SPECIAL ANALYSIS

Effects of the increase in refugees coming to Sweden

The influx of refugees into Sweden will affect macroeconomic developments and the basis for economic policy. The NIER believes that the refugee influx will increase the economy's supply potential in the longer term. The labour force will grow, leading eventually to an increase in employment despite higher equilibrium unemployment. The refugee influx will also affect demand in the economy. Government expenditure will rise, mainly through increased government consumption. On balance, the NIER expects the demand effects to considerably outweigh the supply effects over the next few years. This will lead to higher resource utilisation, higher inflation and a need for less expansionary monetary policy.

The number of people seeking asylum in Sweden soared in autumn 2015. The influx of refugees will affect macroeconomic developments and the basis for economic policy. In the longer term, a larger population means a larger labour force, which will increase the economy's capacity to produce goods and services. In other words, *supply* in the economy will increase. A larger population also means that *demand* in the economy will increase, through higher public and private consumption and investment in production capacity and housing.

This special analysis presents the revisions made to the NIER's forecast relative to August 2015 as a result of the increase in refugee numbers. The focus is mainly on the next five years; the long-term macroeconomic effects of the refugee influx are beyond the scope of this analysis. The first section looks at the current refugee influx and its effects on the population forecast. We then present the NIER's view of the effects on the supply side of the economy.[79] The third section analyses the effects on public finances, while the final section looks at the effects on macroeconomic developments as a whole.

The NIER's analysis is based on the Migration Agency's October forecast

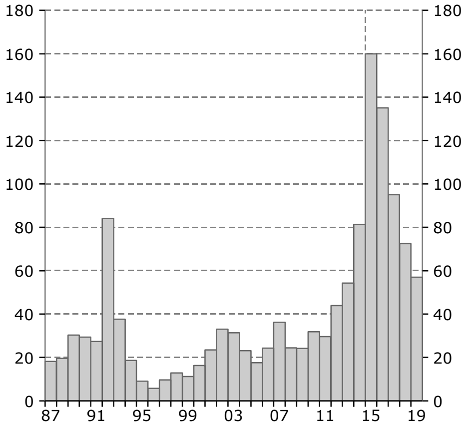
The NIER's forecasts and scenarios are based on Statistics Sweden's November 2015 population forecast. This, in turn, is based partly on the main scenario in the Swedish Migration Agency's October 2015 forecast for asylum seekers and family reunion migrants. However, there have subsequently been a number of events that may affect growth in the population. First, the number of asylum seekers increased more quickly than anticipated. At the end of November, the government announced various measures to drastically reduce the number of asylum seekers coming to Sweden. These include temporary residence permits, limits on family reunion migrants, and requirements for identification documents. The EU has also struck an agreement with Turkey with the aim of reducing the number of refugees coming to Europe. The flow of asylum seekers into Sweden has slowed in December. It is currently difficult to gauge what effects this response from the Swedish government and the EU will have. The NIER has therefore relied on Statistics Sweden's updated population forecast. The forecast is associated with greater uncertainty than usual, and refugee flows may be affected by political decisions both in Sweden and abroad (see also the chapter "Osäkerhet i prognosen" [Uncertainty in the forecast] in the Swedish-language edition of this report).

Record-high numbers of refugees

Recent months have seen a dramatic increase in the number of asylum seekers in Sweden and the rest of Europe. Sweden is one of the EU countries taking the highest numbers of asylum seek-

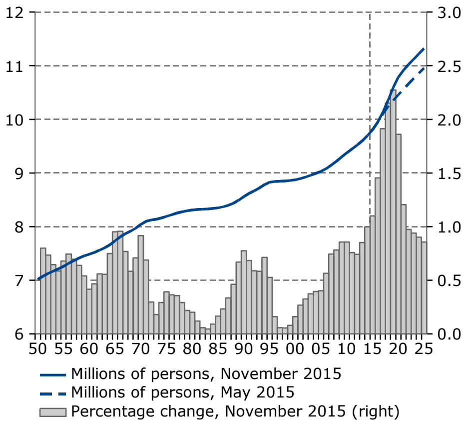
[79] The forecast was also revised in June as a result of higher refugee numbers, see NIER (2015a).

Diagram 151 Asylum seekers
Thousands



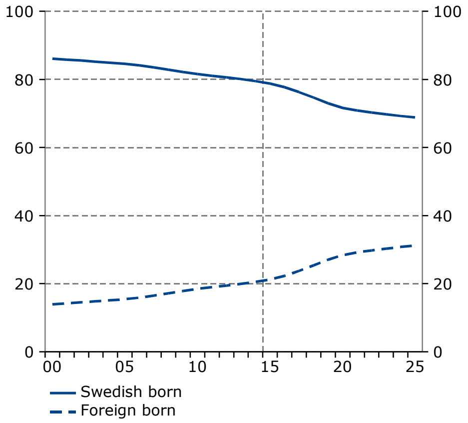
Note. Values for 2015–2019 relate to the Migration Agency's October, 2015, main scenario.
Source: The Swedish Migration Agency.

Diagram 152 Population
Millions of persons and percentage change



Note. Calculated annual mean.
Sources: Statistics Sweden and NIER.

Diagram 153 Foreign born and Swedish born, proportion of population ages 20–64
Per cent



Note. Calculated annual mean.
Sources: Statistics Sweden and NIER.

ers relative to the size of its population.[80] It is estimated that around 160,000 people will seek asylum in Sweden in 2015 (see Diagram 151). That is more than ever before. Around 35,000 of these asylum seekers are unaccompanied minors. Most of the asylum seekers are from Afghanistan, Iraq and Syria.

