The Swedish Economy

June 2015

National Institute of Economic Research

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Summary

After a somewhat weaker first quarter, the Swedish economy will continue to recover this year. High immigration means that the population and the labour force are growing rapidly. Despite further strong growth in employment, unemployment will therefore remain high for a long period and will not fall below 7 per cent until 2017. The rising need for public services is putting pressure on public finances, and substantial tax increases can be expected in 2016.

Swedish GDP grew by a moderate 0.4 per cent in the first quarter of 2015 after a temporary surge in the fourth quarter last year. Employment rose slightly, and unemployment held at 7.8 per cent. The NIER's economic tendency indicator, which measures sentiment among both firms and consumers, has dropped back somewhat so far in 2015 but is still pointing to slightly stronger growth in the second quarter (see Diagram 1).

POSITIVE SIGNALS FROM THE EURO AREA

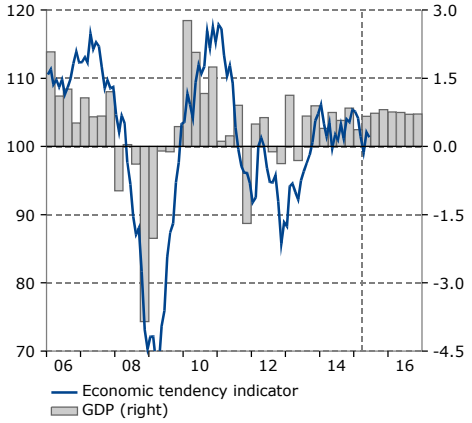
Developments in the global economy have become more mixed in the first part of 2015. Growth has slowed in a number of major markets, including the US, Germany, China and Brazil. More positive is that the recovery in the euro area now seems to be on a slightly firmer footing, which is important from a Swedish perspective. GDP growth in the euro area climbed to 0.4 per cent in the first quarter. It is mainly in southern Europe where growth is accelerating, which suggests that the recovery in the euro area is becoming more widespread and so more sustainable. Consumer confidence has picked up recently and is now, like some other confidence indicators, above the historical average (see Diagram 2). Together with a growing need for investment and slightly less contractionary fiscal policy this year and next, this will help push up growth somewhat.

In the US, GDP fell 0.2 per cent in the first quarter, but this was due largely to temporary factors. Extremely cold weather hampered construction activity, and port strikes on the West Coast had a negative impact on both production and foreign trade. Employment continued to grow, which means that household consumption and housing investment will rise more quickly slightly further ahead. The US will therefore remain a key driver for global economic recovery.

Low resource utilisation means that it will take a long time for the global economy to normalise, and inflation will pick up only slowly in the coming years. Central bank policy rates will therefore remain low for a long period. The US is ahead of the euro area in the business cycle and will begin to raise interest rates gradually this autumn (see Diagram 3). In the euro area, the

Diagram 1 Economic tendency indicator and GDP

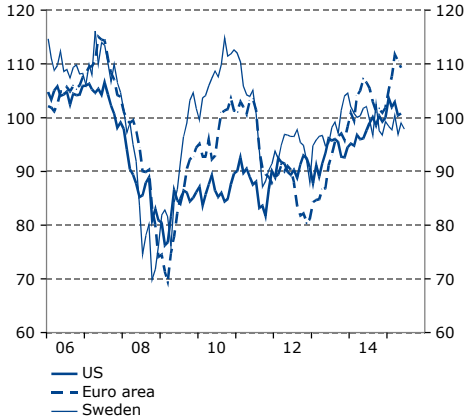
Index mean=100, monthly values and percentage change, seasonally adjusted quarterly values



Sources: Statistics Sweden and NIER.

Diagram 2 Consumer confidence in US, euro area and Sweden

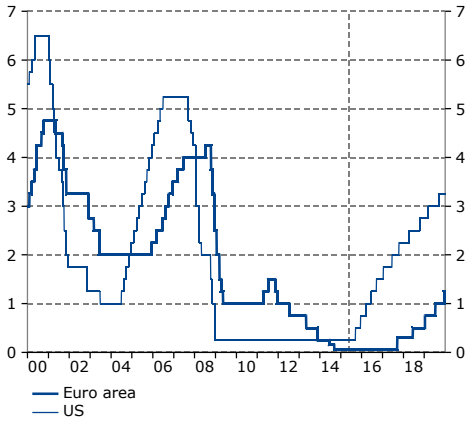
Index mean=100, seasonally adjusted quarterly values



Sources: Conference Board, Eurostat and NIER.

Diagram 3 Policy rates

Per cent, daily values



Sources: ECB, Federal Reserve and NIER.

key rate is not expected to start rising until the second half of 2017.

Table 1 Selected indicators

Percentage change, unless otherwise indicated

	2013	2014	2015	2016	2017	2018	2019
GDP, market prices	1.3	2.3	2.8	3.2	2.6	2.0	1.6
GDP, calendar-adjusted	1.3	2.4	2.6	3.0	2.8	2.1	1.6
Global GDP	3.4	3.5	3.4	3.9	4.0	3.9	3.9
Current account[1]	6.9	6.2	6.5	6.6	6.3	5.9	5.7
Hours worked[2]	0.3	1.8	1.4	1.6	1.7	1.1	0.4
Employment	1.0	1.4	1.2	1.4	1.6	1.1	0.4
Unemployment[3]	8.0	7.9	7.7	7.5	6.9	6.6	6.8
Labour market gap[4]	–1.9	–1.3	–1.3	–0.8	0.0	0.4	0.1
Output gap[5]	–2.3	–1.8	–1.4	–0.5	0.2	0.5	0.1
Hourly earnings[6]	2.5	2.9	2.5	3.0	3.1	3.2	3.3
Hourly labour cost[2]	2.1	1.8	2.9	3.5	3.1	3.2	3.3
Productivity[2]	0.9	0.6	1.2	1.5	1.1	1.0	1.2
CPI	0.0	–0.2	0.1	1.2	2.3	3.2	3.0
CPIF	0.9	0.5	0.9	1.7	1.8	2.2	2.3
Repo rate[7,8]	0.75	0.00	–0.40	–0.25	0.75	1.25	1.75
Ten-year government bond rate[7]	2.1	1.7	0.8	1.6	2.4	3.1	3.8
Effective krona exhange rate index (KIX)[9]	103.0	106.8	113.0	111.7	108.9	106.0	103.2
General government net lending[1]	–1.4	–1.9	–1.6	–0.8	–0.3	0.0	0.3
Structural net lending[10]	–0.8	–1.3	–0.9	–0.4	–0.3	–0.2	0.3
General government consolidated gross debt (Maastricht debt)[1]	38.7	43.8	45.0	43.7	42.7	41.5	40.3

[1] Per cent of GDP. [2] Calendar-adjusted. [3] Per cent of labour force. [4] Difference between actual and potential hours worked, in per cent of potential hours worked. [5] Difference between actual and potential GDP, in per cent of potential GDP. [6] According to the short-term earnings statistics. [7] Per cent. [8] At year-end. [9] Index 18 November 1992=100. [10] Per cent of potential GDP.

Sources: Statistics Sweden, National Mediation Office, the Riksbank and NIER.

Diagram 4 Export orders in industry

Diffusion index and net balances respectively, seasonally adjusted monthly values

Sources: Swedbank/SILF and NIER.

Downside risks to the global economy continue to dominate. Low global interest rates have pushed up asset prices in many areas, and there is a risk of factors such as fresh problems with government finances in the euro area triggering an abrupt decline in asset prices. With limited scope for economic policy stimuli, it will be harder to counteract negative effects on the real economy.

It is also uncertain whether the necessary rebalancing of the Chinese economy towards consumption-led expansion can be achieved without overly stifling growth. But even a deep recession in China would have limited effects on the Swedish economy unless it sparked turbulence in global financial markets.

WEAK EXPORTS HOLDING BACK RECOVERY IN SWEDEN

Swedish exports fell in the first quarter. This was partly a consequence of temporarily high exports of services in the fourth quarter last year, but underlying growth has also been weak, and manufacturing export orders do not indicate any immediate improvement (see Diagram 4). However, the stronger global recovery in the forecast, especially in the euro area, and the relatively weak krona are expected to help Swedish export growth to pick up somewhat later this year. Exports are forecast to rise by almost 4 per cent in 2015 as a whole and accelerate further to 5 per cent in 2016, which is in line with the average rate of growth since 1980.

Household real disposable income has risen rapidly in recent years due to strong growth in employment and reduced taxes. Very low interest rates have stimulated household consumption, but precautionary motives and efforts to even out consumption over time have contributed to the saving rate hitting record-high levels (see Diagram 5). Real disposable income is expected to climb rapidly this year on the back of rising employment and low inflation. Although the labour market is improving, the NIER's Consumer Tendency Survey suggests that households are not particularly optimistic, with the confidence indicator just below the historical average (see Diagram 2). Households are therefore expected to remain cautious about stepping up spending, and the saving rate will remain high in the coming years.

Demographic trends, with a growing proportion of elderly people and large numbers of incoming refugees and family members, mean that the need for welfare services is increasing rapidly. Government consumption expenditure will therefore rise unusually quickly this year and next, climbing 2.3 and 2.7 per cent respectively, which compares to an average annual increase since 1993 of 0.8 per cent.

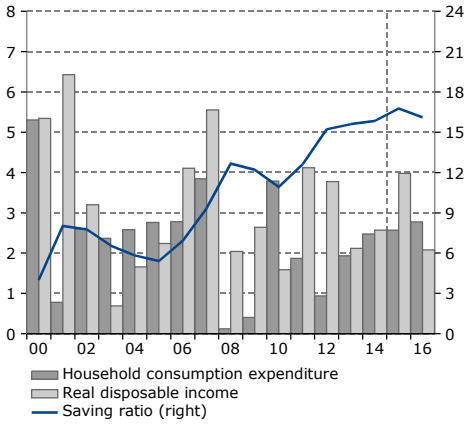
GDP will grow by 2.8 per cent this year and by just over 3 per cent next year as exports make a stronger contribution to demand growth. GDP will rise more quickly than potential GDP in both 2015 and 2016, and resource utilisation as measured by the output gap is expected to normalise early in 2017 (see Diagram 6).

RAPIDLY EXPANDING POPULATION TO BOOST EMPLOYMENT AND PROP UP UNEMPLOYMENT

Employment has grown strongly in recent years. A number of forward-looking indicators, including both Statistics Sweden's and the Swedish Public Employment Service's vacancies statistics, are at high levels, which suggests that this growth will continue in the immediate future. However, the business sector's employment plans have deteriorated somewhat in recent months in the NIER's Business Tendency Survey, and the hard em-

Diagram 5 Household consumption, real disposable income and saving ratio

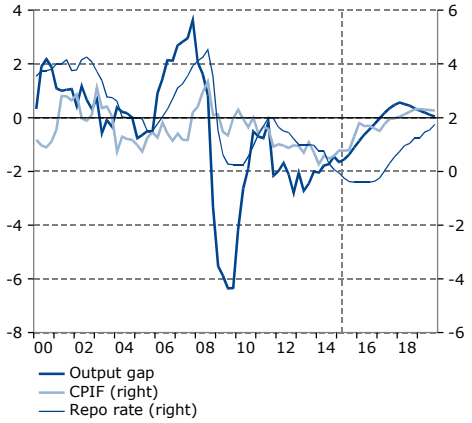
Percentage change and per cent of disposable income, respectively



Sources: Statistics Sweden and NIER.

Diagram 6 Output gap, CPIF and repo rate

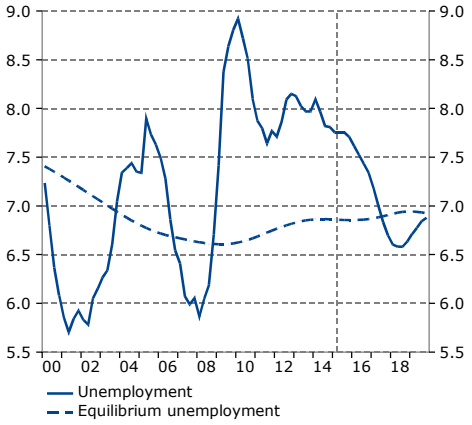
Per cent and annual percentage change, quarterly values, respectively



Sources: Statistics Sweden, The Riksbank and NIER.

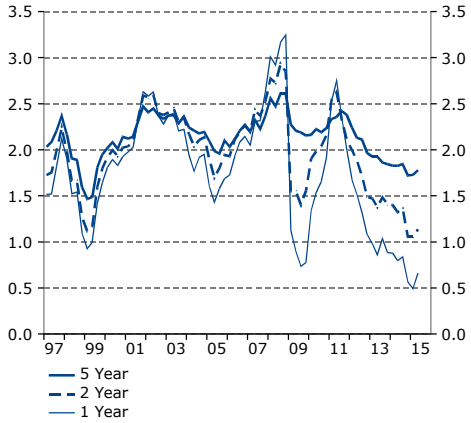
Diagram 7 Unemployment and equilibrium unemployment

Per cent of labour force, seasonally adjusted values



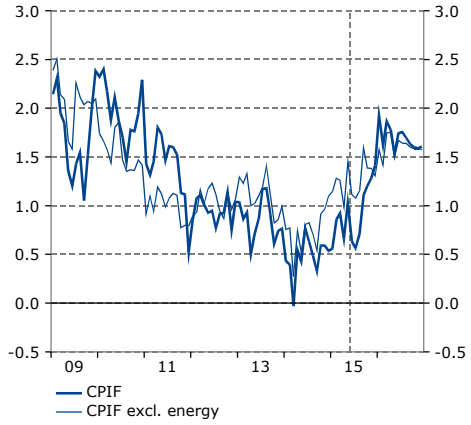
Sources: Statistics Sweden and NIER.

Diagram 8 Inflation expectations
Per cent, quarterly values



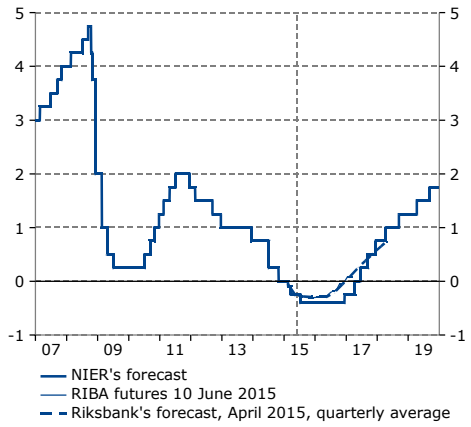
Note. Average, all respondent categories.
Source: TNS Sifo Prospera.

Diagram 9 Consumer prices
Annual percentage change, monthly values



Sources: Statistics Sweden and NIER.

Diagram 10 Repo rate
Per cent, daily values



Sources: Nasdaq OMX, The Riksbank and NIER.

ployment data for April were relatively weak. Taken together, this points to a slowdown in employment growth in the second quarter this year, after which it is expected to speed up again.

This relatively strong employment growth will continue in 2016–2018. One contributing factor is rapid expansion in the working-age population and, as a result, the labour force. The increase in the population will be driven to a great extent by an influx of asylum seekers and family members – groups with a relatively weak position in the labour market. Due in part to these large migratory flows, the NIER expects equilibrium unemployment and unemployment to remain high in the coming years (see Diagram 7). Unemployment will fall to 6.9 per cent in 2017 when resource utilisation in the labour market normalises.

RIKSBANK FOCUSING ON KRONA AND INFLATION

The protracted slump in Sweden and elsewhere has brought very low inflation in recent years. The sharp slide in crude oil prices in 2014 is also contributing to low inflation, but lower oil prices are positive for the economy in Sweden and other oil-importing nations.

Low inflation and low inflation expectations contributed to the Riksbank lowering the repo rate to −0.25 per cent in March this year (see Diagram 8). Inflation bottomed out at the beginning of last year and has shown a clear upward trend since the end of 2014, especially when the direct effects of lower energy prices are excluded (see Diagram 9). The krona's depreciation since summer 2014 will continue to help push up inflation and inflation expectations for a time if the currency holds at these lower levels. To prevent the krona from strengthening in 2015 and encourage inflation to rise more quickly, the Riksbank is expected to lower the repo rate further to −0.40 per cent in the second half of this year (see Diagram 10). The NIER then expects the repo rate to be unchanged until the end of 2016, when it will be raised for the first time.

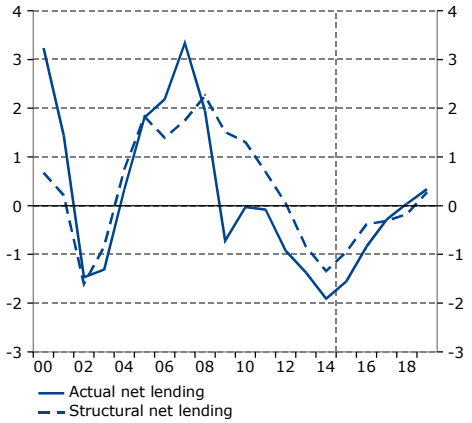
The NIER expects the government to lower the ROT (repairs, conversion and extension) tax deduction and raise fuel taxes next year. This will temporarily boost inflation as measured by the consumer price index with a fixed interest rate (CPIF) by around 0.3 percentage point in 2016. Inflation will therefore hit a temporary high of around 2 per cent at the beginning of next year. It will then slow somewhat due to slight appreciation of the krona. In the longer term, falling unemployment will bring faster wage growth, which, along with stronger demand, will fuel inflation. However, CPIF inflation will not hit 2 per cent until 2018 (see Diagram 6).

MILDLY CONTRACTIONARY FISCAL POLICY AHEAD

Fiscal policy has been expansionary since the economic slump began in 2008, resulting in a deterioration in public finances. Structural net lending was negative at −1.3 per cent of potential GDP last year (see Diagram 11). Structural net lending will improve somewhat this year but will need to improve further whether the government switches to a balanced-budget target or retains the existing surplus target for public finances. If the government also wishes to maintain an unchanged public sector commitment, spending will need to be raised by around SEK 20 billion per year in 2016−2019. If these expenditure increases are to be funded "krona for krona" as the government has indicated, this will entail tax increases for both households and firms. The tax-to-GDP ratio will then rise by 2.5 percentage points over the next four years and end up in 2019 at around the same level as in 2007.

Diagram 11 General government actual and structural net lending

Per cent of GDP and per cent of potential GDP, respectively



Sources: Statistics Sweden and NIER.

