gain. The link covers all forms of corruption, including state capture by vested private interests.

In addition, four more specific links were considered, concerning issues of:

D. Starting a business and licensing

E. Public procurement

F. Tax compliance and tax administration

G. Efficiency of civil justice.

These links explicitly relate the quality of an administration to the business environment, capturing the most important interactions and contact points between the public administration and private companies. The analyses do not focus on industry-specific interactions between public administration and certain branches. Rather, the links have been selected with the intention of drawing a broad and at the same time concise picture of the degree of excellence of public administration at the Member State level.

The broadness of the links requires the selection of more than one representative indicator in order to comprehensively capture the different aspects of how the quality of public administration affects the overall business environment. Although the selection of the indicators for each of the links is driven by the intention to draw a broad and comprehensive picture of the quality of public administration, it should be noted that the selection of any one indicator is restricted by the availability, quality, country coverage, timeliness and representativeness of the data. Thus, certain prudence is required when interpreting the results.

The selected indicators are described in the following table:

TABLE: The assessment framework: links, indicators and data sources

EPA-competitiveness link	Unit	Data source
A) General governance		
1) Government effectiveness	Index range -2.5 to +2.5, higher values indicate better performance	World Bank - Worldwide Governance Indicators
B) Tools for administrative modernisation		
1) Availability of 8 business related E-Government services	% of total of 8 services	European Commission: E-Government Benchmarking Reports
2) Use of Evidence-Based Instruments	Index 0 to 10, high values indicate intensive reliance	Bertelsmann Stiftung - Sustainable Governance Indicators
3) Post-bureaucracy Index	Index 0 to 100, high values indicate intensive reliance	Demmke and Moilanen (2010)
C) Corruption and fraud		
1) Diversion of public funds	Index on a scale from 1 (very common) to 7 (never occurs)	WEF Global Competitiveness Report 2011-12
2) Irregular payments and bribes	Index on a scale from 1 (very common) to 7 (never occurs)	WEF Global Competitiveness Report 2011-12
3) Experience of corruption	% share of respondents reporting an incident	European Commission: Special Eurobarometer
D) Starting a business and licensing		
1) Fully operational one stop shop to start up a company	does not exist =0, does exist = 1	European Commission: Monitor start-up procedures
2) Time required to start up a company	number of calendar days	World Bank – Doing Business
3) Cost to start up a company	% of income per capita	World Bank – Doing Business
4) Index of total licensing complexity	range 1 to 26, high values indicate high complexity	European Commission (DG Enterprise): Business Dynamics
E) Public procurement		
1) Total person-days per individual firm per competition	authority days + (firm days * average number of bids)	European Commission: Cost and effectiveness of Public procurement
2) Typical cost of a competition for firms per competition	% of per capital GDP	European Commission: Cost and effectiveness of Public procurement
3) Average delay in payments from public authorities	days	Intrum Justitia - European Payment Index
F) Tax compliance and tax administration		
1) Time to prepare and file tax returns and to pay taxes	hours per year	World Bank - Paying Taxes
2) Administrative costs of taxation	per 100 units of revenue collection	OECD – Tax Administration in OECD and Selected Non-OECD Countries
G) Efficiency of civil justice		
1) Enforcing contracts: Time	Calendar days	World Bank – Doing Business
2) Enforcing contracts: Cost	Percentage of claim	World Bank – Doing Business
3) Resolving insolvency: Time	Calendar days	World Bank – Doing Business
4) Independent judiciary	Index from 1 to 7, high values indicate independence	WEF - Global Competitiveness Report 2011-12

4.2.2. Normalisation and computation of composite indicators

Except for link (A) all links are described by more than one indicator. This requires constructing composite indicators in order to compare the performance of member states at the 'link-level'. The construction of indicators relies on the good practice outlined in the *Handbook on Constructing Composite indicators: Methodology and User Guide* (OECD/EC JRC, 2008). In a first step, raw indicator values were normalized into the [0,1] range using the min-max method. Higher scores represent a better performance, or, in the case of tools, the enhanced use of instruments associated with a modernised public administration:

For indicators where high values indicate better performance, e.g. index for independent judiciary

$$normalized\ value_i = \frac{(value_i - minimum)}{(maximum - minimum)}.$$

For indicators where low values indicate better performance, e.g., experience of corruption,

$$normalized\ value_i = \frac{(maximum - value_i)}{(maximum - minimum)}.$$

'Minimum' refers to the minimal value of an indicator, 'maximum' to its maximum value. We considered also other normalization techniques (z-scores). Results using different methods of normalization did not lead to different results.

Potentially problematic indicators that could bias the composite indicators as those having skewness greater than 2 and a kurtosis greater than 3.5 were identified using the normalized data. Two problematic indicators were identified:

- In the case of indicator (F.2) *Administrative costs per 100 units of revenue collection* the observation for Cyprus was winsorised (the country value for Greece was assigned the next highest value).
- For (G.1) *Enforcing contracts: Time*, das was leaved as it is. This entails the risk that composite indicator for Efficiency of Judicial Systems for Italy and Slovenia may be biased.

In addition, a limited number of indicators are unavailable for some countries. For the purpose of computing composite indicators, the missing values were imputed (using cross-sectional regression based imputation). The following indicators were concerned:

- (B.2) *Use of Evidence-Based Instruments* - 8 missing values
- (E.3) *Average delay in payments from public authorities* (in days) – one missing value for (Luxembourg), and
- (F.2) *Administrative costs per 100 units of revenue collection,* one value missing for Greece.

4.2.3. Methodological note on the introductory graph in the country chapters

The graphs present, for each indicator, the distance of the respective Member State from the EU average. This distance is expressed in terms of standard deviations, which is a common measure of the spread of observations in a distribution (in this case, a measure of the variation of Member State performance around the EU average). This enhances the comparability of the presentation of indicators with different measurement units and distributions across Member States.

The data are presented in the country graphs in such a way that a bar pointing to the right always indicates a positive performance. Likewise, a bar pointing to the left always indicates a performance below average. This is straightforward for indicators, e.g. labour productivity, where high values are strived for. However, for those indicators where low values are the objective, the data bars in the graph have been converted so that a positive deviation from the average (bar pointing to the right) represents a *lower* value of the indicator than the average. These conversions enable an easy reading of the country profiles, since all bars presenting positive values in the country profile suggest a level of performance of the respective Member State which is better than the EU average and all bars presenting negative values suggest a level of performance of the respective Member State which is below EU average.