DELAYED IMPACT ON POPULATION STATISTICS

In October 2015, the Swedish Migration Agency published an updated forecast for incoming asylum seekers and family reunion migrants.[81] Many more people are now expected to seek and be granted asylum in Sweden than in its previous forecast (see Table 21).[82] Statistics Sweden has updated its May 2015 population forecast accordingly. Since the high numbers of asylum seekers have led to an increase in the Migration Agency's processing times to some 15–24 months, it will take time for them to receive residence permits and be registered in the Swedish Population Register (see the special analysis "Från asylsökande till arbetssökande – det svenska flyktingmottagandet" [From seeking asylum to seeking work – the reception of refugees in Sweden] in the Swedish-language edition of this report). The population forecast has therefore been revised up primarily from 2017 onwards (see Table 21). The population will, however, also grow rapidly in both 2015 and 2016 (see Diagram 152).

Table 21 Revisions of the population forecast
Thousands of people

	2015	2016	2017	2018	2019
Asylum seekers[1]	160	135	95	73	57
Revision[2]	70	55	25	13	10
Population[3]	9 803	9 945	10 136	10 354	10 589
Revision[4]	−10	−8	34	117	239
Population aged 15−74[3]	7 263	7 349	7 466	7 597	7 735
Revision[4]	−7	−4	28	93	186
Population aged 20−64[3]	5 648	5 713	5 804	5 907	6 022
Revision[4]	−7	−7	17	68	146

[1] Swedish Migration Agency's main scenario for 2015–2019. [2] Compared with the Swedish Migration Agency's main scenario in February. [3] Statistics Sweden's November forecast. [4] Compared with Statistics Sweden's May forecast.

Note. Figures in the table are estimated annual means.

Sources: Swedish Migration Agency, Statistics Sweden and NIER.

[80] See the box "A first assessment of the macroeconomic impact of the refugee influx" in European Commission (2015).

[81] See Swedish Migration Agency (2015b).

[82] Compared with the Migration Agency's February forecast, used as a basis for Statistics Sweden's May population forecast, see Swedish Migration Agency (2015a).

Based on Statistics Sweden's November 2015 population forecast, the population will increase by just over 1.5 million people, or slightly more than 15 per cent, from 2015 to 2025. This is the fastest population growth since records began in 1750 (see Diagram 152). The increase is due largely to high numbers of refugees, both now and over the next couple of years.

The proportion of elderly people (65 and over) is lower in the foreign-born population than in the Swedish-born population (around 15 and 20 per cent respectively) (see Table 22). This is because a high proportion of those coming to Sweden are of working age, and immigration has increased in recent years. From 2015 to 2025, the foreign-born population aged 20−64 is expected to grow by around 770,000 people, while the number of people of working age who were born in Sweden is expected to fall by around 100,000. This means that the percentage of immigrants in the working-age population will rise from around 21 per cent to around 31 per cent during the period (see Diagram 153).

Table 22 Population 2014

Percentage of Swedish-born, foreign-born and total population

	Swedish-born	Foreign-born	Total
Aged 0−19	25	12	23
Aged 20−64	55	73	58
Aged 65+	20	15	20

Source: Statistics Sweden.

DEMOGRAPHIC DEPENDENCY RATIO TO RISE DESPITE IMMIGRATION

The demographic dependency ratio has been rising since 2007 (see Diagram 154 and definition in the margin) and is expected to climb further through to 2025.[83] This means that those of working age will need to provide for more people. The increase is due to growing shares of both young and elderly in the population (see Diagram 155). The revised population forecast means that the demographic dependency ratio will rise slightly more slowly than in our August 2015 forecast (see Diagram 154).

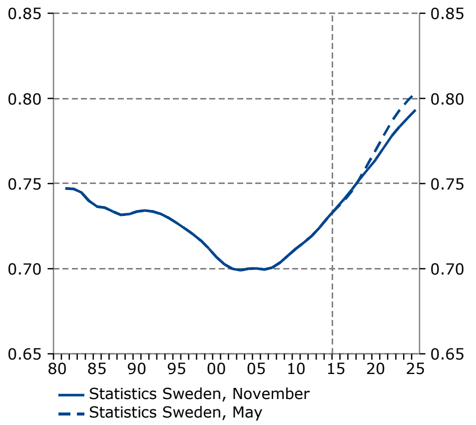
UNUSUALLY UNCERTAIN POPULATION FORECAST

Revisions of the population forecast are nothing unusual. Statistics Sweden also conducted an extensive review of its population

[83] The economic dependency ratio is examined in the following section.

Diagram 155 Demographic dependency ratio

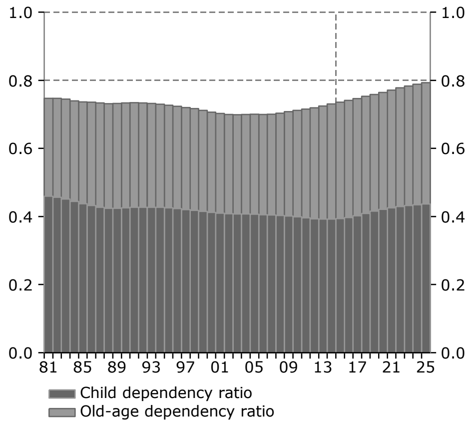
Number of people outside of working age in relation to number of people of working age (age 20–64)



Note. Calculated annual mean.
Sources: Statistics Sweden and NIER.

Diagram 154 Demographic dependency ratio

Number of people outside of working age in relation to number of people of working age (age 20–64)



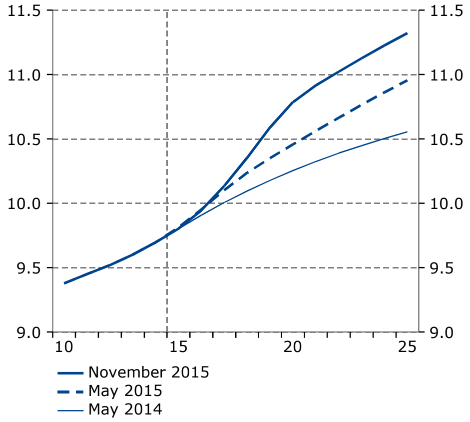
Note. Calculated annual mean.
Sources: Statistics Sweden and NIER.