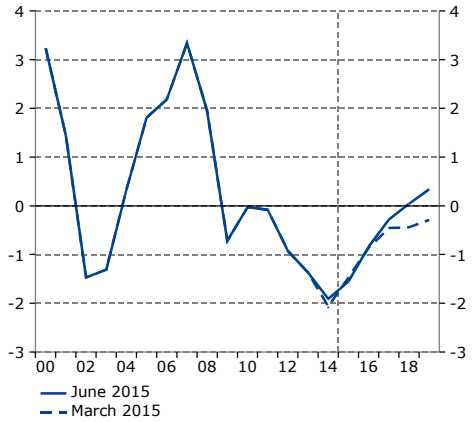
Forecast revisions

This section outlines the principal revisions to the forecast published in *The Swedish Economy*, March 2015. In general, the revisions are minor. The economy in both Sweden and the rest of the world has developed largely as expected.

- GDP growth has been weaker than expected in the first part of 2015 in countries such as the US, China and Brazil, but has been in line with the March forecast in the euro area. Taken together, this has led to a slight downward revision of the forecast for global GDP growth in 2015 (see Table 2).
- In Sweden, too, both hard and soft data seem to be slightly weaker, which has prompted a slight downward revision of the growth forecast for 2015 to 2.8 per cent (2.6 per cent in calendar-adjusted terms).
- It is primarily exports that will be appreciably weaker this year than forecast in March. Otherwise the revisions to the forecasts for demand in 2015−2016 are relatively minor.
- Oil prices have risen in recent months and are expected to hold at higher levels. This will exert slight upward pressure on consumer prices, but the forecast for CPI inflation in the OECD area is unchanged.
- Wages in Sweden have risen surprisingly little since the end of 2014. This can be explained partly by noise in the measurement of the short-term earnings statistics, but the underlying trend is also considered to be weak. The forecast for wage growth in 2015 has been revised down relatively sharply to 2.5 per cent.

Diagram 12 General government net lending

Per cent of GDP



Sources: Statistics Sweden and NIER.

- Inflation has been somewhat weaker than expected, but higher oil prices, tax increases on fuel and a reduced ROT (repairs, conversion and extension) tax deduction next year mean that the forecast for 2016 has been revised up by 0.1 percentage point to 1.7 per cent.
- General government net lending in 2015−2016 is more or less unchanged from the March forecast but will then rise more quickly than forecast in March (see Diagram 12). This revision is due mainly to updated calculation methods and assessments of central government tax revenue.

Table 2 Current forecast and revisions compared to the March 2015 forecast

Percentage change, unless otherwise indicated

	2015		2016	
	June 2015	Diff.	June 2015	Diff.
Global economy				
GDP, global	3.4	–0.2	3.9	0.1
GDP, OECD	2.1	–0.3	2.6	0.1
GDP, euro area	1.6	0.1	1.9	0.2
GDP, US	2.4	–0.7	2.9	0.0
GDP, China	6.6	–0.2	6.6	–0.2
Federal funds target rate[1,2]	0.75	0.00	1.50	0.00
ECB refi rate[1,2]	0.05	0.00	0.05	0.00
Oil price[3]	62.8	5.0	68.4	5.0
CPI, OECD	0.7	0.0	1.8	0.0
GDP by expenditure				
GDP, calendar-adjusted	2.6	–0.3	3.0	0.0
GDP	2.8	–0.3	3.2	0.0
Household consumption	2.7	–0.1	2.9	0.2
General government consumption	2.3	0.1	2.7	0.0
Gross fixed capital formation	4.7	0.6	5.1	–0.4
Stockbuilding[4]	0.0	0.0	0.0	0.0
Exports	3.9	–1.1	5.0	–0.2
Imports	4.5	–0.3	5.4	–0.1
Labour market, inflation, interest rates etc.				
Hours worked[5]	1.4	–0.1	1.6	0.0
Employment	1.2	–0.2	1.4	0.0
Unemployment[6]	7.7	0.0	7.5	0.1
Labour market gap[7]	–1.3	–0.3	–0.8	–0.3
Output gap[8]	–1.4	–0.6	–0.5	–0.6
Productivity[5]	1.2	–0.3	1.5	0.0
Hourly earnings[9]	2.5	–0.4	3.0	–0.1
CPI	0.1	–0.1	1.2	0.1
CPIF	0.9	0.0	1.7	0.1
Repo rate[1,2]	–0.40	0.00	–0.25	0.00
Ten-year government bond rate[1]	0.8	–0.1	1.6	–0.1
Effective krona exchange rate index (KIX)[10]	113.0	–0.6	111.7	–1.0
Current account[4]	6.5	0.5	6.6	0.4
General government net lending[11]	–1.6	–0.1	–0.8	0.0

[1] Per cent. [2] At year-end. [3] USD per barrel, annual average. [4] Change in per cent of GDP the previous year. [5] Calendar-adjusted. [6] Per cent of labour force. [7] Difference between actual and potential hours worked, in per cent of potential hours worked. [8] Difference between actual and potential GDP, in per cent of potential GDP. [9] According to the short-term earnings statistics. [10] Index 18 November 1992=100. [11] Per cent of GDP.

Note. The difference is between the current forecast and the March 2015 forecast. A positive value denotes an upward revision.

Source: NIER.

SPECIAL ANALYSIS

Population growth will affect the labour market

The NIER uses Statistics Sweden's population forecasts to produce long-term projections of variables such as employment and unemployment. According to the May 2015 population forecast, the population aged 15–74 will grow from 7.2 million in 2014 to 7.7 million in 2024. This is because large numbers of people are expected to come to Sweden as a result of unrest elsewhere in the world. As it normally takes time to become established in the labour market, labour market status will vary with length of stay. This special analysis presents the NIER's assessment of potential employment, based partly on Statistics Sweden's population forecasts and data for labour force status and length of stay.

The NIER publishes regular medium-term scenarios, currently for the period 2017–2024. It is therefore necessary to assess how the potential level of key labour market variables such as employment and unemployment will move. The potential level is the level that is compatible in the long run with the Riksbank's inflation target. Demographic developments are the main driver of growth in the labour force and the number of hours worked in the longer term. Together with productivity growth, population growth and its composition are therefore central to determining developments in potential GDP and public finances in the longer term.[66]

The analysis begins by presenting Statistics Sweden's population forecast and a description of the labour market situation for the foreign-born population. It then presents the NIER's assessment of potential employment before turning to developments in the demographic and economic dependency ratios.

Potential variables

Potential GDP is the level of output when the economy is operating at full capacity.

The NIER divides potential GDP into potential productivity and the potential number of hours worked. Potential productivity is the level of productivity that would be observed in the absence of cyclical variations.

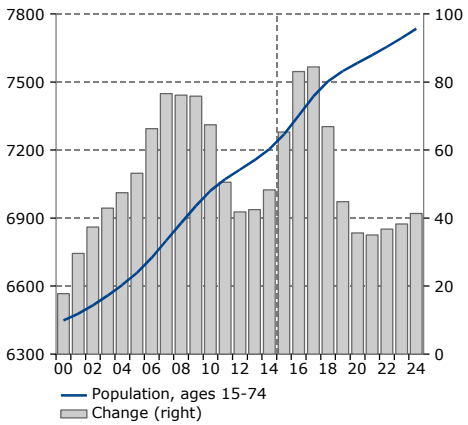
The potential number of hours worked is determined by potential employment – i.e. the number of employed when the labour market is in equilibrium – and by their average hours worked. Potential employment, in turn, is determined by the potential labour force and equilibrium unemployment – i.e. the labour force and unemployment when the labour market is in equilibrium.

Growing proportion of the population born abroad

According to Statistics Sweden's May 2015 population forecast, the number of people of working age (15–74 years) will grow by

Diagram 132 Population, ages 15–74

Thousands

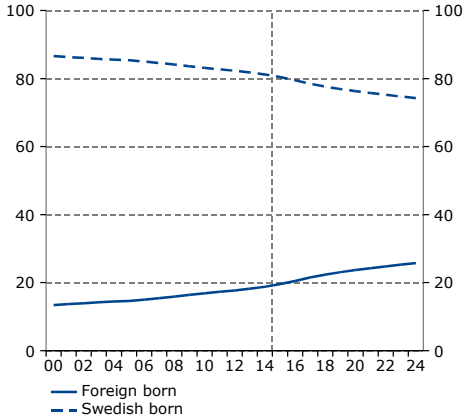


Source: Statistics Sweden.

[66] For a more detailed description of potential GDP, see "Hur Konjunkturinstitutet beräknar potentiell BNP" [How the NIER estimates potential GDP], memo, NIER, www.konj.se.

Diagram 133 Foreign born and Swedish born, proportion of population ages 15–74

Per cent



Source: Statistics Sweden.

just over 500,000 from 2014 to 2024 (see Diagram 132).[67] This is mainly because immigration is expected to remain high. The number of people born abroad in the working-age population will rise by just over 600,000, while the number of people born in Sweden in the working-age population will fall by just over 100,000. This means that the percentage of immigrants in the working-age population will increase from 19 per cent to 26 per cent during the period (see Diagram 133).

LENGTH OF STAY AFFECTS LABOUR FORCE STATUS

Because it normally takes time for new immigrants to become established in the labour market, immigrants' labour market status will vary with length of stay, i.e. how long a person has been in Sweden (see Table 17). Both labour force participation and the employment rate rise with the number of years spent in Sweden, and those who have been in the country for a short period are more likely to be unemployed than those who have been here for a longer period.[68]

Table 17 Labour force status of immigrants by length of stay, ages 16–64, 2013

Per cent of population and labour force

Length of stay	Labour force participation	Employment rate	Unemploy-ment rate
0–4 years	66.9	48.2	27.9
5–9 years	71.4	53.8	24.7
10–19 years	77.6	64.7	16.6
20–29 years	82.1	73.0	11.1
30 or more years	78.2	73.2	6.4
All immigrants	**75.8**	**63.4**	**16.3**

Source: Table 2d, Statistical Report AM 110 SM 1402, Statistics Sweden.

One reason why immigrants' labour force status varies with length of stay is that many of those coming to Sweden lack the human capital required to find work. The concept of human capital encompasses all factors that affect a person's capacity, not only education, language skills and vocational experience,

[67] See "Sveriges framtida befolkning 2015–2060" [The future population of Sweden 2015–2060], Demographic Reports 2015:2, Statistics Sweden, 2015.

[68] See "Utrikes föddas arbetsmarknadssituation 2005–2013" [The labour market situation for the foreign-born population 2005–2013], Statistical Report AM 110 SM 1402, Statistics Sweden, 2014.

but also understanding of various aspects of how society works.[69]

Human capital can be assumed to deteriorate in connection with migration. For example, training in one country may be less useful in another. Immigrants' training may therefore need to be supplemented and/or validated.[70] A poor grasp of the Swedish language is another factor that can delay entry into the labour market. It takes time to learn a new language, and proficiency in Swedish is valued highly by Swedish employers.[71]

New immigrants must often therefore resort to relatively low-skilled jobs on low wages that may reflect a lack of human capital. Relatively high collectively-agreed minimum wages mean that it is more difficult to find work on wages that correspond to the individual's (actual or perceived) human capital, but the supply of low-skilled jobs also plays a role.[72]

Access to formal and informal networks also differs between those born in Sweden and those born abroad. The informal networks where a large part of recruitment takes place will often be more difficult for immigrants to access and/or have a different composition.[73]

Immigrants also encounter discrimination in the Swedish labour market – for example, they are less likely to be called to interview than native Swedes with equivalent qualifications.[74]

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[69] See Eriksson, S., "Utrikes födda på den svenska arbetsmarknaden" [Immigrants in the Swedish labour market], Annex 4 to Långtidsutredningen 2011 [The Long-term Survey 2011], SOU 2011:11, in *Vägen till arbete – arbetsmarknadspolitik, utbildning och arbetsmarknadsintegration* [The road to work – labour market policy, education and labour market integration], SOU 2010:88.

[70] See Olli Segendorf, Å. and T. Teljosu, "Sysselsättning för invandrare – en ESO-rapport om arbetsmarknadsintegration" [Employment among immigrants – an ESO report on labour market integration], Report to the Expert Group on Public Finances, 2011:5.

[71] See Rooth, D-O. and O. Åslund, "Får utlandsfödda betalt för sin utbildning och sina kunskaper i svenska?" [Are immigrants rewarded for their education and their Swedish?], *Ekonomisk debatt*, No. 3, 2007.

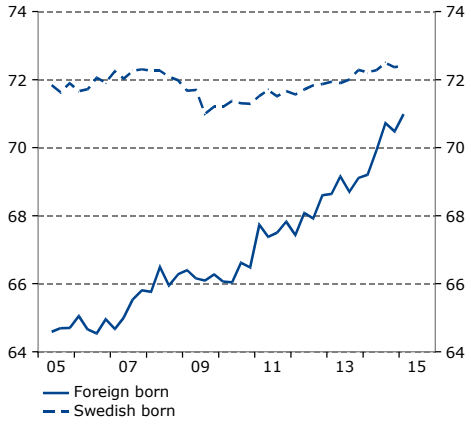
[72] See Eriksson, S., "Utrikes födda på den svenska arbetsmarknaden" [Immigrants in the Swedish labour market], Annex 4 to Långtidsutredningen 2011 [The Long-term Survey 2011], SOU 2011:11, in *Vägen till arbete – arbetsmarknadspolitik, utbildning och arbetsmarknadsintegration* [The road to work – labour market policy, education and labour market integration], SOU 2010:88.

[73] See, for example, Olli Segendorf, Å. and T. Teljosu, "Sysselsättning för invandrare – en ESO-rapport om arbetsmarknadsintegration" [Employment among immigrants – an ESO report on labour market integration], Report to the Expert Group on Public Finances, 2011:5.

[74] For a research overview, see Ahmed, A., "Etnisk diskriminering – vad vet vi, vad behöver vi veta och vad kan vi göra?" [Ethnic discrimination – what do we know, what do we need to know, and what can we do?], *Ekonomisk debatt*, No. 4, 2015.

Diagram 134 Labour force participation, foreign born and Swedish born

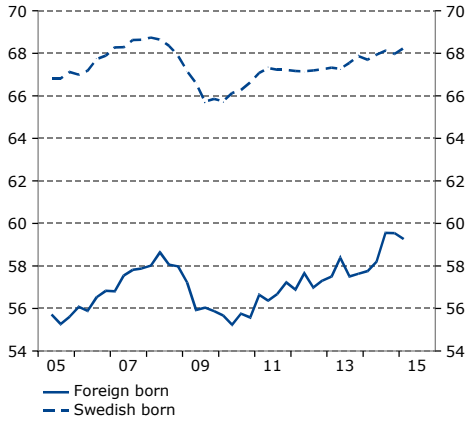
Per cent of population, seasonally adjusted quarterly values



Source: Statistics Sweden.

Diagram 135 Employment rate, foreign born and Swedish born

Per cent of population, seasonally adjusted quarterly values



Source: Statistics Sweden.

EMPLOYMENT HAS RISEN IN THE FOREIGN-BORN POPULATION BUT THERE IS STILL A BIG EMPLOYMENT GAP

Labour force participation and the employment rate, i.e. the number of people in the labour force and the number of people in employment as a percentage of the population aged 15–74, are lower for those born abroad than for those born in Sweden (see Diagrams 134 and 135). Both the employment rate and labour force participation in the immigrant population have improved in recent years, however, and are now higher than before the financial crisis. Labour force participation in particular is approaching the same levels as for native Swedes.[75] But there is still a big difference in the employment rate between those born in Sweden and those born abroad in all educational and age groups (see Table 18).

Table 18 Employment rate and employment gap by education (ages 15–74) and age, 2005 and 2014

Per cent and percentage points

	Employment rate					
	2005			2014		
	Swedish-born	Foreign-born	Gap	Swedish-born	Foreign-born	Gap
All aged 15–74	66.8	55.9	–10.9	67.9	58.8	–9.1
Basic education at most	39.0	37.6	–1.4	35.2	33.3	–1.9
Upper secondary	74.1	62.4	–11.7	71.5	62.6	–8.9
Post-secondary	79.8	67.9	–11.9	79.5	72.3	–7.2
Ages 15–24	39.1	33.8	–5.3	44.9	28.2	–16.7
Ages 25–54	87.1	68.0	–19.1	89.5	71.1	–18.5
Ages 55–74	47.5	37.9	–9.6	47.1	42.2	–4.9

Note. The employment gap is the difference in the employment rate between those born abroad and those born in Sweden.

Information on education is not available for the entire population, which means that the employment rates broken down by education do not correspond to the total employment rate for the 15–74 age group.

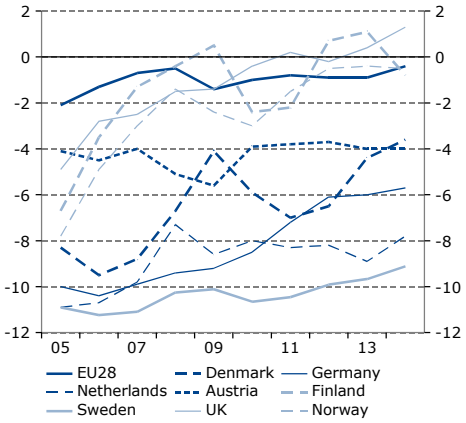
Source: Statistics Sweden.

[75] Part of the increase can probably be explained by the effects of economic policies and the integration reforms. See the chapter "Equilibrium unemployment and its explanatory factors" in *Wage Formation in Sweden*, 2014, NIER.

The employment gap, i.e. the difference in the employment rate between those born abroad and those born in Sweden, has narrowed from almost 11 to just over 9 percentage points in the 15–74 age group. It is mainly the employment rate among immigrants with post-secondary education that improved during the period. Broken down by age group, the employment rate has risen among immigrants aged 25 and over. The employment gap has also decreased slightly in that age group, but is still close to 19 percentage points in the 25–54 age group. The employment gap in the 15–24 age group has grown sharply from just over 5 to almost 17 percentage points. This is due to both a rise in the employment rate among those born in Sweden and a fall in the employment rate among those born abroad in this age group during the period.

Diagram 136 Employment gap, foreign and Swedish born, ages 15–74

Percentage points



Note. The employment gap is the difference in the employment rate between foreign born and Swedish born.

Sources: Statistics Sweden and Eurostat.

LARGE EMPLOYMENT GAP BY INTERNATIONAL STANDARDS

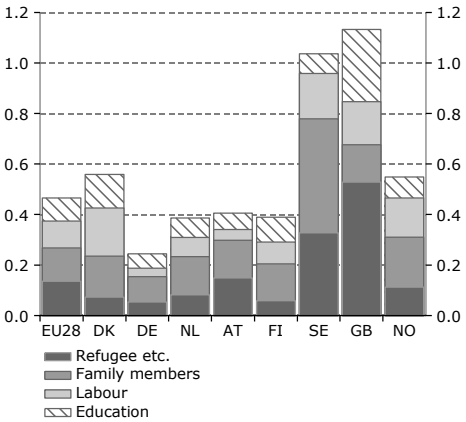
The employment gap in Sweden is large by international standards (see Diagram 136). The gap was close to 0 percentage points in the EU28, the UK, Norway and Finland in 2014, but just over 9 percentage points in Sweden.