The indicators for which such conversions have been carried out are: (1) energy intensity in industry in kg of oil equivalent per euro of gross value-added at constant prices; (2) carbon intensity per ton of oil equivalent of energy consumption; (3) electricity prices for medium-sized enterprises, (4) time required to start a business; (5) duration of payments by public authorities.

The indicators presented in the above table (under 1.2) for which the distance from the EU average would not be meaningful (exchange rates and trade balances) are quoted in the text.
The EU averages used to show the respective standard deviations in the country profiles are the values for the EU as a whole and, hence, weighted averages of Member States performance. For the following indicators, however, unweighted arithmetic averages have been used due to missing EU totals: share of science and technology graduates, satisfaction with quality of infrastructure, legal and regulatory framework, time required to start a business, business environment score, enterprise survival rate, business churn, early stage financing, access to bank lending, duration of payments by public authorities, share of high-growth enterprises as percent of all enterprises.

Data used to show the respective standard deviations in the country profiles are the values for the EU as a whole and, hence, weighted averages of Member States performance where data are available. For the following indicators, however, unweighted arithmetic averages have been used due to missing EU totals: share of science and technology graduates, satisfaction with quality of infrastructure, legal and regulatory framework, time required to start a business, business environment score, enterprise survival rate, business churn, early stage financing, access to bank lending, duration of payments by public authorities, share of high-growth enterprises as percent of all enterprises.

4.2.4. The country codes used in the tables

Country	Code	Country	Code
Belgium	BE	Luxembourg	LU
Bulgaria	BG	Hungary	HU
Czech Republic	CZ	Malta	MT
Denmark	DK	Netherlands	NL
Germany	DE	Austria	AT
Estonia	EE	Poland	PL
Ireland	IE	Portugal	PT
Greece	EL	Romania	RO
Spain	ES	Slovenia	SI
France	FR	Slovakia	SK
Italy	IT	Finland	FI
Cyprus	CY	Sweden	SE
Latvia	LV	United Kingdom	UK
Lithuania	LT		

4.3. Data sets

TABLE: Innovative industrial policy

Policy objective / indicators	Labour productivity per hour worked (EU27=100; 2010) Source: Eurostat	Labour productivity per person employed (EU27=100; 2010) Source: Eurostat	Labour productivity per person employed in manufacturing (1000 PPS; 2011) Source: Eurostat	% of employees in manufacturing with high educational attainment (2011) Source: Eurostat	Unit labour costs, level in manufacturing (2005 = 100; 2010) Source: OECD	Tertiary graduates in science and technology (% of 20-29 years old population; 2010) Source: Eurostat	R&D performed by businesses (% of GDP; 2010) Source: Eurostat	Share of high-tech exports in total exports (2009) Source: Eurostat	Real effective exchanges rates deflated by nominal unit labour costs (total economy) against a panel of 36 countries (1999=100; Q4 2010) Source: DG ECFIN	Trade balance of goods as % of total exports of goods (2010) Source: Eurostat	Trade balance of services as % of total exports of services (2010) Source: Eurostat
BE	136 *	128	75	29.1	107	12.2	1.3	8.8	107 *	4	10
BG	41	41	:	14.0	133 *	11.4	0.3	4.6	146	-23	39
CZ	68	73	37	8.9	89	16.5	1.0	15.2	166	5	19
DK	120	112	53	22.8	99	16.5	2.1	12.3	116	13	14
DE	124	105	68	23.0	108	14.8	1.9	14.0	88	16	-11
EE	61	69	30	22.5	114	11.3	0.8	6.9	142	-6	38
IE	126	137	153 *	39.4	72	20.1	1.2	22.1	119	48	-10
EL	78	95	49	15.5	137	12.8	0.2 *	6.6	109	-195	47
ES	108	109	69	32.5	112	13.9	0.7	4.7	113	-28	30
FR	134	116	55	26.8	110	20.4 *	1.4	19.7	108	-16	9
IT	102	109	48	8.6	116	11.3 *	0.7	6.8	114	-8	-12
CY	81	90	33	18.3	116 *	5.1	0.1	20.1	115	-511	59
LV	47	55	28	16.8	178 *	10.7	0.2	5.3	132	-23	40
LT	55	62	43	23.9	123 *	18.7	0.2	5.8	121	-13	31
LU	:	:	52 *	23.1	109	3.1	1.2	41.8	:	-22	45
HU	60	71	39	11.1	101	8.3	0.7	22.3	133	8	20
MT	83 *	91	48	8.7	103 *	8.0	0.4	43.8	117	-66	39
NL	136	113	75	21.5	103	9.2	0.9	18.4	111	10	10
AT	115	115	73	15.3	103	15.5	1.9	11.7	96	-4	32
PL	54	67	33	16.2	83	15.8	0.2	5.7	107	-11	9
PT	65	77	32	7.5	104 *	14.4	0.7	3.7	111	-55	38
RO	43	49	27 *	11.7	134 *	15.6	0.2	8.2	173	-25	-8
SI	80	80	40	14.9	106	14.8	1.4	5.5	111	-3	28
SK	75	81	50	9.7	105	18.3	0.3	5.9	177	-1	-17
FI	110	112	66	31.6	95	24.2	2.7	13.9	106	2	1
SE	116	115	69	17.1	102	14.0	2.4	14.8	99	6	27
UK	105 *	107	:	28.5	117	18.7	1.1	18.2	89	-38	33
weighted EU27	100	100	51 *	19.8		12.5	1.2	13.7	110		11
EU27 unweighted	89	92	54	19.2		13.9	1.0	13.6			
max	136	137	153	39.4	177	24.2	2.7	43.8	177	48	59
min	41	41	27	7.5	72	3.1	0.1	3.7	88	-511	-17
Standard deviation	31	25	26	8.4		4.7	0.7	10.3			