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 156 Statistics Sweden's recent population forecasts
Millions of persons



Note. Calculated annual mean.
Sources: Statistics Sweden and NIER.

What is equilibrium unemployment?

NIER uses a definition of equilibrium unemployment based on research by Peter A. Diamond, Dale T. Mortensen and Christopher A. Pissarides. According to this literature, equilibrium unemployment does not depend on short-term variations in nominal variables such as wages, prices and inflation expectations. Instead, equilibrium unemployment is determined by so-called structural (real) factors, such as the pace of economic structural change, the efficiency with which job openings are matched with jobseekers, the replacement rates in social insurance systems and the actions of the social partners in local as well as central negotiations. If the structural factors change, equilibrium unemployment will readjust to a new level that is sustainably consistent with the inflation target.

Severe and extended periods of low resource utilisation may affect structural factors and, in turn, equilibrium unemployment. An extended period of absence from the labour market can, for instance, impact negatively on the skills and the degree of search activity of individuals, thereby impairing the matching between vacancies and unemployed once the economy recovers. This, in effect, means that equilibrium unemployment has risen, a phenomenon sometimes referred to as "persistence effects".

forecast in May 2015 (see Diagram 156).[84] This is only natural, especially as refugee flows are hard to predict. The current population forecast is associated with considerable uncertainty. Actual developments will be influenced by political decisions on refugee policy both in Sweden and in other countries (see the chapter "Osäkerhet i prognosen" [Uncertainty in the forecast] in the Swedish-language edition of this report).

Supply effects of the influx of refugees in the labour market

This section looks at the effects of the refugee influx on the supply side of the economy, with the emphasis on the labour force and equilibrium unemployment. The demand side of the economy will also be affected, however, and the combined effects on the labour force and unemployment are presented together with the effects on other macroeconomic variables in the final section of this analysis.

WHAT DOES THE RESEARCH LITERATURE SAY?

Integration into the labour market takes time

The current influx of refugees will affect the Swedish labour market in a number of ways. The effects depend largely on the extent to which the refugees enter the labour market and how quickly they do so. To begin with, equilibrium unemployment is expected to rise, because it takes time for new immigrants to become established in the labour market. On average, the refugee groups coming to Sweden have a lower level of education than the existing population. Many also lack relevant employment experience, contacts and language skills needed to integrate quickly into the labour market. High minimum wages are also likely to be a barrier to many refugees finding work.[85] Even refugees with a higher level of education will often take a long time to find employment.[86] It is possible, however, that a large population coming from the same area will lead to changes in em-

[84] See Statistics Sweden (2015a).

[85] The unemployment gap, or the difference in unemployment between natives and non-natives, is generally smaller in countries with wider wage dispersion, see IMF (2015a).

[86] See Statistics Sweden (2015b).

ployment and recruitment patterns, as social contacts and networks are important factors in recruitment.[87]

Impact of refugees on the existing population

A major influx of refugees can also impact the functioning of the labour market and thereby affect unemployment, employment and wages in the existing population. According to economic theory, the increase in labour supply may lead to lower wages in the short term, because it takes time to build up the productive stock of real capital. There may also be negative labour market effects for groups in the existing population for which the refugees can be a substitute. An increased supply of relatively unskilled labour should, in the first instance, impact relative wages and unemployment among low-skilled labour, such as those with only compulsory education and the existing non-European population. These lower wages may, in turn, reduce labour force participation in these groups.

On the other hand, there may be positive wage and employment effects for groups that complement the refugees, i.e. more-skilled labour. From a theoretical standpoint, however, it is not clear how wages for more-skilled labour will be affected by a greater supply of low-skilled labour, but it is reasonable to assume that the effects will be less than for low-skilled labour.[88] In the longer term, the increased supply of low-skilled labour will affect the industrial structure and production technology in such a way that demand for low-skilled labour increases. There may also be positive effects if the increase in immigration leads to greater specialisation and more-skilled jobs for the existing population.

Empirical studies offer little guidance

It is difficult to confirm and quantify the labour market effects of increased immigration empirically. Many studies point out that the overall effects of immigration on the native population's employment and wages are minor.[89] The effects vary, however, depending on the groups studied. Empirical studies suggest that there may be some negative effects on wages and employment for the poorly educated and the existing foreign-born popula-

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[87] See, for example, Åslund et al. (2014).

[88] See Cahuc and Zylberberg (2004).

[89] See, for example, Pekkala Kerr and Kerr (2011) for an overview.

tion.[90] Studies based on European data generally find smaller wage effects than those based on US data. This may be a result of greater wage rigidity in Europe than in the US, but may also be because it takes longer for immigrants to find employment in Europe.[91] Refugees have larger effects on unemployment in countries with a rigid labour market.[92] The negative economic effects of immigration are greater if unemployment is already high and if there are significant matching problems in the labour market.[93] Some studies suggest there may be positive effects for low-skilled labour in the native population, because these people then look for more-skilled jobs.[94]

In the current situation with extremely high volumes of refugees, it may be misleading to draw conclusions from studies exploring the effects of relatively small volumes of immigrants. Furthermore, most studies do not look specifically at refugees. It is reasonable to assume that refugees will generally be less likely to find work than those who come to Sweden as labour migrants. The wage and employment differences between refugees and labour migrants are often highly persistent.[95] The large volumes of refugees are also resulting in bottlenecks in reception, which may further delay integration into the labour market for many.

LOWER LABOUR FORCE PARTICIPATION

The NIER’s assessment of the effects of the refugee influx on the labour force and equilibrium unemployment takes account of the new arrivals’ labour force status in both the short and the longer term.

Given that more people are now seeking asylum and being granted residence permits in Sweden, the population aged 15−74 will grow more quickly than previously forecast (see Table 21). Projections using the NIER’s demographic model KAMEL indicate that the new population forecast entails faster growth in

[90] IMF (2015b).