The difference in the employment gap between Sweden and other European countries cannot be explained by systematic differences in education, age and family status. The region of origin does seem to explain part of the difference when it comes to women, but not men.[76]

The composition of the foreign-born population in terms of the reasons for immigration varies between countries. Compared to other countries in Europe, Sweden accepts high numbers of refugees and family members (see Diagram 137).[77] Because refugees and family members are often further removed from the labour market than labour immigrants, they take longer to become established.[78] The composition of immigration also varies according to historical factors and geographical and/or linguistic proximity. Some countries, such as the UK and France, have accepted large numbers of immigrants from former colonies

Diagram 137 Residence permits, persons born outside the EU, by cause, 2013

Per cent of population



Source: Eurostat.

[76] See Szulkin, R. et al., ”På jakt efter framgångsrik arbetslivsintegrering” [The quest for successful labour market integration], Swedish Institute for Futures Studies Research Report 2013/1. This study does not take account of the reasons for immigration, which can affect the chances of finding work.

[77] In a comparison of the total number of stay permits relative to the size of the population covering all European countries, Sweden ranked fourth behind Malta, Cyprus and the UK. See ”Stay permits for non-EU citizens in the EU28”, Eurostat news release, STAT/14/159.

[78] See ”Integration – etablering på arbetsmarknaden” [Integration – establishment in the labour market], Integration: Report 7, Statistics Sweden, 2014.

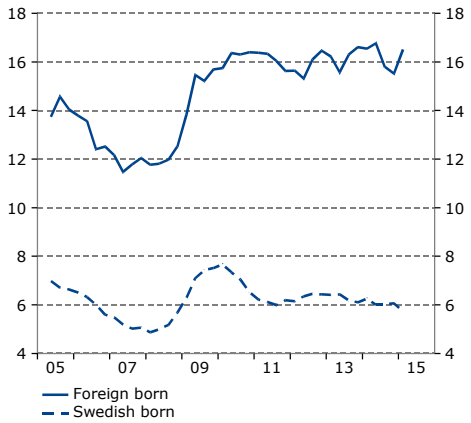
who therefore often have the relevant language skills when they arrive.[79]

A study shows that the employment gap between the immigrant and native populations in the OECD area is larger in countries with more generous social safety nets and extensive collective agreements. The same study shows that, on average, countries with a smaller employment gap also have wider income dispersion.[80]

Sweden does not stand out as negatively by European standards when it comes to the employment gap for those where the length of stay is more than 10 years. It therefore appears that the labour market does not function less well in Sweden in the longer term, but it does take longer for immigrants to become established in the labour market than in other countries.[81]

Diagram 138 Unemployment

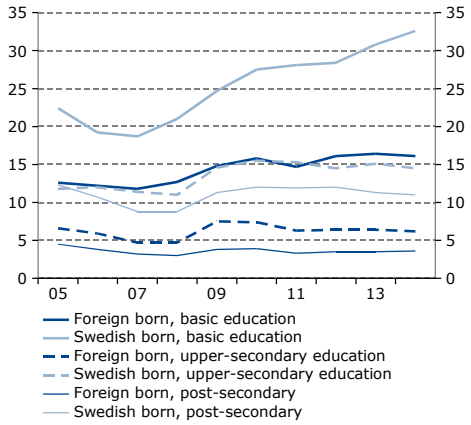
Per cent of labour force, seasonally adjusted quarterly values



Source: Statistics Sweden.

Diagram 139 Unemployment by highest educational level attained, ages 15–74

Per cent of labour force



Source: Statistics Sweden.

UNEMPLOYMENT IN THE FOREIGN-BORN POPULATION HAS RISEN

In 2005, unemployment was just over 14 per cent in the foreign-born population and just under 7 per cent for those born in Sweden (see Diagram 138). Unemployment in both groups increased in connection with the financial crisis. Unlike unemployment in the Swedish-born population, unemployment in the foreign-born population has not since fallen back again. The jobless rate among those born abroad was just over 16 per cent in 2014 but had fallen to just over 6 per cent among those born in Sweden. Above all, unemployment has risen to high levels among immigrants with no more than basic education (see Diagram 139).

It is not surprising that unemployment has risen somewhat in the foreign-born population in Sweden in recent years. Labour force participation among those born abroad has increased relatively sharply. When there is a large influx into the labour force, unemployment will normally increase in the short term, as it

[79] See Eriksson, S., ”Utrikes födda på den svenska arbetsmarknaden” [Immigrants in the Swedish labour market], Annex 4 to Långtidsutredningen 2011 [The Long-term Survey 2011], SOU 2011:11, in *Vägen till arbete – arbetsmarknadspolitik, utbildning och arbetsmarknadsintegration* [The road to work – labour market policy, education and labour market integration], SOU 2010:88.

[80] See Bergh, A., ”Utlandsföddas svårigheter på den svenska arbetsmarknaden – partiernas lösningar är otillräckliga” [The difficulties facing immigrants in the Swedish labour market – the political parties’ solutions are inadequate], *Ekonomisk debatt*, No. 4, 2014.

[81] See Szulkin, R. et al., ”På jakt efter framgångsrik arbetslivsintegrering” [The quest for successful labour market integration], Swedish Institute for Futures Studies Research Report 2013/1.

takes time for the new entrants to find work.[82] The relatively large influx of immigrants into the labour force has also meant that the average length of stay for immigrants in the labour force has decreased, which will tend to push up unemployment in itself. The influx into the labour force has also coincided with an economic slump where the job-finding rate has been low for cyclical reasons. This has probably exacerbated the situation, as unemployment varies more widely in the foreign-born population over the business cycle.[83]

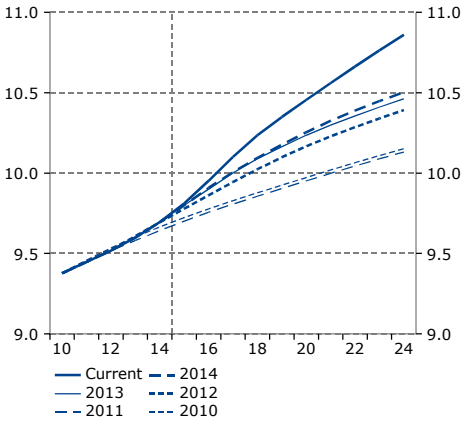
Potential employment revised up in light of new population forecast

According to the May 2015 population forecast, the population will grow more quickly than previously predicted (see Diagram 140).[84] It is not uncommon for the population forecast to be revised up, but the change from 2014 is relatively large by recent years' standards.[85]

The NIER normally uses the demographic model KAMEL to produce projections of various labour market variables beyond its forecast horizon using Statistics Sweden's population forecast.[86] KAMEL assumes that labour force participation and the employment rate for each individual group are constant over time. There are a total of 480 groups in KAMEL, where the population is broken down by age, gender and country/region

Diagram 140 Statistics Sweden's population forecasts by year of publication

Population, million



Source: Statistics Sweden.

[82] See the chapter "Jämviktsarbetslöshetens bestämningsfaktorer och utveckling" [Equilibrium unemployment's determinants and development] in *Wage Formation in Sweden*, 2012, NIER.

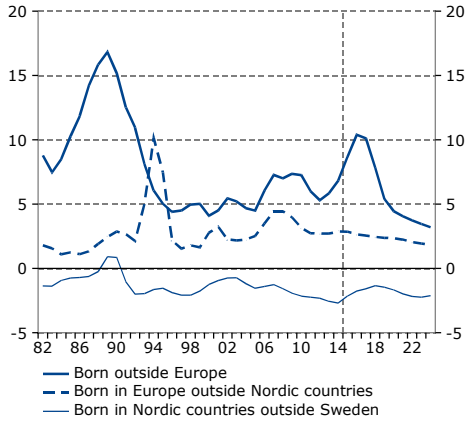
[83] See Rooth, D-O. and O. Åslund, "Spelar när och var någon roll? Arbetsmarknadslägets betydelse för invandrares inkomster" [Do when and where make a difference? The labour market situation's role in immigrants' incomes], Report 2003:5, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU).

[84] At the request of the Ministry of Finance, Statistics Sweden's April 2014 population forecast was updated regularly during the remainder of 2014 and the first part of 2015 in line with the Swedish Migration Agency's forecasts for incoming asylum seekers and family members. This means that the NIER has to some extent already discounted the higher rate of population growth in its forecasts published since June 2014.

[85] Statistics Sweden conducts an extensive review of its population forecast every three years, and 2015 was one such year. The 2012 review also led to a major revision.

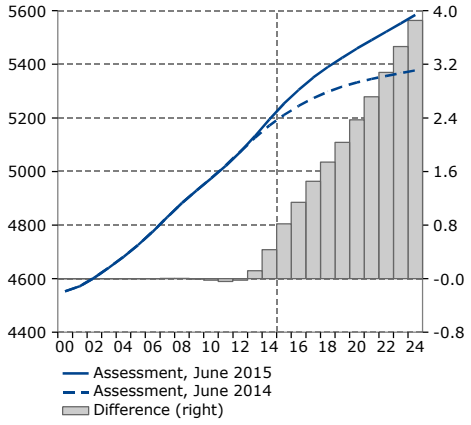
[86] KAMEL uses historical data from Statistics Sweden's Labour Force Survey (LFS) for a number of variables, such as the labour force and employment by gender, age and four countries/regions of birth (Sweden, other Nordic, other Europe and rest of world). These variables are then projected from a given start year with the help of Statistics Sweden's population forecasts. The model captures how a change in the composition of the population aged 15–74 impacts on the labour market over time with otherwise unchanged assumptions. For a more detailed presentation of KAMEL, see Appendix 2 to "Sveriges ekonomi – ett långsiktsscenario fram till år 2035" [The Swedish economy – a long-term scenario through to 2035], Occasional Study No. 30, NIER, 2012.

Diagram 141 Population growth, foreign born, ages 15–74
Per cent



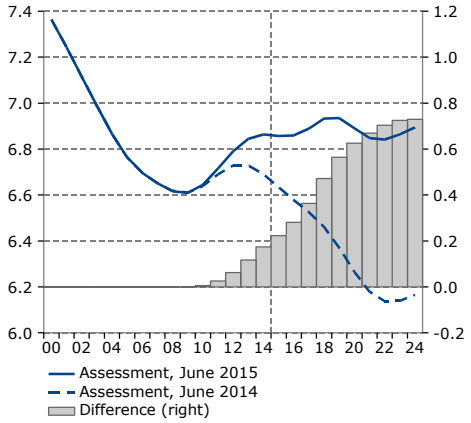
Source: Statistics Sweden.

Diagram 142 Potential labour force
Thousand persons and per cent, respectively



Source: NIER.

Diagram 143 Equilibrium unemployment
Per cent of labour force



Source: NIER.

of origin, but not by length of stay. New immigrants are therefore given the same labour force status as the corresponding group in the start year. As long as flows in the population are roughly the same from year to year, the demographic projections using KAMEL function relatively well, but we are now entering a period where immigration is expected to be substantially higher than before (see Diagram 141). In these circumstances, demographic projections based on average labour market status will overestimate labour force participation and underestimate unemployment in the foreign-born population, because it takes time for new immigrants to become established in the labour market.

LARGER POTENTIAL LABOUR FORCE

Since it takes time for new immigrants to become established in the labour market, the NIER expects the potential labour force to be somewhat smaller for a number of years than indicated by the projections from KAMEL.[87] Compared with the NIER's June 2014 scenario, which was based on Statistics Sweden's April 2014 population forecast and took no account of length of stay, the potential labour force is now expected to be around 4 per cent larger in 2024 (see Diagram 142). This increase reflects not only the new population forecast but also revisions in the light of hard data and the trend among the elderly for labour force participation among the over-55s to continue to rise.[88] This trend will be offset to some extent by the government's policies, which are expected to reduce labour force participation (see the special analysis "Policy changes to have lasting effects on labour market").

HIGHER EQUILIBRIUM UNEMPLOYMENT

The composition of the population affects the level of equilibrium unemployment, because unemployment varies between the different groups in the population. According to the new population forecast, groups that have a relatively weak attachment to the labour market will increase in size. Because it takes time for

[87] The NIER has assumed that immigrants arriving in Sweden will reach the same levels of labour force participation and employment at the 15-year horizon as the stock of non-Europeans. In its analysis, the NIER has used data on labour force status from the LFS and length of stay from Statistics Sweden's STATIV database for those born in Africa and Asia in the 16–64 age group for 2013. For a description of labour force status and the effect of length of stay for those born in Africa and Asia, see Aldén, A. and M. Hammarstedt, "Utrikes födda på 2000-talets arbetsmarknad – en översikt och förklaringar till situationen" [Immigrants in the labour market in the 2000s – overview and explanations], *Ekonomisk debatt*, No. 3, 2015.

[88] See *The Swedish Economy*, March 2015.

new immigrants to become established in the labour market, equilibrium unemployment is expected to be higher for a number of years. On balance, the NIER estimates that equilibrium unemployment in 2024 will be just over 0.7 percentage point higher than projected in June 2014 (see Diagram 143). The estimate of equilibrium unemployment has also been influenced slightly by the government's policies (see the special analysis "Policy changes to have lasting effects on labour market").

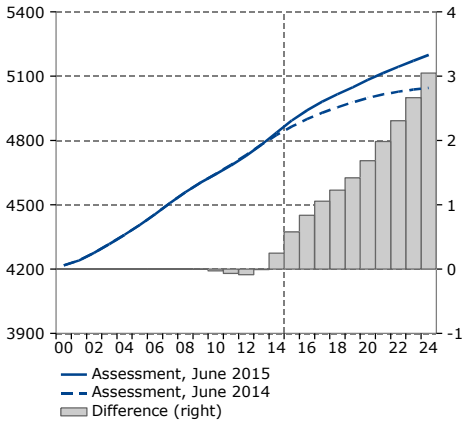
HIGHER POTENTIAL EMPLOYMENT OVERALL

To sum up, potential employment, i.e. the difference between the potential labour force and equilibrium unemployment, is estimated to be around 3 per cent higher in 2024 than projected in June 2014 (see Diagram 144).

The estimated effects of large migratory flows on average length of stay are expected to be only temporary. In the longer term, as the average length of stay for new immigrants increases, unemployment is expected to fall, and labour force participation to rise.

Diagram 144 Potential employment

Thousand persons and per cent, respectively



Source: NIER.

Immigration to rein in rise in demographic dependency ratio

Until the mid-2000s, the age composition of the Swedish population was such that the demographic dependency ratio was falling, but it has since increased and is expected to rise further in the future (see Diagram 145). Those of working age therefore need to provide for more people. The rise in the demographic dependency ratio through to 2024 is a result of increases in both the old-age dependency ratio and the child dependency ratio.[89]

Demographic developments play an important role in public finances beyond the forecast horizon via effects on GDP and, as a result, tax revenue. They also play a key role on the expenditure side. The higher the proportion of children and elderly in the population, the greater the need for welfare services and social transfers.

Immigrants into Sweden have a favourable age structure in economic terms (see Diagram 146). Around 75 per cent of the foreign-born population is of working age (20–64 years), while

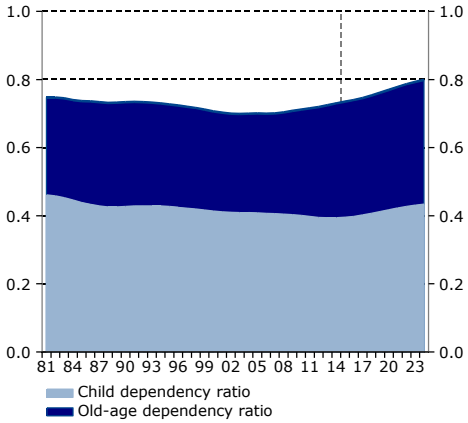
Dependency ratios

The **demographic dependency ratio** is defined as the number of people aged 19 and under and 65 and over in relation to the number of people of working age. Working age is defined here as 20-64 years, because the employment rate is relatively low outside this age group. The demographic dependency ratio can be divided into a **child dependency ratio**, defined as the number of people aged 19 and under in relation to the working-age population, and an **old-age dependency ratio**, defined as the number of people aged 65 and over in relation to the working-age population.

The **economic dependency ratio** is defined as the ratio between the number of people in the population who are economically inactive (not employed) and the number of employed.

Diagram 145 Demographic dependency ratio, 1980–2024

Number of people outside of working age in relation to number of people of working age

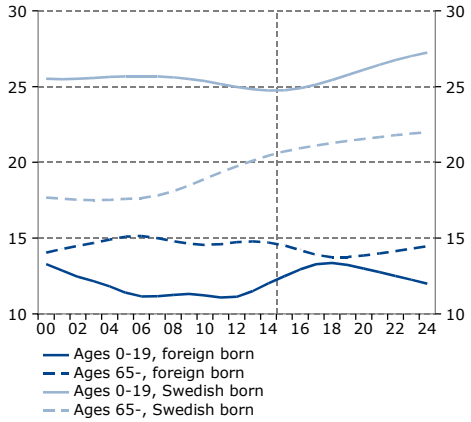


Note. See box for definitions.
Source: Statistics Sweden.

[89] At a slightly longer horizon, the proportion of children in the population is relatively stable, but the proportion of elderly continues to rise, with the result that the demographic dependency ratio climbs even higher – see the special analysis "The long-term sustainability of public finances" in *The Swedish Economy*, March 2015.

Diagram 146 Age structure, foreign born and Swedish born

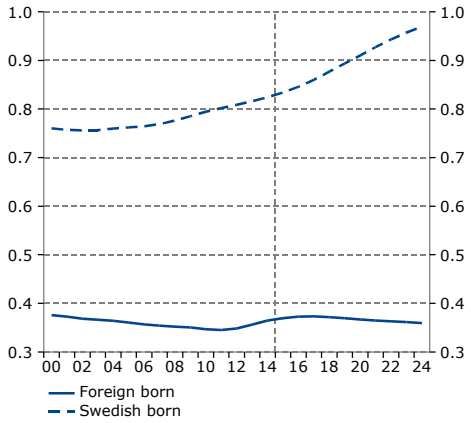
Per cent of the respective population group



Source: Statistics Sweden.

Diagram 147 Demographic dependency ratio

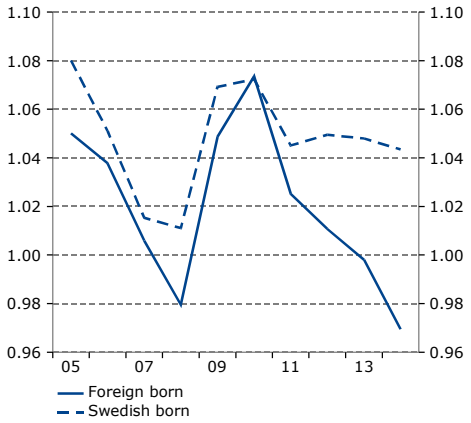
Number of people outside of working age in relation to number of people of working age



Note. See box for definitions.
Source: Statistics Sweden.

