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Country Report Denmark 2015

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EXECUTIVE SUMMARY

After five years of slow recovery, the Danish economy seems to be picking up. In 2014, growth and employment in Denmark were affected by the generally slow recovery in the EU and weak domestic demand. GDP growth is expected to pick-up, reaching a growth rate of 1.7% in 2015 and 2.1% in 2016. According to the national accounts, employment reached a trough in mid-2013 and has since increased by 0.8%. The unemployment rate has been on a downward trend since mid-2012, stood at 6.4% by the end of 2014, and is projected to remain stable over the next two years. Inflation is currently very low, reaching an annual growth rate of -0.3% in January 2015. It is expected to improve slightly, as the effects of the fall in commodity prices lessen, and is expected to reach 0.4% in 2015 and 1.6% in 2016. The housing market is improving, but there are very marked regional differences with significant increases in house prices in the largest cities. Since Denmark is a small and open economy, its continued recovery is to a large extent dependent on the economic situation of its main trading partners.

This Country Report assesses Denmark's economy against the background of the Commission's Annual Growth Survey, which recommends three main pillars for the EU's economic and social policy in 2015: investment, structural reforms, and fiscal responsibility. In line with the Investment Plan for Europe, it also explores ways to maximise the impact of public resources and unlock private investment. Finally, it provides an analysis of the Danish economy and reviews the policy response since mid-2014, notably as regards the Country-Specific Recommendations issued by the Council in 2014. The main observations and findings of the analysis are:

Public finances are expected to remain sustainable over the medium-term. The European Commission winter 2015 forecast projects that the budget deficit will stay below 3% in 2015-16. The structural balance will be influenced by volatile revenue components during these years, which to some extent explains the projected fall in the structural balance from a surplus of 1.2% in 2014 to a deficit of 1.8% in 2015. The general government gross debt level is expected to decrease gradually from 45.1% of GDP in 2013 to 43.6% in 2016.

The labour market in Denmark is flexible and employment rates are high, but certain groups remain at the margins. Employment has been improving since mid–2013, and unemployment is expected to remain comparatively low and stable. However, several groups, in particular low-skilled young people and migrants from outside the EU, remain at the margins of the labour market. Recent policy measures, such as the reforms of social assistance, active labour market policies and unemployment benefits are important steps towards addressing this issue. The 2014 reform of active labour market policies is an important step designed to ensure better and more individualised support for unemployed people, more training and education incentives for unskilled workers, and better coordination of relations between the unemployed people and employment offices.

Denmark has the highest expenditure on education in the EU relative to GDP, but educational outcomes are average. The drop-out rates from upper secondary vocational training and education remain relatively high. Moreover, basic skills attainment levels in primary and lower secondary education are average in comparison with the rest of the EU, while apprenticeship places in tertiary education remain scarce. In addition, the basic skills of pupils with a migrant background, and their participation in pre–school education remain low. The recent reform of vocational education seems promising with regard to improving its effectiveness and attractiveness.

Danish productivity growth has been weak over the past two decades, and has been hampered by a lack of competition in the domestic services sector. Restrictions on entry and a generally high regulatory burden are particularly problematic for non-Danish companies. The government adopted a growth package in May 2014, comprising more than 100 measures to accelerate productivity growth. The implementation of these measures is still at an early stage. More generally, limited progress has been made in reducing barriers to entry and regulatory burden related to the planning law, establishment conditions for retailers, and construction authorisations.

Boosting investment would help Denmark strengthen economic growth, increase productivity and improve competitiveness. Growth in private investment is expected on the basis of a high savings surplus in the private sector and low interest rates. Furthermore, the analysis points to possible underinvestment in transport and energy infrastructure in Denmark since the early 2000s, in particular for road maintenance, rail investment and energy infrastructure. Denmark has an ambitious energy strategy, with a goal to cover the entire supply with renewable energy by 2050. The overall investment in energy in Denmark has increased since 2012, enabling improvements in connectivity and infrastructure, as well as capacity expansion. Further investment in electricity and gas networks could enhance the interconnection capacity with neighbouring countries. In the area or research and innovation, the transfer of research results from universities to innovation is weak.

Denmark has made some progress in addressing the 2014 Country-Specific Recommendations. Some progress was made on improving the employability of the people at the margins of the labour market and facilitating their transition from education to the labour market. However, limited steps were taken to remove barriers to entry or to reduce the regulatory burden in order to increase competition in the domestic services sector, in particular in retail and construction.

This Country Report also examines the policy challenges stemming from the analysis, as set out below:

Inclusion of the groups at the margins of the labour market remains a challenge. The active labour market policy reform is primarily targeted at those who have recently been in employment and does not directly target those who are most excluded from the labour market. In addition, the labour market potential of people with a migrant background remains considerably under–utilised.

Drop-out rates from vocational education and training are still high and this type of education does not seem to be attractive enough for young people. This jeopardises sustainable transitions from education to the labour market. The vocational education and training reform adopted in June 2014, and the measures in the 2014 growth package to increase the number of apprenticeships have not yet been implemented.

Barriers to entry and regulatory burden in the domestic services sector affect productivity growth. Strict rules and competition hampering legislation prevail, including in areas such as national standards, authorisations in the construction sector, and the planning law.

The transfer from research to innovation also has an impact on productivity growth. The challenge of better translating the investment in public research into benefits for businesses and society has been recognised by the government, who recently published an evaluation report reflecting on how to enhance university-business collaboration and utilisation of university research.

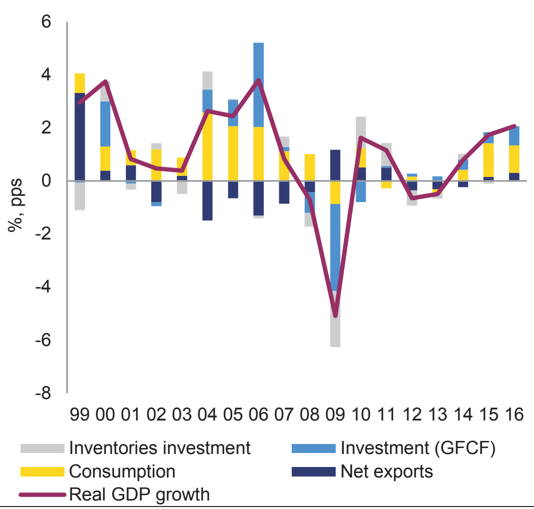
1. SCENE SETTER: ECONOMIC SITUATION AND OUTLOOK

Macroeconomic scene setter

The recovery of the Danish economy has been very slow over the last five years, but economic growth has picked up somewhat in the past year. The strengthening of the economic recovery in Denmark is expected to be supported by a high savings surplus in the private sector, improved labour market conditions, stable and high levels of consumer confidence, and very low interest and inflation rates.

Real GDP growth has been positive for five consecutive quarters and is estimated to have reached 0.8% in 2014. According to the European Commission winter 2015 forecast, GDP is projected to grow by 1.7% in 2015 and 2.1% in 2016. The economic recovery is expected to be driven by both domestic demand and exports (Graph 1.1). High consumer confidence levels for the last year and a half, growth in household disposable income, improved housing market and labour market conditions, and low interest rates are expected to accompany the increase in private consumption. Growth in investment is expected in view of the high savings surplus in the private sector and low interest rates. Exports are projected to increase gradually amid the slow recovery of the wider European economy, and imports are forecast to develop in line with exports.

Graph 1.1: **Components of GDP growth in Denmark**



GFCG - Gross Fixed Capital Formation
Source: European Commission

The current account balance remains in surplus. The surplus is, however, estimated to have fallen from 7.2% of GDP in 2013 to 6.5% in 2014. The high surplus should be seen in the light of weak domestic demand, high savings in the corporate sector and higher yields on investments abroad than those in Denmark. The net international investment position has been positive for the past five years, and is estimated at around 40% of GDP in 2014.

Denmark pursues a fixed currency exchange policy, maintaining a close peg to the euro. The fixed exchange rate regime has been the monetary anchor of Danish economic policy for more than thirty years. Since the introduction of the euro in 1999, the policy has been conducted within the Exchange Rate Mechanism II framework. The objective of the Danish monetary policy is to keep the krone stable against the euro. This policy has proven successful, even during periods of severe turbulences, such as the 1992-93 exchange rate crises, the 2008 global crisis and the euro area sovereign debt crisis in 2012.

The labour market conditions have improved over the past year and the labour market has performed better than the overall GDP growth would suggest. The employment rate increased to 76.7% (20-64 years) in the third quarter of 2014, the highest level since 2009. Even though the structural decline in North Sea oil production has pulled down total GDP growth, the labour market performed relatively well, reflecting better results in other more labour–intensive sectors. The unemployment rate (15-74 years) has fallen to 6.4% by the end of 2014, following a downward trend since spring 2012. Long-term unemployment remains at a low level, affecting merely 1.7% of the active population in the third quarter of 2014. The labour force participation rate is expected to improve amid reforms and welfare programmes adopted over the recent years.

Consumer price inflation has generally been low in 2013 and 2014, but is expected to improve gradually over the next two years. The harmonised index of consumer prices (HICP) stood at -0.3% in January 2015. The headline inflation has been dragged down by the drop in energy prices. According to the European Commission winter 2015 forecast, the HICP is expected to reach 0.4% in 2015 and 1.6% in 2016 as the recovery gathers momentum and the effects of previous falls in commodity prices on the HICP gradually reduce.

House prices have increased over the last two years but there are significant regional differences. In November 2014, prices on single-family houses had grown by 4.1% on an annual basis (three month average), while the corresponding number for owner-occupied apartments was 8.3%. There are large regional differences, with the strongest growth in the capital area. House sales are still slow, but picked up slightly in 2014. This positive trend can be explained by very low mortgage rates and by improved labour market conditions, with growth in employment and real wages.

The fiscal outlook remains stable. The general government deficit of 1.1% of GDP in 2013 is projected to turn into a surplus of 1.8% in 2014. The projected surplus is to a large degree related to high revenues from one–off pension taxation measures and high revenues from the pension–yield tax. In 2015, the fiscal balance is expected to show a deficit of 2.8% of GDP and to remain broadly at that level in 2016. The worsening of the fiscal balance expected in 2015 is due mainly to lower one–off revenues from the pension taxation measures (expected to fall from 3% of GDP in 2014 to 0.8% of GDP in 2015) and from markedly lower pension–yield tax revenues. The fall in oil prices will also reduce public revenues from North Sea oil and gas production. The structural balance is expected to deteriorate from a surplus of 1.2% of GDP in 2014 to a deficit of 1.8% and 1.5% of GDP in 2015 and 2016 respectively. The structural balance in Denmark is strongly influenced by very large and volatile revenue items, such as revenues from oil and gas production and from pension–yield taxes, which are not corrected for in the calculation of the structural balance.

Productivity growth has been weak over the past two decades. Lack of competition in the domestic services sector has been identified as an important contributing factor in this regard. The construction and retail sectors have particularly strong barriers to competition. In 2012, the Danish Government established the Productivity Commission, which made several recommendations for boosting productivity. The government took these into account in the growth package it adopted in May 2014 to accelerate the productivity growth. This package has not yet been implemented.

Box 1.1: **Economic surveillance process**

The Commission's Annual Growth Survey, adopted in November 2014, started the 2015 European Semester, proposing that the EU pursue an integrated approach to economic policy built around three main pillars: boosting investment, accelerating structural reforms and pursuing responsible growth-friendly fiscal consolidation. The Annual Growth Survey also presented the process of streamlining the European Semester to increase the effectiveness of economic policy coordination at the EU level through greater accountability and by encouraging greater ownership by all actors.

This Country Report includes an assessment of progress towards the implementation of the 2014 Country-Specific Recommendations adopted by the Council in July 2014. The Country-Specific Recommendations for Denmark concerned public finances, the labour market, education, and competition in the domestic services sector.