[91] Pekkala Kerr and Kerr (2011).

[92] Peri (2014).

[93] IMF (2015b).

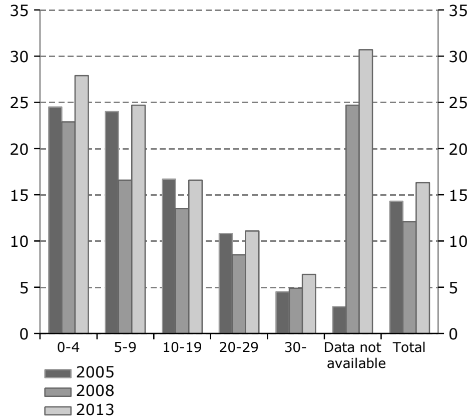
[94] See Foged and Peri (2015).

[95] See, for example, Åslund and Rooth (2007).

the labour force.[96] However, at a time when inflows of refugees into Sweden are far higher than in previous years, purely demographic projections may be misleading. This is because it normally takes time for new immigrants to become established in the labour market.[97] Those who have been in Sweden for only a short time are less likely to participate in the labour force and find employment than those who have been in Sweden for longer. Unemployment is also high among those who have been in the country for a short time (see Diagram 157).[98] The NIER therefore expects labour force participation among the newly arrived refugees to be below the average for non-Europeans for a number of years (see Table 23).[99] After 15 years, it is assumed that labour force participation among the current cohort of refugees will have increased to the extent that the average for all non-Europeans will be the same as it was in 2014, namely 70.4 per cent.

Diagram 157 Unemployment, foreign born, by number of years of residence in Sweden

Per cent



Source: Statistics Sweden.

Table 23 The NIER's assumptions for the labour market status of the non-European population aged 15−74

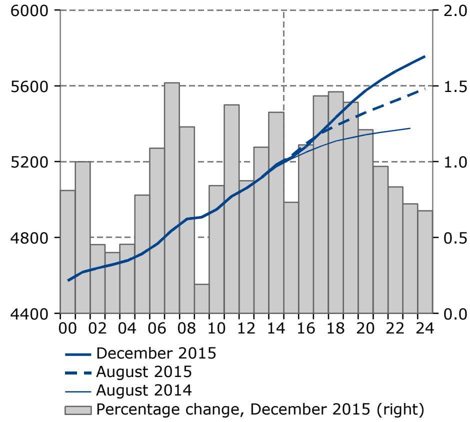
Per cent of population and labour force

	Labour force participation	Employment rate	Unemployment rate
Assumptions, 0−1 years in Sweden[1]	approx. 50	approx. 25	approx. 55
Actual, all non-Europeans, 2014[2]	70.4	54.8	22.2

[1] Denotes time registered in the Swedish Population Register. [2] The equivalent figures for the 20−64 age group were 76.3, 60.1 and 21.2 per cent.

Diagram 158 Labour force

Thousands of persons and percentage change



Sources: Statistics Sweden and NIER.

The influx of refugees into Sweden means that more people will participate in the labour force. All in all, it is now expected that around 170,000 more people will participate in 2024 than was forecast in August 2015, an increase of just over 3 per cent (see

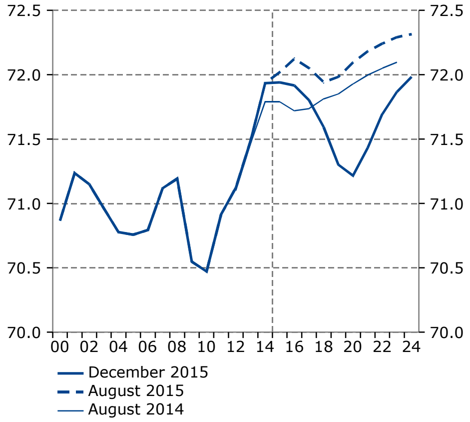
[96] KAMEL uses historical data from Statistics Sweden's labour force survey (LFS) for a number of variables, including the labour force and employment broken down by gender, age and four countries/regions of birth (Sweden, other Nordic, other European and non-European). These variables are then projected from a given start year (currently 2014) 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 description, see NIER (2012b).

[97] For a more detailed account, see the special analysis "Population growth will affect the labour market" in NIER (2015a).

[98] The economic climate also has a bearing on unemployment among new immigrants, see Rooth and Åslund (2003).

[99] For an equivalent analysis for Germany, see Fratzscher and Junker (2015).

Diagram 159 Labour force participation
Per cent of population age 15–74



Sources: Statistics Sweden and NIER.

Diagram 158).[100] The Migration Agency's relatively long processing times mean that a large proportion of those now seeking asylum will not be registered in the Swedish Population Register until 2017. The labour force has therefore been revised up mainly from 2017 onwards. The NIER also revised up the labour force significantly in its June 2015 forecast following the adjustments to Statistics Sweden's population forecast in May.

The labour force participation rate – the number of people in the labour force as a percentage of the total population aged 15−74 – will nevertheless be lower than previously forecast (see Diagram 159).[101] This is because the number of people in the labour force at this horizon has been revised up less than the population aged 15−74. In the longer term, more of the newly arrived refugees are expected to enter the labour market, which will have a positive effect on the participation rate.

HIGHER EQUILIBRIUM UNEMPLOYMENT

The NIER believes that the influx of refugees into Sweden will push up equilibrium unemployment. This can be explained mainly by two factors: rapid growth in the labour force and a change in the composition of the labour force.

An increase in labour supply will pave the way for higher employment in the longer term,[102] but in the short term it means that equilibrium unemployment will rise. This is because it will take time for the labour market to adapt to the increased labour supply. This will apply even if the economy is at full capacity and the new entrants into the labour market have the same skills on average as the existing labour force.[103] The labour force is expected to expand rapidly in the next few years (see Diagram 158). The NIER expects this to push up equilibrium unemployment through to 2020. The growth in the labour force is then expected to slow gradually, with the result that equilibrium unemployment comes back down.