Diagram 148 Economic dependency ratio

Number of people not in employment in relation to number of people in employment



Sources: Statistics Sweden and NIER.

children and the elderly account for just over 10 per cent each. The equivalent age structure for the Swedish-born population is less favourable. In 2014, just under 55 per cent of the Swedish-born population were of working age, and this will fall to just under 51 per cent in 2024. The proportions of children and elderly stood at 25 and 20 per cent in 2014 and will rise to 27 and 22 per cent in 2024. The demographic dependency ratio is therefore much lower in the foreign-born population than in the Swedish-born population (see Diagram 147). Hence the foreign-born population will help rein in the demographic dependency ratio for the population as a whole through to 2024.

ECONOMIC DEPENDENCY RATIO TO DETERIORATE SOMEWHAT IN THE MEDIUM TERM

The demographic dependency ratio presented above does not necessarily reflect the burden that the economically active population has to bear. The economic dependency ratio is a more valid measure in this respect, as it is based on the proportion of people who are in work.

Although unemployment in 2014 was higher among those born abroad than among those born in Sweden, the economic dependency ratio was lower in the foreign-born population than in the Swedish-born population (see Diagram 148). This is because the immigrant population has a favourable age structure with relatively few children and elderly. In 2014, the economic dependency ratio for the population as a whole was 1.03. This means that there were roughly the same number of economically inactive people as there were people in work (see Diagram 149).[90]

Because the Swedish economy is still operating below capacity, the economic dependency ratio is currently somewhat elevated. Over the next few years, the economic recovery will result in higher employment and a slight fall in the economic dependency ratio. The economic dependency ratio will then rise again and hit 1.09 in 2024, with the result that the number of people in the population who are not employed will exceed the number of people who are (see Diagram 149). Compared with the economic dependency ratio in the NIER's June 2014 scenario, there has been a slight deterioration at this horizon despite the new immigrants in the new population forecast having a favourable age

[90] Compared with the June 2014 forecast for the economic dependency ratio, the baseline situation in 2014 is slightly better as a result of hard employment data turning out better than expected at that time.

structure. This is because new immigrants are expected to have a low employment rate during this period.

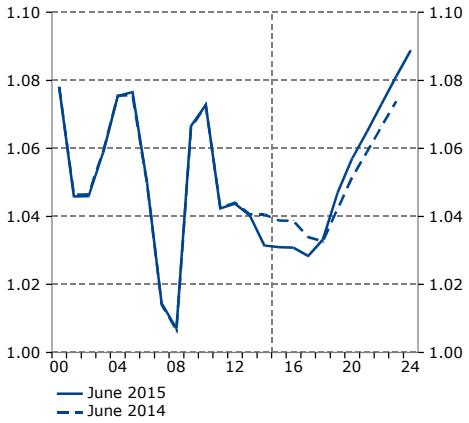
ECONOMIC DEPENDENCY RATIO IN THE LONGER TERM DEPENDS ON HOW WELL LABOUR MARKET FUNCTIONS

Projections of the economic dependency ratio are sensitive to the assumptions made for labour force participation and the employment rate.

In its scenario, the NIER has assumed lower labour force participation and employment initially for new immigrants arriving in Sweden in the next few years, but that they will attain the same levels as for existing non-Europeans at the 15-year horizon. The scenario is associated with considerable uncertainty and depends on how well integration functions and on how well the labour market adapts. This is very important for the economic dependency ratio and, as a result, public finances.[91] Even in the longer term when the foreign-born population has aged, the demographic dependency ratio among those born abroad will be much lower than for those born in Sweden (see Diagram 150). By improving the integration of immigrants and reducing the employment gap, it will be possible to achieve higher employment, lower unemployment and stronger public finances.

Diagram 149 Economic dependency ratio

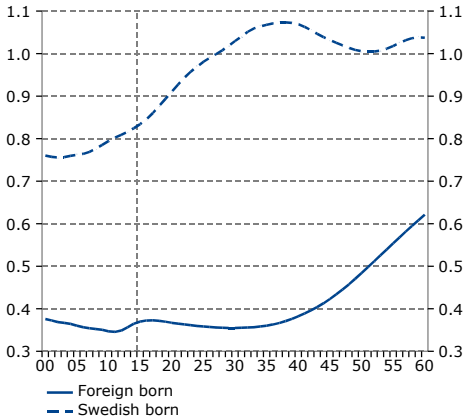
Number of people not in employment in relation to number of people in employment



Sources: Statistics Sweden and NIER.

Diagram 150 Demographic dependency ratio

Number of people outside of working age in relation to number of people of working age



Source: Statistics Sweden.

[91] See the chapter "The fiscal impact of immigration in OECD countries" in *International Migration Outlook 2013*, OECD.

SPECIAL ANALYSIS

Policy changes to have lasting effects on labour market

The government presented a number of measures in the 2015 Spring Fiscal Policy Bill that are expected to impact on the labour market, and further proposals are anticipated later this year in the Budget Bill for 2016. The NIER's overall assessment is that these measures will reduce equilibrium unemployment slightly but will also reduce the labour supply. The net effect on employment in the longer term will therefore be slightly negative. This assessment is, however, associated with considerable uncertainty.

The NIER publishes regular medium-term scenarios, currently for the period 2017–2024. These provide a basis for estimating how much space there is for unfunded fiscal policy measures. Many economic policy initiatives have lasting effects on the economy, and so the NIER needs to assess how different measures will impact on key macroeconomic variables.[92] In the 2015 Spring Fiscal Policy Bill, the government presented a number of measures that are expected to impact on employment in the longer term, and further proposals are expected in the upcoming Budget Bill for 2016. In this special analysis, the NIER assesses the net effects of these measures. The analysis considers the effects of:

- Phasing out reduced employer contributions for young people
- Higher unemployment insurance replacement rates
- New active labour market policies
- Changes to the sickness insurance system
- Changes to the tax reductions for purchases of household services ("RUT" – cleaning, maintenance and laundry) and home improvements ("ROT" – repairs, conversions and extensions).
- New sliding scale for earned-income tax allowance (the tax reduction for income from active work) for incomes above SEK 50,000/month
- Lower indexation of the threshold for central government income tax
- Reduced tax for the over-65s
- Special income tax for the over-65s

Potential variables

Potential GDP is the level of output when the economy is operating at full capacity.

The NIER divides potential GDP into potential productivity and the potential number of hours worked. Potential productivity is the level of productivity that would be observed in the absence of cyclical variations.

The potential number of hours worked is determined by potential employment – i.e. the number of employed when the labour market is in equilibrium – and by their average working hours. Potential employment, in turn, is determined by the potential labour force and equilibrium unemployment – i.e. the labour force and unemployment when the labour market is in equilibrium.

[92] See "Hur Konjunkturinstitutet beräknar potentiell BNP" [How the NIER estimates potential GDP], memo, NIER, www.konj.se.

The NIER's assessment is that these measures will reduce labour force participation in the longer term. The greatest effect on labour force participation will come from the removal of the time limit in the sickness insurance system (see Table 1). At the same time, active labour market policies are expected to bring down equilibrium unemployment somewhat. This is because some job seekers will now be recorded as being in employment in the official statistics. However, subsidised employment that is more like ordinary employment also tends to increase the chances of those concerned finding work on completing the programme.[93]

Table 19 Long-term effects of the economic policies in the 2015 Spring Fiscal Policy Bill and Budget Bill for 2016

Per cent or percentage points

	Potential labour force	Equilibrium unemployment	Potential employment
Phasing out reduced employer contributions for young people	–0.1	0.1	–0.2
Higher unemployment insurance replacement rates	*	0.2	–0.2
Active labour market policies	*	–0.2	0.2
Changes to sickness insurance system	–0.3	–0.2	–0.1
Special income tax for the elderly	–0.0	*	–0.0
Total	**–0.4**	**–0.1**	**–0.3**

Note. Effects on potential labour force and potential employment expressed as a percentage. Effects on equilibrium unemployment expressed in percentage points. Totals may not agree due to rounding.

* Effects considered negligible and so not quantified.

Source: NIER.

On balance, the NIER expects the government's economic policies to permanently lower the number of employed by just over 0.3 per cent, or 15–20,000 people. The effects on potential

[93] See Calmfors, L. et al., "Vad vet vi om den svenska arbetsmarknadspolitikens sysselsättningseffekter?" [What do we know about the employment effects of active labour market policies in Sweden?], Report 2002:8, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU); and Forslund, A. and J. Vikström, "Arbetsmarknadspolitikens effekter på sysselsättning och arbetslöshet – en översikt" [The effects on employment and unemployment of active labour market policies – an overview], Annex 1 to Långtidsutredningen 2011 [The Long-term Survey 2011], in *Vägen till arbete – arbetsmarknadspolitik, utbildning och arbetsmarknadsintegration* [The road to work – labour market policy, education and labour market integration], SOU 2010:88.

GDP are estimated to be somewhat smaller. This is because labour force participation will fall mainly among those whose skills and abilities are such that they will tend to be restricted to jobs with below-average productivity.

The NIER's assessment of the measures

HIGHER EMPLOYER CONTRIBUTIONS FOR YOUNG PEOPLE WILL REDUCE EMPLOYMENT SLIGHTLY

A general increase in employer social security contributions will normally have a very limited effect on potential employment, because the initial rise in labour costs will be reflected in wage formation. Both theoretical and empirical research indicates that general increases in employer contributions are passed on fully into wages in the longer term.[94] Firms' labour costs – and employment – are therefore expected to be unaffected by the higher employer contributions in the longer term.[95]

This reasoning is harder to apply to a rise in employer contributions for young people.[96] Their wages are heavily influenced by the minimum wages in collective agreements. A relatively high proportion of young people have limited relevant experience and skills, making them less productive. Many are also employed for duties that, in themselves, add relatively little value. The value added by many young people's work therefore only marginally exceeds the labour cost associated with the minimum wage. An increase in employer contributions for young people may therefore push the labour cost higher than the value added in some cases. Employment among young people will therefore decrease.

The NIER estimates that employment among young people will fall by around 20,000 in the longer term due to the phasing-

[94] See, for example, Bennmarker, H. et al., "Är sänkta arbetsgivaravgifter ett effektivt sätt att öka sysselsättningen?" [Are lower employer contributions an effective way of increasing employment?], Report 2008:16, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU).

[95] These conclusions build on the assumption that replacement rates in the social insurance systems are kept unchanged and that the labour supply is therefore unaffected.

[96] The reduced contributions apply to young people aged 24 and under.

out of reduced employer contributions.[97] Much of this decrease in employment among young people will, however, be offset by an increase in employment among those over the age of 25.[98] The net effect is estimated to be a reduction in employment of around 8,000 people, or around 0.2 per cent. This moderate decrease calls into question whether the reduction in employer contributions for young people has been a cost-effective measure given that many young people who were already in work have also been covered by this subsidy.

The reduced demand for labour is expected to lead to a slight decrease in labour force participation. It is likely that young people who do not find work will instead begin to study or leave the labour force for some other reason. The NIER estimates that the net effect on the potential labour force will be a decrease of around 0.1 per cent. Equilibrium unemployment is therefore expected to rise by around 0.1 percentage point as a result of this policy change.

HIGHER CEILING FOR UNEMPLOYMENT BENEFITS WILL PUSH UP EQUILIBRIUM UNEMPLOYMENT BUT REDUCE INCOME INEQUALITY

From 7 September 2015, the ceiling for unemployment insurance benefits will rise from SEK 680 to SEK 910 per day for the first 100 days and SEK 760 per day thereafter. The basic benefit will also climb from SEK 320 to SEK 365 per day. These changes mean that the average replacement rate will rise, which can be expected to reduce the incentive to seek work and lead to higher wage demands.[99] This will likely push up equilibrium unemployment somewhat. The increase in the unemployment insurance ceiling and basic benefit may nevertheless be justified

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[97] The reduced contributions are due to be phased out in two stages, returning to the standard rate from 1 July 2016. The phasing-out of reduced contributions means that labour costs for young people will climb almost 14 per cent. Given demand elasticity of −0.3 (see Egebark, J. and N. Kaunitz, "Sänkta arbetsgivaravgifter för unga" [Reduced employer contributions for young people], Report 2013:26, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU)), this will decrease demand for young workers by 4 per cent, or just over 20,000 people.

[98] Subsidised employment is associated with substitution effects. In an evaluation of the New Start programme, Liljeberg, L. et al. found that 63 per cent of new hires would have happened even without the subsidy, see Liljeberg, L. et al. "Leder nystartsjobben till högre sysselsättning?" [Do New Start jobs result in higher employment?], Report 2012:6, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU). The NIER has assumed a substitution effect of 60 per cent.

[99] For a review of the literature, see Forslund, A. "Den svenska jämviktsarbetslösheten – en översikt" [Swedish equilibrium unemployment – an overview], Report 2008:17, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU), and Skogman Thoursie, P., "Ekonomiska incitament inom arbetslöshets- och sjukförsäkringarna" [Economic incentives in the unemployment and sickness insurance systems], Background Report No. 9, Swedish Parliamentary Social Insurance Commission, 2012.

given that the ceiling has been unchanged in nominal terms since 2002. If the ceiling for benefits is not raised for a long period, unemployment insurance will not act as a buffer for career change, which could reduce matching efficiency in the labour market.

How much of an effect this has on equilibrium unemployment depends on the size of the increase in the effective replacement rate, and on how sensitive to such a change individuals are believed to be. Estimates using the FASIT model show that the average replacement rate will rise by around 4 percentage points as a consequence of the increase in unemployment benefits.[100] It is, however, uncertain how many people will be affected by the changes. Many unemployed will not be affected at all because they have not worked enough in the past year and are therefore not eligible for benefits.[101] Many workers will not be affected by the increase in the ceiling either, as they have supplementary unemployment insurance that replaces incomes above the ceiling in the standard system.[102] Previous assessments of equilibrium unemployment have to some extent discounted expectations of higher benefits.[103] Against this background, the NIER estimates that the average replacement rate will rise by only half the amount indicated by the FASIT model, in other words by around 2 percentage points.

On balance, higher replacement rates make it slightly less profitable to work rather than be unemployed. Using the NIER's standard estimation methods, this means that equilibrium unemployment will rise by just over 0.2 percentage point.[104] An increase in unemployment insurance benefits does, however, mean that income inequality will be slightly reduced.[105, 106]

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[100] Estimated using FASIT 2012 version 4, data from Statistics Sweden's Household Finances Survey (HEK).

[101] At the end of 2013, only around 40 per cent of the open unemployed registered with the Swedish Public Employment Service received benefits through the unemployment insurance system. See *Labour Market Report 2014*, Swedish Public Employment Service.

[102] Simulations in FASIT capture supplementary unemployment insurance taken out through collective agreements but not individual policies taken out through trade unions or private players. For an overview, see Sjögren Lindquist, G. and E. Wadensjö, "Avtalsbestämda ersättningar, andra kompletterande ersättningar och arbetsutbudet" [Collectively agreed benefits, other supplementary benefits and the labour supply], Report to the Expert Group on Public Finances, 2011:4.

[103] See the special analysis "Long-term effects of economic policy reforms on the labour market" in *The Swedish Economy*, December 2011.

[104] The NIER assumes quasi-elasticity of 0.12. See "How should the functioning of the labour market be assessed?", Report from the Economic Affairs Department at the Ministry of Finance, 2011:1.

[105] See "Fördelningseffekter av sex förslag ur budgetpropositionen för 2015" [Distribution effects of six proposals in the Budget Bill for 2015], Background Report 2015/3, Swedish Fiscal Policy Council.

One additional effect of a higher replacement rate is that labour force participation may increase. Higher unemployment benefits enhance the incentive to participate in the labour force. At the same time, higher unemployment means that fewer people want to participate. The net effect on the labour force is expected to be limited and does not warrant any revision of the potential labour force.

CHANGES TO ACTIVE LABOUR MARKET POLICIES WILL BOOST EMPLOYMENT

Active labour market policies affect the labour supply and unemployment in both the short and the longer term. Through support and monitoring, these policies can influence the unemployed's job-seeking behaviour. In most cases, applying for jobs is the most important route to employment, but different approaches are needed for some. Active labour market policies can help make these people more attractive to employers either by developing their skills or by subsidising their employment.[107]

The government plans to modify and expand its active labour market policy initiatives and increase the number of places in adult education. The key changes are as follows:

- Traineeships: Young jobless people will be given an opportunity to work 50 per cent of the time and receive vocational training the rest of the time. Subsidised traineeships are possible in the welfare sector and also in other parts of the labour market where there are shortages.
- Education contracts: Within 90 days of becoming unemployed, young people will have to start or return to studying with the aim of completing upper secondary education.
- Extra Jobs: Jobs for the long-term unemployed in the welfare sector on collectively agreed wages will gradually replace the employment phase (phase 3) of the Job and Development Guarantee.

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[106] In the short term, however, a fully funded increase in unemployment benefits may lead to greater demand in the economy and so lower unemployment, see the special analysis "Vårpropositionen 2015" [The 2015 Spring Fiscal Policy Bill] in the Swedish version of the present report.

[107] See Forslund, A. and J. Vikström, "Arbetsmarknadspolitikens effekter på sysselsättning och arbetslöshet – en översikt" [The effects on employment and unemployment of active labour market policies – an overview], Annex 1 to Långtidsutredningen 2011 [The Long-term Survey 2011], in *Vägen till arbete – arbetsmarknadspolitik, utbildning och arbetsmarknadsintegration* [The road to work – labour market policy, education and labour market integration], SOU 2010:88.

Both the traineeship and Extra Jobs programmes are expected to affect unemployment in the official statistics, because job seekers on these programmes will be classified as being employed. Subsidised positions like these that are more like ordinary employment also tend to increase the chances of those concerned finding work on completing the programme.[108]

On balance, the changes to active labour market policies are expected to make equilibrium unemployment around 0.2 percentage points lower and employment in the longer term around 0.2 per cent higher.

INCOME TAX CHANGES WILL HAVE LITTLE IMPACT ON EQUILIBRIUM UNEMPLOYMENT

The NIER expects the changes to the taxation of income to have a negligible effect on equilibrium unemployment. This applies to the new sliding scale for the earned-income tax allowance, the lower indexation of the threshold for central government income tax, and the reduced tax for the over-65s. The main reason why these measures will not affect equilibrium unemployment is that unemployment is very low to start with in the groups directly affected by the changes.

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[108] When it comes to subsidised employment, studies show that the programmes that are most like ordinary employment work best. However, they also appear to have the greatest crowding out effects, see Calmfors, L. et al., ”Vad vet vi om den svenska arbetsmarknadspolitikens sysselsättningseffekter?” [What do we know about the employment effects of active labour market policies in Sweden?], Report 2002:8, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU). In addition, these programmes have higher costs, which may mean that fewer can take part in them.