Note:
Labour productivity per hour worked - BE, MT & UK (2009)
Labour productivity per person employed in manufacturing – IE & EU (2010); RO (2009); LU (Source: STATEC)
Unit labour costs, level in manufacturing - BG, CY, LV, LT, MT, PT & RO (2008)
Share of science and technology graduates – FR (2009), IT (2008)
R&D performed by businesses - EL (2007)
Real effective exchanges rates - BE & LU values together

TABLE: Sustainable industry

Policy objective / indicators	Energy intensity in industry and the energy sector (kg oil eq. / euro GVA; reference year 2000; 2010) Source: Eurostat	CO2 intensity in industry and the energy sector (kg CO2 / euro GVA; reference year 2000; 2009) Sources: EEA, Eurostat	Environmental protection expenditure in Europe (Euro per capita and % of GDP; 2009) Source: Eurostat	Exports of environmental goods as % of all exports of goods (2011) Source: Eurostat (COMEXT)
BE	0.35	0.9	:	0.54
BG	0.83	7.6	0.8	0.19
CZ	0.42	2.9	0.8	1.11
DK	0.11	0.8	0.4	0.47
DE	0.19	1.0	:	1.24
EE	0.35	5.8	0.7	0.20
IE	0.04	0.4	:	0.29
EL	0.25	2.6	0.4	0.43
ES	0.22	1.0	0.3	0.60
FR	0.24 *	0.6 *	0.2	0.48
IT	0.18	0.5	:	0.50
CY	0.17	2.5	0.4	4.66
LV	0.39	4.1	0.7	0.15
LT	0.44	0.6	0.5	0.20
LU	0.23	7.8	0.1	1.63
HU	0.36	0.1	0.4	0.76
MT			0.7	0.02
NL	0.35	0.4	0.3	1.03
AT	0.19	3.5	0.3	0.78
PL	0.32	0.4	0.9	0.31
PT	0.29	1.2	0.3	0.42
RO	0.57	3.0	0.7	0.25
SI	0.19	1.1	0.8	1.06
SK	0.50	2.0	0.6	0.23
FI	0.29	0.8	0.4	0.55
SE	0.19	0.3	:	0.54
UK	0.14	0.8	0.3	0.64
weighted EU27	0.21	1.0	0.4	0.77
EU unweighted	0.30	2.0	0.5	0.71
max	0.83	7.8	0.9	4.66
min	0.04	0.1	0.1	0.02
Standard deviation	0.16	2.2	0.2	0.87

Note:
Energy intensity in industry - FR (2009)
CO_2 intensity in industry - FR (2008)

TABLE: Business Environment and entrepreneurship

Policy objective / indicators	**Time required to start a business (days; 2010/11)** Source: World Bank Doing Business 2012	**Business environment score (1= best 0 = worst; 2010/11)** Source: Calculation done by European Commission based on data from World Bank Doing Business 2012	**Enterprise survival rate after two years (2009)** Source: Eurostat	**Business churn (enterprise entries and exits as % of existing stock; 2008)** Source: Eurostat	**Share of high-growth enterprises as % of all enterprises (2009)** Source: Eurostat	**Early stage financing (% of GDP; 2011)** Source: EVCA	**Access to bank lending for SMEs (1 = best 0 = worst; 2011)** Source: Calculation done by European Commission	**Duration of payments by public authorities (days; 2011)** Source: European Payment Index 2012 by Intrum Justitia
BE	4	0.72	75	16 *	:	0.019	0.64	73
BG	18	0.53	68	31	:	0.000	0.59	52
CZ	20	0.54	68	13	4.1	0.002	0.63	42
DK	6	0.75	:	:	:	0.023	0.59	37
DE	15	0.65	63	:	:	0.017	0.68	36
EE	7	0.60	52	26 *	5.7 *	0.008	0.52	25
IE	13	0.83	:	:	:	0.030	0.19	48
EL	10	0.40	:	:	:	0.004	0.15	174
ES	28	0.60	65	17	2.9	0.007	0.39	160
FR	7	0.60	:	22 *	7.7	0.013	0.47	65
IT	6	0.52	76	15	3.1	0.003	0.53	180
CY	8	0.53	:	5	:	:	0.59	83
LV	16	0.67	57	30	:	0.012	0.74	38
LT	22	0.64	31	54	:	:	0.62	56
LU	19	0.49	79	17	3.8	0.014	0.57	:
HU	4	0.53	62	22	3.7	0.031	0.45	57
MT	17 *	:	96 *	11 *	:	:	0.62	:
NL	8	0.65	69	22	:	0.019	0.45	44
AT	28	0.60	77	13	:	0.018	0.70	44
PL	32	0.47	:	:	:	0.003	0.70	39
PT	5	0.70	49	34	3.3	0.005	0.34	139
RO	14	0.56	74	25	0.5	0.000	0.58	45
SI	6	0.60	81	19	3.6	0.003	0.38	45
SK	18	0.60	50	30	:	:	0.65	62
FI	14	0.74	67	17	:	0.028	0.79	24
SE	15	0.73	87	13	5.0 *	0.033	0.72	35
UK	13	0.84	78	24	:	0.017	0.43	43
weighted EU27						0.014		
EU unweighted	14	0.62	68	22	3.9	0.013	0.54	66
max	32	0.84	96	54	7.7	0.033	0.79	180
min	4	0.40	31	5	0.5	0.000	0.15	24
Standard deviation	8	0.11	14	10	1.8	0.011	0.16	46

Note:
Time required to start a business: MT (Source: MT's National Statiscical Office)
Enterprise survival rate after two years: MT (Source: MT's National Statiscical Office)
Business churn - BE, EE, FR (2009); MT (Source: MT's National Statiscical Office)
Share of high-growth enterprises as % of all enterprises - EE (2008); SE (2008)