Table 1.1: **Key economic, financial and social indicators**

							Forecast		
	2008	2009	2010	2011	2012	2013	2014	2015	2016
Real GDP (y-o-y)	-0.7	-5.1	1.6	1.2	-0.7	-0.5	0.8	1.7	2.1
Private consumption (y-o-y)	0.5	-3.4	0.8	0.2	0.4	0.0	0.3	1.7	2.1
Public consumption (y-o-y)	3.2	3.0	1.3	-1.4	-0.2	-0.5	0.9	1.6	0.1
Gross fixed capital formation (y-o-y)	-3.3	-14.3	-4.0	0.3	0.6	0.9	2.1	2.3	3.8
Exports of goods and services (y-o-y)	3.2	-9.5	1.9	7.3	0.1	0.8	2.8	3.0	4.5
Imports of goods and services (y-o-y)	4.3	-12.4	0.9	7.1	0.9	1.5	3.7	3.0	4.4
Output gap	1.4	-4.3	-3.2	-2.4	-3.3	-4.1	-3.9	-2.9	-2.0
Contribution to GDP growth:									
Domestic demand (y-o-y)	0.2	-4.2	-0.1	-0.2	0.3	0.0	0.8	1.7	1.8
Inventories (y-o-y)	-0.5	-2.1	1.2	0.9	-0.6	-0.2	0.2	-0.1	0.0
Net exports (y-o-y)	-0.4	1.2	0.5	0.5	-0.4	-0.3	-0.2	0.1	0.3
Current account balance (% of GDP), balance of payments	2.7	3.3	5.7	5.7	5.6	7.2	.	.	.
Trade balance (% of GDP), balance of payments	3.3	4.4	6.1	5.5	5.4	5.7	.	.	.
Terms of trade of goods and services (y-o-y)	1.6	0.2	2.4	-2.1	0.2	1.5	0.1	0.2	-0.2
Net international investment position (% of GDP)	-5.1*	4.4*	14.0*	29.4*	38.4*	39.9*	.	.	.
Net external debt (% of GDP)	30.8*	28.2*	22.7*	14.9*	11.4*	9.8*	.	.	.
Gross external debt (% of GDP)	176.3*	188.9*	190.6*	183.3*	181.1*	177.1*	.	.	.
Export performance vs advanced countries (% change over 5 years)	3.8*	3.6*	-5.4	-7.7	-10.1	-12.1	.	.	.
Export market share, goods and services (%)	1.0	1.0	0.8	0.8	0.8	0.8	.	.	.
Savings rate of households (net saving as percentage of net disposable income)	-4.2	0.8	2.1	0.9	0.0	-0.4	.	.	.
Private credit flow, consolidated, (% of GDP)	18.9	-1.9	-3.0	4.5	7.0	-0.3	.	.	.
Private sector debt, consolidated (% of GDP)	222.8	233.4	222.1	222.8	226.7	224.0	.	.	.
Deflated house price index (y-o-y)	-7.7	-13.3	0.1	-4.3	-5.4	2.8	.	.	.
Residential investment (% of GDP)	5.4	4.2	3.7	4.3	4.0	3.7	.	.	.
Total financial sector liabilities, non-consolidated (y-o-y)	-2.5	6.7	10.4	-0.3	1.6	-0.3	.	.	.
Tier 1 ratio[1]	10.4	14.4	15.1	15.5	17.3	17.7	.	.	.
Overall solvency ratio[2]	13.1	16.1	16.2	16.9	18.7	19.2	.	.	.
Gross total doubtful and non-performing loans (% of total debt instruments and total loans and advances)[2]	1.6	2.8	3.1	3.0	3.9	3.9	.	.	.
Change in employment (number of people, y-o-y)	0.9	-2.8	-2.3	0.0	-0.3	0.1	0.7	0.6	0.9
Unemployment rate	3.4	6.0	7.5	7.6	7.5	7.0	6.6	6.5	6.4
Long-term unemployment rate (% of active population)	0.5	0.6	1.5	1.8	2.1	1.8	.	.	.
Youth unemployment rate (% of active population in the same age group)	8.0	11.8	13.9	14.2	14.1	13.0	.	.	.
Activity rate (15-64 year-olds)	80.7	80.2	79.4	79.3	78.6	78.1	.	.	.
Young people not in employment, education or training (%)	4.3	5.4	6.0	6.3	6.6	6.0	.	.	.
People at risk of poverty or social exclusion (% of total population)	16.3	17.6	18.3	18.9	19.0	18.9	.	.	.
At-risk-of-poverty rate (% of total population)	11.8	13.1	13.3	13.0	13.1	12.3	.	.	.
Severe material deprivation rate (% of total population)	2.0	2.3	2.7	2.6	2.8	3.8	.	.	.
Number of people living in households with very low work-intensity (% of total population aged below 60)	8.5	8.8	10.6	11.7	11.3	12.9	.	.	.
GDP deflator (y-o-y)	4.1	0.5	3.2	0.8	2.5	1.5	0.7	1.1	1.8
Harmonised index of consumer prices (HICP) (y-o-y)	3.6	1.1	2.2	2.7	2.4	0.5	0.3	0.4	1.6
Nominal compensation per employee (y-o-y)	3.9	2.8	3.2	1.4	1.5	1.3	2.0	2.1	2.3
Labour productivity (real, person employed, y-o-y)	-1.8	-2.2	4.0	1.2	-0.4	-0.5	.	.	.
Unit labour costs (ULC) (whole economy, y-o-y)	5.9	5.1	-0.8	0.2	1.9	1.9	1.9	1.0	1.1
Real unit labour costs (y-o-y)	1.7	4.6	-3.9	-0.6	-0.6	0.3	1.1	-0.1	-0.7
REER[3)] (ULC, y-o-y)	4.0	3.3	-4.3	-1.5	-3.1	2.9	1.8	-1.1	0.0
REER[3)] (HICP, y-o-y)	0.4	1.1	-3.7	-0.5	-2.3	0.6	1.1	-0.8	-0.2
General government balance (% of GDP)	3.2	-2.8	-2.7	-2.1	-3.7	-1.1	1.8	-2.8	-2.7
Structural budget balance (% of GDP)	.	.	-0.7	-0.6	-0.1	-0.1	1.2	-1.8	-1.5
General government gross debt (% of GDP)	33.4	40.4	42.9	46.4	45.6	45.1	45.0	42.7	43.6

(1) Domestic banking groups and stand-alone banks.
(2) Domestic banking groups and stand-alone banks, foreign-controlled (EU and non-EU) subsidiaries and branches.
(3) Real effective exchange rate
(*) Indicates BPM5 and/or ESA95

Source: European Commission; ECB

Table 1.2: **The Macroeconomic Imbalance Procedure scoreboard**

			Thresholds	2008	2009	2010	2011	2012	2013
External imbalances and competitiveness	Current Account Balance (% of GDP)	3 year average	-4%/6%	2.4	2.5	3.9	4.9	5.7	6.1
		p.m.: level year	-	2.7	3.3	5.7	5.7	5.5	7.1
	Net international investment position (% of GDP)		-35%	*-5.1*	*4.4*	*14.0*	*28.7*	*37.8*	*39.7*
	Real effective exchange rate (REER) (42 industrial countries - HICP deflator)	% change (3 years)	±5% & ±11%	2.1	5.5	0.2	-2.5	-7.7	-2.6
		p.m.: % y-o-y change	-	2.1	2.6	-4.4	-0.7	-2.9	1.0
	Export Market shares	% change (5 years)	-6%	*-8.2*	*-5.1*	-13.4	-15.8	-18.6	-17.9
		p.m.: % y-o-y change	-	1.4	-1.4	-10.9	-3.8	-5.0	2.3
	Nominal unit labour costs (ULC)	% change (3 years)	9% & 12%	13.7	17.1	10.3	4.2	1.1	3.4
		p.m.: % y-o-y change	-	5.9	5.1	-0.8	0.0	1.9	1.4
Internal imbalances	Deflated House Prices (% y-o-y change)		6%	-7.9	-13.1	0.3	-4.3	-5.1	2.8
	Private Sector Credit Flow as % of GDP, consolidated		14%	18.8	-1.9	-2.9	4.5	7.0	-1.4
	Private Sector Debt as % of GDP, consolidated		133%	222.8	233.3	222.1	222.7	227.1	222.6
	General Government Sector Debt as % of GDP		60%	33.4	40.4	42.9	46.4	45.6	45.0
	Unemployment Rate	3-year average	10%	3.7i	4.4	5.6	7.0	7.5	7.4
		p.m.: level year	-	3.4	6.0	7.5	7.6	7.5	7.0
	Total Financial Sector Liabilities (% y-o-y change)		16.5%	0.0	5.6	9.7	1.6	3.0	-0.1

Flags: na: not available.
(1) Figures highlighted are those falling outside the threshold established in the European Commission's Alert Mechanism Report. For REER and ULC, the first threshold applies to euro area Member States.
(2) Figures in italics are calculated according to the old standards (ESA95/BPM5).
(3) Export market share data: total world exports are based on the fifth edition of the Balance of Payments Manual (BPM5).
Source: European Commission

2. STRUCTURAL ISSUES

2.1. TAXATION, DEBT SUSTAINABILITY AND FISCAL FRAMEWORK

Taxation

The limited shift of the tax burden from labour towards taxes less detrimental to growth is not conducive to growth and employment in Denmark. In its final report of March 2014, the Productivity Commission recommended gradually shifting taxes to sources that are less distortive and do not constrain productivity growth, putting more emphasis on land and property taxes and reducing the tax burden on companies and personal income.([1])

As regards housing taxes, the property value tax has been frozen in nominal terms since 2002, despite the biennial update of cadastral tax values to reflect market values. This has effectively reduced the property value tax rate and is eroding budget revenues. The property tax freeze arguably contributed to the housing boom between 2003 and 2007. However, the government does not intend to review this system in the near term. The Productivity Commission recommends withdrawing the nominal property value tax freeze, leading to a continuous adjustment of the valuations to current market prices, and gradually increasing the property value tax to a level that neutralises the tax benefit of the mortgage interest deduction. It was concluded that the land tax should be kept and, if possible, be given more weight in overall taxation. Increasing taxation on property would restore the tax base and help to prevent future housing booms.

Denmark continues to have one of the highest environmental tax revenues relative to GDP in the EU. They amounted to 3.9% of GDP in 2012, as compared with the EU average of 2.3%. Per capita road transport emissions in Denmark are among the highest in the EU, which suggests that the structure of car taxation in Denmark, currently based on low excise duties and high car registration fees, is not meeting its environmental objectives. In particular, it provides disincentives to purchase newer and more efficient cars.

Some progress has been observed in relation to the indexation of excise duties on oil, which will start in 2016. To incentivise the use of hydrogen or electric cars, a 52 % increase in the diesel 'countervailing charge' has been set but exempting trucks, buses and tractors.

Debt sustainability

Denmark does not appear to face major short, medium or long-term debt sustainability challenges. At 45.1% of GDP in 2013 (and expected to decline at 43.6% in 2016), government debt is well below 60% of GDP. Denmark does not appear to face major fiscal sustainability risks in the short or medium term. According to Commission projections, the public debt ratio is projected to remain broadly stable reaching 44% of GDP by 2025 in the baseline no-policy change assumption.([2]) Also in the long term, fiscal sustainability risks seem limited, and primarily associated with projected age-related spending, in particular in the field of long-term care. The reforms of the voluntary early retirement pension scheme and the linking of the statutory retirement age with life expectancy have improved the long-term sustainability of public finances. Continuing to ensure sufficient primary surpluses in the medium term would improve the sustainability of public finances.([3])

Fiscal framework

The fiscal framework in Denmark is designed as a medium-term budgetary strategy that applies to all levels of government. The basic budgetary principle of the framework is to achieve a structural general government balance or surplus in the medium to long term.