Based on calculations from the Ministry of Finance, the effects are estimated on the basis of the following principle:

employment effect = number of participants × (1 – crowding out) + number of participants × treatment effect in days / 365.

Estimates of these effects are associated with considerable uncertainty. The methodology implies that all other potential effects of active labour market policies, such as those on wage formation, and effects on matching and labour force participation in the longer term are negligible.

The NIER assesses that the estimated volumes in the 2015 Spring Fiscal Policy Bill will be hard to achieve, partly because employers may find it difficult to provide training. Previous experience shows that it also takes time to phase different measures in and out. The estimated volumes have therefore been halved to around 10,000 Extra Jobs and around 5,000 traineeships in the longer term. Crowding out has been estimated at 60 per cent. The treatment effect for Extra Jobs has been set at 120 days, the same as used by the Ministry of Finance and the Public Employment Service for New Start jobs. This may be on the high side, as analyses show that directly-created jobs in the public sector rarely bring major positive opportunities for finding unsubsidised work in the short term. The treatment effect for traineeships has been set at 4 days, the same as used by the Ministry of Finance for apprenticeships. Overall, the analysis indicates relatively minor effects from the different types of measures for young people. The employment effects of the measures in the employment phase (phase 3) of the Job and Development Guarantee are deemed negligible. See ”How should the functioning of the labour market be assessed?”, Report from the Economic Affairs Department at the Ministry of Finance, 2011:1; *Labour Market Report 2014*, Swedish Public Employment Service; and *Swedish Fiscal Policy 2010*, Swedish Fiscal Policy Council.

The incentive to work rather than not work will decrease slightly for high earners when the earned-income tax allowance is on a sliding scale and when more people are paying central government income tax. But the impact on employment and equilibrium unemployment is expected to be small, because this group has a low risk of unemployment, has low replacement rates to start with (at least from the standard unemployment insurance system) and consists of relatively few people. The incentive to work will remain high following these tax increases, which means that labour force participation will not decline notably either.

Nor is the reduced tax for the elderly – more specifically an increase in the basic allowance for those over 65 on annual incomes below SEK 240,000 – expected to have any appreciable effects on equilibrium unemployment. For one thing, labour force participation in this age group is low. For another, unemployment in this group is low, because they are not eligible for unemployment insurance benefits.[109] The incentive to work for pensioners on annual incomes below SEK 240,000 is already low due to the system of guaranteed pensions and housing supplements.[110] This incentive will be weakened further when the basic allowance for the elderly is raised.

The new sliding scale for the earned-income tax allowance and lower indexation of the threshold for central government income tax could affect average hours worked and potential productivity. The majority of those directly affected by the income tax hikes will see increases in marginal and average taxes. Higher marginal taxation will result in a reduced incentive to work more hours, because the individual will keep less of the increase in income after tax (substitution effect). Higher average taxation, however, will mean that the individual has to work more hours to achieve a given level of income after tax (income effect). The NIER estimates that the net impact of these two opposing effects on average hours worked will be negligible.

Higher taxes on high incomes may affect how hard people work, as future pay increases are then worth less. This may have a negative effect on productivity. The higher taxes also lead to a decreased education premium, reducing the incentive to under-

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[109] Unemployment in 2014 was 3.0 per cent among those aged 65–74 and 7.9 per cent for the 15–74 age group.

[110] See *Längre liv, längre arbetsliv: Förutsättningar och hinder för äldre att arbeta längre* [Longer lives, longer working lives: What older people need and do not need to work longer], preliminary report of the Swedish Retirement Age Commission, SOU 2012:28.

take further training. In the long term, this could reduce potential productivity.

SPECIAL INCOME TAX FOR ELDERLY MAY REDUCE LABOUR FORCE AND EMPLOYMENT

The increase in special income tax is expected to reduce employment among the elderly in the short term through decreased demand for labour. The long-term effect will depend on how wages for the elderly react, as this will impact on the labour supply in this age group. The NIER estimates that employment will decrease slightly due to the broadening of special income tax.[111] The fall in employment will result in elderly people leaving the labour force rather than becoming unemployed, and so equilibrium unemployment is not expected to be affected by the change.

CHANGES TO DEDUCTIONS FOR HOME IMPROVEMENTS AND HOUSEHOLD SERVICES WILL HAVE NEGLIGIBLE IMPACT ON LABOUR SUPPLY

The NIER expects that the changes to the tax deductions for purchases of household services ("RUT" – cleaning, maintenance and laundry) and home improvements ("ROT" – repairs, conversions and extensions) will have negligible effects on the labour market.

The NIER has found previously that the household services deduction implies permanently higher employment and lower unemployment.[112] The increase in employment is driven by a number of factors: a reduction in the black economy,[113] an increase in the labour supply among those buying these services, and an inflow of labour into the market for these services from groups previously unemployed or outside the labour market.

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[111] Laun, L., "Om förhöjt jobbskatteavdrag och sänkta arbetsgivaravgifter för äldre" [A higher earned-income tax allowance and lower employer contributions for the elderly], Report 2012:16, Swedish Institute for Evaluation of Labour Market and Education Policy (IFAU), looks at the effect of the increased earned-income tax allowance and reduced employer contributions for the elderly introduced in 2007. It is not possible to separate the effects of these two changes in the study's results. If, however, we assume the effects are equally distributed, the employment elasticity with respect to net income from employment is estimated at 0.25. If this spills fully over into wages, the introduction of the special income tax means that net income from employment (with unchanged income tax and unchanged hours worked) falls by just over 6 per cent. This results in a reduction of the labour supply among the elderly of 1.5 per cent, or around 2,000 people.

[112] See the special analysis "Long-term effects of economic policy reforms on the labour market" in *The Swedish Economy*, December 2011.

[113] This will not, however, affect the number of employed as defined in Statistics Sweden's Labour Force Survey (LFS).

The government is now proposing that the ceiling for the deduction of purchases of household services is lowered from SEK 50,000 to SEK 25,000 per person per tax year for taxpayers below the age of 65. The NIER expects this change to have negligible effects on employment in the longer term, because demand for household services will not be greatly affected. At present, only a very small number of people spend more than SEK 25,000 per year on these services.[114,115]

The government also proposes that the subsidy for home improvements is lowered from 50 to 30 per cent. This is not expected to affect employment in the longer term. The home improvements deduction is believed to have less of an effect on the labour supply than the household services deduction. One important reason for this is that these services are generally more complex and therefore require more skills than those covered by the household services deduction. As a result, not as much domestic work is replaced with market work.[116] The reduction in demand will still lead to reduced employment in the home improvements sector, but this effect will be offset by higher employment in other sectors. There is, however, a tangible risk of an increase in the black economy.

CHANGES TO SICKNESS INSURANCE WILL REDUCE LABOUR FORCE PARTICIPATION

Sickness benefit is currently time-limited in that it is normally paid only for a maximum of 2½ years at a time. Those reaching the end of this period are invited to participate in the Swedish Public Employment Service's Working Life Introduction (ALI) programme for three months. If the person's capacity to work is still impaired, he or she can then apply for a fresh period on sickness benefit. The government now plans to abolish this time limit in the sickness insurance system from 1 January 2016. Dis-

[114] An estimated 460,000 people below the age of 65 will make deductions for household services in 2016, of whom only around 12,000 will claim more than SEK 25,000. See "Förändringar i husavdraget" [Changes in the household services deduction], consultation response, NIER, 2015.

[115] Halldén and Stenberg find a positive relationship between women's labour supply and the use of the tax deduction for household services. Income from employment increased most among women using 40–80 hours of these services a year. See Halldén, K. and A. Stenberg, "Ökar RUT-avdrag kvinnors arbetsmarknadsutbud?" [Do tax deductions for household services increase women's labour supply?], *Ekonomisk debatt*, No. 2, 2015.

[116] See *Swedish Fiscal Policy 2010*, Swedish Fiscal Policy Council.

ability and incapacity benefit will also be raised from 64 to 64.7 per cent of imputed income from 1 October 2015.[117]

Since the new rules with fixed time limits were introduced in 2008, around 100,000 people have exited the sickness insurance system due to the time limit, and 10,000 of these have hit the time limit a second time. Around 85,000 have taken part in the ALI programme. Surveys indicate that around 17 per cent of those who took part in the ALI programme in 2010−2013 were in employment or education 270 days after completing the programme.[118] Around 43 per cent were still registered with the Public Employment Service as open unemployed or on job creation schemes, and around 40 per cent were no longer registered with the Public Employment Service and had probably returned to the sickness insurance system. Both the proportion of people leaving the Public Employment Service to work and the proportion of those returning to the sickness insurance system have increased over time. According to the Swedish Social Insurance Agency, around 65 per cent of those reaching the time limit for the first time in 2013 returned to the sickness insurance system.[119] There is also a large group who are still registered with the Public Employment Service. The number of people registered with the Public Employment Service who were taking, or had previously taken, part in the ALI programme was almost 30,000 in March 2015. [120]

There has not been any evaluation looking directly at the effects of the time limit in the sickness insurance system, but there have been studies showing that a rehabilitation chain with set time limits, where the right to sickness benefit is tested against various conceivable types of employment, has helped shorten periods of sickness absence and reduce the number of people on long-term sickness absence.[121] Empirical evidence from both the sickness insurance system and the employment insurance system alongside it shows that time limits, replacement rates and con-

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[117] Imputed income is based on previous income during a period that depends on the age of the insured (guaranteed benefits are paid to those on low incomes or no income).

[118] See ”Arbetsförmedlingens återrapportering 2014, tidiga och aktiva insatser för sjukskrivnas återgång i arbete, 6b Arbetslivsintroduktion” [Early and active efforts to get the sick back to work, 6b: Working Life Introduction], Swedish Public Employment Service, 2014.

[119] See ”Sjukfrånvarons utveckling, delrapport 1, år 2014” [Sickness absence, interim report 1, 2014], Social Insurance Report 2014:12, Swedish Social Insurance Agency.

[120] Information from the Swedish Public Employment Service’s statistics unit.

[121] See Hägglund, P., ”Do time limits in the sickness insurance system increase return to work?”, *Empirical Economics*, 2012, volume 45, pp. 567−582.

trols of various kinds have a bearing on the use of these systems. One general conclusion is that generous rules – in the form of high replacement rates and low levels of control – lead to increased use of the insurance system, and vice versa.[122]

On balance, the NIER believes that the changes to the sickness insurance system – and most notably the abolition of the time limit – will mean that the number of people on sickness benefit will rise. The increase in the replacement rate is only minor, and the expected effects are therefore limited. There are also indications that the Social Insurance Agency is becoming less likely to test the right to benefits at the set time limits in the rehabilitation chain.[123] These measures are expected to reduce the labour supply by around 0.3 per cent, or just over 15,000 people. Equilibrium unemployment is estimated to fall by around 0.2 percentage point, partly as a direct effect of a reduced flow from the sickness insurance system to the ALI programme and other active labour market policy programmes.

[122] See Gautier, P. and B. van der Klaauw, "Att kombinera socialförsäkringar med incitament till arbete" [Combining social insurance with incentives to work], Annex 8 to Långtidsutredningen 2011 [The Long-term Survey 2011], SOU 2011:2, in *Vägen till arbete – arbetsmarknadspolitik, utbildning och arbetsmarknadsintegration* [The road to work – labour market policy, education and labour market integration], SOU 2010:88; and "Tidsgränser i sjukförsäkringen" [Time limits in the sickness insurance system], Report 2015:5, Swedish Social Insurance Inspectorate.

[123] See "Tidsgränser i sjukförsäkringen" [Time limits in the sickness insurance system], Report 2015:5, Swedish Social Insurance Inspectorate.

Tables and graphs

Data for additional variables and longer time series can be found on the NIER's website at www.konj.se/statistics.

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The global economy 2015–2016

Table A1 Global output

Per cent of global GDP at purchasing power parity and percentage points, respectively, constant prices

	Weight 2014	2010	2011	2012	2013	2014	2015	2016
World		5.4	4.2	3.4	3.4	3.5	3.4	3.9
OECD	45.8	3.0	2.0	1.3	1.4	1.8	2.1	2.6
USA	16.1	2.5	1.6	2.3	2.2	2.4	2.4	2.9
Euro area	11.8	2.0	1.6	–0.8	–0.4	0.8	1.6	1.9
Germany	3.4	3.9	3.7	0.6	0.2	1.6	1.8	2.1
France	2.4	1.9	2.1	0.2	0.7	0.2	1.3	1.7
Italy	2.0	1.7	0.7	–2.8	–1.7	–0.4	0.7	1.3
Spain	1.5	0.0	–0.6	–2.1	–1.2	1.4	2.9	2.7
Finland	0.2	3.0	2.6	–1.4	–1.3	0.0	0.3	1.3
Japan	4.4	4.7	–0.4	1.7	1.6	–0.1	1.0	1.4
UK	2.4	1.9	1.6	0.7	1.7	2.8	2.4	2.6
Sweden	0.4	5.7	2.7	0.1	1.3	2.4	2.6	3.0
Norway	0.3	0.4	1.1	2.5	0.8	2.2	1.5	1.5
Denmark	0.2	1.6	1.2	–0.7	–0.5	1.1	1.8	2.2
Emerging markets[1]	54.2	7.7	6.2	5.3	5.1	4.9	4.5	5.0
China	16.3	10.5	9.3	7.7	7.7	7.4	6.6	6.6
India	6.8	11.0	7.6	4.8	6.4	7.3	7.0	7.4
Brazil	3.0	7.6	3.9	1.8	2.7	0.2	–1.0	1.2
GDP per capita								
US		1.7	0.8	1.6	1.5	1.6	1.7	2.2
Euro area		1.7	1.3	–1.1	–0.6	0.6	1.3	1.7
Japan		4.7	–0.3	2.0	1.8	0.1	1.3	1.7
Market growth								
World[2]		10.6	6.0	1.9	2.2	3.1	4.3	4.9

[1] Emerging markets are defined here as countries that are not members of the OECD. [2] World market growth refers to total import demand in the countries to which Sweden exports, each country weighted by its share of Swedish goods exports.

Note. The figures for GDP are the calendar-adjusted change expressed in constant prices. The aggregates are calculated using time-varying purchasing power parity GDP weights from the IMF.

Sources: IMF, OECD, Eurostat, national sources and NIER.

Table A2 Global inflation

Percentage change in CPI

	2009	2010	2011	2012	2013	2014	2015	2016
OECD	0.5	1.9	2.9	2.3	1.6	1.7	0.7	1.8
US	–0.4	1.6	3.2	2.1	1.5	1.6	0.2	1.8
Euro area	0.3	1.6	2.7	2.5	1.4	0.4	0.1	1.3
Germany	0.2	1.2	2.5	2.1	1.6	0.8	0.4	1.7
France	0.1	1.7	2.3	2.2	1.0	0.6	0.1	1.0
Italy	0.8	1.6	2.9	3.3	1.3	0.2	0.2	1.1
Spain	–0.2	2.0	3.1	2.4	1.5	–0.2	–0.4	1.0
Finland	1.6	1.7	3.3	3.2	2.2	1.2	0.2	0.9
Japan	–1.3	–0.7	–0.3	0.0	0.4	2.7	0.8	1.0
UK	2.2	3.3	4.5	2.8	2.6	1.5	0.3	1.7
Sweden	1.9	1.9	1.4	0.9	0.4	0.2	0.8	1.5
Norway	2.3	2.3	1.2	0.4	2.0	1.9	1.9	2.2
Denmark	1.1	2.2	2.7	2.4	0.5	0.3	0.5	1.4
Emerging markets[1]								
China	–0.7	3.2	5.5	2.6	2.6	2.1	1.4	2.0
India	10.9	12.0	8.9	9.3	10.9	6.4	6.1	5.8
Brazil	4.9	5.0	6.6	5.4	6.2	6.3	7.9	5.7

[1] Emerging markets are defined here as countries that are not members of the OECD.

Note. The CPI values for the EU countries and Norway refer to harmonised indices of consumer prices (HICP). The OECD aggregate includes national CPI series only. The aggregate for the euro area is weighted using consumption weights from Eurostat and the OECD aggregate using consumption weights from the OECD.

Sources: IMF, OECD, Eurostat, national sources and NIER.

Table A3 Selected indicators for the euro area

EUR billion, current prices, and percentage change, constant prices, respectively

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Household consumption expenditure	5 527	0.8	0.2	–1.3	–0.6	1.0	1.8	1.6
General government consumption expenditure	2 088	0.8	–0.2	–0.1	0.2	0.6	0.9	0.4
Gross fixed capital formation	1 930	–0.5	1.6	–3.5	–2.3	1.1	2.2	3.6
Stockbuilding[1]	–17	1.0	0.4	–0.8	0.0	–0.1	0.0	0.0
Exports	4 320	10.7	6.6	2.7	2.0	3.7	3.9	4.6
Imports	3 952	9.5	4.3	–0.7	1.3	4.0	4.5	4.5
GDP	**9 894**	**2.0**	**1.6**	**–0.8**	**–0.4**	**0.8**	**1.6**	**1.9**
HICP[2]		1.6	2.7	2.5	1.4	0.4	0.1	1.3
Unemployment[3]		10.0	10.1	11.3	12.0	11.6	11.1	10.7
Policy rate[4]		1.00	1.00	0.75	0.25	0.05	0.05	0.05
Interest rate, ten-year government bond[5]		2.8	2.6	1.6	1.6	1.2	0.6	1.4
USD/EUR[6]		1.33	1.39	1.29	1.33	1.33	1.11	1.11

[1] Change in per cent of GDP the previous year. [2] Percentage change. [3] Per cent of labour force. [4] Refi rate level, per cent, at year-end. [5] Level, per cent, Germany. [6] Level.

Sources: ECB, Eurostat and NIER.

Table A4 Selected indicators for the US

USD billion, current prices, and percentage change, constant prices, respectively

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Household consumption expenditure	11 930	1.9	2.3	1.8	2.4	2.5	3.0	2.8
General government consumption expenditure	2 586	0.1	–2.7	–0.6	–1.3	0.4	0.5	0.4
Gross fixed capital formation	3 359	1.1	3.7	5.4	2.8	3.9	4.0	6.2
Stockbuilding[1]	82	1.4	–0.1	0.1	0.0	0.0	0.2	0.0
Exports	2 337	11.9	6.9	3.3	3.0	3.2	2.2	5.5
Imports	2 875	12.7	5.5	2.3	1.1	4.0	6.5	6.2
GDP	**17 419**	**2.5**	**1.6**	**2.3**	**2.2**	**2.4**	**2.4**	**2.9**
CPI[2]		1.6	3.2	2.1	1.5	1.6	0.2	1.8
Unemployment[3]		9.6	8.9	8.1	7.4	6.2	5.4	4.9
Policy rate[4]		0.25	0.25	0.25	0.25	0.25	0.75	1.50
Interest rate, ten-year government bond[5]		3.2	2.8	1.8	2.4	2.5	2.2	2.9
USD/EUR[6]		1.33	1.39	1.29	1.33	1.33	1.11	1.11

[1] Change in per cent of GDP the previous year. [2] Percentage change. [3] Per cent of labour force. [4] Federal Funds target rate level, per cent, at year-end. [5] Level, per cent. [6] Level.