TABLE: Services sector and Public administration

Policy objective / indicators	**Electricity prices for medium size enterprises (euro per kWh; 2011)** Source: Eurostat	**Infrastructure expenditures (euro per inhabitant; 2010)** Source: OECD, Eurostat calculation	**Satisfaction with quality of infrastructure (rail, road, port and airport) (1=underdeveloped / 7=extensive and efficient by int'l standards; 2010-11)** Source: The Global Competitiveness Report 2011-2012	**% of broadband lines with speed above 10 MBps (2011)** Source: DG INFSO	**Legal and regulatory framework (0= neg. / 10=pos.; 2011)** Source: IMD World Competitiveness Center	**Burden of government regulation (1 = burdensome 7 = not burdensome; 2010-11)** Source: The Global Competitiveness Report 2011-2012	**% of e-government usage by enterprises (2010)** Source: Eurostat, Survey on ICT usage and e-commerce in enterprises
BE	0.1147	296 *	5.9	57	3.9	2.5	77
BG	0.0667	55	3.3	74	3.7	3.1	64
CZ	0.1082	231	4.7	28	3.8	2.6	89
DK	0.0927	241	6.1	48	6.5	4.0	92
DE	0.1243	236	6.1	31	5.7	3.0	67
EE	0.0751	154	4.5	10	5.9	4.3	80
IE	0.1294	243	4.9	13	5.8	3.4	87
EL	0.1111	:	4.0	54	2.9	2.3	77
ES	0.1156	410	5.8	34	4.1	2.8	67
FR	0.0809	279	6.2	55	3.8	2.6	78
IT	0.1668	:	4.1	9	2.9	2.1	84
CY	0.2109	:	5.4	5	:	3.9	74
LV	0.1101	98	4.2	41	:	3.3	72
LT	0.1038	168	4.6	42	4.0	2.8	95
LU	0.1000	:	5.5	27	6.2	3.6	90
HU	0.0995	116	4.1	41	3.9	2.3	71
MT	0.1800	86 *	4.9	12	:	2.8	77
NL	0.0936	:	6.1	57	6.0	3.5	95
AT	0.1072 *	:	5.5	13 *	5.4	3.5	75
PL	0.0941	193	3.0	12	4.1	2.6	89
PT	0.1011	202	5.3	73	3.5	2.5	75
RO	0.0803	160	2.7	60	4.3	2.8	50
SI	0.0964	182	4.4	26	3.1	3.0	88
SK	0.1261	127	3.8	25	3.3	2.7	88
FI	0.0750	256	6.0	33	6.7	4.4	96
SE	0.0828	335	5.8	48	6.6	3.9	90
UK	0.1044	213	5.5	45	5.0	3.1	67
weighted EU27	0.1117	190		39			76
EU unweighted	0.1093	204	4.9	36	4.6	3.1	80
max	0.2109	410	6.2	74	6.7	4.4	96
min	0.0667	55	2.7	5	2.9	2.1	50
Standard deviation	0.0324	86	1.0	20	1.3	0.6	11

Note:
Electricity prices for medium size enterprises - AT (2008)
Infrastructure expenditure - BE (2009); MT (MT's National Statiscical Office)
% of broadband lines with speed above 10 MBps - AT (2010)

TABLE: Public administration dataset

country	Composite Indicator **A. Governance**	original A. Governance	Composite Indicator **B. Tools for administrative modernisation**	original values B.1 EGOV-8	original values B.2 Evidence-based	original values B.3 PBI	normalized values B.1 EGOV-8	normalized values B.2 Evidence-based	normalized values B.3 PBI
AT	0.84	1.89	0.62	100.00	6.33	23.70	1.00	0.64	0.22
BE	0.71	1.59	0.30	88.00	1.00	18.60	0.76	0.00	0.15
BG	0.00	0.01	0.33	75.00		28.90	0.50	0.19	0.29
CY	0.67	1.50	0.38	75.00		9.70	0.50	0.60	0.03
CZ	0.45	1.01	0.84	100.00	6.33	73.00	1.00	0.64	0.89
DK	0.97	2.17	0.87	100.00	7.67	68.20	1.00	0.80	0.82
EE	0.54	1.22	0.76	100.00		38.30	1.00	0.85	0.42
FI	1.00	2.24	0.87	100.00	9.33	53.40	1.00	1.00	0.62
FR	0.64	1.44	0.41	88.00	4.00	16.30	0.76	0.36	0.12
DE	0.64	1.44	0.64	100.00	7.67	16.60	1.00	0.80	0.13
EL	0.23	0.52	0.13	63.00	2.00	7.20	0.26	0.12	0.00
HU	0.31	0.70	0.18	50.00	3.70	22.90	0.00	0.32	0.21
IE	0.58	1.31	0.58	100.00	6.33	13.60	1.00	0.64	0.09
IT	0.23	0.52	0.54	100.00	4.67	20.40	1.00	0.44	0.18
LV	0.31	0.70	0.65	100.00		40.20	1.00	0.51	0.44
LT	0.32	0.72	0.36	75.00		24.30	0.50	0.34	0.23
LU	0.76	1.71	0.18	75.00	1.33	7.20	0.50	0.04	0.00
MT	0.52	1.16		100.00		29.30	1.00		0.30
NL	0.77	1.73	0.74	88.00	8.67	47.10	0.76	0.92	0.54
PL	0.31	0.71	0.49	88.00	4.67	27.70	0.76	0.44	0.28
PT	0.46	1.04	0.53	100.00	5.00	16.30	1.00	0.48	0.12
RO	0.06	0.14	0.29	75.00		19.70	0.50	0.19	0.17
SK	0.38	0.85	0.54	88.00	3.33	51.00	0.76	0.28	0.59
SI	0.46	1.03	0.46	88.00		29.50	0.76	0.31	0.30
ES	0.43	0.98	0.47	100.00	3.00	19.10	1.00	0.24	0.16
SE	0.90	2.02	0.88	100.00	6.33	81.40	1.00	0.64	1.00
UK	0.70	1.57	0.92	100.00	9.33	64.10	1.00	1.00	0.77
HR	0.27	0.62		88.00			0.76		

