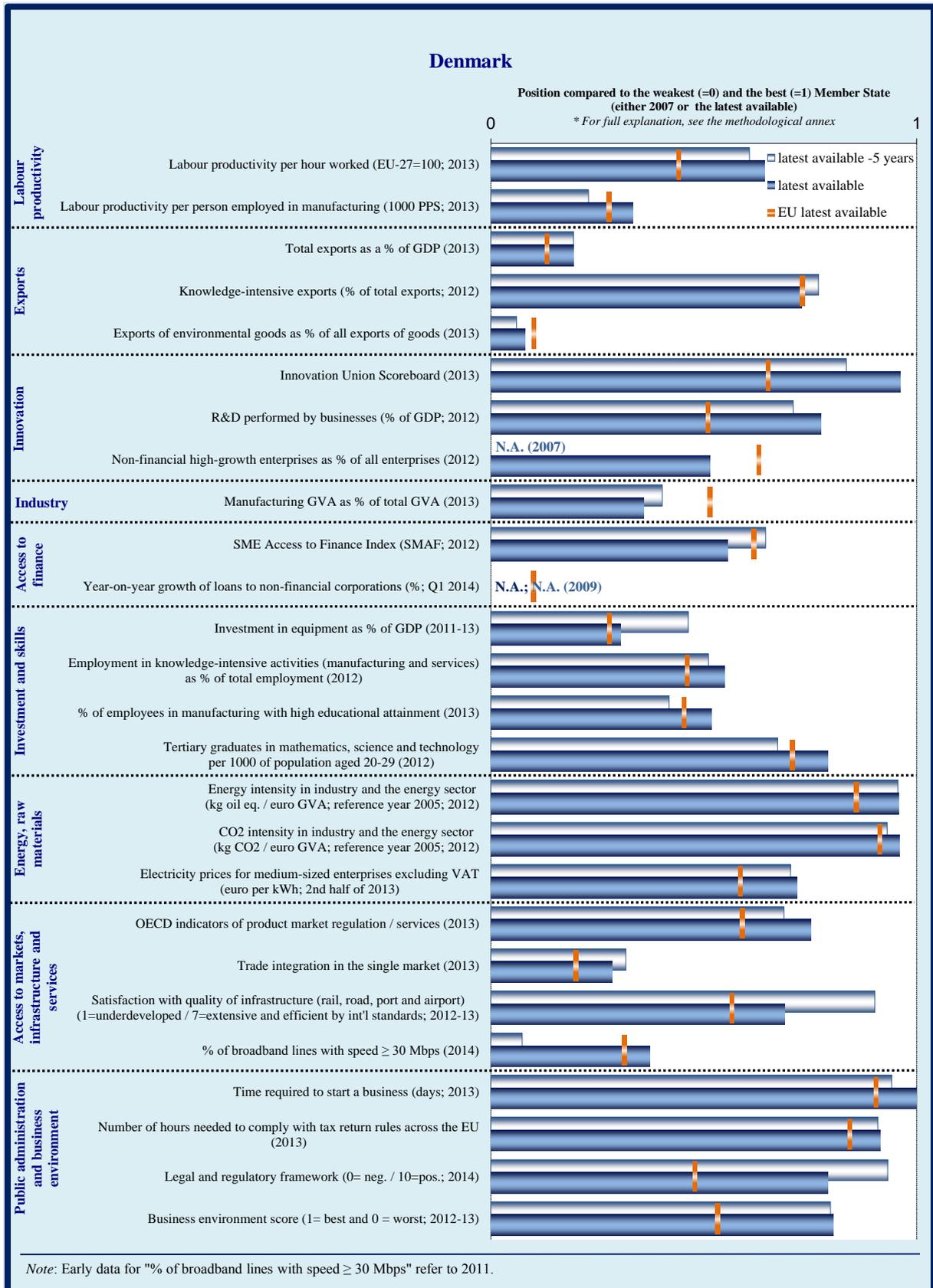
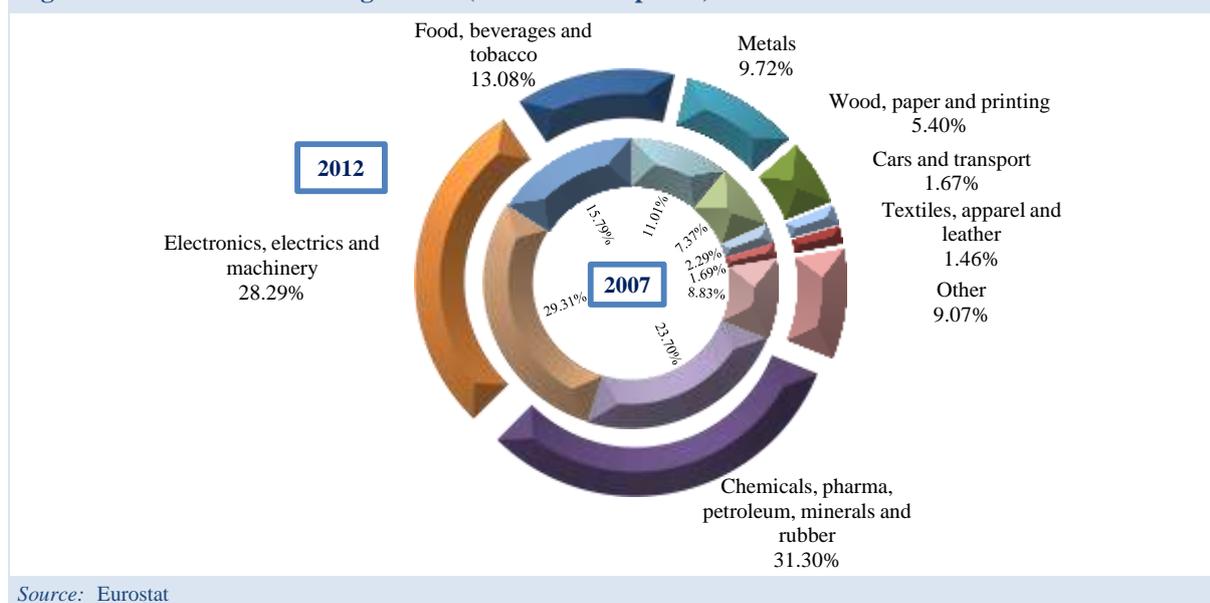