As Denmark has ratified the Treaty on Stability, Cooperation and Governance (TSCG) and opted to apply its Article 14.5 of the TSCG, it is bound by the substance of the TSCG, including its Fiscal Compact. The Danish Budget Law transposed the provisions of the TSCG, including the introduction of a structurally

([1]) The report can be found on the website http://produktivitetskommissionen.dk/media

([2]) See http://ec.europa.eu/economy_finance/publications/occasional_paper/2014/op200_en.htm for details on the methodology used.

([3]) By offering lower rates of taxation for personal pension savings if taxes are paid now instead of at retirement, Denmark has shifted some of its revenues from the long-term to the short-term.

balanced budget rule with a correction mechanism and independent monitoring.[4]

An independent fiscal institution monitors compliance with national fiscal rules in Denmark and produces macroeconomic forecasts. The Danish Economic Council (DORS) has been designated 'fiscal watchdog', monitoring the long-term sustainability of public finances and the general balance of public finances in the medium-term. More specifically, DORS evaluates and monitors whether fiscal policy complies with the Danish Budget Law, assesses the general government expenditure ceiling and their compatibility with fiscal targets, and checks that the budgets and actual accounts for the general government comply with the expenditure ceilings. In addition, DORS publishes biannual forecasts on the state of Danish economy and public finances.

([4]) The relevant provisions (cf. Art. 2-4) came into force on 1 February 2013.

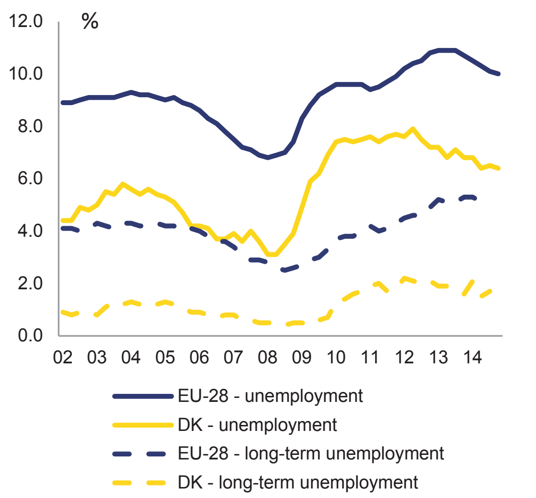
2.2. LABOUR MARKET, EDUCATION AND SOCIAL POLICIES

Labour market

Situation and challenges

Denmark is witnessing a gradual labour market recovery. The unemployment rate (15-74 years) fell to 6.4% by the end of 2014 and long-term unemployment has also improved slightly, affecting merely 1.7% of the working–age population in the third quarter of 2014 (Graph 2.2.1). Denmark is performing relatively well in terms of employment, with an employment rate (20-64 years) of 76.7% in the third quarter of 2014, compared with the EU average of 69.8%. In recent years, the country has adopted substantial labour market reforms to improve incentives to work. In this context, and given the effects of the economic crisis, it may be a challenge to maintain a policy balance that safeguards the efficient functioning of the Danish flexicurity model.

Graph 2.2.1: **Unemployment**



Source: European Commission

The key labour market challenge in Denmark has traditionally been long-term labour supply in the context of demographic ageing. The recent reform of the voluntary early retirement pension scheme and other welfare programmes are expected to improve long–term labour supply by including more inactive adults in the workforce and raising the retirement age. According to national estimates, the employment rate could increase by about 4 pps. towards 2020 as a result of structural reforms carried out over the last three years, including the retirement reform, the tax reform, the early retirement reform, reform of the 'flex-job' system, and the 2013 growth plan. This is expected to happen in parallel with projected demographic and immigration developments, and would bring Denmark close to the 80% employment target.([5])

The labour market potential of immigrants from outside the EU remains underutilised. The employment rate of non-EU nationals (15-64 years) is 54%, 20.7 pps. below the employment rate for Danes (Graph 2.2.2). Looking at certain countries, the employment rate gap is up to 27.1 pps. Furthermore the gender-gap for non-EU nationals is higher.([6]) Lower employment rates for non-EU nationals are accompanied by slightly higher inactivity rates.([7]) The labour market disadvantage of the non-EU nationals could stem from educational disadvantages (as described in the later section). Discrimination on the grounds of ethnic origin may also be a contributing factor.([8]) This group's poor labour market outcome remains a considerable loss of human capital, and a social inclusion challenge. Disadvantages, if not corrected, may give labour market difficulties to the younger generations.

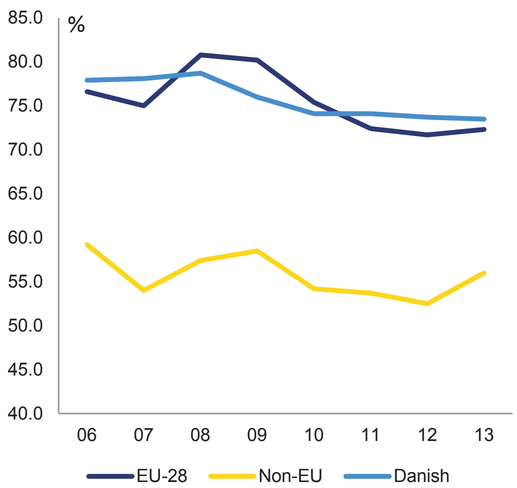
([5]) The employment target for 2020. Ministry of Finance, 16 November 2014.

([6]) The employment rate (15-64 years) for non-EU-28 nationals is 54% while 74.7% for Danish nationals. The gender gap for non-EU nationals is 15.5 pps. (62.9% for men and 47.4% for women) compared with 5.4 pps. for Danes (77.3% for men and 71.9% for women). Eurostat (2014, third quarter). Danish Authorities also measure employment rate from a range of countries (all except EU, Andorra, Australia, Canada, Iceland, Liechtenstein, Monaco, New Zealand, Norway, San Marino, Switzerland, USA and the Vatican State). Danish Statistics (2014) Indvandreres og efterkommeres tilknytning til arbejdsmarkedet

([7]) The activity rate (15-64 years) is 64.2% and unemplyment rate (15-64 years) is 15.9% for non-EU migrants, in comparison with 79.4% and 6.0% for Danes. Eurostat (2014, third quarter). Additional findings are available in Ankestyrelssen: Integration – Status og udvikling 2014.

([8]) Discrimination (in general, not specifically on the labour market) on the ground of ethnic origin is perceived as widespread by 70% of Danish citizens, Euro barometer (2012) on discrimination. There is a gap in the probability of being employed for foreign-born and native-born (16-64), after controlling for education and literacy skills. OECD, International Migration Outlook 2014, page 120.

Graph 2.2.2: **Employment rate in Denmark by nationality**



Source: European Commission

People with disabilities and reduced work capacity are more often at the margins of the labour market. Unemployment rates for people with disabilities are relatively high while employment rates are low. This cannot be explained fully by the fact that the average educational level for this group is lower.([9])

Youth unemployment in Denmark remains low. The unemployment rate among young people remains well below the EU average at 11.3% (fourth quarter 2014). Similarly, the long-term youth unemployment rate at 1.3% in 2013 is very low compared to the EU-28 average of 7.9%, although still above the pre-crisis years. The proportion of young people, who are not in education, employment, or training (NEETs) of 6.0% (15-24 years) and 7.5% (15-29 years) in 2013, also compares favourably with most Member States, and remains well above the pre-crisis levels. Moreover, young people are increasingly over-represented among social benefit recipients.([10])

The number of people who are at-risk-of-poverty has decreased, while the overall number of people living in at-risk-of-poverty and social exclusion has remained quite stable. Despite the drop in unemployment since 2011-12, the number of people living in low work-intensity households increased to 522 000 in 2013. This underlines the importance of better inclusion of people at the furthest margins of the labour market in order to prevent long–term consequences for social inclusion and cohesion.([11])

The pension system performs well on sustainability and adequacy. The system offers a good economic and social balance, with the basic, universal pension financed by general taxation, pre-funded occupational schemes covering 85% of the workforce and very prevalent personal retirement savings schemes. The basic pension ensures that the risk of poverty rate for aged 65 and older is lower than for the rest of the population. Contributions to pre–funded schemes are subject to tax relief, while investment returns and benefits are taxed.

Current income inequalities among pensioners are small, but they are likely to increase considerably in the future. The gender pension gap is currently no larger than the gender pay gap. The future gender pension gap is expected to be considerably larger as income from the second and the third pillars of the pension system becomes more important. Though gender gaps in occupational and personal pension coverage are moderate by EU standards, when combined with differences in pay, working hours and the length of men's and women's working lives, they are expected to result in a substantial widening of the gender pension gap.

([9]) Self-reported employment rate was 49.7% compared to 75.3% for people without disabilities and it has been decreasing (56% in 2010). Only 24,2% of persons with a psychological disability are in employment. SFI (2014) '*Handicap og beskæftigelse 2002-2012*' and EU-SILC (2012).

([10]) 16-29 year old constituted 32% of all social benefit recipients in 2007 and 37% in 2014. European Employment Policy Observatory, Per Kongshøj Madsen (2014-15). Country challenges and specific analysis of country situation, Calculations based on data from the databanks of Statistics Denmark.

([11]) The number in risk of poverty after social transfers decreased from 731 000 to 690 000 in 2012-13 (although the number was 643 000 persons in 2008). The number of people living in at risk of poverty and social exclusion has remained stable 2012-13: 1 057 000 to 1 059 000. Severe material deprivation affected 3.8% in 2013 (in comparison to 2% in 2008). 347 000 persons was living in low work-intensity households in pre-crisis 2008. Eurostat.

Policy response and assessment

The first results of the Danish reforms of the early retirement (disability pension) and the 'flex-job' system can now be seen. As a rule, people under 40 cannot claim a disability pension, but instead undergo a labour market reintegration process. The reform included the setting up of 'rehabilitation teams' in all municipalities. The positive impact of the work of these teams is now being reported. The Danish Government estimates that 5 000 new 'flex–jobs' and 8 000 'mini–flex–jobs' (with fewer than 10 working hours per week) have been created so far.

The reform of the social assistance (cash benefits) was implemented in January 2014. The reform comprises a number of elements focusing on helping young people into education and on improving the employment prospects of people with reduced employability. Initial estimates were that 1 000 people would enter into education in 2014 (rising to 4 600 people in 2017) and 3 100 people more would be in work in 2014 (4 200 people in 2017). More recent estimates are not available. It remains to be seen, therefore, if these expectations are met – and to what extent these people are able find stable and sustainable employment, rather than repeatedly falling back on the social assistance system.

The 2014 reform of the active labour market policy is one of the main responses to the 2014 Country-Specific Recommendation on inclusion of those at the margins of the labour market. The reform, based on the first report by the Carsten Koch expert group, which focuses on the insured unemployed, will be implemented in 2015.([12]) The reform will change both the content and the structure of the active labour market policy (ALMP) and the public employment services. The changes aim at providing better and more individualised support for people who become unemployed.([13]) A process of 'screening' is a key function of the new approach, where those who are assessed as being able to find a job independently within six months will have more freedom to do so, while those who are at risk of ending in long-term unemployment should get more support at an earlier stage. How effectively this screening process will be carried out depends on the resources and knowledge available in individual employment offices. The reform is budget-neutral, and meeting the additional demands in terms of coordination, outreach to local businesses and individualising the ALMP measures taken by the employment offices remains a key challenge. The active labour market reform primarily improves the situation for those who have recently been on the labour market (as they qualify for unemployment benefits) and reduces the outflow of people towards the margins of the labour market. However, the reinforced ALMP measures do not target those who are already more or less permanently excluded from the labour market.