	Composite Indicator	original values			normalized values		
country	**C. Corruption**	C.1 Diversion	C.2 Irreg	C.3 Experience	C.1 Diversion	C.2 Irreg	C.3 Experience
AT	0.69	5.30	5.80	0.11	0.71	0.72	0.67
BE	0.81	5.20	5.70	0.03	0.69	0.69	0.93
BG	0.14	2.90	3.60	0.25	0.14	0.03	0.20
CY	0.68	4.70	5.00	0.06	0.57	0.47	0.83
CZ	0.25	2.30	3.90	0.18	0.00	0.13	0.43
DK	0.98	6.50	6.70	0.02	1.00	1.00	0.97
EE	0.74	4.80	5.50	0.05	0.60	0.63	0.87
FI	0.92	6.20	6.50	0.04	0.93	0.94	0.90
FR	0.80	5.10	5.60	0.03	0.67	0.66	0.93
DE	0.82	5.60	5.90	0.05	0.79	0.75	0.87
EL	0.29	2.70	3.50	0.15	0.10	0.00	0.53
HU	0.26	2.60	4.30	0.20	0.07	0.25	0.37
IE	0.87	5.40	6.10	0.02	0.74	0.81	0.97
IT	0.42	3.20	4.10	0.12	0.21	0.19	0.63
LV	0.36	3.30	4.20	0.16	0.24	0.22	0.50
LT	0.19	3.00	4.50	0.27	0.17	0.31	0.13
LU	0.92	6.10	6.40	0.03	0.90	0.91	0.93
MT	0.66	4.20	4.80	0.04	0.45	0.41	0.90
NL	0.93	6.00	6.20	0.01	0.88	0.84	1.00
PL	0.50	4.10	4.90	0.14	0.43	0.44	0.57
PT	0.65	3.90	5.10	0.05	0.38	0.50	0.87
RO	0.07	2.80	4.00	0.31	0.12	0.16	0.00
SK	0.09	2.50	3.70	0.27	0.05	0.06	0.13
SI	0.57	3.40	4.90	0.07	0.26	0.44	0.80
ES	0.68	3.90	5.00	0.03	0.38	0.47	0.93
SE	0.97	6.40	6.60	0.02	0.98	0.97	0.97
UK	0.87	5.70	5.90	0.02	0.81	0.75	0.97
HR		2.90	3.80		0.14	0.09	

country	Composite Indicator	original values				normalized values			
	D. Starting Business	D.1 One stop shop	D.2 Time start up	D.3 Cost start up	D.4 Licencing compl.	D.1 One stop shop	D.2 Time start up	D.3 Cost start up	D.4 Licencing compl.
AT	0.42	1	28.00	5.20	22.00	1.00	0.14	0.74	0.09
BE	0.78	1	4.00	5.20	13.80	1.00	1.00	0.74	0.51
BG	0.60	1	18.00	1.50	20.40	1.00	0.50	0.93	0.17
CY	0.61	1	8.00	13.10	15.20	1.00	0.86	0.35	0.43
CZ	0.57	0	20.00	8.40	4.00	0.00	0.43	0.58	1.00
DK	0.83	1	6.00	0.00	14.60	1.00	0.93	1.00	0.46
EE	0.89	1	7.00	1.80	8.00	1.00	0.89	0.91	0.80
FI	0.73	1	14.00	1.00	15.00	1.00	0.64	0.95	0.44
FR	0.83	1	7.00	0.90	13.00	1.00	0.89	0.96	0.55
DE	0.43	0	15.00	4.60	21.20	0.00	0.61	0.77	0.13
EL	0.30	0	10.00	20.10	18.60	0.00	0.79	0.00	0.26
HU	0.77	1	4.00	7.60	12.40	1.00	1.00	0.62	0.58
IE	0.71	0	13.00	0.40	7.40	0.00	0.68	0.98	0.83
IT	0.54	1	6.00	18.20	16.20	1.00	0.93	0.09	0.38
LV	0.59	0	16.00	2.60	11.20	0.00	0.57	0.87	0.64
LT	0.59	1	22.00	2.80	17.00	1.00	0.36	0.86	0.34
LU	0.65	1	19.00	1.90	15.60	1.00	0.46	0.91	0.41
MT		0			21.50	0.00			0.12
NL	0.58	0	8.00	5.50	14.80	0.00	0.86	0.73	0.45
PL	0.21	0	32.00	17.30	12.00	0.00	0.00	0.14	0.60
PT	0.73	1	5.00	2.30	20.00	1.00	0.96	0.89	0.19
RO	0.63	1	14.00	3.00	19.40	1.00	0.64	0.85	0.22
SK	0.54	0	18.00	1.80	14.00	0.00	0.50	0.91	0.49
SI	0.73	1	6.00	0.00	21.60	1.00	0.93	1.00	0.11
ES	0.40	1	28.00	4.70	23.80	1.00	0.14	0.77	0.00
SE	0.69	1	15.00	0.60	17.20	1.00	0.61	0.97	0.33
UK	0.81	1	13.00	0.70	9.80	1.00	0.68	0.97	0.71
HR			7.00	8.60	21.80		0.89	0.57	0.10

	Composite Indicator	original values			normalized values		
country	**E. Procurement**	E.1 Person unit costs	E.2 Cost competition	E.3 Pay delay	E.1 Person unit costs	E.2 Cost competition	E.3 Pay delay
AT	0.53	20.00	0.26	14.00	0.58	0.10	0.91
BE	0.71	14.00	0.18	28.00	0.83	0.50	0.78
BG	0.54	25.00	0.20	22.00	0.38	0.40	0.84
CY	0.41	29.00	0.24	23.00	0.21	0.20	0.83
CZ	0.77	15.00	0.16	12.00	0.79	0.60	0.93
DK	0.68	18.00	0.19	12.00	0.67	0.45	0.93
EE	0.73	16.00	0.18	10.00	0.75	0.50	0.95
FI	0.90	10.00	0.14	4.00	1.00	0.70	1.00
FR	0.88	10.00	0.12	21.00	1.00	0.80	0.85
DE	0.71	17.00	0.18	11.00	0.71	0.50	0.94
EL	0.14	25.00	0.27	114.00	0.38	0.05	0.00
HU	0.73	15.00	0.16	27.00	0.79	0.60	0.79
IE	0.82	15.00	0.13	13.00	0.79	0.75	0.92
IT	0.27	20.00	0.28	90.00	0.58	0.00	0.22
LV	0.74	14.00	0.18	18.00	0.83	0.50	0.87
LT	0.78	13.00	0.15	26.00	0.88	0.65	0.80
LU	0.91	11.00	0.08		0.96	1.00	0.79
MT		34.00	0.23		0.00	0.25	
NL	0.76	13.00	0.17	19.00	0.88	0.55	0.86
PL	0.84	11.00	0.14	19.00	0.96	0.70	0.86
PT	0.41	16.00	0.25	79.00	0.75	0.15	0.32
RO	0.67	15.00	0.21	20.00	0.79	0.35	0.85
SK	0.34	30.00	0.26	32.00	0.17	0.10	0.75
SI	0.87	12.00	0.12	15.00	0.92	0.80	0.90
ES	0.60	14.00	0.15	80.00	0.83	0.65	0.31
SE	0.69	17.00	0.20	7.00	0.71	0.40	0.97
UK	0.61	17.00	0.23	18.00	0.71	0.25	0.87
HR							