### 3.4 Denmark



**Figure 3.4.1: Manufacturing sectors (GVA at basic prices) - Denmark**

### 3.4.1 Introduction and performance

Denmark is a small but open and wealthy economy. After contracting by -0.4 % in 2012, GDP grew by 0.4 % in 2013, driven mainly by domestic demand, particularly investments and public consumption. At the same time, imports outperformed exports, which meant that net exports had a detrimental effect on growth. The Commission's spring 2014 forecast indicates that the economy is recovering, with real GDP growing by 1.5 % in 2013 and 1.9 % in 2014.

Danish manufacturing exports mostly comprise machinery and transport equipment, chemicals and food and beverages, with a focus on the higher value segments of these markets. Exports of high-tech, higher value-added products have continued to grow, but growth is slower than in many competing countries. Graph 3.4.2 presents a similar situation as last year for the three largest knowledge-intensive Danish manufacturing sectors. The largest is chemicals, pharmaceuticals, petroleum and rubber (28.6 %), followed by electronics, electric and machinery (27.8 %) and the traditional sector of food, beverages and tobacco (15.5 %). The main differences compared to 2008 are that chemicals and pharmaceuticals have expanded, mostly at the expense of metals.

### 3.4.2 Access to finance and investment

#### *Access to finance*

The financial sector remains stable and banks are well capitalised. Danish small businesses regard conditions for accessing finance as worse than the pre-crisis level, as banks seek to compensate for the higher risk of SMEs. However, conditions for obtaining credit in the pre-crisis years were relatively loose, with financial institutions putting less emphasis on solvency and other indicators of the credit-worthiness of companies. <sup>(1)</sup> The latest available data (2011) puts the rate of rejected loan applications for SMEs at 20 %, which is higher than the EU average (15 %). National survey data after 2011 showed recent improvements in companies' assessment of their access to credit. <sup>(2)</sup> SMEs have credit costs that are 52 % higher than large businesses. However, this is mainly due to the relatively low cost of credit for large businesses in Denmark. For loans of less than EUR 1 million, the average cost for credit in Denmark was around the Eurozone average in 2013 (excluding repurchasing agreements).