Not enough steps were taken to address the situation of those furthest away from the labour market, who no longer qualify for unemployment insurance fund benefits. Low educational attainment and very limited labour market experience appear to be key factors in unemployment. Studies suggest that 24% of social assistance recipients have been on social assistance for over three years, and 7% for over eight years.([14]) Around 70% of all social assistance recipients have not completed education or training beyond lower secondary education. In addition, young people and immigrants from a range of countries are also over–represented.([15]) Better

([12]) In February 2014, the 'Carsten Koch' expert group made a number of recommendations on active labour market policy measures for insured workers (on unemployment benefit) advising more individualised and job-targeted measures. The reform was passed in Parliament ultimo 2014 and the first part entered into force January 2015. The Carsten Koch II recommendations on measures for uninsured workers (on social assistance etc.) are expected in March 2015.

([13]) The reforms changes include more flexibility in the timing and content of the active measures, more training and education incentives for unskilled workers, more freedom for the unemployed to manage relations with the job-centres through digital self-service, but also mandatory monthly meetings among the job-centres, the unemployed and the relevant unemployment insurance fund (UI).

([14]) Arbejderbevægelsens Erhvervsråd (2012) *Reformer af kontanthjælp og førtidspension.* Study, which is based on 126 000 recipients of social assistance, is from before implementation of the reform.

([15]) 37% of social assistance recipients are aged 16-29. Danish Government and the Carsten Koch report have measured immigrants from a range of countries (all except EU, Andorra, Australia, Canada, Iceland, Liechtenstein, Monaco, New Zealand, Norway, San Marino, Switzerland, USA and the Vatican State) who constitutes 7% of the working age population in Denmark, but 21% of those on social assistance assessed as job-ready and 33% of those labour market inclusion of these vulnerable groups will be the topic of the 'Carsten Koch II' report, expected in March 2015, which will focus on the uninsured workers (who do not qualify for unemployment benefits, whether they are receiving social assistance or are not receiving any public benefits). The main recommendations are expected to cover issues in several sectors, such as health and education, and in particular address coordination problems between these sectors. Despite the large number of labour market reforms already carried out, it is essential to follow up on the recommendations to ensure improvements for peoples at the margins of the labour market.

Despite an ambitious 'Youth Guarantee' scheme, certain groups of young people in Denmark are at risk of unemployment. Young people with low educational attainment and skills seem to be at risk of falling through the system. The four month deadline for 'activating' job-seekers is not met in a tenth of cases and the recent ALMP reform is likely to increase pressure on employment offices. Tackling these challenges is necessary to ensure the Youth Guarantee becomes a reality for all young people. Furthermore, the transition between systems (school to higher education, higher education to work, etc.) is a crucial time for future working life. A more detailed assessment of why vulnerable young people fall through the system during these transition phases would help bridge the knowledge gap. Low educational attainment and 'negative social inheritance' seem to be strong contributory factors.([16]) This highlights the importance of effectively implementing the social assistance reform, and steering more young people away from passive support and towards education. A more detailed 'profile' of young people not in education, employment or training (NEETs), based on the findings in the 'Carsten Koch II' report could improve the analytical basis and help with the design of more targeted measures.

The 2012 reform of the unemployment benefit system was never fully implemented. This was owing to political measures that introduced a number of short-term benefits which mitigated its effects. The government has tasked an expert commission with proposing reforms to the unemployment benefit system in order to help bridge the knowledge gap. The commission's recommendations are expected in the second half of 2015.([17]) These recommendations could be the starting point for reaching a more balanced post-crisis flexicurity equilibrium**.**

The labour market reforms described above are important steps towards improving the long–term labour supply and including those with lower work capacity in the labour market. Denmark made some progress in towards improving the employability of people at the margins of the labour market, having introduced important reforms which were now at an early stage of implementation. Tangible results are, however, yet to be seen and additional measures for those at the furthest margins of the labour market need to be carried out.

Education and Training

Situation and challenges

Denmark has the highest expenditure on education in the EU, but challenges related to better educational outcomes remain. General government expenditure on education stood at 7.8% of GDP in 2012, as compared with a 5.3% EU average. Public expenditure per student is also well above the EU average at every level of education. Nevertheless, Denmark is facing a number of significant challenges in the education sector. There could be a shortage of highly–skilled

assessed as ready for other activation. *'Delrapportering: Integrations-indsatsen for nyankomne flygtninge og familie-sammenførte udlændinge*' (January 2015), the report can be found on the website: http://www.dst.dk/da/Statistik/emner/indvandrere-og-efterkommere, and Skipper, Lars (2011): 'Systematic Register-based Mapping of Health Problems amongst the Weakest Cash-benefit Recipients'.

([16]) Around 25% social assistance recipients under 30 have an education above primary school, compared to 40% of the average recipient. Among young people with a socially challenged background, one in five receives social benefits. European Employment Policy Observatory, Per Kongshøj Madsen (2014-15).

([17]) The Expert Commission, chaired by Professor Nina Smith and composed of independent experts and representatives from the social partners, is tasked with areas such as compensation-rate and eligibility, increased flexibility, opportunities for full/part-time insurance, calculations methods, a voluntary versus a mandatory system and the financial robustness in relation to increased national and international labour mobility.

workers in Denmark by 2020([18]), which highlights the main challenge for the Danish educational system– ensuring better educational outcomes for a larger proportion of the population.

Despite high expenditure, school outcomes of pupils are around the EU average and even below that average for migrant pupils. Pupils' performance in the basic skills is around the EU average. Denmark is one of the EU countries with the highest performance differences between migrant and non-migrant pupils. The PISA 2012 report also confirmed that students who had not attended early childhood education and care (ECEC) were twice as likely to end up as low performers. Meanwhile, the participation rate of migrant children in ECEC is significantly lower than that of other children.([19])

Denmark has a well-established and effective vocational education and training system. However, improving its attractiveness, image and some quality aspects is a challenge in order to attract a larger proportion of young people. Currently the level of participation in vocational education and training (VET) compared with upper secondary youth educations is slightly below the EU average.([20]) The high drop-out rate from VET (almost 50%) is linked to the lack of approximately 4 500 apprenticeship places([21]) and students' inadequate basic skills; although some students dropping out of VET are simply switching to another VET education. The strengthening of the career guidance at the lower and upper secondary school remains a challenge, while the transition from school to the labour market has become more challenging for young people.

While Denmark is one of the leaders in tertiary attainment, study duration is one of the longest in the EU. The taximeter model used to fund tertiary education (where funding is directly linked to the number of exams passed by students) is currently under review as it does not account for quality. There is limited permeability between vocational bachelor programmes and general master's programmes, making the system less efficient.

Policy response and assessment

To improve educational outcomes, a reform of the municipal primary and lower secondary school (*Folkeskole*) was introduced in the 2014-15 school year. The focus is on improving learning outcomes and making the school day more flexible. More mathematics, Danish and English lessons have been added, as well as practical lessons, often linked to the local environment. To help schools and local authorities implement the reform, a catalogue of experiences and best practices was prepared. A new data warehouse was also created to help schools compare their results with other schools. The current public school reform is funded via the government budget.([22]) The 2014 financial bill allocated a total of DKK 280 million (EUR 37.6 million) over four years to improve social inclusion in early childhood education and in compulsory education. The reform is heading in the right direction but more work needs to be done to improve the basic skills of migrant children and their participation in ECEC.

The 'Better and more attractive vocational education and training programmes' VET reform was adopted in June 2014 and will come

([18]) A paper from the Economic Council of the Labour movement suggests that in 2020 there will be a deficit of 109 000 people with higher education and at the same time a surplus 142 000 unskilled workers. *Arbejderbevægelsens Erhvervsråd (2014): 'Mismatch på arbejdsmarkedet og løndannelse i 2020'.*

([19]) In Denmark, participation in ECEC for children from immigrant families is 19 pps. lower than participation of non-immigrant children; the difference in PISA reading results between those who attended ECEC for more than three years and those who attended for less than one year is 36 points; the difference in PISA mathematics results between those who attended ECEC for more than one year and those who attended for less than one year is 43.5 points (Key Data on Early Childhood. Education and Care, 2014 Edition Eurydice and Eurostat Report).

([20]) The ratio of VET students compared to ISCED 3 was 46.1 % in 2011, EU-average was 50.3 % (Eurostat)

([21]) Out of the 79 503 VET students, 4 774 are seeking an apprenticeship place (2% less than a year ago) while 6 547 VET students were in an in-education internship (6% more than in 2013). Data from November 2014. Data can be found on the website: http://www.uvm.dk/Service/Statistik

([22]) Municipalities' total budgets will be raised by DKK 204 million (EUR 27.4 million) in 2014 and DKK 407 million (EUR 54.7 million) yearly from 2015. The reform includes separate funding of DKK 1 060 million (EUR 142.4 million) for competency development of school leaders, teachers and pedagogues. The government has also allocated DKK 500 million (EUR 67.2 million) in the period 2012-15 for better use of ICT in the primary and lower secondary school. The Ministry invested DKK 1 billion (EUR 134.3 million) into training of teachers and pedagogues' competences.

into effect from the 2015-16 school year. The reform has clear targets, including increasing the proportion of young people who complete VET education from the current level of 19% to 25% in 2020 and 30% in 2025. It provides for the creation of more attractive and better quality learning environments, including a separate education system for those under 25, more job oriented programmes and support of teacher development. The reform appears comprehensive and promising, and it is strongly supported by the social partners and has the backing of a broad majority in parliament. The main challenge now is to put these good intentions into practice, delivering better VET education and thus improving the image of the education and attracting a larger proportion of young people.

Some initiatives have been taken to address the lack of apprenticeships places. These are developed by the government, together with the social partners, and focus is on giving better advice to VET students and administrative assistance to small companies who would otherwise be hesitant about taking on apprentices.([23]) The first result of this cooperation is a report published in January 2015, estimating a potential for creating a considerable number of apprenticeships places over the coming years.([24]) In the meantime, in-school internship centres are a necessary alternative, ensuring that all VET students can at least complete their education. However, attention should be paid to whether these students, do as well on the labour market as other VET graduates, and the extent to which this can be mitigated by increased help with job search.

Denmark aims to raise the quality of higher education and reduce the duration of study. To speed up completion of tertiary studies and save costs, the new grants and loans scheme and the framework for higher education programmes are being implemented gradually from 1 July 2014 to 1 January 2016.([25])The reform is expected to produce a net benefit for the public finances of DKK 2.2 billion (EUR 295.5 million) by 2020 – assuming an increase in labour supply of around 5 900 people. There are some concerns that the new initiatives aimed at speeding up completion time could have a negative impact upon students who start a business whilst studying. Since 2014 all higher education institutions need to include the access for students from low socio-economic backgrounds as one of the targets in their 2015-16 performance contracts.

The Quality Expert Committee was set up to reflect on how to improve the higher education. Its first report([26]) recommended better quality teaching so that all students could gain skills that can be translated into employment, in particular in the private sector. From the summer of 2015, the government will gradually reduce the number of study places by 3 500 in areas where graduate unemployment was high in the last 7–10 years. The reduction of study places should be seen in the context of an average unemployment rate among graduates one year after graduation of about 30%. The second report([27]) focuses inter alia on accreditation as a tool for ensuring the quality of the study programmes and proposes putting greater emphasis on the quality of teaching, by giving the institutions more autonomy. The findings of the two reports will serve as a base for future political discussions and reforms.

It remains a challenge to intensify the implementation of reforms in the adult and continuing educational centres. The work of the Council for Adult and Continuing Education([28]) will be crucial for up-skilling unqualified workers, by maintaining the focus on connections to economic and employment policies and increasing the supply of adult vocational training and digital skills, but also literacy.([29])

Denmark has made some progress regarding the recommendation to improve educational

([23]) The article can be found on the website http://uvm.dk/Aktuelt

([24]) The potential is estimated as 33 755 apprenticeship places, 59% above the 2012 figure. Ministry of Education (2015) 'Praktikplads-potentiale og benchmarking af erhvervs-skolerne'.