Sources: US Bureau of Economic Analysis, US Bureau of Labor Statistics, Federal Reserve and NIER.

The Swedish economy 2015–2016

Table A5 GDP by expenditure

SEK billion, current prices, and percentage change, constant prices, respectively

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Household consumption expenditure	1 818	3.9	1.9	0.8	1.9	2.4	2.7	2.9
Goods	820	4.2	–0.2	1.1	1.1	3.0	2.5	2.1
Services excl. housing	581	3.7	4.5	0.2	2.8	2.9	4.1	3.7
Housing	355	0.2	2.1	0.4	1.7	2.5	3.2	3.2
General government consumption expenditure	1 029	1.3	0.8	1.1	0.7	1.9	2.3	2.7
Central government	276	3.4	0.7	2.5	1.6	1.8	0.7	2.3
Local government	753	0.6	0.9	0.6	0.4	1.9	2.8	2.9
Gross fixed capital formation	912	6.0	5.7	–0.2	–0.4	7.4	4.7	5.1
Business sector	741	5.7	7.1	–0.7	–0.9	8.7	5.5	4.9
Industry	176	3.4	8.8	–3.1	–1.4	4.9	0.8	4.5
Other goods producers	97	6.4	–0.2	4.7	–3.5	3.6	5.4	1.0
Services producers[1]	306	3.8	8.1	4.8	–1.0	6.8	3.8	6.4
Housing	162	12.7	8.0	–11.8	2.1	20.8	13.6	5.1
General government	167	7.4	–0.2	1.7	1.8	2.3	1.3	6.0
Domestic demand excl. stockbuilding	*3 758*	*3.7*	*2.5*	*0.6*	*1.0*	*3.4*	*3.0*	*3.4*
Stockbuilding[2]	8	2.1	0.5	–1.1	0.1	0.2	0.0	0.0
Total domestic demand	*3 766*	*6.0*	*3.0*	*–0.6*	*1.1*	*3.6*	*3.1*	*3.3*
Exports	1 744	11.9	6.1	1.0	–0.2	3.3	3.9	5.0
Exports of goods	1 229	15.8	6.8	0.3	–1.7	1.8	2.6	5.0
Processed goods	952	17.3	8.3	–2.9	0.0	0.3	2.9	5.4
Raw materials	278	9.1	1.4	12.2	–7.1	7.1	1.3	3.6
Exports of services	515	2.2	4.0	3.0	4.0	7.1	6.9	5.1
Total demand	*5 510*	*7.9*	*4.0*	*–0.1*	*0.7*	*3.5*	*3.3*	*3.9*
Imports	1 596	12.8	7.3	0.5	–0.7	6.6	4.5	5.4
Imports of goods	1 106	17.2	8.7	–0.8	–2.3	4.9	4.9	5.5
Processed goods	783	20.8	12.2	–2.9	–0.6	4.7	4.9	6.0
Raw materials	322	7.6	–0.2	4.3	–6.0	5.4	4.8	4.0
Imports of services	490	2.3	3.7	4.3	3.5	10.8	3.8	5.2
Net exports[2]	*149*	*0.4*	*–0.2*	*0.3*	*0.2*	*–1.1*	*–0.1*	*0.0*
GDP	**3 915**	**6.0**	**2.7**	**–0.3**	**1.3**	**2.3**	**2.8**	**3.2**
GDP per capita[3]	404	5.1	1.9	–1.0	0.4	1.3	1.6	1.8

[1] Excluding housing. Housing is, however, included in the business sector total. [2] Change in per cent of GDP the previous year.
[3] SEK, thousand, current prices, and percentage change, constant prices, respectively.

Sources: Statistics Sweden and NIER.

Table A6 Household income, consumption expenditure and saving

SEK billion, current prices, and percentage change, respectively

	Level 2014	2013	2014	2015	2016	2017	2018	2019
Total earnings, adjusted for external transactions	1 587	2.4	3.7	4.3	4.7	4.9	4.3	3.7
Hourly earnings (according to national accounts)		1.9	1.8	2.6	3.0	3.1	3.2	3.3
Hours worked[1,2]		0.3	1.8	1.4	1.6	1.7	1.1	0.4
Transfers from government sector, net	578	4.5	1.5	3.3	5.4	4.3	3.9	4.4
Property income, net	236	4.2	7.9	13.3	5.6	5.2	3.9	4.5
Other income, net	68	4.4	3.0	7.3	3.8	6.0	8.4	9.1
Income before taxes[3]	**2 469**	**3.1**	**3.6**	**5.0**	**4.9**	**4.8**	**4.3**	**4.1**
Direct taxes[4]	492	–0.2	–0.2	–0.1	–1.3	–0.9	–1.0	–0.9
Disposable income	**1 977**	**2.9**	**3.3**	**4.9**	**3.5**	**3.9**	**3.2**	**3.1**
Consumer prices[5]		0.8	0.8	0.9	1.4	1.6	2.2	2.3
Real disposable income	**1 977**	**2.1**	**2.6**	**4.0**	**2.1**	**2.2**	**1.0**	**0.8**
Per capita[6]		1.3	1.6	2.7	0.6	0.7	–0.3	–0.3
Consumption expenditure	**1 818**	**1.9**	**2.4**	**2.7**	**2.9**	**2.4**	**2.1**	**1.8**
Saving[7]	342	15.6	15.8	16.8	16.1	15.9	14.9	13.9
Own saving[7]	159	7.9	8.1	9.2	8.5	8.3	7.3	6.4
Net lending[7]	298	14.0	13.8	14.8	14.0	13.8	12.8	11.8

[1] Calendar-adjusted. [2] For employees. [3] Growth in income before taxes is calculated as a weighted sum of the growth rates for total earnings, transfers, capital income and other income. [4] Change in per cent of income before taxes, with reverse sign. [5] Implicit price index for household consumption expenditure. [6] SEK thousand. [7] SEK billion, current prices, and per cent of disposable income, respectively. Own saving excludes occupational and premium pensions. Net lending excludes real saving.

Sources: Statistics Sweden and NIER.

Table A7 Current account and net lending

SEK billion, current prices, and per cent, respectively

	2009	2010	2011	2012	2013	2014	2015	2016
Net exports, goods	154	150	125	138	142	123	122	124
Net exports, services	36	42	47	44	48	25	35	36
Earnings, net	20	19	17	18	17	19	21	22
Investment income, net	57	72	80	90	113	137	153	157
Transfers etc., net	–45	–55	–54	–56	–60	–63	–64	–54
Current account balance	**221**	**228**	**216**	**233**	**260**	**242**	**267**	**285**
Per cent of GDP	*6.7*	*6.5*	*5.9*	*6.3*	*6.9*	*6.2*	*6.5*	*6.6*
Capital transfers	–4	–5	–6	–6	–9	–4	–5	–5
Net lending	**217**	**223**	**210**	**228**	**251**	**238**	**262**	**280**
Per cent of GDP	*6.6*	*6.3*	*5.7*	*6.2*	*6.7*	*6.1*	*6.4*	*6.5*

Sources: Statistics Sweden and NIER.

Table A8 GNI

SEK billion, current prices, thousands, ratio and annual percentage change, respectively

	Level 2014	2010	2011	2012	2013	2014	2015	2016
GNI	4 075	7.2	4.0	1.0	3.0	4.2	4.8	4.8
Deflator, domestic use		1.3	1.7	1.1	1.2	1.4	1.4	1.7
Real GNI		**5.8**	**2.3**	**–0.1**	**1.7**	**2.7**	**3.4**	**3.1**
Population[1]	9 695	0.9	0.8	0.7	0.9	1.0	1.2	1.4
Real GNI per capita[2]	**420**	**4.9**	**1.5**	**–0.8**	**0.9**	**1.7**	**2.2**	**1.7**

[1] Thousands. [2] SEK thousand.

Sources: Statistics Sweden and NIER.

Table A9 Production

SEK billion, current prices, and percentage change, constant prices, respectively, calendar-adjusted values

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Good producers	941	14.3	2.4	–3.7	–0.5	2.0	1.2	3.3
Of which: Industry	577	22.5	4.1	–6.5	–0.6	–0.9	0.1	3.7
Construction	208	3.2	–2.2	–5.3	–0.6	11.8	5.8	3.5
Services producers	1 765	3.8	4.8	2.2	3.2	3.0	3.6	3.4
Of which: Trade	385	5.8	3.0	2.2	3.2	4.5	4.6	4.1
Business services	329	8.2	5.6	1.6	3.2	3.7	3.6	3.7
Business sector	2 706	7.7	3.9	0.0	1.8	2.6	2.8	3.4
General government	720	–0.1	–0.5	1.4	–0.7	1.5	1.8	2.4
GDP at basic prices[1]	**3 474**	**6.0**	**3.0**	**0.3**	**1.3**	**2.4**	**2.6**	**3.1**
Taxes/subsidies on products	451	4.1	0.6	–1.3	1.4	2.5	2.7	2.1
GDP at market prices	3 924	5.7	2.7	0.1	1.3	2.4	2.6	3.0

[1] Including production in non-profit institutions serving households.

Note. Production refers here to value added.

Sources: Statistics Sweden and NIER.

Table A10 Hours worked

Million hours and percentage change, respectively, calendar-adjusted values

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Goods producers	1 895	0.9	2.4	–0.7	–1.9	0.4	1.2	0.6
Of which: Industry	1 013	1.2	1.5	–3.1	–3.0	–1.3	0.2	0.0
Construction	555	0.7	2.6	2.8	1.0	1.2	3.0	1.6
Services producers	3 537	4.0	2.7	0.8	1.3	2.3	1.4	1.9
Of which: Trade	1 015	2.2	2.1	–0.6	2.2	2.8	1.6	1.8
Business services	747	6.0	3.7	0.7	–0.4	1.1	1.9	2.1
Business sector	5 433	2.9	2.6	0.3	0.1	1.6	1.3	1.4
General government	2 072	–0.2	0.4	1.6	1.0	2.2	1.6	2.3
Total economy[1]	**7 670**	**2.0**	**2.0**	**0.7**	**0.3**	**1.8**	**1.4**	**1.6**

[1] Including production in non-profit institutions serving households.

Sources: Statistics Sweden and NIER.

Table A11 Productivity

SEK per hour, basic prices, and percentage change, constant prices, respectively, calendar-adjusted values

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Goods producers	497	13.3	–0.1	–3.0	1.4	1.6	0.0	2.7
Of which: Industry	569	21.1	2.6	–3.5	2.5	0.5	–0.1	3.7
Construction	376	2.5	–4.7	–7.9	–1.6	10.5	2.7	1.8
Services producers	499	–0.2	2.1	1.4	1.9	0.7	2.2	1.5
Of which: Trade	380	3.5	0.9	2.8	1.0	1.6	3.0	2.3
Business services	441	2.1	1.9	0.9	3.6	2.5	1.6	1.5
Business sector	498	4.7	1.2	–0.3	1.7	1.0	1.5	1.9
General government	347	0.1	–0.9	–0.2	–1.7	–0.7	0.2	0.1
Total economy[1]	**453**	**3.9**	**0.9**	**–0.4**	**0.9**	**0.6**	**1.2**	**1.5**

[1] Including non-profit institutions serving households.

Sources: Statistics Sweden and NIER.

Table A12 The labour market

Thousands of people and percentage change, respectively, unless otherwise indicated

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Hours worked[1]	7 670	2.0	2.0	0.7	0.3	1.8	1.4	1.6
Average hours worked for employed[2]	30.9	1.4	–0.3	0.0	–0.7	0.3	0.1	0.2
Number of employed	4 772	0.6	2.3	0.7	1.0	1.4	1.2	1.4
Employment rate[3]		64.4	65.4	65.5	65.7	66.2	66.5	66.7
Labour force	5 183	0.8	1.4	0.9	1.1	1.3	1.0	1.1
Labour force participation rate[4]		70.5	70.9	71.1	71.5	71.9	72.1	72.1
Unemployment[5]	411	8.6	7.8	8.0	8.0	7.9	7.7	7.5
Population aged 15–74	7 206	0.9	0.7	0.6	0.6	0.7	0.8	1.1

[1] Billion hours, calendar-adjusted. [2] Hours per week, calendar-adjusted. [3] Number of employed in per cent of the population aged 15–74. [4] Number of people in the labour force in per cent of the population aged 15–74. [5] Per cent of labour force.

Sources: Statistics Sweden, Swedish Public Employment Service and NIER.

Table A13 Hourly earnings according to the short-term earnings statistics

Per cent and percentage change, respectively

	Weight 2014	2010	2011	2012	2013	2014	2015	2016
Business sector	68.4	2.5	2.5	3.2	2.3	2.9	2.5	3.0
Industry	16.8	2.8	2.5	3.9	2.0	2.6	2.7	3.0
Construction	6.3	1.9	3.1	2.6	3.0	3.2	2.2	3.0
Services	45.3	2.4	2.4	3.0	2.3	3.0	2.4	3.0
Local government	25.1	2.7	2.3	2.7	2.9	2.8	2.7	3.2
Central government	6.4	3.1	1.9	2.1	2.6	2.3	2.3	2.8
Total	**100.0**	**2.6**	**2.4**	**3.0**	**2.5**	**2.9**	**2.5**	**3.0**
Real hourly earnings (CPI)[1]		1.4	–0.5	2.1	2.5	3.0	2.5	1.8
Real hourly earnings (CPIF)[2]		0.6	1.0	2.0	1.6	2.4	1.6	1.3

[1] Deflated by the CPI. [2] Deflated by the CPI with constant mortgage rates (CPIF).

Sources: National Mediation Office, Statistics Sweden and NIER.

Table A14 Hourly earnings and labour costs in the business sector according to the national accounts

Per cent and percentage change, respectively, calendar-adjusted values

	2009	2010	2011	2012	2013	2014	2015	2016
Hourly earnings	202	0.4	3.3	3.1	1.5	1.8	2.6	3.0
Employers' social contributions[1] (per cent of earnings)		40.5	40.6	41.0	41.5	41.6	42.0	42.8
Hourly labour costs[2]	283	0.4	3.3	3.4	1.8	1.9	2.9	3.5
Productivity[3]		4.5	0.7	–0.6	1.3	0.9	1.3	1.9
Unit labour costs		–3.9	2.6	4.0	0.5	1.1	1.6	1.6

[1] Employers' social contributions and payroll taxes. [2] Earnings and employers' social contributions. [3] Employees.

Sources: Statistics Sweden and NIER.

Table A15 Supply and use prices

Per cent and percentage change, respectively

	Weight 2014	2010	2011	2012	2013	2014	2015	2016
GDP	71.0	1.0	1.2	1.1	1.2	1.4	1.7	1.6
General government[1,2]	13.9	1.7	3.6	3.2	3.8	2.6	1.7	2.6
Business sector[2]	49.0	0.6	0.5	0.5	0.5	1.3	1.6	1.3
Taxes, net	8.2	1.8	1.4	0.9	0.5	0.2	2.1	2.4
Imports	29.0	–0.1	–0.2	–1.1	–2.9	1.8	2.1	0.9
Processed goods	14.2	–4.4	–3.7	–2.8	–4.1	2.3	4.2	–0.1
Raw materials	5.8	14.5	9.2	0.2	–3.6	–1.6	–6.3	4.0
Services	8.9	–1.4	0.0	0.9	–0.4	3.4	4.4	0.7
Supply/use[3]	**100.0**	**0.7**	**0.8**	**0.4**	**0.0**	**1.5**	**1.8**	**1.4**
General government consumption expenditure	18.7	1.7	3.0	2.6	2.8	2.2	2.1	2.6
Household consumption expenditure	33.0	1.5	1.7	0.5	0.8	0.8	0.9	1.4
Gross fixed capital formation	16.5	0.7	0.3	0.8	0.4	1.7	1.6	1.1
Exports	31.7	–0.7	–1.0	–1.0	–2.6	1.7	2.7	0.9
Processed goods	17.3	–4.7	–3.2	–1.2	–3.3	2.7	4.3	0.6
Raw materials	5.0	16.0	5.2	–3.1	–3.8	–0.4	–2.8	2.8
Services	9.4	0.3	0.5	0.9	–0.5	1.2	2.8	0.5

[1] Including production in non-profit institutions serving households. [2] Value added price calculated at basic prices. [3] Including stockbuilding.

Sources: Statistics Sweden and NIER.

Table A16 Business sector prices, costs and profits

SEK billion, percentage change and per cent, respectively

	Level 2014	2010	2011	2012	2013	2014	2015	2016
Value added, constant prices[1]		8.0	3.9	–0.4	1.8	2.5	3.0	3.6
Value-added deflator		0.6	0.5	0.5	0.5	1.3	1.6	1.3
Value added, current prices[2]	2 704	8.6	4.5	0.1	2.3	3.8	4.7	4.9
Hours worked, employees		3.7	3.2	–0.3	0.5	1.4	2.1	2.0
Hourly labour costs[3]	317	–0.2	3.3	4.3	1.9	2.3	2.3	2.9
Total labour costs[4]	1 580	3.5	6.6	4.0	2.3	3.7	4.4	5.0
Gross profit	1 124	15.7	1.9	–4.9	2.2	4.0	5.2	4.7
Profit share		**44.8**	**43.7**	**41.5**	**41.5**	**41.6**	**41.7**	**41.7**
Adjusted profit share[5]		36.9	36.0	33.9	34.0	34.3	34.7	34.7

[1] Calculated at basic prices. [2] Calculated at factor prices. [3] SEK. [4] Including wage-related other taxes on production for employees. [5] Excluding one- and two-family houses and secondary homes, and adjusted for the number of hours worked by the self-employed.

Sources: Statistics Sweden and NIER.