The Danish authorities have made significant efforts to improve access to finance by SMEs and

<sup>(1)</sup> <http://www.nationalbanken.dk/da/publikationer/Documents/2012/11/WP81.pdf>.

<sup>(2)</sup> <http://di.dk/SiteCollectionDocuments/Opinion/Konjunktur/Finansiering%202014Q2.pdf>.

entrepreneurs over the past year by: providing loans of more than EUR 0.3 million to entrepreneurs who lack the collateral for obtaining finance in the private sector; and adopting a bill aimed at improving the Danish market for corporate bonds and securities.

Over the past year, the European Investment Fund (EIF) and the Danish state-backed investment fund, the Growth Fund (Vækstfonden), have signed two agreements aimed at supporting small and medium-sized enterprises (SMEs) and micro-enterprises. The first agreement is a direct guarantee enabling the Growth Fund to provide a subordinated loans totalling EUR 126 million to start-ups. The second agreement facilitates access to microfinance.

SMEs with financial problems tend to have lower capital than larger firms. This lack of own capital is seen as one of the main future challenges. <sup>(3)</sup>

The EIF and Danish Growth Capital (Dansk Vækstkapital) support the Danish market for venture capital by investing in Danish venture funds. Danish Growth Capital is a fund-of-funds with capital of DKK 4.8 billion (EUR 640 million) from Danish private pension companies. It also makes direct venture investments in companies with particular growth potential.

### *Investment*

Following the crisis, decreases in investment were recorded in Denmark as well as in Sweden and Belgium.

State initiatives such as the Market Development Fund (Markedsmodningsfonden), the Innovation Incubator Scheme (Innovationsmiljøerne), the Green Transition Fund (Grøn Omstillingsfond) and Danish Growth Capital, together with investments by The Growth Fund in funds and particular lending schemes, all contribute to supporting investment in entrepreneurs and SMEs in Denmark.

## 3.4.3 Innovation and skills

### *Innovation*

Based on 2013 data, Denmark outranks all other EU countries in fields such as skills, innovation, internationalisation, responsive administration and

second chance. However, it lags behind in entrepreneurship, especially in regard to media coverage for entrepreneurship, the self-employment rate and entrepreneurial intention. <sup>(4)</sup>

Denmark is one of the EU leaders in eco-innovation. <sup>(5)</sup> Moreover, the Danish cleantech clusters offer innovative solutions for the sustainable use of natural resources.

Start-ups targeting highly innovative sectors require substantial budgets to invest in research and innovation.

The Innovation Union Scoreboard 2013 <sup>(6)</sup> confirmed Denmark's position among the 'innovation leaders' of the EU together with Finland, Germany and Sweden. The latest available data indicates top values for most indicators that measure the innovative performance of SMEs. For example, 38 % of Danish SMEs have introduced process or product innovation while approximately 40 % are using internal research capacities, innovative marketing and organisational strategies. However, these firms' sales revenues do not fully reflect investment in innovation. <sup>(7)</sup>

Sales revenues of SMEs that sell their products online are nearly twice the EU average. Furthermore, the sales revenues of SMEs participating in EU-funded research and those purchasing their prime materials online are also higher than the EU average.

### *Skills*

The number of Danish enterprises that provide training to their employees is almost double the EU average. The situation is even better for employee participation rates in education and trainings (more than triple). <sup>(8)</sup>

Even if Denmark's education system does not lack resources, <sup>(9)</sup> findings by the Danish Productivity Commission (Produktivitetskommissionen) show that

<sup>(4)</sup> [http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/index\\_en.htm](http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/performance-review/index_en.htm).

<sup>(5)</sup> [http://www.eco-innovation.eu/images/stories/Reports/EIO\\_Annual\\_Report\\_2012.pdf](http://www.eco-innovation.eu/images/stories/Reports/EIO_Annual_Report_2012.pdf).

<sup>(6)</sup> Innovation Union Scoreboard 2013, <http://ec.europa.eu/enterprise/policies/innovation>.