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[100] It is uncertain what effect the introduction of temporary residence permits will have on the number of people in the labour force. Temporary residence permits may reduce the number of people seeking asylum in Sweden (if Sweden is considered less attractive than other countries). They may also mean that more people have their asylum applications rejected and are forced to leave Sweden. This may also increase the proportion of asylum seekers who exit the asylum process and stay in Sweden without papers. Temporary residence permits may also both increase and decrease the incentive to seek and accept employment. The incentive may increase if people in work are allowed to stay in Sweden.

[101] The higher level of labour force participation in the August 2015 forecast than in the August 2014 forecast is a result of incoming data.

[102] See Forslund (2015).

[103] See NIER (2012a).

The updated population forecast also entails a change in the composition of the labour force, with an increase in groups with a weaker attachment to the labour market. This will further increase equilibrium unemployment. Newly arrived refugees lacking in Swedish language skills, relevant education and formal and informal networks will take longer to become established in the labour market.[104] The NIER therefore believes that unemployment among the refugee population will initially be above the average for the rest of the non-European population (see Table 23). After 15 years, unemployment among refugees is expected to be the same as the average for other non-Europeans.

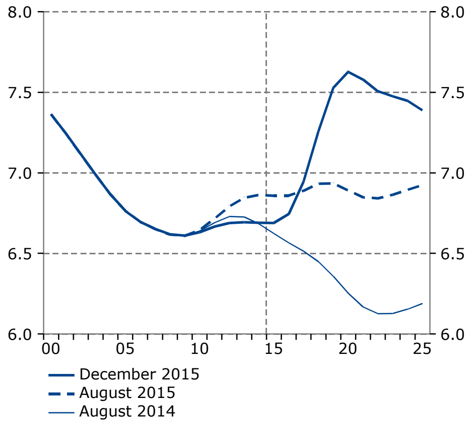
All in all, equilibrium unemployment is now forecast to be around 0.5 percentage points higher in 2025 than in the August 2015 forecast (see Diagram 160).[105] In the longer term, equilibrium unemployment will drop back to just below 7 per cent. The NIER also increased its forecast for equilibrium unemployment in its June 2015 forecast as a result of a new population forecast showing higher numbers of refugees. This explains the difference to the August 2014 forecast.

RISING ECONOMIC DEPENDENCY RATIO

On balance, the NIER now expects the number of employed to be around 2.4 per cent higher in 2024 than in its August 2015 forecast (see Diagram 161).[106] The employment rate – the number of employed as a percentage of the population aged 15–74 – is nevertheless lower than previously forecast (see Diagram 162). This is because employment has been revised up less than the population aged 15–74.

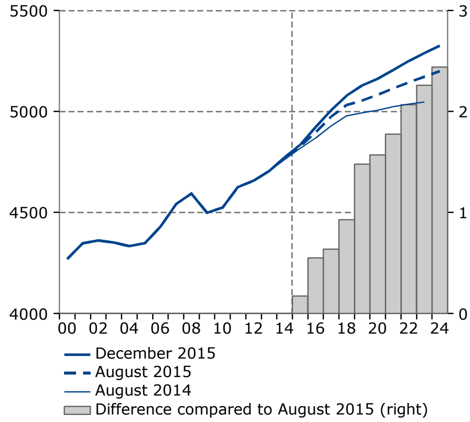
The demographic dependency ratio presented above does not necessarily reflect the burden that the working population has to bear. The economic dependency ratio – the number of people in the population who are not in work relative to the number who are – is a fairer measure of this burden. Over the next couple of years, economic developments will mean that employment will grow strongly, while the number of people

Diagram 160 Equilibrium unemployment
Per cent of potential labour force and percentage points



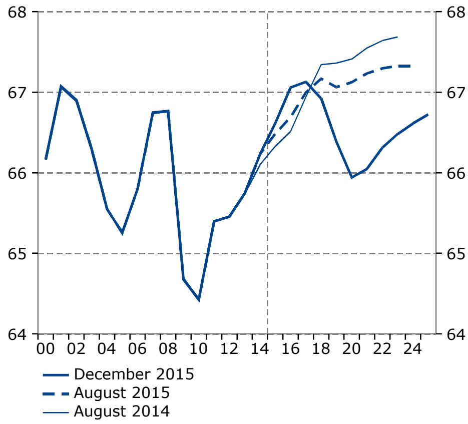
Source: NIER.

Diagram 161 Employed
Thousands of persons and per cent



Sources: Statistics Sweden and NIER.

Diagram 162 Employment rate
Per cent of population age 15–74



Sources: Statistics Sweden and NIER.

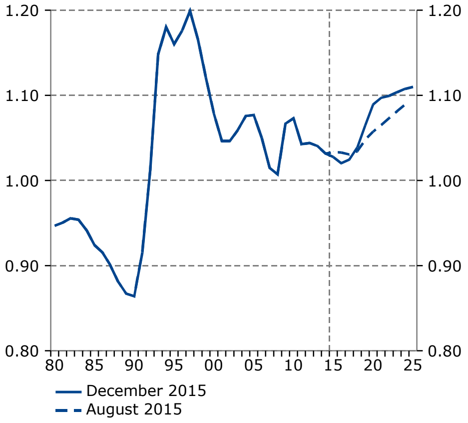
[104] See the special analysis "Population growth will affect the labour market" in NIER (2015a).

[105] Equilibrium unemployment is now believed to be somewhat lower in 2015 than previously thought. Unemployment fell more quickly than expected during the autumn. It is likely that newly arrived refugees will not be included in the labour force survey (LFS) to the extent that the NIER had anticipated, cf. the box "Nyanlända i AKU" [New immigrants in the LFS] in the Swedish-language edition of NIER (2015c).

[106] Asylum seekers have a right to work during the asylum process, but no statistics are available. This would not affect employment as measured in the LFS, however, because a person must be registered in the Swedish Population Register to be included in the LFS's sample.