([25]) It includes incentives to stimulate early entry to higher education, more stringent criteria regarding progress in studies for receiving state education support and a new framework for higher education programmes that supports the active completion of studies and a bonus for faster completion.

([26]) Report can be found at http://ufm.dk/en/education-and-institutions/councils-and-commissions/the-expert-committee-on-quality-in-higher-education-in-denmark

([27]) Ibid.

([28]) Law number 1100 from 30.11.2009.

([29]) Denmark performed under the OECD average in the Survey of Adults Skills – PIAAC.

outcomes, in particular for young people with migrant background. However, it remains a challenge to increase the participation rate of migrant children in pre-school education and raise the level of their language and basic skills.

Denmark has made some progress towards reforming and improving the effectiveness and attractiveness of vocational training and facilitating the transition from education to the labour market, including through a wider use of work-based training and apprenticeships. While the recent reform seems promising, the tangible results are yet to be seen.

2.3. PRODUCTIVITY AND COMPETITION

Situation and challenges

Improved competitiveness is essential to strengthen the economic recovery in Denmark. Productivity growth, which is vital in this regard, has generally been weak over the last two decades. The Danish domestic services sector is marked by low productivity growth, high market concentration, high food prices, and a low proportion of foreign companies. In particular, barriers in the construction sector, strict planning law and size regulations deter non-Danish firms from entering the Danish market. Limited action has been taken to implement measures in the construction sector, whereas no measures have been announced so far in the retail sector.

The construction sector suffers from significant regulatory and structural barriers to competition. The Danish construction sector has experienced slow productivity growth in recent years.([30]) The percentage of foreign–owned companies in the sector is about one-third lower ([31]) than the EU average (Graph 2.3.1). At the same time, prices in the construction sector([32]) are the second highest in the EU (after Sweden), 40.5% above the EU average (Graph 2.3.2).([33])

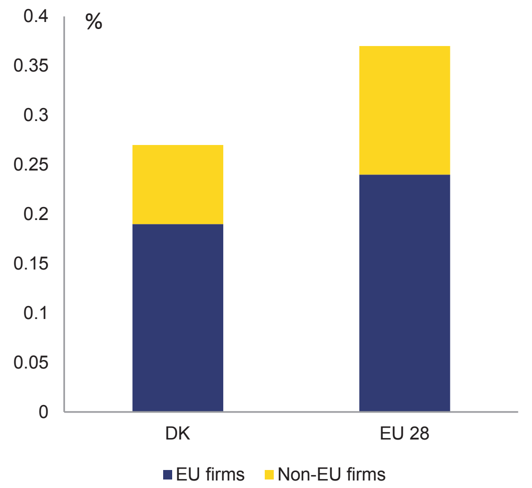
([30]) As highlighted by the Productivity Commission report of 2013. The report can be found on the website - http://produktivitetskommissionen.dk/media

([31]) Foreign firms in Denmark account for only 0.27% (0.19% from the EU) as compared to the EU average of 0.37% (0.24% from the EU) – Eurostat (Commission analysis) data from 2011.

([32]) The calculation of prices is based on a survey comparing the purchasers' prices actually paid for comparable and representative buildings and civil engineering works across participating countries.

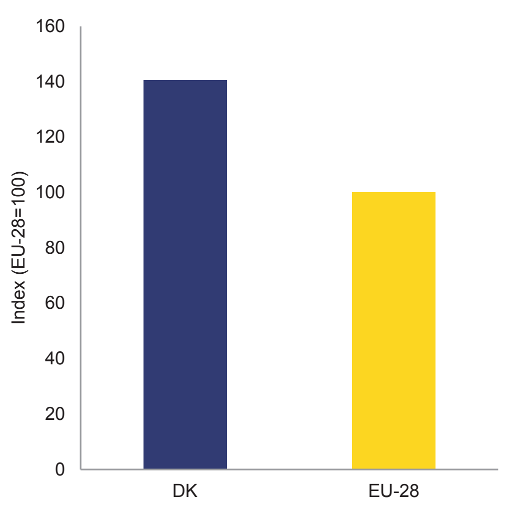
([33]) Eurostat (2013 data)

Graph 2.3.1: **Percentage of non-Danish owned firms in the Danish construction sector**



Source: European Commission (2011 data)

Graph 2.3.2: **Price level index in the construction sector (EU-28 = 100)**



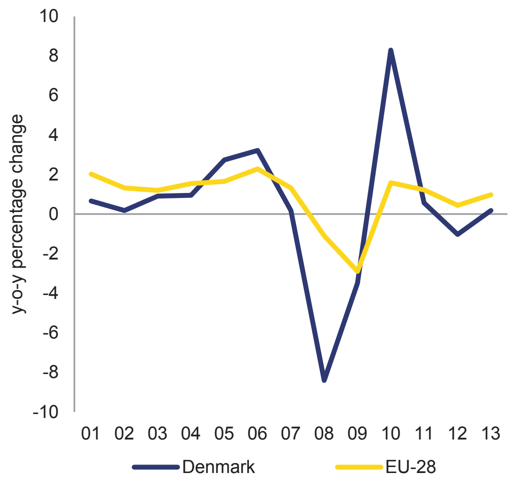
Source: European Commission (2013 data)

The Productivity Commission has identified the construction sector as an area with potential for productivity improvement. The regulatory environment in the Danish construction sector is characterised by strict building regulations and sustainability requirements, and a large number of certification schemes (which are applied to both construction professionals and construction services in general). In addition, restrictive authorisation and certification schemes are applied to crafts, and overlap for temporary cross-border services providers. In addition, authorisations, certifications and national standards issued by other Member States are not always recognised. As a result, EU service providers, who are not certified to European or international standards, are forced to acquire several authorisations and certifications and to comply with all Danish requirements. Limited or no regard is paid to requirements complied with in the provider's home Member State. The Productivity Commission recommended restructuring the processing of building permits, with faster procedures, 'one-stop-shop' solutions, and mutual recognition of permits between municipalities.

Low level of competition is still a problem in the retail sector. The five main grocery retailers in Denmark account for nearly 90% of the market and there are only a few large–scale retail establishments. The productivity of the retail sector is lower than the EU average both in terms of levels and growth (Graph 2.3.3). Grocery prices in Denmark are high, around 4–6% higher([34]) than the average of seven other Member States([35]), when corrected for VAT and excise duties, taking into account the high Danish per capita wealth and that more products are sold on campaign in Denmark than in the other countries.([36]) Foreign-owned chains account for only 11% of the market and are exclusively represented in the discount segment.

([34]) 'Discount culture in the Danish grocery market', Danish Competition and Consumer Authority, 2012
([35]) Belgium, Denmark, Finland, France, Italy, The Netherlands and Germany
([36]) 'Discount culture in the Danish grocery market', Danish Competition and Consumer Authority, 2012

Graph 2.3.3: **Productivity growth trends in the wholesale and retail trade**



(1) Productivity measured as gross value added per hour worked, at constant prices. Sector G-I: Wholesale retail trade accommodation food services, transportation and storage
Source: OECD (2014), Productivity and unit labour cost by industry, ISIC Rev. 4, OECD Productivity Statistics (database).

Retail establishment regulations for large outlets are among the most restrictive in Europe. The restrictions include bans on outlets above a certain surface area and strict rules on outlet size and location, e.g. in town and city centres and local centres. Such strict regulations not only constitute a barrier to entry for companies, but also limit the ability of existing stores to achieve economies of scale. They may also discourage foreign retailers from investing in Denmark. Currently, there is only one hypermarket operator on the market (*Dansk Supermarked*), owing its dominant position to the fact that it was established before the restrictive planning regulations were implemented.([37])

According to the findings of the Productivity Commission, productivity in the grocery retail sub–sector could benefit from a 13% increase if planning regulations were relaxed. The 2013 recommendations of the Productivity Commission included elements such as a significant

([37]) 'Barriers to productivity growth in the retail sector', Productivity Commission, Copenhagen Economics, 8 May 2013 liberalisation of the Planning Act rules on the location and size of new stores, the inclusion of competition objectives in local planning, the provision of a general authorisation to establish substantially larger stores in Denmark and easier access to the market for foreign companies. However, no action on these recommendations has been included in the recent growth package.

The rapid development of the e-commerce sector is not likely to significantly change the landscape of the daily consumer goods market in the near future. The e-commerce sector in Denmark is developing dynamically, with 14% growth in the value of online sales in 2013.([38]) Nearly a third of the purchases are made in foreign online shops. Books, films, music, toys and clothes are the categories of goods most frequently purchased on the internet. However, even though e-commerce plays an increasingly important role in the Danish retail sector, its impact on the daily consumer goods sector remains limited. There is no indication that online shopping will have any significant impact on the high market concentration or in reducing the need for physical premises in the daily goods segment in the short or medium term.

Danish competition law does not sufficiently reflect international standards. In 2012 and 2013, amendments to competition law were introduced to strengthen the enforcement regime, but as pointed out by the Productivity Commission in March 2014, Denmark's competition law is still not sufficiently in line with international standards. The Productivity Commission found that competition infringements are subject to fines only in cases of gross negligence, that the independence of the authority is impaired when conducting market studies and that its decision–making powers are insufficient. So far, no follow–up measures have been taken in this area.

The significant public investment in research could be better translated into productivity, economic growth and job creation. Denmark has already reached its R&D intensity target of 3% of GDP in 2012 and is among leaders in the EU on this indicator, after Finland and Sweden.([39]) This is mainly due to a continuous increase in its public R&D intensity, which reached 1.04% of GDP in 2013, which is the highest level in the EU.([40]) The public R&D system produces high–quality scientific output and this is reflected in quality indicators. Denmark ranks for example first in the EU for the number of citations per scientific publication([41]) and second for the percentage of highly cited publications.([42])

Nevertheless, Denmark's high public investment in and outstanding performance of public research are not translated into equivalent benefits for businesses and society. As regards the European innovation output indicator([43]) Denmark ranks only sixth in the EU with regards to the utilisation of research, after Germany, Sweden, Ireland, Luxembourg and Finland. The percentage of public research expenditures financed by businesses([44]) is under the EU average.([45])

Boosting investment would help Denmark to strengthen economic growth, increase productivity growth and improve competitiveness. Business investment has been sluggish despite recent government tax breaks. Empirical analysis([46]) also points to possible underinvestment in transport and energy infrastructure in Denmark since the early 2000s, in particular in road maintenance, rail investment and energy infrastructure. Denmark has an ambitious energy strategy, with a goal to cover the entire supply with renewable energy by 2050. Total investment in energy in Denmark has increased since 2012, enabling improvements in connectivity

([38]) 'Danish E-commerce Survey', Danish E-commerce Association, 2013
([39]) Source: Eurostat.

([40]) Source: Eurostat.
([41]) For 2008-2012. Source: InCites TM, Thomson Reuters (2012). Cited in *Research and Innovation Indicators 2014*, Danish Agency for Science Technology and Innovation, Copenhagen, 2014, p. 36.
([42]) *Innovation Union Scoreboard 2014*, European Commission, 2014, pp. 82-83.
([43]) Research and Innovation performance in the EU – Innovation Union progress at country level, European Commission, 2014, p.p. 86-87.
([44]) This is an indicator of collaboration between public research institutions and firms and hence of utilisation and dissemination of research.
([45]) Source: Eurostat.
([46]) Empirical analysis comparing estimated investment based on an econometric model with actual investment. European Commission (2014), 'Infrastructure in the EU: Developments and Impact on Growth, European Economy', Occasional Paper 2013, Dec 2014.

and infrastructure, as well as capacity expansion. Further investment in electricity and gas networks could enhance the interconnection capacity with neighbouring countries.