Table A17 Consumer prices

Per cent and percentage change, respectively

	Weight 2014	2010	2011	2012	2013	2014	2015	2016
CPI	**100**	**1.2**	**3.0**	**0.9**	**0.0**	**–0.2**	**0.1**	**1.2**
Mortgage interest costs, interest rate		–15.3	36.6	–0.5	–14.7	–11.5	–19.9	–10.0
CPIF	**100**	**2.0**	**1.4**	**1.0**	**0.9**	**0.5**	**0.9**	**1.7**
Goods	41	0.7	–0.1	–0.3	0.2	–0.1	1.0	0.8
Services	29	2.1	1.3	1.7	0.8	0.5	1.0	1.5
Housing excl. mortgage interest costs	16	1.0	2.3	2.6	2.0	1.7	1.6	2.4
Energy	9	6.5	5.2	0.2	–1.8	–2.5	–3.1	2.7
Mortgage interest costs, capital stock	6	5.8	6.5	5.9	5.2	5.0	5.5	6.0
CPIF excl. energy	**91**	**1.5**	**1.0**	**1.0**	**1.1**	**0.7**	**1.3**	**1.6**
HICP		1.9	1.4	0.9	0.4	0.2	0.8	1.5
Crude oil (Brent)[1]		80.2	110.9	111.8	108.8	99.6	62.8	68.4

[1] Dollars per barrel, annual average.

Note. The CPI's mortgage interest cost component is the product of interest rate and capital stock.

Sources: Intercontinental Exchange, Statistics Sweden and NIER.

Macroeconomic scenario and economic policy 2015–2019

Table A18 Scenario for the global economy

Percentage change and per cent, respectively

	2012	2013	2014	2015	2016	2017	2018	2019
GDP, OECD	1.3	1.4	1.8	2.1	2.6	1.9	2.0	1.9
GDP, emerging markets	5.3	5.1	4.9	4.5	5.0	5.0	5.0	5.0
GDP, global	3.4	3.4	3.5	3.4	3.9	4.0	3.9	3.9
Output gap, euro area	–2.1	–3.1	–3.0	–2.4	–1.6	–0.9	–0.3	0.0
Output gap, US	–2.9	–2.5	–2.0	–1.7	–1.0	–0.5	0.0	0.0
CPI, euro area	2.5	1.4	0.4	0.1	1.3	1.6	1.8	1.9
CPI, US	2.1	1.5	1.6	0.2	1.8	2.1	2.2	2.3
Policy rate, euro area[1]	0.75	0.25	0.05	0.05	0.05	0.30	0.50	1.25
Policy rate, US[1]	0.25	0.25	0.25	0.75	1.50	2.25	2.75	3.25

[1] At year-end.

Note. Aggregates calculated using the IMF's purchasing power parity GDP weights.

Sources: IMF, OECD and NIER.

Table A19 Resource utilisation

Percentage change, calendar-adjusted values, unless otherwise indicated

	2012	2013	2014	2015	2016	2017	2018	2019
Labour market								
Equilibrium unemployment[1]	6.8	6.8	6.9	6.9	6.9	6.9	6.9	6.9
Actual unemployment[2]	8.0	8.0	7.9	7.7	7.5	6.9	6.6	6.8
Potential hours worked	0.8	0.9	1.2	1.3	1.1	0.9	0.7	0.6
Of which: Potential employment	1.0	1.1	1.2	1.2	1.0	0.8	0.7	0.7
Actual hours worked	0.7	0.3	1.8	1.4	1.6	1.7	1.1	0.4
Labour market gap[3]	–1.4	–1.9	–1.3	–1.3	–0.8	0.0	0.4	0.1
Productivity								
Potential productivity	0.5	0.5	0.6	0.9	1.0	1.1	1.2	1.3
Of which: Potential productivity, business sector	1.0	1.1	1.1	1.1	1.4	1.5	1.6	1.7
Actual productivity	–0.6	0.9	0.6	1.2	1.4	1.1	1.0	1.2
Productivity gap[4]	–0.8	–0.4	–0.4	–0.1	0.3	0.3	0.1	0.0
GDP								
Potential GDP	1.3	1.4	1.8	2.2	2.1	2.0	1.9	1.9
Actual GDP	0.1	1.3	2.4	2.6	3.0	2.8	2.1	1.6
Output gap[5]	–2.1	–2.3	–1.8	–1.4	–0.5	0.2	0.5	0.1

[1] Level, per cent of potential labour force. [2] Level, per cent of labour force. [3] Difference between actual and potential hours worked in per cent of potential hours worked. [4] Difference between actual and potential productivity in per cent of potential productivity. [5] Difference between actual and potential GDP in per cent of potential GDP.

Sources: Statistics Sweden and NIER.

Table A20 Scenario for the Swedish Economy

Percentage change unless otherwise indicated

	2012	2013	2014	2015	2016	2017	2018	2019
GDP[1]	0.1	1.3	2.4	2.6	3.0	2.8	2.1	1.6
Output gap[2]	–2.1	–2.3	–1.8	–1.4	–0.5	0.2	0.5	0.1
Hours worked[1]	0.7	0.3	1.8	1.4	1.6	1.7	1.1	0.4
Productivity	–0.4	0.9	0.6	1.2	1.5	1.1	1.0	1.2
Labour force	0.9	1.1	1.3	1.0	1.1	1.0	0.7	0.7
Employment	0.7	1.0	1.4	1.2	1.4	1.6	1.1	0.4
Unemployment[3]	8.0	8.0	7.9	7.7	7.5	6.9	6.6	6.8
Hourly earnings[4]	3.0	2.5	2.9	2.5	3.0	3.1	3.2	3.3
Unit labour cost	3.7	1.4	1.4	1.9	2.0	2.0	2.2	2.1
CPI	0.9	0.0	–0.2	0.1	1.2	2.3	3.2	3.0
CPIF	1.0	0.9	0.5	0.9	1.7	1.8	2.2	2.3
Repo rate[5]	1.00	0.75	0.00	–0.40	–0.25	0.75	1.25	1.75
Interest rate, ten-year government bond[6]	1.6	2.1	1.7	0.8	1.6	2.4	3.1	3.8
Effective krona exchange rate index (KIX)[6, 7]	106.1	103.0	106.8	113.0	111.7	108.9	106.0	103.2
Government net lending[8]	–0.9	–1.4	–1.9	–1.6	–0.8	–0.3	0.0	0.3
Structural net lending[2]	0.1	–0.8	–1.3	–0.9	–0.4	–0.3	–0.2	0.3

[1] Calendar-adjusted values. [2] Per cent of potential GDP. [3] Per cent of labour force. [4] According to the short-term earnings statistics. [5] At year-end. [6] Annual average. [7] Index 18 November 1992=100. [8] Per cent of GDP.

Sources: National Mediation Office, the Riksbank, Statistics Sweden and NIER.

Table A21 GDP and demand

Percentage change, constant prices, calendar-adjusted values

	2012	2013	2014	2015	2016	2017	2018	2019
Household consumption expenditure	0.9	1.9	2.5	2.6	2.8	2.5	2.2	1.8
General government consumption expenditure	1.6	0.7	2.1	1.9	2.4	2.1	2.0	1.6
Gross fixed capital formation	0.3	–0.4	7.6	4.3	4.8	4.8	3.1	1.5
Domestic demand excl. stockbuilding	*1.0*	*1.0*	*3.6*	*2.8*	*3.2*	*3.0*	*2.4*	*1.7*
Stockbuilding[1]	–1.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0
Total domestic demand	*–0.2*	*1.1*	*3.7*	*2.8*	*3.1*	*3.0*	*2.3*	*1.7*
Exports	1.6	–0.2	3.5	3.5	4.6	4.7	3.9	3.7
Total demand	*0.4*	*0.7*	*3.6*	*3.0*	*3.6*	*3.5*	*2.9*	*2.3*
Imports	1.1	–0.7	6.8	4.1	5.0	5.2	4.6	3.9
Net exports[1]	*0.3*	*0.2*	*–1.1*	*–0.1*	*0.0*	*0.0*	*–0.2*	*0.0*
GDP	**0.1**	**1.3**	**2.4**	**2.6**	**3.0**	**2.8**	**2.1**	**1.6**

[1] Change in per cent of GDP the previous year.

Sources: Statistics Sweden and NIER.

Table A22 Interest and exchange rates

Per cent, index 18 November 1992=100 and SEK per currency unit, respectively

	2012	2013	2014	2015	2016	2017	2018	2019
At year-end								
Repo rate	1.00	0.75	0.00	–0.40	–0.25	0.75	1.25	1.75
Annual average								
Repo rate	1.5	1.0	0.5	–0.3	–0.4	0.2	1.0	1.5
Five-year government bond rate	1.1	1.6	0.9	0.3	1.0	1.7	2.4	3.1
Ten-year government bond rate	1.6	2.1	1.7	0.8	1.6	2.4	3.1	3.8
Effective krona exchange rate index (KIX)	106.1	103.0	106.8	113.0	111.7	108.9	106.0	103.2
EUR exchange rate	8.7	8.7	9.1	9.3	9.2	9.0	8.8	8.6
USD exchange rate	6.8	6.5	6.9	8.4	8.3	8.0	7.7	7.4

Sources: The Riksbank and NIER.

Public finances 2015–2019

Table A23 General government finances

SEK billion and percentage of GDP, respectively, current prices

	2012	2013	2014	2015	2016	2017	2018	2019
Revenue	**1 810**	**1 861**	**1 896**	**1 974**	**2 102**	**2 231**	**2 357**	**2 480**
Per cent of GDP	*49.1*	*49.3*	*48.4*	*48.2*	*48.9*	*49.7*	*50.3*	*50.9*
Taxes and duties	1 563	1 613	1 664	1 742	1 866	1 979	2 088	2 193
Per cent of GDP	*42.4*	*42.7*	*42.5*	*42.5*	*43.4*	*44.0*	*44.5*	*45.0*
Property income	71	72	62	56	58	66	75	84
Other revenue	176	176	170	176	178	186	194	203
Expenditure	**1 844**	**1 912**	**1 971**	**2 038**	**2 138**	**2 244**	**2 355**	**2 464**
Per cent of GDP	*50.0*	*50.7*	*50.4*	*49.8*	*49.8*	*49.9*	*50.2*	*50.6*
Transfers	684	717	729	753	780	818	857	893
Households	557	582	588	607	640	667	693	724
Corporations	67	68	73	77	82	85	89	93
Abroad	60	67	68	69	58	66	74	77
Consumption expenditure	955	988	1 029	1 074	1 132	1 186	1 244	1 301
Capital formation etc.	165	169	177	180	193	202	211	220
Property expenditure	40	37	36	31	33	38	43	49
Net lending	**–34**	**–52**	**–75**	**–64**	**–36**	**–13**	**2**	**17**
Per cent of GDP	*–0.9*	*–1.4*	*–1.9*	*–1.6*	*–0.8*	*–0.3*	*0.0*	*0.3*
Primary net lending	**–65.3**	**–86.6**	**–100.7**	**–88.8**	**–61.3**	**–40.5**	**–29.3**	**–18.7**
Per cent of GDP	*–1.8*	*–2.3*	*–2.6*	*–2.2*	*–1.4*	*–0.9*	*–0.6*	*–0.4*
Maastricht debt	**1 347**	**1 462**	**1 715**	**1 841**	**1 879**	**1 918**	**1 946**	**1 961**
Per cent of GDP	*36.6*	*38.7*	*43.8*	*45.0*	*43.7*	*42.7*	*41.5*	*40.3*
GDP, current prices	3 685	3 775	3 915	4 094	4 296	4 494	4 687	4 871
Potential GDP, current prices	3 766	3 864	3 984	4 153	4 319	4 483	4 666	4 863
Net financial wealth	660	703	743	873	962	1 066	1 190	1 334
Per cent of GDP	*17.9*	*18.6*	*19.0*	*21.3*	*22.4*	*23.7*	*25.4*	*27.4*

Sources: Statistics Sweden and NIER.

Table A24 Central government finances

SEK billion and percentage of GDP, respectively, current prices

	2012	2013	2014	2015	2016	2017	2018	2019
Revenue	**927**	**954**	**968**	**996**	**1 075**	**1 151**	**1 222**	**1 290**
Taxes and duties	784	807	832	863	939	1 007	1 069	1 127
Property income	32	35	24	19	20	23	27	31
Other revenue	111	112	113	114	116	121	126	131
Expenditure	**968**	**998**	**1 026**	**1 051**	**1 096**	**1 148**	**1 206**	**1 258**
Transfers	590	612	633	656	681	715	752	784
Old-age pension system[1]	21	20	22	22	24	25	26	28
Local government sector	182	192	204	214	230	243	258	269
Households	285	291	296	306	319	329	341	355
Corporations	44	44	47	49	53	54	57	60
Abroad	57	64	65	65	55	62	70	73
Consumption expenditure	256	265	273	279	291	302	315	328
Capital formation etc.	91	92	92	90	98	101	106	110
Property expenditure	30	29	28	24	26	30	33	36
Net lending	**–41**	**–43**	**–58**	**–55**	**–20**	**3**	**17**	**32**
Per cent of GDP	*–1.1*	*–1.1*	*–1.5*	*–1.3*	*–0.5*	*0.1*	*0.4*	*0.7*
Net financial wealth	–310	–368	–440	–397	–343	–276	–194	–94
Per cent of GDP	*–8.4*	*–9.8*	*–11.2*	*–9.7*	*–8.0*	*–6.1*	*–4.1*	*–1.9*

[1] Central government's old-age pension contributions.

Sources: Statistics Sweden, National Debt Office and NIER.

Table A25 Old-age pension system finances

SEK billion and percentage of GDP, respectively, current prices

	2012	2013	2014	2015	2016	2017	2018	2019
Revenue	**252**	**255**	**266**	**276**	**290**	**305**	**319**	**333**
Social insurance contributions	203	208	214	225	235	246	257	266
Central government's old-age pension contributions	21	20	22	22	24	25	26	28
Property income	27	25	28	28	29	32	35	38
Other revenue	1	1	1	1	1	1	1	1
Expenditure	**242**	**260**	**262**	**272**	**290**	**308**	**323**	**338**
Income pensions	236	254	255	265	283	301	315	330
Property expenditure	2	1	2	2	2	2	2	2
Other expenses	4	5	5	5	5	6	6	6
Net lending	**10**	**–5**	**4**	**4**	**–1**	**–3**	**–4**	**–5**
Per cent of GDP	*0.3*	*–0.1*	*0.1*	*0.1*	*0.0*	*–0.1*	*–0.1*	*–0.1*
Net financial wealth	968	1 069	1 198	1 297	1 344	1 390	1 436	1 483
Per cent of GDP	*26.3*	*28.3*	*30.6*	*31.7*	*31.3*	*30.9*	*30.6*	*30.5*

Sources: Statistics Sweden and NIER.

Table A26 Local government finances

SEK billion and percentage of GDP, respectively, current prices

	2012	2013	2014	2015	2016	2017	2018	2019
Revenue	**846**	**875**	**901**	**951**	**1 004**	**1 057**	**1 114**	**1 169**
Taxes	561	582	602	638	676	709	744	781
Municipal property tax	15	16	16	16	16	17	18	18
Central government grants incl. VAT compensation	180	190	203	213	229	243	257	268
Property income	14	14	13	12	12	14	17	20
Other revenue	76	74	67	72	71	74	78	82
Expenditure	**850**	**879**	**922**	**964**	**1 019**	**1 069**	**1 125**	**1 180**
Transfers	70	72	75	76	78	80	82	85
Households	38	39	39	39	40	40	41	42
Other	32	33	35	37	38	40	41	43
Consumption expenditure	696	721	753	791	838	880	925	969
Capital formation etc.	74	77	85	89	95	100	105	110
Property expenditure	10	9	9	8	8	10	13	16
Net lending	**–4**	**–3**	**–20**	**–13**	**–15**	**–12**	**–11**	**–11**
Per cent of GDP	*–0.1*	*–0.1*	*–0.5*	*–0.3*	*–0.3*	*–0.3*	*–0.2*	*–0.2*
Net financial wealth	1	2	–15	–27	–39	–47	–52	–55
Per cent of GDP	*0.0*	*0.0*	*–0.4*	*–0.6*	*–0.9*	*–1.0*	*–1.1*	*–1.1*

Sources: Statistics Sweden and NIER.

Table A27 General government revenue

Per cent of GDP

	2012	2013	2014	2015	2016	2017	2018	2019
Direct household taxes	14.9	15.1	15.1	15.2	15.8	16.3	16.8	17.3
Direct business taxes	2.6	2.7	2.6	2.4	2.4	2.4	2.4	2.4
Employers' social contributions[1]	11.9	11.9	11.9	12.0	12.3	12.4	12.4	12.4
VAT	8.9	8.9	9.0	9.1	9.0	9.0	9.0	9.0
Excise	2.5	2.4	2.3	2.3	2.3	2.3	2.3	2.3
Other taxes	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Tax-to-GDP ratio	**42.6**	**42.9**	**42.7**	**42.7**	**43.6**	**44.2**	**44.7**	**45.2**
EU taxes	–0.1	–0.1	–0.1	–0.1	–0.2	–0.2	–0.2	–0.2
Property income	1.9	1.9	1.6	1.4	1.4	1.5	1.6	1.7
Other revenue[3]	4.8	4.7	4.4	4.3	4.1	4.1	4.1	4.2
Total revenue	**49.1**	**49.3**	**48.4**	**48.2**	**48.9**	**49.7**	**50.3**	**50.9**

[1] Employers' social contributions, contributions from the self-employed and special payroll tax. [2] Taxes paid to the EU are included in the tax-to-GDP ratio but not in general government revenue. [3] Including transfers from abroad and from unemployment insurance funds.

Sources: Statistics Sweden and NIER.

Table A28 General government expenditure

Per cent of GDP

	2012	2013	2014	2015	2016	2017	2018	2019
Transfers	18.6	19.0	18.6	18.4	18.2	18.2	18.3	18.3
Households	15.1	15.4	15.0	14.8	14.9	14.8	14.8	14.9
Corporations	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9
Abroad	1.6	1.8	1.7	1.7	1.4	1.5	1.6	1.6
General government consumption expenditure	25.9	26.2	26.3	26.2	26.4	26.4	26.5	26.7
Gross fixed capital formation	4.5	4.5	4.5	4.4	4.5	4.5	4.5	4.5
Property expenditure	1.1	1.0	0.9	0.8	0.8	0.9	0.9	1.0
Total expenditure	**50.0**	**50.7**	**50.4**	**49.8**	**49.8**	**49.9**	**50.2**	**50.6**

Sources: Statistics Sweden and NIER.

Table A29 Transfers from general government to households

Per cent of GDP

	2012	2013	2014	2015	2016	2017	2018	2019
Pensions[1]	8.1	8.4	8.1	7.9	8.0	8.0	8.0	8.0
Labour market[2]	0.9	0.9	0.8	0.9	0.9	0.8	0.8	0.8
Illness and disability[3]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Family and children[4]	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8
Education[5]	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
Social assistance[6]	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Other[7]	1.6	1.6	1.7	1.6	1.7	1.7	1.7	1.7
Transfers to households	**15.1**	**15.4**	**15.0**	**14.8**	**14.9**	**14.8**	**14.8**	**14.9**

[1] Income pension, supplementary pension, guaranteed pension, survivor's pension, general government occupational pensions and housing supplement for pensioners. [2] Unemployment benefits, labour market programme benefits and salary guarantee. [3] Sickness and rehabilitation benefit, activity and sickness compensation, work injury compensation and disability allowance. [4] Parental benefit, child allowance, care allowance and housing allowance. [5] Student grants and study allowance. [6] Welfare benefits. [7] Assistance compensation, financial support for asylum seekers, income support for the elderly and other transfers to households.