Diagram 163 Economic dependency ratio

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



Sources: Statistics Sweden and NIER.

registered in the Swedish Population Register will not be affected that much by the influx of refugees in 2015. As a result, the economic dependency ratio will fall slightly (see Diagram 163). It will then rise again. Although the newly arrived refugees in the new population forecast have a favourable age structure, the economic dependency ratio will be slightly less favourable than in the August 2015 forecast. This is because the refugees are initially expected to have a relatively low employment rate (see Table 23).

ANALYSIS ASSOCIATED WITH CONSIDERABLE UNCERTAINTY

This analysis of the effects of the refugee influx on the Swedish labour market is associated with considerable uncertainty. A delayed or failed integration process could lead to persistently low labour force participation and/or high unemployment among the refugees. This, in turn, could put considerable pressure on public finances. Compared to many other countries, the Swedish labour market offers relatively few unskilled jobs, and the wage structure is very compressed.[107] There will probably be a need for greater flexibility and structural measures in the labour market so that more people in this large refugee group find work.

Effects of higher refugee numbers on public finances

HIGHER GOVERNMENT EXPENDITURE

The increased inflow of refugees entails increased expenditure in the government sector. The NIER has based its scenario for government expenditure on the Migration Agency's projections of its expenditure on migration and integration for the next few years.[108] In the longer term, once asylum seekers have been granted residence permits, they will be included in the population statistics. At this horizon, the NIER's estimates of government expenditure are also based on the age of the refugees, because the need for government consumption in the form of health care, education and elderly care varies greatly with age.

[107] See NIER (2015c) and IMF (2015a).

[108] Some of these costs will be incurred by municipalities and county councils. These will be financed mainly through the Migration Agency's funding as a result of the Agency compensating the municipalities through central government grants.

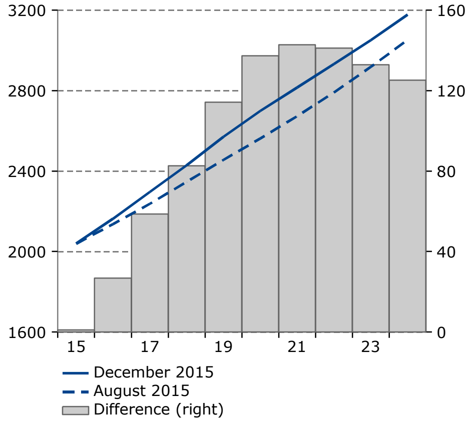
BIGGEST INCREASE IN GOVERNMENT CONSUMPTION

Government expenditure has been revised up in all years relative to the August 2015 forecast, and by around SEK 140 billion in 2020 (see Diagram 164). The most important, but not sole, reason for the revision is the surge in refugee numbers. Above all, it is government consumption that will be higher. This is due largely to the authorities providing board and lodging for asylum seekers.[109] The cost of accommodation is considerable, accounting for more than half of total immigration-related consumption expenditure in 2016 (see Table 24). The reception and care of unaccompanied minors is particularly expensive.

In addition, the influx of refugees entails an increased need for processing resources at the Migration Agency, costs for court proceedings, and payments to municipalities for providing health care, education and elderly care for asylum seekers. Children seeking asylum have a right to education, health care and dental care on the same terms as other children in Sweden, while adult asylum seekers have limited rights that extend only to acute health and dental care and other care that cannot wait.

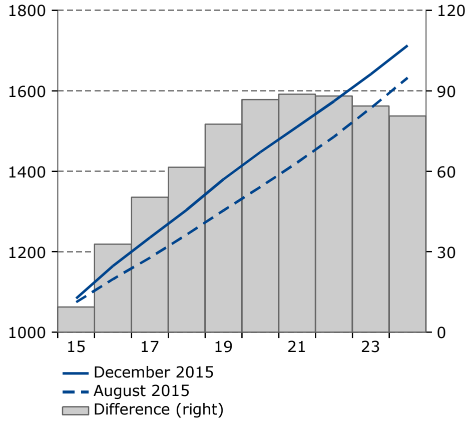
All in all, government consumption expenditure has been revised up by just over SEK 30 billion in 2016, rising to almost SEK 90 billion in 2020 (see Diagram 165). The revisions are a result not only of direct costs for refugee reception but also of increases in consumption expenditure that are solely attributable to a larger population in the present forecast than in the August forecast.[110] From 2022 onwards, the revisions decrease in size. This is mainly because the current crop of refugees will by then have their own accommodation, leading to a decrease in government expenditure on accommodation for asylum seekers.

Diagram 164 General government expenditure
SEK billion, current prices



Sources: Statistics Sweden and NIER.

Diagram 165 General government consumption
SEK billion, current prices



Sources: Statistics Sweden and NIER.

[109] See the special analysis "Från asylsökande till arbetssökande – det svenska flyktingmottagandet" [From seeking asylum to seeking work – the reception of refugees in Sweden] in the Swedish-language edition of this report.

[110] Part of the increase in consumption expenditure is due to a higher rise in prices for government consumption in the present forecast.

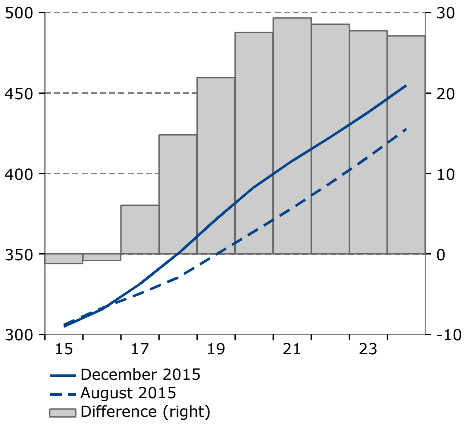
Table 24 Costs for refugee reception 2016
Per cent

	2016
Unaccompanied minors (payments to municipalities for care, accommodation, education, health care, etc.)	37
Accommodation for asylum seekers	18
Integration (payments to municipalities for those granted residence permits and assigned to municipalities)	19
Migration Agency's funding	10
Other asylum-related payments to municipalities (health care, education, etc.)	9
Daily allowance paid to asylum seekers	4
Court proceedings, outward travel for those refused/deported, etc.	3
Total	**100**

Note. The total cost is the expenditure forecast for the migration policy area in the Migration Agency's main scenario. See Appendix 4 to Swedish Migration Agency (2015a).