Policy response and assessment

The 2014 growth package is the first follow-up on the Productivity Commission's work. It comprises of more than 100 measures, including strengthening the competition act, reducing the administrative case–processing time for companies, and eliminating trade licences in the food supply sector. In addition, the government has established a committee to review taxation rules of businesses at the company and owner level, which is expected to deliver its recommendations by the end of 2015.

In November 2014, the Danish Government launched a strategy to strengthen competition in the construction sector.([47]) The new strategy is intended to ensure better conditions for competition in construction, simplifying the rules in the sector and streamlining the technical elements of building applications. The strategy contains 34 initiatives covering better regulation, enhanced competition, effective public construction, growth throughout the value chains and the sustainability of buildings. The initiatives should also help make public authorities more efficient. In addition, the strategy includes specific measures to tackle the competition problem in the construction sector, such as the introduction of international standards and harmonisation of national standards, the avoidance of requirement duplication, the reduction by a third of the time taken to issue a building permit, and the modernisation of insurance requirements. Guidelines on effective competition will also be issued to municipalities.

Some European standards are now better recognised in construction authorisation schemes. The government has reported progress in the field of electricity, plumbing and heating, sewerage installations and gas, where European standards are now accepted. In addition, authorisation schemes in this field have been modernised, with better access to sub-sector authorisations.([48])

Competition in the retail sector in Denmark remains low, despite recommendations. In 2014 the government tabled an extensive growth package following the recommendations of the Productivity Commission. However, no actions to address the barriers to competition in retail were included. The Productivity Commission called for the removal of restrictions on retail establishment (planning and size restrictions for large retail outlets) in order to boost competition on the market and reduce the productivity gap. The proposed measures include a significant relaxation of the rules governing the location of shops, allowing substantially larger stores to be built and promoting competition at municipal level through planning. However, the growth package included no measures relating to these recommendations.

The challenge of better translating the significant public investment in public research into increased productivity was recognised by the Productivity Commission and by the government. The recent evaluation report published by the Danish Government([49]) reflects the recommendations of the Productivity Commission, which call for strengthening of incentives for universities knowledge transfer and streamlining of its legal framework. The recommendations for strengthening the incentives for knowledge transfer include an adjustment of the criteria for allocating basic research funding, setting goals for knowledge exchange in the triennial university-government contracts, improving recognition and promotion of researchers engaging in knowledge exchange, more student involvement in knowledge transfer activities, and an increase in proof of concept funding.

([47]) More details about the strategy can be found on the website http://www.kebmin.dk/en/news

([48]) The progress was made through amendments of Order No. 545 of 30 May 2014 on quality management systems for authorised companies in the field of electricity, plumbing/heating and sewerage installations and for companies with approval to be engaged in the field of gas and Order No. 547 of 30 May 2014 on the authorisation and operation of companies engaged in the field of electricity, plumbing/heating and sewerage installations in June 2014.

([49]) Vidensamarbejde under lup – Evaluering af universiteternes erhvervssamarbejde og teknologioverførsel, Ministry of Higher Education and Science, Copenhagen, 2014.

The commitment to enhance productivity in Denmark is strengthened through the policy agenda focused on energy and environment. The government published a comprehensive strategy for energy saving in May 2014.([50]) The strategy includes 21 initiatives to reduce the energy consumption for heating in existing buildings by 35% before 2050. Denmark has taken appropriate steps to improve waste management and implement the current European minimum targets in this area. However, it remains one of the worst performers in the EU in terms of the quantity of municipal waste produced and the percentage incinerated. Moreover, the current policy does not ensure a cost-effective outcome that makes reuse and recycling more economically attractive.

Limited progress has been made in improving competition in the domestic services sector. No progress has been accomplished in addressing the barriers to competition in retail, despite the 2014 Country-Specific Recommendations and the recommendations of the Productivity Commission aimed at improving the sector's performance. Although the in-depth economic analysis showed the clear benefits of liberalising the Danish planning law, such initiative was not included in the government's 2014 growth package.

Limited progress has been made in removing barriers to competition in the construction sector, where a strategy for further initiatives was published in 2014. In the area or research and innovation, improvement of the performance of universities in transferring their research results in innovation is a challenge.

([50]) More details about the strategy can be found on the website http://www.ens.dk/sites/ens.dk/

ANNEX A

Overview Table

Commitments	Summary assessment[51]
2014 Country-Specific Recommendations (CSRs)	
CSR1: Following the correction of the excessive deficit, continue to pursue a growth-friendly fiscal policy and preserve a sound fiscal position, ensuring that the medium-term budgetary objective continues to be adhered to throughout the period covered by the Convergence Programme.	Denmark made **substantial progress** in addressing CSR 1 of the Council recommendation (this overall assessment of CSR 1 excludes an assessment of compliance with the Stability and Growth Pact).
CSR2: Take further measures to improve the employability of people at the margins of the labour market. Improve educational outcomes, in particular for young people with a migrant background, and the effectiveness of vocational training. Facilitate the transition from education to the labour market, including through a wider use of work-based training and apprenticeships.	Denmark made **some progress** in addressing CSR 2 of the Council recommendation: In relation to taking further measures to improve the employability of people at the margins of the labour market and the key challenge of labour marked supply, Denmark made some progress. But as the number of people living in jobless households show, implementation and showing actual results are still work-in-progress. Denmark made some progress regarding the recommendation to improve educational outcomes, in particular for young people with a migrant background. It remains a challenge to increase the participation rate of migrant children in pre-school education so that it can prevent drop-outs and improve their language skills. Also, Denmark made some progress in reforming and improving the effectiveness of vocational training and to facilitate the transition from education to the labour market, including through a wider use of work-based training and apprenticeships, even if it is likely to be 2017-18 before more tangible results of the reform will begin to show.
CSR 3: Increase efforts to remove barriers to entry and reduce regulatory burden with a view to increasing competition in the domestic services sector, in particular in retail and construction, as	Denmark made **limited progress** in addressing CSR 3 of the Council recommendation:

([51]) The following categories are used to assess progress in implementing the 2014 CSRs of the Council Recommendation: No progress: The Member State has neither announced nor adopted any measures to address the CSR. This category also applies if a Member State has commissioned a study group to evaluate possible measures. Limited progress: The Member State has announced some measures to address the CSR, but these measures appear insufficient and/or their adoption/implementation is at risk. Some progress: The Member State has announced or adopted measures to address the CSR. These measures are promising, but not all of them have been implemented yet and implementation is not certain in all cases. Substantial progress: The Member State has adopted measures, most of which have been implemented. These measures go a long way in addressing the CSR. Fully addressed: The Member State has adopted and implemented measures that address the CSR appropriately.

recommended by the Productivity Commission.	No progress was made in addressing the lack of competition in retail. The recent government growth package included no measures on retail. Limited progress was made in addressing the lack of competition in construction. Denmark has reported progress in the field of electricity, plumbing and heating, sewerage installations and gas where European standards now are accepted and more flexible authorisations for craftsmen have been introduced. The new Danish strategy on construction includes positive reforms such as the simplification of rules in the sector, streamlining the technical elements of building applications and reducing decision-reaching times. It also intends to continue to introduce European and international standards, replacing national ones. However, no subsequent measures have been announced yet and tangible results remain to be seen.
Europe 2020 (national targets and progress)	
Employment rate target set in the 2013 NRP: 80%	The employment rate decreased during the crisis from its 2006 high (79.4%). 2012 to 2013 saw the first slight positive developments with an increase from 75.4% to 75.6%. In 2014 it increased further to 76.7% in the third quarter.
R&D target set in the 2013 NRP: 3 % of GDP	The 3% target has been reached. Since 2005, Denmark's performance has been continuously improving, from 2.39% in 2005 to 3.05% in 2013.([52]) Public R&D intensity has continuously increased since 2007, reaching 1.04% of GDP in 2013. Denmark ranks now first in the EU for this indicator. Business R&D intensity has stabilised since 2010 at close to the 2.0% of GDP.
National greenhouse gas (GHG) emissions target: 20% emissions reduction in 2020 compared to 2005 (in non-ETS sectors)	According to preliminary estimates, non-ETS greenhouse gas emissions decreased by 15% between 2005-13. According to the latest national projections and taking into account existing measures, emissions will be 22% lower in 2020 than in 2005. The 2020 target of -20% compared to 2005 is expected to be

([52]) With a singular high value of 3.07% in 2009 which can be explained by the sharp decline of GDP that year (-4.5%).

	achieved.
Renewable energy target: 30% Share of renewable energy in all modes of transport: 10%	Renewable energy share in gross final energy consumption was 26% in 2012 (latest data available). Renewable energy share in transport was 5.8% in 2012 (latest data available).
Energy efficiency: Denmark has set an indicative national energy efficiency target of 12.6 % energy savings compared to 2006, which implies reaching a 2020 level of 17.8 Mtoe primary consumption and 14.8 Mtoe final energy consumption.	Denmark continues to follow a trend of slowly decreasing primary energy consumption (gross inland consumption minus non energy uses), moving from 18.5 Mtoe in 2011 to 17.9 Mtoe in 2012. Transport and household energy consumption in 2012 – with 4.6 and 4.4 Mtoe – are by far the largest final consumption sectors. Whereas transport consumption slightly dropped from its 5.5 Mtoe peak in 2008 to 4.6 Mtoe in 2012, The final energy consumption in industry declined slightly from 2.4 Mtoe in 2011 slightly to 2.3 Mtoe in 2012.
Early school leaving target: <10% (Less than 10 per cent school drop-out rates of the population aged 18-24)	The rate of early school leaving from education and training (percentage of the population aged 18-24 with at most lower secondary education and not in further education or training) was 9.1% in 2012, 8% in 2013. Denmark has already reached the EU target of 10% and the rate has decreased significantly in recent years (from 11.0 % in 2010). With the reform of the public school and VET the drop-out rate is on track to be reduced even further. Denmark does not have a specific early school leaving strategy but a set of preventive and compensatory measures, e.g. the provision of early childhood education and care, an attendance detection system, and assistance for students with learning problems.
Tertiary education target: >40% (At least 40 per cent of the population aged 30-34 having completed tertiary)	Tertiary educational attainment rate was 43% in 2012 and 43.4% in 2013. Denmark's tertiary education attainment rate is well above the EU average (43.4% in 2013 compared to 36.8% in 2013). Denmark has already reached the EU target of 40%. The rate has increased significantly in recent years (it was 36.3% in 2009). The government set a national target for 60 %

	of young people (30-34 years old) to complete at least one tertiary education programme by 2015 (25% of these should be long-term degrees). With the reforms of higher education (quality and a loan system) Denmark is on the right track to increase the rate in the next years.
Target on the reduction of population at risk of poverty or social exclusion in number of persons: reduce the number of people in households with low work intensity by 22,000 towards 2020.	The number of people at-risk-of-poverty or social exclusion has remained relatively stable: 1 057 000 in 2012 to 1 059 000 persons in 2013. The Danish 2020-target on social inclusion was reducing the number of people living in low work-intensity households with 22 000 persons. The 2008 starting point was 347 000 persons, but during the crisis the number grew to 480 000 (2011). 2012 seemed promising with a drop to 464 000 persons; however, the latest data from 2013 show a significant increase to 522 000 persons.