<sup>(7)</sup> SBA Fact Sheet 2013.

<sup>(8)</sup> SBA Fact Sheet 2013.

<sup>(9)</sup> Denmark has the highest spending in public expenditure on education in the OECD, as a percentage of GDP.

<sup>(3)</sup> <http://www.evm.dk/english/news>.

education outcomes could be improved. <sup>(10)</sup> PISA results, in particular, are below the OECD average.

Denmark is one of the seven Member States that achieved the Europe 2020 15 % target to reduce the percentage of ‘low achievers in reading’. <sup>(11)</sup>

Denmark is also one of the eleven Member States that have reached the Europe 2020 target to have at least 40% of 30-34 years old with tertiary education.

The Productivity Commission recommends that students should be given incentives ‘to seek education and training with ample job opportunities and high income’, in order to provide the necessary skills to enhance Danish competitiveness.

### 3.4.4 Energy, raw materials and sustainability

#### *Energy use and prices*

Denmark has set an ambitious national target for renewable energy sources, which are to constitute 50 % of electricity generation by 2020, thus exceeding even the EU target of 27 % renewable energy sources to be achieved by 2030. <sup>(12)</sup> This ambitious target will have a significant effect on the Danish current energy mix, which incorporated 26 % renewable energy sources as early as 2012.

To achieve this goal, Denmark is planning to improve interconnection capacity with neighbouring countries, in order to incorporate increased amounts of renewable energy sources and to maintain a high level of security of supply. Consumer flexibility is another, albeit smaller, contributor to the integration of high amounts of fluctuating renewable energy. Activation of consumer flexibility requires presently hourly settlement and smart metering. In 2013 the government decided on a full roll-out of smart meters in Denmark by 2020. Currently, more than half of consumers, covering around 75 % of the total electricity consumption, are being remotely metered and replacement of the remaining existing meters began in 2014. <sup>(13)</sup>

Denmark continues to be a net exporter of gas and, according to latest estimates, is expected to remain so until 2025. This will facilitate the development and integration of renewable energy sources in the energy system and help to achieve the 2030 renewable energy sources target, as gas is fuel that is well-suited to the back-up generators needed in the transition to a low carbon society.

During the period between 2008 and 2012, Danish households paid one of the highest electricity prices in the EU, mostly on account of taxes and levies. However, retail industrial prices actually decreased over the period in question. <sup>(14)</sup>

#### *Environmental sustainability*

Although Denmark has made considerable efforts on sustainability, also improving resource efficiency, challenges remain in the area of waste management.

Denmark faces the challenge to reduce the incineration of municipal waste and increase its recycling, which would be more resource efficient, and scale up its recycling industry.

In some areas of the country, there are incentive systems to limit waste production and encourage participation in sorted waste collection. Consideration should be given to extending this initiative throughout the country.

Denmark generates the highest amount of municipal waste in the EU. It ranks above other EU countries when it comes to the proportion of incinerated waste (54 % in 2012). According to Eurostat, the resource productivity of Denmark is in the EU middle range. There is potential to increase resource productivity.

In October 2013, the Danish government presented a new resource strategy — ‘Denmark without waste. Recycle more – incinerate less’ — targeted at waste management. The Government also intends to present a strategy on waste prevention.

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<sup>(14)</sup> [http://ec.europa.eu/energy/doc/2030/20140122\\_swd\\_prices.pdf](http://ec.europa.eu/energy/doc/2030/20140122_swd_prices.pdf).

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<sup>(10)</sup> <http://produktivitetsskommissionen.dk/publikationer>.

<sup>(11)</sup> [http://europa.eu/rapid/press-release\\_IP-13-1198\\_en.htm](http://europa.eu/rapid/press-release_IP-13-1198_en.htm).

<sup>(12)</sup> COM/2014/015 final: A policy framework for climate and energy in the period from 2020 to 2030.

<sup>(13)</sup> Smart Grid Strategy, Danish Ministry of Climate, Energy and Building, May 2013.

### 3.4.5 Access to markets, infrastructure and services

#### *Access to markets*

One of Denmark's main challenges is the low level of competition on the domestic market and limited presence of foreign competitors in the construction sector, which results in higher prices combined with lower relative productivity growth compared to other EU Member States.