Sources: Swedish Migration Agency and NIER.

Diagram 166 Social transfers excl. pensions
SEK billion, current prices



Sources: Statistics Sweden and NIER.

DELAYED INCREASE IN TRANSFER PAYMENTS

Expenditure on social transfers will not increase as much as government consumption. In 2015–2016, social transfers excluding pensions will be largely the same as in the August forecast (see Diagram 166). In 2017, social transfers excluding pensions have been revised up by SEK 6 billion, including around SEK 3 billion in payments to asylum seekers. The reason why the increase is so small is partly that asylum seekers are entitled to only very limited benefits – just SEK 24 per day for a single adult in accommodation where food is provided.[111] The revision of social transfers comprises not only direct costs for the increase in refugee numbers but also all of the effects from a new macroeconomic forecast. For example, transfer payments have been held back by the downward revision of unemployment in 2016–2017 (see next section).

In the slightly longer term, expenditure on transfers will increase further. This is because reception enters a different phase where the refugees are integrated into society with support from transfers from the public purse. Once a residence permit has been granted, an introduction allowance of SEK 231 per day becomes payable. This is paid for five days per week, equivalent to around SEK 5,000 per month, for a maximum of 24 months. This allowance has contributed to the upward revision of trans-

[111] The daily allowance for asylum seekers averaged SEK 44 in 2014.

fer payments.[112] Expenditure on child benefit, housing benefit and parental benefit has also been revised up.

The size of social transfers in the slightly longer term depends largely on how well the refugees integrate into the labour market. Like consumption expenditure, transfer expenditure is also higher as a result of a larger population in the present forecast than in the August forecast, which was based on Statistics Sweden's May 2015 population forecast. All in all, expenditure on transfers excluding pensions has been revised up by around SEK 25 billion in 2020. The upward revisions then fall somewhat through to 2024 as more refugees find employment (see Diagram 166).

RISE IN EXPENDITURE RATIO HELD BACK BY HIGHER GDP

The increase in government expenditure in absolute terms says relatively little about how easy or difficult it will be for public finances to handle the higher level of spending. How far this expenditure has been revised relative to GDP is a better measure of the challenges facing public finances, because the increase in expenditure is then placed in relation to the change in the economy's production capacity.

When the population increases, the economy's production capacity – and so GDP – will rise. How far it rises will, in this case, depend on how well the refugees are integrated, their characteristics and skills, and how well the labour market adapts to the new population structure.

The upward revision of GDP has limited the upward revision of the expenditure ratio, defined as the ratio of government expenditure to GDP. At the end of the period, in 2024, the expenditure ratio has been revised up by 0.5 percentage points (see Diagram 167). Had GDP not been revised up from the August forecast, the expenditure scenario presented above would have led to an upward revision of the expenditure ratio of around 2 percentage points in 2024.

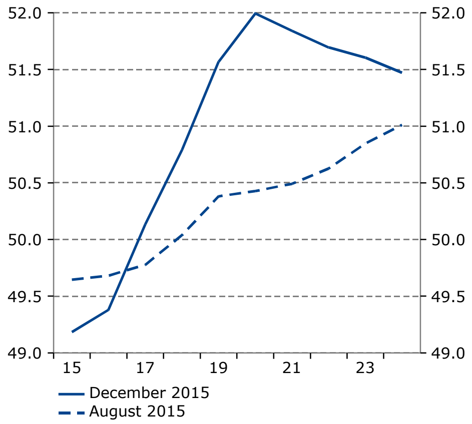
HIGHER TAX REVENUE AND MORE TAX INCREASES

Higher GDP spells higher tax revenue, because the tax bases (primarily corporate and household income and household consumption) grow. Government revenue has been revised up by SEK 120 billion in 2020 (see Diagram 168).

[112] The forecast also includes an upward revision of expenditure on sickness benefit of around SEK 6 billion in 2020. This is due mainly to factors other than the refugee influx.

Diagram 167 General government expenditure

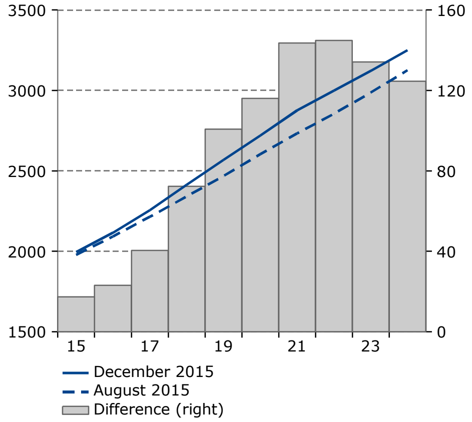
Per cent of GDP



Sources: Statistics Sweden and NIER.

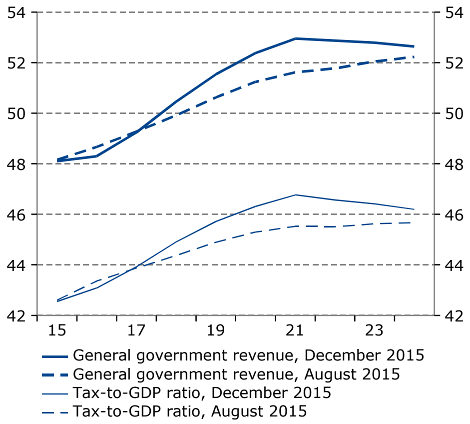
Diagram 168 General government revenue

SEK billion, current prices



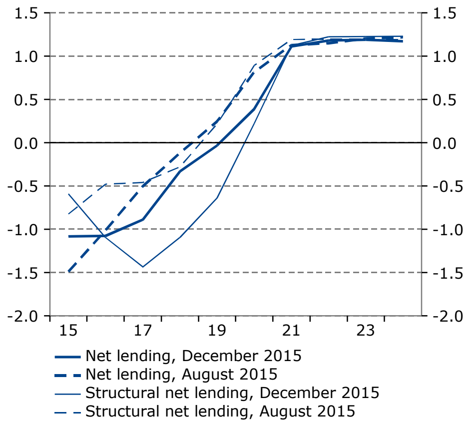
Sources: Statistics Sweden and NIER.