ANNEX B
Standard Tables

Table B.1: **Macroeconomic indicators**

	1996-2000	2001-2005	2006-2010	2011	2012	2013	2014	2015	2016
Core indicators									
GDP growth rate	3.0	1.4	0.1	1.2	-0.7	-0.5	0.8	1.7	2.1
Output gap [1]	1.9	1.1	0.3	-2.4	-3.3	-4.1	-3.9	-2.9	-2.0
HICP (annual % change)	2.0	1.9	2.1	2.7	2.4	0.5	0.3	0.4	1.6
Domestic demand (annual % change) [2]	2.7	1.9	0.3	0.7	-0.3	-0.2	1.1	1.7	1.9
Unemployment rate (% of labour force) [3]	5.2	5.0	4.9	7.6	7.5	7.0	6.6	6.5	6.4
Gross fixed capital formation (% of GDP)	20.9	21.0	21.7	18.3	18.3	18.3	18.7	18.8	19.2
Gross national saving (% of GDP)	23.5	25.5	25.5	25.2	24.6	26.0	25.7	26.0	26.3
General government (% of GDP)									
Net lending (+) or net borrowing (-)	-0.3	1.6	1.5	-2.1	-3.7	-1.1	1.8	-2.8	-2.7
Gross debt	60.0	45.1	35.1	46.4	45.6	45.1	45.0	42.7	43.6
Net financial assets	-29.7	-16.1	2.8	-2.6	-7.3	-5.5	n.a.	n.a.	n.a.
Total revenue	55.0	54.4	54.3	54.8	55.1	55.8	58.4	53.3	51.8
Total expenditure	55.3	52.8	52.8	56.8	58.8	56.8	56.5	56.1	54.6
of which: Interest	4.6	2.8	1.7	2.0	1.8	1.7	1.5	1.5	1.4
Corporations (% of GDP)									
Net lending (+) or net borrowing (-)	6.2	4.9	4.8	8.7	8.7	9.1	8.4	7.8	7.7
Net financial assets; non-financial corporations	-61.2	-60.6	-86.5	-69.3	-64.1	-68.8	n.a.	n.a.	n.a.
Net financial assets; financial corporations	-4.0	-8.6	-5.7	-1.3	-3.7	-5.4	n.a.	n.a.	n.a.
Gross capital formation	13.0	12.8	12.6	11.1	10.6	10.7	11.2	11.2	11.8
Gross operating surplus	21.7	22.4	22.0	22.2	22.2	22.0	21.3	21.3	21.6
Households and NPISH (% of GDP)									
Net lending (+) or net borrowing (-)	-3.8	-2.6	-3.0	-0.6	0.7	-0.8	-3.8	1.7	1.7
Net financial assets	74.8	76.2	90.4	101.2	112.1	118.6	n.a.	n.a.	n.a.
Gross wages and salaries	48.5	48.2	49.0	49.0	48.6	48.5	49.0	49.0	48.6
Net property income	0.7	1.6	1.6	1.6	2.0	2.2	1.9	2.1	2.1
Current transfers received	23.0	23.0	23.1	24.4	24.7	25.9	25.7	25.2	24.6
Gross saving	1.8	3.5	3.3	4.1	3.7	3.5	0.6	6.2	6.1
Rest of the world (% of GDP)									
Net lending (+) or net borrowing (-)	2.1	3.8	3.3	6.1	5.6	7.2	6.5	6.7	6.7
Net financial assets	20.6	9.6	-0.1	-26.3	-35.2	-37.6	n.a.	n.a.	n.a.
Net exports of goods and services	5.2	6.3	4.1	5.5	5.4	5.7	5.4	5.5	5.6
Net primary income from the rest of the world	-1.3	-0.4	1.1	2.1	2.3	3.6	3.4	3.5	3.5
Net capital transactions	0.1	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.1
Tradable sector	41.6	40.5	38.5	37.8	37.7	37.3	n.a.	n.a.	n.a.
Non-tradable sector	44.1	45.2	47.1	48.4	48.5	48.8	n.a.	n.a.	n.a.
of which: Building and construction sector	4.4	4.5	4.7	4.0	3.9	3.8	n.a.	n.a.	n.a.

(1) The output gap constitutes the gap between the actual and potential gross domestic product at 2010 market prices.
(2) The indicator of domestic demand includes stocks.
(3) Unemployed persons are all those who were not employed, had actively sought work and were ready to begin working immediately or within two weeks. The labour force is the total number of people employed and unemployed. The unemployment rate covers the age group 15-74.
Source: European Commission 2015 winter forecast; Commission calculations

Table B.2: **Financial market indicators**

	2009	2010	2011	2012	2013	2014
Total assets of the banking sector (% of GDP)[1)]	494.3	481.6	476.1	472.0	420.2	401.8
Share of assets of the five largest banks (% of total assets)	64.0	64.4	66.3	65.6	68.4	n.a.
Foreign ownership of banking system (% of total assets)	19.9	19.1	15.0	16.6	19.2	n.a.
Financial soundness indicators:						
- non-performing loans (% of total loans)[2)]	n.a.	4.1	3.7	6.0	4.6	4.5
- capital adequacy ratio (%)[2)]	n.a.	16.0	17.2	18.9	19.2	18.3
- return on equity (%)[2)]	n.a.	0.0	-0.6	1.5	1.1	2.7
Bank loans to the private sector (year-on-year % change)[3)]	-1.9	1.2	-1.3	-0.4	0.6	0.0
Lending for house purchase (year-on-year % change)[3)]	5.2	2.5	1.9	1.2	-0.8	0.3
Loan to deposit ratio[3)]	301.1	305.6	306.2	295.4	292.4	277.2
Central Bank liquidity as % of liabilities[4)]	1.7	0.2	0.5	0.9	0.0	0.3
Private debt (% of GDP)	233.4	222.1	222.8	226.7	223.1	n.a.
Gross external debt (% of GDP) - public[5)]	16.0	16.3	21.1	20.6	17.9	17.9
- private[5)]	46.6	47.0	43.9	42.8	37.8	34.5
Long-term interest rate spread versus Bund (basis points)*	36.5	18.4	12.2	-9.2	17.6	16.3
Credit default swap spreads for sovereign securities (5-year)*	57.9	29.1	63.7	80.0	17.6	16.0

(1) Latest data October 2014.
(2) Latest data Q3 2014. Data from 2010 onwards are reported by the authorities for dissemination on the IMF's FSI website. Basel II.
(3) Latest data October 2014.
(4) Latest data September 2014.
(5) Latest data Q2 2014. Monetary authorities, monetary and financial institutions are not included.
* Measured in basis points.
Source: IMF (financial soundness indicators); European Commission (long-term interest rates); World Bank (gross external debt); ECB (all other indicators).

Table B.3: **Taxation indicators**

	2002	2006	2008	2010	2011	2012
Total tax revenues (incl. actual compulsory social contributions, % of GDP)	47.9	49.6	47.8	47.5	47.7	48.1
Breakdown by economic function (% of GDP)[1]						
Consumption	15.8	16.3	15.4	14.9	15.0	14.9
of which:						
- VAT	9.6	10.3	10.1	9.8	9.9	10.0
- excise duties on tobacco and alcohol	0.9	0.7	0.6	0.6	0.6	0.7
- energy	2.6	2.2	2.1	2.3	2.3	2.2
- other (residual)	2.7	3.1	2.6	2.2	2.2	2.1
Labour employed	21.2	19.9	20.6	19.4	19.3	19.2
Labour non-employed	4.9	4.7	4.8	5.0	5.2	5.3
Capital and business income	3.5	6.2	4.2	5.5	5.5	6.1
Stocks of capital/wealth	2.7	2.7	2.9	2.8	2.8	2.7
p.m. Environmental taxes[2]	4.8	4.8	4.2	4.0	4.0	3.9
VAT efficiency[3]						
Actual VAT revenues as % of theoretical revenues at standard rate	60.2	64.7	62.4	58.1	59.1	59.0

(1) Tax revenues are broken down by economic function, i.e. according to whether taxes are raised on consumption, labour or capital. See European Commission (2014), Taxation trends in the European Union, for a more detailed explanation.
(2) This category comprises taxes on energy, transport and pollution and resources included in taxes on consumption and capital.
(3) VAT efficiency is measured via the VAT revenue ratio. It is defined as the ratio between the actual VAT revenue collected and the revenue that would be raised if VAT was applied at the standard rate to all final (domestic) consumption expenditures, which is an imperfect measure of the theoretical pure VAT base. A low ratio can indicate a reduction of the tax base due to large exemptions or the application of reduced rates to a wide range of goods and services ('policy gap') or a failure to collect all tax due to e.g. fraud ('collection gap'). It should be noted that the relative scale of cross-border shopping (including trade in financial services) compared to domestic consumption also influences the value of the ratio, notably for smaller economies. For a more detailed discussion, see European Commission (2012), Tax Reforms in EU Member States, and OECD (2014), Consumption tax trends.

Source: European Commission

Table B.4: **Labour market and social indicators**

	2008	2009	2010	2011	2012	2013	2014
Employment rate (% of population aged 20-64)	79.7	77.5	75.8	75.7	75.4	75.6	75.7
Employment growth (% change from previous year)	1.1	-3.0	-2.3	-0.1	-0.3	0.0	0.6
Employment rate of women (% of female population aged 20-64)	75.5	74.5	73.0	72.4	72.2	72.4	71.9
Employment rate of men (% of male population aged 20-64)	83.9	80.5	78.6	79.0	78.6	78.7	79.4
Employment rate of older workers (% of population aged 55-64)	58.4	58.2	58.4	59.5	60.8	61.7	62.8
Part-time employment (% of total employment, age 15 years and over)	24.4	25.9	26.3	25.9	25.7	25.4	25.6
Part-time employment of women (% of women employment, age 15 years and over)	36.0	37.5	38.4	37.6	36.4	35.8	35.8
Part-time employment of men (% of men employment, age 15 years and over)	14.3	15.3	15.1	15.3	16.0	15.9	16.4
Fixed term employment (% of employees with a fixed term contract, age 15 years and over)	8.5	8.7	8.4	8.8	8.5	8.8	8.4
Transitions from temporary to permanent employment	n.a.	n.a.	n.a.	n.a.	24.0	28.0	n.a.
Unemployment rate[1] (% of labour force, age group 15-74)	3.4	6.0	7.5	7.6	7.5	7.0	6.7
Long-term unemployment rate[2] (% of labour force)	0.5	0.6	1.5	1.8	2.1	1.8	1.8
Youth unemployment rate (% of youth labour force aged 15-24)	8.0	11.8	13.9	14.2	14.1	13.0	13.1
Youth NEET rate (% of population aged 15-24)	4.3	5.4	6.0	6.3	6.6	6.0	n.a.
Early leavers from education and training (% of pop. aged 18-24 with at most lower sec. educ. and not in further education or training)	12.5	11.3	11.0	9.6	9.1	8.0	n.a.
Tertiary educational attainment (% of population aged 30-34 having successfully completed tertiary education)	39.2	40.7	41.2	41.2	43.0	43.4	n.a.
Formal childcare (from 1 to 29 hours; % over the population aged less than 3 years)	8.0	10.0	10.0	5.0	8.0	n.a.	n.a.
Formal childcare (30 hours or over; % over the population aged less than 3 years)	65.0	63.0	68.0	69.0	59.0	n.a.	n.a.
Labour productivity per person employed (annual % change)	-1.8	-2.2	4.0	1.2	-0.4	-0.5	0.1
Hours worked per person employed (annual % change)	-0.4	-0.2	-0.7	1.3	-0.8	-0.5	0.2
Labour productivity per hour worked (annual % change; constant prices)	-1.5	-1.9	4.8	-0.1	0.5	-0.1	-0.1
Compensation per employee (annual % change; constant prices)	-0.2	2.3	-0.1	0.6	-1.0	-0.2	1.3
Nominal unit labour cost growth (annual % change)	6.1	5.8	-0.5	0.0	1.5	1.1	n.a.
Real unit labour cost growth (annual % change)	1.8	5.1	-4.5	-0.7	-0.8	-0.2	n.a.