country	Composite Indicator **F. Tax compliance & tax administration**	original values		normalized values	
		F.1 Time pay tax	F.2 Administrative cost	F.1 Time pay tax	F.2 Administrative cost
AT	0.86	170.00	0.85	0.78	0.94
BE	0.83	156.00	1.40	0.81	0.86
BG	0.49	500.00	1.37	0.11	0.86
CY	0.78	149.00	7.37	0.82	0.73
CZ	0.42	557.00	1.46	0.00	0.85
DK	0.90	135.00	0.67	0.85	0.96
EE	0.97	85.00	0.40	0.95	1.00
FI	0.93	93.00	0.87	0.93	0.93
FR	0.86	132.00	1.31	0.85	0.87
DE	0.81	221.00	0.79	0.67	0.94
EL	0.70	224.00		0.67	0.73
HU	0.72	277.00	1.20	0.56	0.89
IE	0.93	76.00	1.08	0.97	0.90
IT	0.72	285.00	1.20	0.55	0.89
LV	0.71	290.00	1.14	0.54	0.89
LT	0.83	175.00	1.18	0.77	0.89
LU	0.95	59.00	1.13	1.00	0.90
MT			0.48		0.99
NL	0.88	127.00	1.11	0.86	0.90
PL	0.67	296.00	1.72	0.52	0.81
PT	0.71	275.00	1.44	0.57	0.85
RO	0.81	222.00	0.72	0.67	0.95
SK	0.68	231.00	2.41	0.65	0.71
SI	0.76	260.00	0.90	0.60	0.93
ES	0.83	187.00	0.97	0.74	0.92
SE	0.94	122.00	0.40	0.87	1.00
UK	0.90	110.00	1.14	0.90	0.89
HR		196.00		0.72	

country	Composite Indicator **G. Effective Civil justice**	original values G.1 Enforcing time	original values G.2 Enforcing cost	original values G.3 Insolvency time	original values G.4 Indep. judiciary	normalized values G.1 Enforcing time	normalized values G.2 Enforcing cost	normalized values G.3 Insolvency time	normalized values G.4 Indep. judiciary
AT	0.77	397.00	18.00	1.10	5.54	0.88	0.64	0.81	0.74
BE	0.74	505.00	17.70	0.90	5.27	0.77	0.66	0.86	0.67
BG	0.34	564.00	23.80	3.30	2.94	0.72	0.39	0.19	0.07
CY	0.66	735.00	16.40	1.50	5.29	0.55	0.71	0.69	0.68
CZ	0.29	611.00	33.00	3.20	3.70	0.67	0.00	0.22	0.27
DK	0.78	410.00	23.30	1.00	6.55	0.87	0.42	0.83	1.00
EE	0.58	425.00	22.30	3.00	5.51	0.85	0.46	0.28	0.73
FI	0.89	375.00	13.30	0.90	6.41	0.90	0.85	0.86	0.96
FR	0.69	331.00	17.40	1.90	4.90	0.94	0.67	0.58	0.58
DE	0.85	394.00	14.40	1.20	6.33	0.88	0.80	0.78	0.94
EL	0.50	819.00	14.40	2.00	3.33	0.46	0.80	0.56	0.17
HU	0.63	395.00	15.00	2.00	3.92	0.88	0.77	0.56	0.32
IE	0.71	650.00	26.90	0.40	6.27	0.63	0.26	1.00	0.93
IT	0.29	1210.00	29.90	1.80	3.99	0.08	0.13	0.61	0.34
LV	0.48	369.00	23.10	3.00	3.81	0.91	0.42	0.28	0.30
LT	0.57	275.00	23.60	1.50	3.39	1.00	0.40	0.69	0.19
LU	0.85	321.00	9.70	2.00	6.09	0.95	1.00	0.56	0.88
MT					5.13				0.63
NL	0.73	514.00	23.90	1.10	6.35	0.76	0.39	0.81	0.95
PL	0.52	830.00	12.00	3.00	4.33	0.45	0.90	0.28	0.43
PT	0.62	547.00	13.00	2.00	3.93	0.73	0.86	0.56	0.33
RO	0.31	512.00	28.90	3.30	3.11	0.77	0.18	0.19	0.12
SK	0.21	565.00	30.00	4.00	2.66	0.71	0.13	0.00	0.00
SI	0.43	1290.00	12.70	2.00	3.78	0.00	0.87	0.56	0.29
ES	0.62	515.00	17.20	1.50	3.92	0.76	0.68	0.69	0.32
SE	0.60	508.00	31.20	2.00	6.47	0.77	0.08	0.56	0.98
UK	0.74	399.00	24.80	1.00	6.20	0.88	0.35	0.83	0.91
HR	0.47	561.00	13.80	3.10	3.05	0.72	0.82	0.25	0.10

TABLE: Average number of days to get licenses in Europe

Country	days
AT	68.5
BE	49.1
BG	93.4
CY	105.4
CZ	8.5
DE	79.6
DK	82.7
EE	55.1
EL	78.2
ES	116.1
FI	49.9
FR	48.9
HU	53.2
IE	75.8
IT	34.3
LT	84.1
LU	65.1
LV	46.0
MT	108.5
NL	53.2
PL	57.6
PT	81.5
RO	85.2
SE	72.1
SI	72.5
SK	52.8
UK	27.9
EU 27	67.04
HR	71.9

TABLE: Sectoral specialisation of manufacturing (2009)