In Denmark the use of national standards for specific construction materials and building process standards creates entry barriers. The Danish Productivity Commission has recommended harmonising national standards in the construction sector with international ones and streamlining municipal building certificates. Consequently, national standards have been scrutinised and the government intends to internationalise and simplify regulation on, for example, building materials and building certificates.

Even if the electricity and gas markets have been liberalised, only a limited number of consumers have utilised their right to change supplier. This situation could be improved through industry schemes that are more friendly towards supplier changes.

In addition, the Productivity Commission has recommended eliminating restrictions relating to retail establishments<sup>(15)</sup> so as to foster competition in the market and reduce the productivity gap. Proposed measures include more flexible rules on the location of shops, the possibility to establish larger retail outlets and adapting local planning rules to improve competition.

#### *Infrastructure*

Denmark has a modern infrastructure with the region's airport hub located in Copenhagen, a well-functioning port and good railway and road connections. Nevertheless, the latest Eurostat data indicates a drop in satisfaction with the quality of infrastructure, as Denmark's gross investment and maintenance expenditure on transport is one of the lowest as a % of GDP. However, there are a number of projects, namely the planned fixed rail/road-link across the Fehmarnbelt including modernisation of the access lines and the already built fixed links

<sup>(15)</sup> Planning and zoning restrictions for large retail outlets.

across the Great Belt (within Denmark) and together with Sweden across the Öresund, which are important for transit traffic between Scandinavia and the Continent.

#### *Services*

Services are characterised by regulation and business practices that hamper competitiveness. The retail trade is highly concentrated, with the top five retailers covering 90 % of the market. It is characterised by competition problems linked to the low share of foreign-owned companies, high prices and the small number of large retail outlets due to rigid retail establishment rules.

Furthermore, the productivity of the Danish retail sector ranks below the EU average, both in terms of growth and level.

In its final report of March 2014, the Productivity Commission issued recommendations on how growth in the Danish economy can be boosted through improved productivity. The recommendations included increased competition in the domestically-oriented service sectors, public administration and business environment.