(1) Unemployed persons are all those who were not employed, but had actively sought work and were ready to begin working immediately or within two weeks. The labour force is the total number of people employed and unemployed. Data on the unemployment rate of 2014 includes the last release by Eurostat in early February 2015.
(2) Long-term unemployed are persons who have been unemployed for at least 12 months.
Source: European Commission (EU Labour Force Survey and European National Accounts)

Table B.5: **Expenditure on social protection benefits (% of GDP)**

	2007	2008	2009	2010	2011	2012
Sickness/healthcare	6.3	6.5	7.3	7.0	6.9	6.9
Invalidity	3.8	3.7	4.1	4.2	4.1	4.1
Old age and survivors	12.6	12.7	14.0	13.8	14.2	14.4
Family/children	4.0	4.0	4.5	4.3	4.1	4.0
Unemployment	1.2	0.9	1.6	1.8	1.8	1.8
Housing and social exclusion n.e.c.	0.7	0.6	0.7	0.7	0.7	0.7
Total	29.3	29.2	33.1	32.8	32.8	33.1
of which: means-tested benefits	1.5	1.4	1.6	1.6	1.7	1.8
Social inclusion indicators	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
People at risk of poverty or social exclusion[1] (% of total population)	16.3	17.6	18.3	18.9	19.0	18.9
Children at risk of poverty or social exclusion (% of people aged 0-17)	12.7	14.0	15.1	16.0	15.3	15.5
Elderly at risk of poverty or social exclusion (% of people aged 65+)	18.6	20.6	18.4	16.6	14.6	11.4
At-risk-of-poverty rate[2] (% of total population)	11.8	13.1	13.3	13.0	13.1	12.3
Severe material deprivation rate[3] (% of total population)	2.0	2.3	2.7	2.6	2.8	3.8
Proportion of people living in low work intensity households[4] (% of people aged 0-59)	8.5	8.8	10.6	11.7	11.3	12.9
In-work at-risk-of-poverty rate (% of persons employed)	5.0	5.9	6.5	6.4	5.6	4.3
Impact of social transfers (excluding pensions) on reducing poverty	57.6	58.0	54.3	54.2	53.7	56.2
Poverty thresholds, expressed in national currency at constant prices[5]	106234.9	106228.7	107693.9	108360.0	106292.4	104972.0
Gross disposable income (households)	796214.0	816051.0	859763.0	886965.0	906724.0	918216.0
Relative median poverty risk gap (60% of median equivalised income, age: total)	18.0	18.4	21.6	21.4	22.8	23.7
Inequality of income distribution (S80/S20 income quintile share ratio)	3.6	4.6	4.4	4.4	4.5	4.3

(1) People at risk of poverty or social exclusion (AROPE): individuals who are at risk of poverty (AROP) and/or suffering from severe material deprivation (SMD) and/or living in households with zero or very low work intensity (LWI).
(2) At-risk-of-poverty rate (AROP): proportion of people with an equivalised disposable income below 60 % of the national equivalised median income.
(3) Proportion of people who experience at least four of the following forms of deprivation: not being able to afford to i) pay their rent or utility bills, ii) keep their home adequately warm, iii) face unexpected expenses, iv) eat meat, fish or a protein equivalent every second day, v) enjoy a week of holiday away from home once a year, vi) have a car, vii) have a washing machine, viii) have a colour TV, or ix) have a telephone.
(4) People living in households with very low work intensity: proportion of people aged 0-59 living in households where the adults (excluding dependent children) worked less than 20 % of their total work-time potential in the previous 12 months.
(5) For EE, CY, MT, SI and SK, thresholds in nominal values in euros; harmonised index of consumer prices (HICP) = 100 in 2006 (2007 survey refers to 2006 incomes)
(6) 2014 data refer to the average of the first three quarters.
Source: For expenditure for social protection benefits ESSPROS; for social inclusion EU-SILC.

Table B.6: **Product market performance and policy indicators**

	2004-08	2009	2010	2011	2012	2013	2014
Labour productivity[1] in total economy (annual growth in %)	0.2	-1.7	4.0	1.4	-0.3	-0.6	n.a.
Labour productivity[1] in manufacturing (annual growth in %)	2.0	0.2	11.9	6.1	5.9	4.3	n.a.
Labour productivity[1] in electricity, gas (annual growth in %)	-6.9	-6.6	20.4	6.0	-11.8	-1.1	n.a.
Labour productivity[1] in the construction sector (annual growth in %)	-0.9	0.2	-4.4	4.1	-3.0	-1.5	n.a.
Labour productivity[1] in the wholesale and retail sector (annual growth in %)	-0.1	-2.1	8.8	-0.3	-0.6	-0.8	n.a.
Labour productivity[1] in the information and communication sector (annual growth in %)	7.3	3.1	5.9	4.9	1.6	0.7	n.a.
Patent intensity in manufacturing[2] (EPO patent applications divided by gross value added of the sector)	0.0	0.0	0.0	0.0	n.a.	n.a.	n.a.
Policy indicators	**2004-08**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Enforcing contracts[3] (days)	380	380	410	410	410	410	410
Time to start a business[3] (days)	6.2	6	6	6	6	6	6
R&D expenditure (% of GDP)	2.5	3.1	2.9	3.0	3.0	3.1	n.a.
Total public expenditure on education (% of GDP)	8.0	8.7	8.8	8.8	n.a.	n.a.	n.a.
(Index: 0=not regulated; 6=most regulated)	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Product market regulation[4], overall	1.35	n.a.	n.a.	n.a.	n.a.	1.22	n.a.
Product market regulation[4], retail	1.83	n.a.	n.a.	n.a.	n.a.	1.69	n.a.
Product market regulation[4], professional services	0.78	n.a.	n.a.	n.a.	n.a.	0.82	n.a.
Product market regulation[4], network industries[5]	1.70	1.70	1.65	1.60	1.61	1.61	n.a.

(1) Labour productivity is defined as gross value added (in constant prices) divided by the number of persons employed.
(2) Patent data refer to applications to the European Patent Office (EPO). They are counted according to the year in which they were filed at the EPO. They are broken down according to the inventor's place of residence, using fractional counting if multiple inventors or IPC classes are provided to avoid double counting.
(3) The methodologies, including the assumptions, for this indicator are presented in detail here: http://www.doingbusiness.org/methodology.
(4) Index: 0 = not regulated; 6 = most regulated. The methodologies of the OECD product market regulation indicators are presented in detail here: http://www.oecd.org/competition/reform/indicatorsofproductmarketregulationhomepage.htm
(5) Aggregate OECD indicators of regulation in energy, transport and communications (ETCR).
Source: European Commission; World Bank — Doing Business (for enforcing contracts and time to start a business); OECD (for the product market regulation indicators)

Table B.7: **Green Growth**

Green growth performance		2003-2007	2008	2009	2010	2011	2012
Macroeconomic							
Energy intensity	kgoe / €	0.10	0.09	0.09	0.10	0.09	0.09
Carbon intensity	kg / €	0.33	0.30	0.30	0.30	0.27	0.25
Resource intensity (reciprocal of resource productivity)	kg / €	0.65	0.64	0.56	0.52	0.56	n.a.
Waste intensity	kg / €	n.a.	0.07	n.a.	0.08	n.a.	0.08
Energy balance of trade	% GDP	1.5	1.7	0.8	0.9	0.7	0.5
Energy weight in HICP	%	10.6	10.9	10.4	10.7	11.5	11.4
Difference between energy price change and inflation	%	1.2	4.1	-3.8	5.1	4.5	-0.7
Ratio of environmental taxes to labour taxes	ratio	19.0%	16.6%	14.6%	16.4%	16.4%	15.8%
Ratio of environmental taxes to total taxes	ratio	9.7%	8.8%	8.3%	8.4%	8.4%	8.0%
Sectoral							
Industry energy intensity	kgoe / €	0.08	0.08	0.08	0.08	0.08	0.07
Share of energy-intensive industries in the economy	% GDP	11.4	10.4	9.8	10.0	9.8	9.6
Electricity prices for medium-sized industrial users**	€ / kWh	n.a.	0.10	0.09	0.10	0.10	0.10
Gas prices for medium-sized industrial users***	€ / kWh	n.a.	0.04	0.03	0.04	0.04	0.04
Public R&D for energy	% GDP	n.a.	0.03	0.03	0.05	0.05	0.04
Public R&D for the environment	% GDP	n.a.	0.02	0.03	0.02	0.02	0.02
Recycling rate of municipal waste	ratio	94.5%	95.7%	96.6%	96.5%	96.6%	97.5%
Share of GHG emissions covered by ETS*	%	n.a.	41.5	41.7	41.1	38.0	35.2
Transport energy intensity	kgoe / €	0.42	0.48	0.48	0.43	0.40	0.38
Transport carbon intensity	kg / €	1.06	1.21	1.32	1.18	1.09	1.02
Security of energy supply							
Energy import dependency	%	-37.6	-21.4	-20.3	-16.1	-6.1	-3.4
Diversification of oil import sources	HHI	0.24	0.17	0.22	0.12	0.18	0.24
Diversification of energy mix	HHI	n.a.	0.27	0.27	0.27	0.27	0.26
Renewable energy share of energy mix	%	13.8	16.3	17.2	19.5	21.2	23.3

Country-specific notes:
2013 is not included in the table due to lack of data.

General explanation of the table items:
All macro intensity indicators are expressed as a ratio of a physical quantity to GDP (in 2000 prices)
Energy intensity: gross inland energy consumption (in kgoe) divided by GDP (in EUR)
Carbon intensity: Greenhouse gas emissions (in kg CO2 equivalents) divided by GDP (in EUR)
Resource intensity: Domestic material consumption (in kg) divided by GDP (in EUR)
Waste intensity: waste (in kg) divided by GDP (in EUR)
Energy balance of trade: the balance of energy exports and imports, expressed as % of GDP
Energy weight in HICP: the proportion of "energy" items in the consumption basket used for the construction of the HICP
Difference between energy price change and inflation: energy component of HICP, and total HICP inflation (annual % change)
Environmental taxes over labour or total taxes: from DG TAXUD's database 'Taxation trends in the European Union'
Industry energy intensity: final energy consumption of industry (in kgoe) divided by gross value added of industry (in 2005 EUR)
Share of energy-intensive industries in the economy: share of gross value added of the energy-intensive industries in GDP
Electricity and gas prices for medium-sized industrial users: consumption band 500–2000MWh and 10000–100000 GJ; figures excl. VAT.
Recycling rate of municipal waste: ratio of recycled municipal waste to total municipal waste
Public R&D for energy or for the environment: government spending on R&D (GBAORD) for these categories as % of GDP
"Proportion of GHG emissions covered by ETS: based on greenhouse gas emissions (excl LULUCF) as reported by Member States to the European Environment Agency "
Transport energy intensity: final energy consumption of transport activity (kgoe) divided by transport industry gross value added (in 2005 EUR)
Transport carbon intensity: greenhouse gas emissions in transport activity divided by gross value added of the transport sector
Energy import dependency: net energy imports divided by gross inland energy consumption incl. consumption of international bunker fuels
Diversification of oil import sources: Herfindahl index (HHI), calculated as the sum of the squared market shares of countries of origin
Diversification of the energy mix: Herfindahl index over natural gas, total petrol products, nuclear heat, renewable energies and solid fuels
Renewable energy share of energy mix: %-share of gross inland energy consumption, expressed in tonne oil equivalents
* European Commission and European Environment Agency
** For 2007 average of S1 & S2 for DE, HR, LU, NL, FI, SE & UK. Other countries only have S2.
*** For 2007 average of S1 & S2 for HR, IT, NL, FI, SE & UK. Other countries only have S2.

Source: European Commission, unless indicated otherwise; European Commission elaborations indicated below