Sources: Statistics Sweden and NIER.

Table A30 Income index, balance index, income pensions and balance ratio

Percentage change, unless otherwise indicated

	2012	2013	2014	2015	2016	2017	2018	2019
Income index[1]	4.9	3.7	0.5	2.1	2.1	3.6	4.3	4.1
Balance index[1]	5.2	5.7	–1.1	2.5	5.9	5.4	4.3	4.1
Balancing effect[2]	0.3	2.1	–1.6	0.4	3.8	1.8	0.0	0.0
Balance ratio[3]		1.020	0.984	1.004	1.038	1.034	1.033	1.030
Nominal income pension[4]	**3.5**	**4.1**	**–2.7**	**0.9**	**4.2**	**3.8**	**2.6**	**2.5**

[1] The NIER's model-based estimates for 2016–2019 . [2] Balance index minus income index. [3] The balance ratio expresses the pension system's assets in relation to its liabilities two years before the current year. [4] Balance index minus 1,6.

Sources: Swedish Pensions Agency and NIER.

Table A31 Central government budget balance and debt

SEK billion and percentage of GDP, respectively

	2012	2013	2014	2015	2016
Budget balance	**–24.9**	**–130.9**	**–72.2**	**–55.3**	**–21.0**
Adjustments to net lending	–1.2	56.5	–1.6	20.0	9.1
Sales of shares etc.	0.0	–20.6	–0.3	0.0	0.0
Extra dividends	–8.4	–4.5	–2.1	–5.3	–2.2
On-lending	1.7	94.4	28.4	13.6	16.0
Other adjustments	5.5	–12.8	–27.6	11.7	–4.7
Accruals	–12.7	30.4	12.4	–18.9	–7.8
Taxes	–17.0	20.8	17.7	–13.9	–3.8
Interest	4.3	9.6	–5.4	–5.0	–4.0
Other	–1.9	0.7	3.4	–0.6	–0.6
Central government net lending	**–40.7**	**–43.2**	**–58.0**	**–54.7**	**–20.3**
Central government borrowing requirement[1]	24.9	130.9	72.2	55.3	21.0
Stock-flow adjustments, central government debt	12.6	–7.9	38.8	49.0	–7.2
Central government debt, change	37.5	123.0	111.0	104.3	13.8
Central government debt	**1 113**	**1 236**	**1 347**	**1 451**	**1 465**
Per cent of GDP	*30.2*	*32.7*	*34.4*	*35.5*	*34.1*

[1] The central government borrowing requirement is equal to the budget balance with the sign reversed.

Sources: Statistics Sweden, Swedish National Financial Management Authority, Swedish National Debt Office and NIER.

Tabell A32 Expenditure ceiling

SEK billion unless otherwise indicated

	2012	2013	2014	2015	2016	2017	2018	2019
Expenditure ceiling	**1 084**	**1 095**	**1 107**	**1 158**	**1 204**	**1 262**	**1 319**	**1 378**
Per cent of potential GDP	*28.8*	*28.3*	*27.8*	*27.9*	*27.9*	*28.2*	*28.3*	*28.3*
Capped expenditure	1 022	1 067	1 096	1 127	1 181	1 239	1 299	1 355
Per cent of potential GDP	*27.1*	*27.6*	*27.5*	*27.1*	*27.3*	*27.6*	*27.8*	*27.9*
Budgeting margin	**62**	**28**	**11**	**31**	**23**	**23**	**20**	**23**
Per cent of capped expenditure	*6.0*	*2.6*	*1.0*	*2.7*	*2.0*	*1.8*	*1.5*	*1.7*

Sources: Swedish National Financial Management Authority, Ministry of Finance and NIER.

Table A33 General government net lending with different fiscal policy forecasts

Per cent of GDP and percentage of potential GDP, respectively

	2015	2016	2017	2018	2019
Net lending	–1.6	–0.8	–0.3	0.0	0.3
Net lending excl. additional policy measures	–1.6	–0.8	–0.1	0.3	0.7
Structural net lending	–0.9	–0.4	–0.3	–0.2	0.3
Structural net lending excl. additional policy measures	–0.9	–0.4	–0.3	–0.2	0.3

Source: NIER.

Table A34 Indicators for the surplus target

Per cent of potential GDP and percentage of GDP, respectively

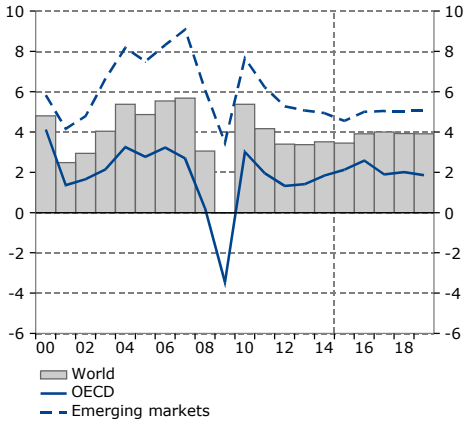
	2012	2013	2014	2015	2016	2017	2018	2019
Structural net lending	0.1	–0.8	–1.3	–0.9	–0.4	–0.3	–0.2	0.3
Seven-year indicator	–0.9	–1.0	–1.0	–1.0	–0.8	–0.5	0.0	0.3
Seven-year indicator, cyclically adjusted	0.1	–0.2	–0.4	–0.6	–0.5	–0.3	0.1	0.4
Ten-year indicator	0.7	0.6	0.4	0.1	–0.2	–0.6	–0.8	–0.7
Ten-year indicator, cyclically adjusted	1.1	1.1	0.9	0.6	0.4	0.2	0.0	–0.2

Note. The ten-year indicator is a ten-year backward-looking moving average for general government net lending. The seven-year indicator is a centred seven-year mean for general government net lending. Here, the indicators are calculated both on the basis of actual net lending and on the basis of structural net lending. All calculations are based on the NIER's fiscal policy scenario.

Source: NIER.

Diagram A1 GDP – world, OECD and emerging markets

Percentage change

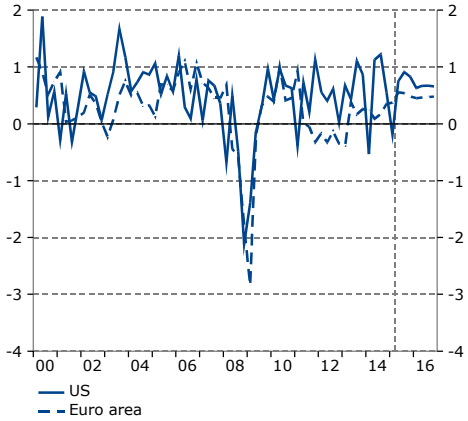


Note. Emerging markets are defined here as countries that are not members of the OECD.

Sources: OECD, IMF and NIER.

Diagram A2 GDP in the US and the euro area

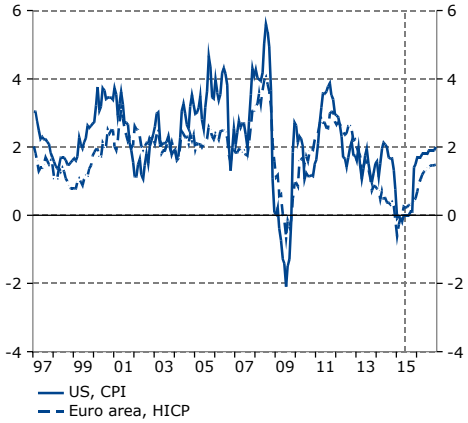
Percentage change, seasonally-adjusted quarterly values



Sources: Bureau of Economic Analysis, Eurostat and NIER.

Diagram A3 Inflation in the US and the euro area

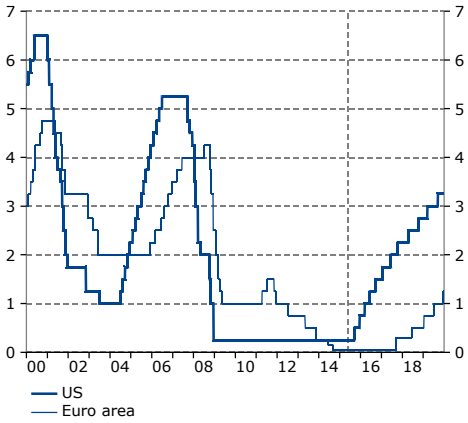
Annual percentage change, monthly values



Sources: Bureau of Labor Statistics, Eurostat and NIER.

Diagram A4 Central bank policy rates

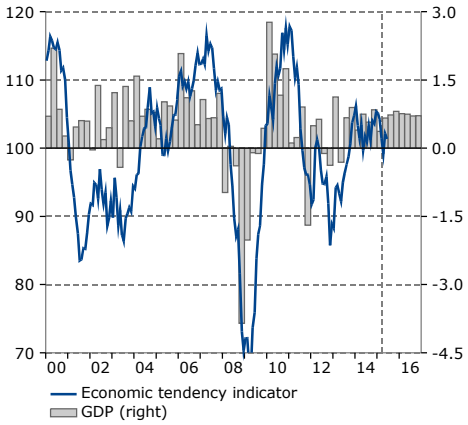
Per cent, daily values



Sources: Federal Reserve, ECB and NIER.

Diagram A5 Economic tendency indicator and GDP

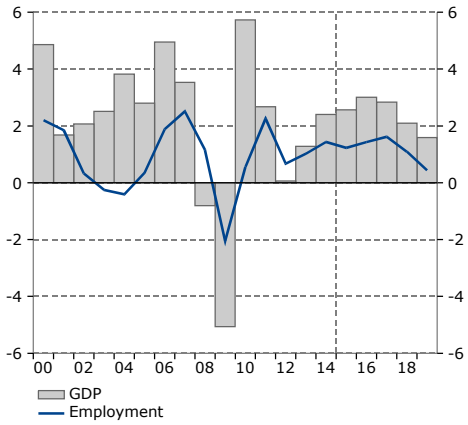
Index mean=100, monthly values, and percentage change, seasonally-adjusted quarterly values, respectively



Sources: Statistics Sweden and NIER.

Diagram A6 GDP and employment

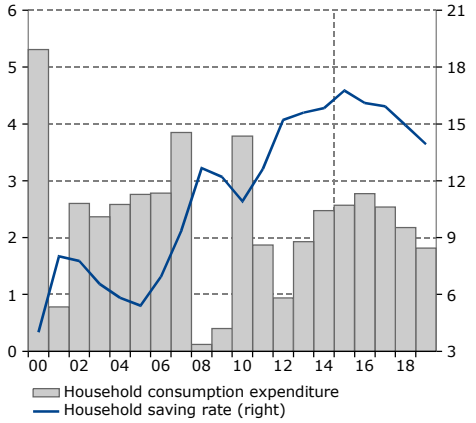
Percentage change, calendar-adjusted values



Sources: Statistics Sweden and NIER.

Diagram A7 Household consumption and saving rate

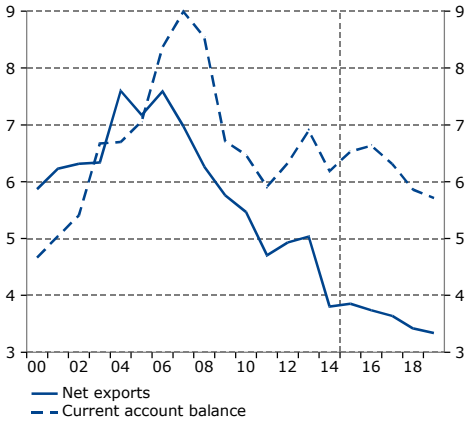
Percentage change, calendar-adjusted values, and percentage of disposable income, resectively



Sources: Statistics Sweden and NIER.

Diagram A8 Net exports and current account balance

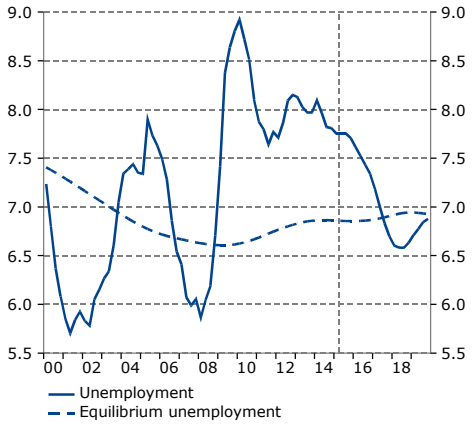
Per cent of GDP, current prices



Sources: Statistics Sweden and NIER.

Diagram A9 Unemployment and equilibrium unemployment

Per cent of labour force, seasonally-adjusted quarterly values



Sources: Statistics Sweden and NIER.

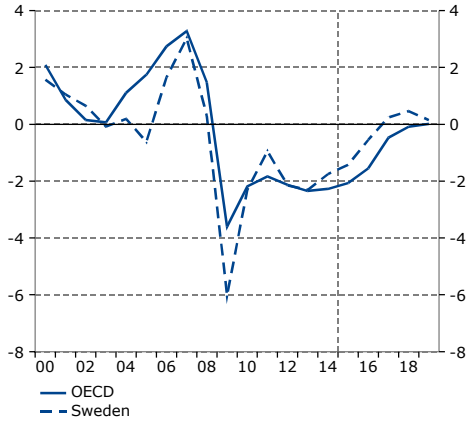
Diagram A10 Consumer prices

Annual percentage change, quarterly values

Sources: Statistics Sweden and NIER.

Diagram A11 Output gap in the OECD and Sweden

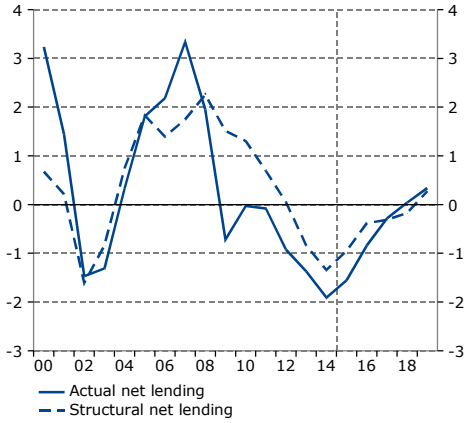
Per cent of potential GDP



Sources: OECD, Statistics Sweden and NIER.

Diagram A12 Actual and structural net lending

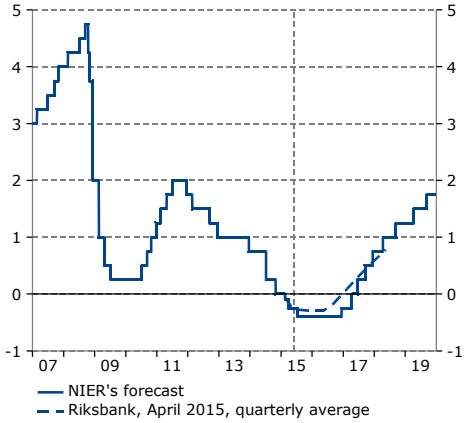
Per cent of GDP and per cent of potential GDP, respectively



Sources: Statistics Sweden and NIER.

Diagram A13 Repo rate

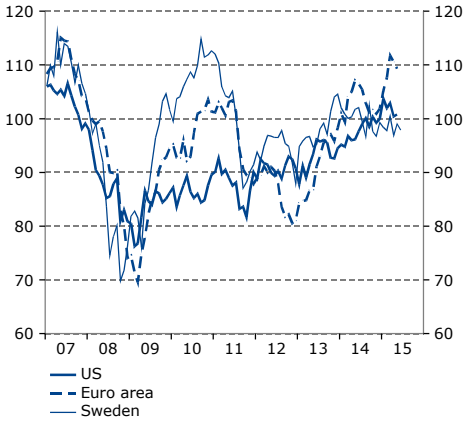
Per cent, daily values



Källor: Riksbanken och Konjunkturinstitutet.

Diagram A14 Consumer confidence in the US, the euro area and Sweden

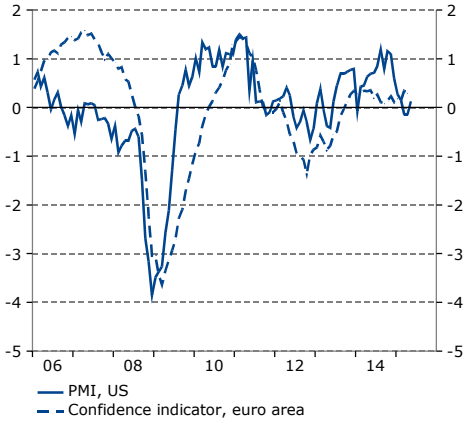
Index mean=100, monthly values



Sources: Conference Board, Eurostat and NIER.

Diagram A15 Confidence indicators for manufacturing

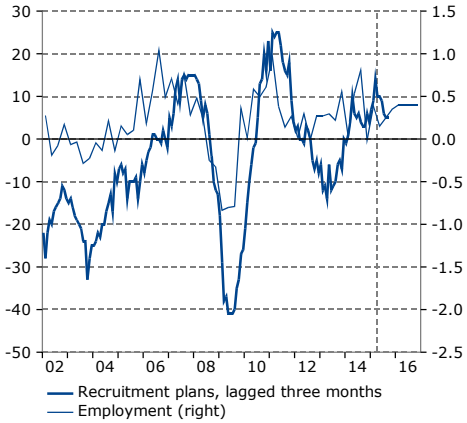
Standardised deviation from mean, seasosnally-adjusted monthly values



Sources: Institute for Supply Management, European Commission and NIER.

Diagram A16 Recruitment plans in the business sector and employment

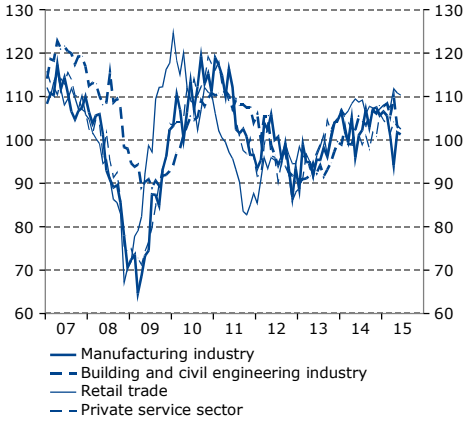
Net balance, seasonally-adjusted monthly values, and percentage change, seasonally-adjusted quarterly values, respectively



Sources: Statistics Sweden and NIER.

Diagram A17 Confidence indicators for the business sector

Index, mean=100, seasonally-adjusted monthly values



Source: NIER.

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