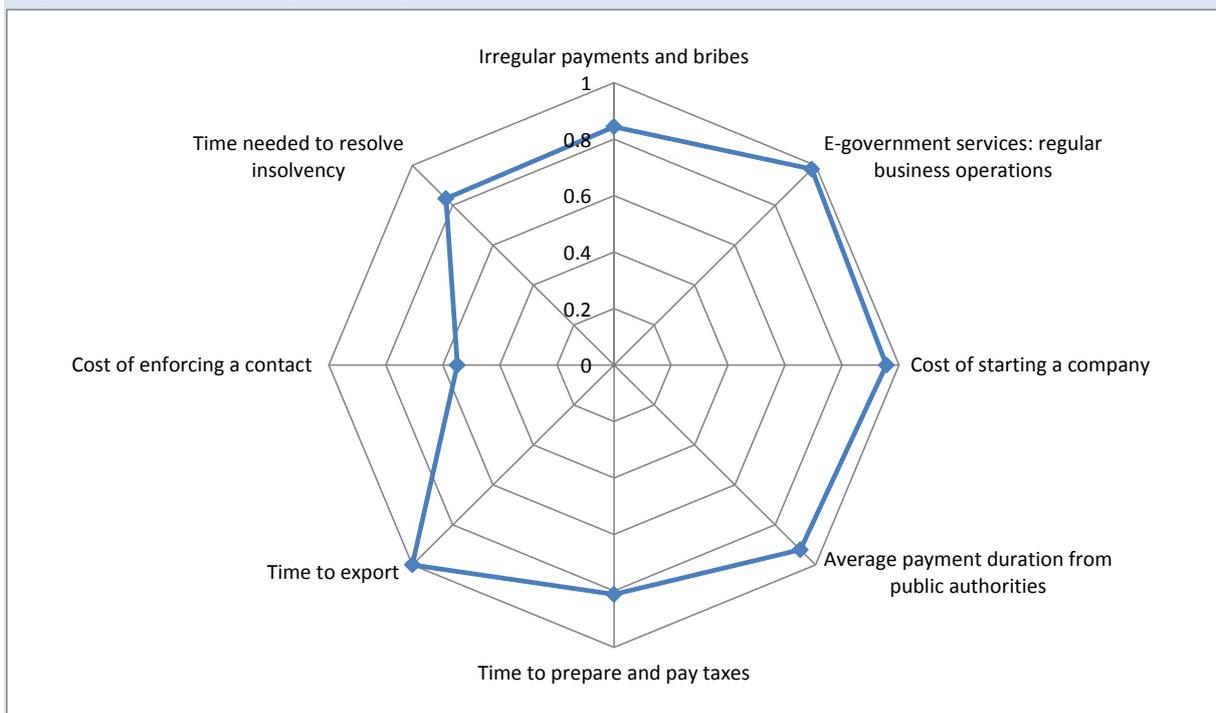
#### *Administrative modernisation*

The Danish public administration performs well compared with other EU countries and is one of the most modern in the EU. Composite indicators are above the EU average on government effectiveness, corruption and fraud, business start-ups and licenses, public procurement, tax compliance and administration, and civil justice.<sup>(16)</sup>

The above Graph 3.4.3 illustrates Denmark's excellence in public administration for competitiveness, using the best and worst performing Member States' indicators as benchmarks.<sup>(17)</sup> Indicators on the time required and the cost involved to start up a company are among the highest. E-government services and bureaucracy indicators also pose a problem.

<sup>(16)</sup> European Commission, 'Excellence in public administration for competitiveness in EU Member States'.

<sup>(17)</sup> The indicators have been normalised (min value — smallest observed = 0, max value — highest observed = 1). For more details please consult the following report: [http://ec.europa.eu/enterprise/policies/industrial-competitiveness/monitoring-member-states/improving-public-administration/files/pa\\_report\\_en.pdf](http://ec.europa.eu/enterprise/policies/industrial-competitiveness/monitoring-member-states/improving-public-administration/files/pa_report_en.pdf).

**Figure 3.4.2: Overall profile of public administration - Denmark**

*Note:* Values have been scaled so that the best observation (Member State) gets 1 and the worst gets 0.

*Source:* World Bank Doing Business; Intrum Justitia; OECD; World Economic Forum; European Commission.

The Productivity Commission has proposed new solutions for improving the effectiveness of public administration. They include: the systematic reduction of bureaucracy and simplification of regulation; pursuing broad and flexible collective bargaining agreements in the public sector; and involving private enterprises, collaborators and users in the development of new public services.

#### *Entrepreneurship and Small Business Act (SBA)*

Denmark provides a business environment which supports small firms and which benefits from one of the best European business-oriented economies, with very short start-up times and very flexible labour market rules. These facts are also confirmed in the graph above. In order to facilitate the growth of SMEs, the authorities are constantly scrutinising the regulatory framework. Simpler rules and fewer administrative procedures are mainstreamed into national legislation and policies. Ministries and agencies are required to consult business associations and/or organise panels of small businesses during all phases of legislative and policy processes. For example, the 'Virksomhedsforum' (an online forum where SMEs and other businesses lead the way in proposing changes to administration) enables SMEs

to communicate directly with the Danish administration.

The labour market has been applying the 'flexicurity' model that combines flexible hiring and firing rules with a generous social safety net in the form of income compensation in the event of unemployment, lowering the cost of scaling business operations up or down.

However, high taxes and living costs continue to remain a concern for investors. <sup>(18)</sup>

#### 3.4.6 Conclusions

Denmark remains one of Europe's most competitive economies with high-quality infrastructure and modern, flexible labour rules. However, there is scope for improvement in supporting access to finance and increasing competition in the services and construction markets.

In order to further improve the sustainability of the economy, Denmark would benefit from continuing to

<sup>(18)</sup>

[http://www.oecd.org/eco/surveys/Overview\\_Denmark\\_2014.pdf](http://www.oecd.org/eco/surveys/Overview_Denmark_2014.pdf).

reduce waste generation and the percentage of waste incinerated, and increase recycling instead.

Even if the Danish public administration is one of the most modern in the EU, further efficiencies could be achieved by increasing e-government services and reducing bureaucracy.