Code	Sector / Country	BE	BG	CZ	DK	DE	EE	IE	EL	ES
C	Manufacturing	44,746.5	3,883.3	26,175.3	24,846.9	381,547.6	1,582.0	28,407.9	16,901.2	100,824.6
C10	Manufacture of food products	5,574.3	554.7	2,026.8	3,761.1	27,911.0	218.4	4,514.5	3,336.6	14,819.4
C11	Manufacture of beverages	1,352.3	205.7	787.8	427.7	4,842.5	62.3	442.6	1,072.9	4,634.1
C12	Manufacture of tobacco products	c	63.5	c	c	1,253.8	0.0	c	309.8	467.1
C13	Manufacture of textiles	1,071.9	68.2	456.5	236.4	3,077.2	53.3	90.9	399.2	1,454.2
C14	Manufacture of wearing apparel	280.9	386.0	231.3	108.7	2,074.1	56.5	40.7	625.9	1,986.4
C15	Manufacture of leather and related products	c	53.0	71.0	21.4	680.7	11.8	7.4	108.0	984.4
C16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	772.9	73.9	801.0	521.6	5,073.4	212.7	18.5	295.1	2,199.3
C17	Manufacture of paper and paper products	1,829.1	75.3	499.0	412.0	9,131.5	32.6	142.0	376.3	3,036.9
C18	Printing and reproduction of recorded media	1,258.4	90.9	500.0	528.1	7,612.9	52.8	461.9	414.9	3,206.8
C19	Manufacture of coke and refined petroleum products	753.6	c	83.3	c	2,391.9	47.8	c	1,287.9	1,509.7
C20	Manufacture of chemicals and chemical products	5,558.7	141.9	889.1	1,346.0	29,790.5	55.1	743.3	815.9	5,986.0
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	3,647.8	c	394.0	2,832.3	15,273.4	8.1	13,075.4	640.6	3,907.1
C22	Manufacture of rubber and plastic products	1,773.8	184.4	2,378.8	1,293.6	19,406.4	50.2	380.8	674.1	4,921.0
C23	Manufacture of other non-metallic mineral products	2,385.6	359.6	1,596.6	1,016.3	12,529.2	68.6	503.7	1,415.8	7,514.8
C24	Manufacture of basic metals	2,263.2	211.5	824.2	217.4	15,991.8	-0.7	26.0	805.8	3,244.0
C25	Manufacture of fabricated metal products, except machinery and equipment	3,397.0	350.5	2,714.1	2,205.6	35,276.0	188.2	519.5	1,586.3	11,636.9
C26	Manufacture of computer, electronic and optical products	1,715.4	75.1	630.3	1,493.6	18,155.3	83.3	2,841.8	139.9	1,872.9
C27	Manufacture of electrical equipment	1,067.4	179.8	1,728.4	810.6	31,084.1	85.3	224.1	382.8	4,348.3
C28	Manufacture of machinery and equipment n.e.c.	2,928.9	213.0	2,653.8	4,397.3	59,825.1	58.3	819.5	573.3	5,897.4
C29	Manufacture of motor vehicles, trailers and semi-trailers	2,391.4	58.1	4,033.7	241.9	43,639.2	43.0	159.6	126.5	7,071.4
C30	Manufacture of other transport equipment	c	49.0	488.8	124.0	8,118.0	12.5	184.0	394.3	3,135.0
C31	Manufacture of furniture	703.1	109.9	385.2	713.9	5,972.0	80.8	c	441.0	2,506.9
C32	Other manufacturing	c	52.1	637.8	1,171.2	10,720.3	35.2	2,800.6	253.1	1,462.9
C33	Repair and installation of machinery and equipment	1,005.0	179.7	c	593.6	11,717.3	65.9	153.3	425.1	3,021.7

Code	Sector / Country	FR	IT	CY	LV	LT	LU	HU	MT	NL
C	Manufacturing	180,452.0	180,256.8	1,188.6	1,230.5	2,178.4	1,126.8	15,447.7	n.a.	54,156.7
C10	Manufacture of food products	26,759.9	17,761.8	333.3	258.8	508.0	c	1,540.5	n.a.	8,126.0
C11	Manufacture of beverages	5,007.1	2,701.4	89.9	55.1	122.9	54.7	367.2	n.a.	1,144.0
C12	Manufacture of tobacco products	595.7	273.7	c	c	c	c	53.6	n.a.	1,657.6
C13	Manufacture of textiles	*1,991.5*	*5,354.3*	*11.3*	*23.3*	*70.0*	*c*	*89.8*	n.a.	*631.3*
C14	Manufacture of wearing apparel	2,249.9	6,628.0	16.5	47.7	115.2	c	189.1	n.a.	131.6
C15	Manufacture of leather and related products	1,363.3	4,369.2	2.3	1.7	6.9	0.0	83.3	n.a.	97.2
C16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	3,020.7	4,127.6	80.0	221.1	169.7	41.2	173.4	n.a.	928.8
C17	Manufacture of paper and paper products	4,001.3	3,603.3	21.8	24.8	50.7	c	284.6	n.a.	1,350.3
C18	Printing and reproduction of recorded media	3,799.9	3,942.9	46.3	34.2	37.6	c	215.5	n.a.	1,873.9
C19	Manufacture of coke and refined petroleum products	2,304.5	1,185.1	c	0.2	c	0.0	1,153.5	n.a.	1,148.2
C20	Manufacture of chemicals and chemical products	12,652.9	7,736.2	27.2	38.9	129.5	c	452.2	n.a.	6,112.5
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	8,728.3	7,231.9	50.1	c	25.1	c	967.5	n.a.	2,166.8
C22	Manufacture of rubber and plastic products	10,347.6	8,895.3	45.2	30.6	110.8	c	848.1	n.a.	2,158.4
C23	Manufacture of other non-metallic mineral products	8,095.1	10,066.6	182.6	51.9	79.4	c	595.6	n.a.	1,998.9
C24	Manufacture of basic metals	4,922.7	5,542.6	24.6	38.6	5.2	c	270.2	n.a.	1,363.9
C25	Manufacture of fabricated metal products, except machinery and equipment	16,321.2	23,394.8	121.5	81.3	109.7	177.5	909.3	n.a.	5,832.6
C26	Manufacture of computer, electronic and optical products	8,979.6	6,087.3	4.6	37.2	51.1	c	1,427.4	n.a.	2,418.5
C27	Manufacture of electrical equipment	8,077.6	8,644.2	20.5	27.0	26.1	c	705.5	n.a.	1,956.4
C28	Manufacture of machinery and equipment n.e.c.	11,879.6	23,952.6	16.9	37.0	62.0	c	2,128.7	n.a.	5,158.9
C29	Manufacture of motor vehicles, trailers and semi-trailers	10,914.0	7,602.4	10.2	10.9	13.9	c	2,129.0	n.a.	1,497.5
C30	Manufacture of other transport equipment	10,530.0	5,163.1	0.5	21.6	47.5	c	114.1	n.a.	1,322.6
C31	Manufacture of furniture	2,440.6	5,747.7	36.6	47.1	180.1	8.9	175.4	n.a.	1,174.3
C32	Other manufacturing	4,419.3	4,433.4	20.7	c	59.7	21.1	236.0	n.a.	983.3
C33	Repair and installation of machinery and equipment	11,049.7	5,811.6	19.4	84.8	82.3	34.9	338.2	n.a.	2,923.3

Code	Sector / Country	AT	PL	PT	RO	SI	SK	FI	SE	UK
C	Manufacturing	41,218.4	45,725.8	16,686.8	11,454.9	5,320.7	6,279.1	22,713.7	39,112.9	143,494.1
C10	Manufacture of food products	3,308.2	6,770.9	2,180.4	1,474.3	351.5	493.2	1,938.9	2,746.1	20,485.9
C11	Manufacture of beverages	1,098.1	2,023.5	691.2	639.7	101.5	160.5	388.0	436.6	c
C12	Manufacture of tobacco products	c	352.6	c	c	0.0	c	c	c	c
C13	Manufacture of textiles	*416.6*	*611.1*	*730.5*	*200.3*	*111.9*	*56.0*	*193.0*	*233.2*	*2,032.3*
C14	Manufacture of wearing apparel	313.4	790.8	1,003.6	805.2	83.7	119.6	112.5	64.9	729.5
C15	Manufacture of leather and related products	187.7	234.5	581.6	313.4	59.1	112.2	c	38.5	265.1
C16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	1,746.6	1,499.0	601.9	461.6	158.2	131.8	826.5	1,635.9	2,230.6
C17	Manufacture of paper and paper products	1,552.1	1,416.3	641.0	147.0	178.7	261.9	1,929.5	2,952.8	2,933.2
C18	Printing and reproduction of recorded media	1,092.6	671.4	524.0	228.2	137.9	114.7	559.1	820.4	5,565.3
C19	Manufacture of coke and refined petroleum products	c	114.7	c	c	c	c	c	386.2	1,424.1
C20	Manufacture of chemicals and chemical products	1,727.3	2,255.9	605.2	500.6	249.3	155.7	1,259.3	1,944.3	10,480.9
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	1,333.7	1,092.6	c	197.2	621.1	c	c	c	8,746.1
C22	Manufacture of rubber and plastic products	1,758.8	3,193.9	811.6	623.8	374.9	497.8	846.0	1,086.5	7,444.1
C23	Manufacture of other non-metallic mineral products	2,153.9	3,146.1	1,537.3	924.9	232.7	414.4	951.7	1,018.8	3,954.7
C24	Manufacture of basic metals	3,298.1	1,247.2	168.9	191.1	148.0	366.1	684.9	1,428.7	3,506.7
C25	Manufacture of fabricated metal products, except machinery and equipment	4,424.1	4,458.8	1,996.2	796.2	683.1	535.6	2,147.1	3,606.5	13,213.5
C26	Manufacture of computer, electronic and optical products	1,689.0	1,227.9	280.5	395.8	137.3	330.0	2,771.7	3,721.2	7,989.4
C27	Manufacture of electrical equipment	3,331.3	2,246.7	719.6	426.4	505.9	307.2	1,339.6	1,687.0	4,534.0
C28	Manufacture of machinery and equipment n.e.c.	5,129.8	3,091.2	561.6	616.6	385.6	507.0	3,275.1	4,002.3	11,852.5
C29	Manufacture of motor vehicles, trailers and semi-trailers	2,448.1	3,794.8	932.5	1,251.8	394.7	1,115.7	303.7	2,265.6	6,565.1
C30	Manufacture of other transport equipment	542.8	1,134.7	148.1	437.1	c	83.6	387.8	1,128.0	8,944.1
C31	Manufacture of furniture	1,164.0	1,941.2	492.3	419.7	158.3	159.4	339.3	703.5	2,740.4
C32	Other manufacturing	933.0	596.8	267.3	92.5	93.9	81.8	243.1	1,053.7	4,193.0
C33	Repair and installation of machinery and equipment	1,173.9	1,812.9	540.8	274.7	134.2	219.8	830.3	1,023.3	5,828.7

Code	Sector	Group
C10	Manufacture of food products	Food, beverages and tobacco
C11	Manufacture of beverages	
C12	Manufacture of tobacco products	
C13	Manufacture of textiles	Textiles, apparel and leather
C14	Manufacture of wearing apparel	
C15	Manufacture of leather and related products	
C16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	Wood, paper and printing
C17	Manufacture of paper and paper products	
C18	Printing and reproduction of recorded media	
C19	Manufacture of coke and refined petroleum products	Chemicals, pharma, petroleum, minerals and rubber
C20	Manufacture of chemicals and chemical products	
C21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	
C22	Manufacture of rubber and plastic products	
C23	Manufacture of other non-metallic mineral products	
C24	Manufacture of basic metals	Metals
C25	Manufacture of fabricated metal products, except machinery and equipment	
C26	Manufacture of computer, electronic and optical products	Electronics, electrics and machinery
C27	Manufacture of electrical equipment	
C28	Manufacture of machinery and equipment n.e.c.	
C29	Manufacture of motor vehicles, trailers and semi-trailers	Cars and transport
C30	Manufacture of other transport equipment	
C31	Manufacture of furniture	Other
C32	Other manufacturing	
C33	Repair and installation of machinery and equipment	

Source: Eurostat