Diagram 169 General government revenue and taxes
Per cent of GDP



Sources: Statistics Sweden and NIER.

Diagram 170 General government net lending and structural net lending
Per cent of GDP



Sources: Statistics Sweden and NIER.

Part of this increase in revenue is because taxes will be raised further than assumed in previous forecasts. The NIER assumes that fiscal policy will be pursued in such a way that the direct costs of incoming refugees are debt-financed, while the spending increases needed to maintain the public sector commitment are funded through tax increases.[113] There will therefore be a greater need for tax increases, because a larger population will bring a greater need for health care, education and elderly care. All in all, spending increases of SEK 100 billion will be required in the central government sector in 2017–2024 to maintain the public sector commitment, giving rise to a need for tax increases of the same magnitude (see Table 25). This is SEK 15 billion higher than the tax increases assumed in the August forecast. Municipal taxes will be raised by around 0.3 percentage points less in 2017–2024, corresponding to around SEK 9 billion in 2024, than in the August forecast.

Taken together, this means that the tax-to-GDP ratio has been revised up by 0.5 percentage points in 2024 (see Diagram 169).

Table 25 Central government tax increases 2017–2024
SEK billion

	2017	2018	2019	2020–2024	2017–2024
August	21	21	20	22	85
December[1]	29	30	31	10	100

[1] The NIER's main scenario, cf. the chapter "Offentliga finanser" [Public finances] in the Swedish-language edition of this report.

Source: NIER.

WEAKER STRUCTURAL NET LENDING THROUGH TO 2020

On balance, the forecast means that structural net lending as a percentage of GDP, which measures net lending adjusted for any cyclical effects, has been revised down. At its peak, in 2017, the downward revision amounts to 1.0 per cent of potential GDP (see Diagram 170). The downward revision is due to an increase in expenditure and to much of this increase not being in areas that will be funded with tax increases. In the longer term, through to 2020, the revisions decrease, and from 2021 onwards they are negligible. This is because the structural weakening

[113] The fiscal policy strategy is currently unclear, however, cf. the chapter "Offentliga finanser 2015–2020" [Public finances 2015-2020] in the Swedish-language edition of this report.

through to 2020 will be superseded by structural strengthening as direct migration costs decrease.[114]

Actual net lending will be affected by cyclical developments. The upward revision of GDP and lower unemployment mean that actual net lending a few years ahead has been revised less than structural net lending. When the economy normalises again, net lending will move closer to structural net lending (see Diagram 170).

NO THREAT TO CENTRAL GOVERNMENT FINANCES

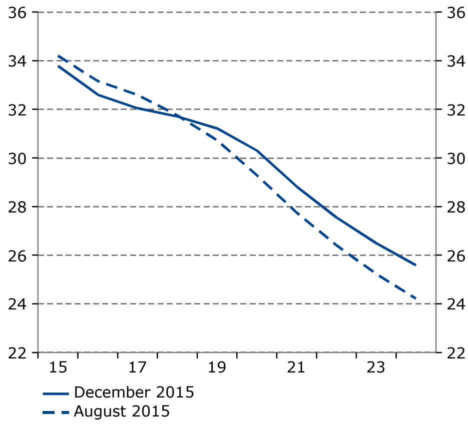
The NIER's scenarios cannot be used as cost-income analyses for admitting larger numbers of refugees. Nor can they be used to assess the implications of a sharp rise in refugee numbers for the distribution of income and wealth. They can, however, serve as a pointer to the extent of the consequences of the refugee influx for public finances.

The tax-to-GDP ratio has been revised up by 0.5 percentage points with the given net lending in 2024 (see Diagram 169). This means that an additional 0.5 per cent of production in the economy will be used to finance the public sector. This corresponds to around SEK 20 billion based on 2015 GDP, which is equivalent to almost SEK 2,500 for every person aged 20 or more in the current population. Larger deficits than previously forecast through to 2024 are reflected in the ratio of central government debt to GDP being revised up by around 1.4 percentage points in 2024 (see Diagram 171).

All in all, the forecast scenario does not present any appreciable threat to a balanced trajectory for public finances. At the same time, the increase in the tax-to-GDP ratio indicated by these calculations for 2024 is probably an overestimate of the long-term increase. The integration of the current cohort of refugees into the labour market will probably continue for a further 10–15 years after 2024. This means that the difference in the tax-to-GDP ratio will probably decrease at that horizon.

Diagram 171 Central government debt

Per cent of GDP



Sources: Statistics Sweden and NIER.

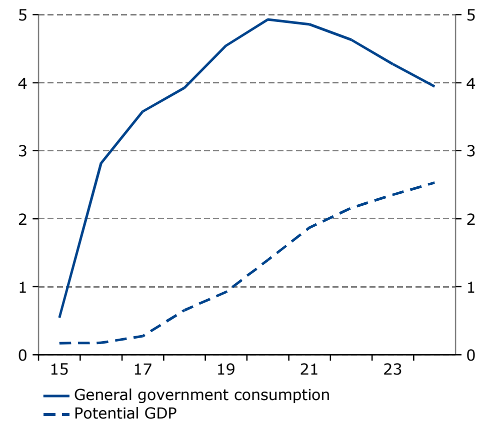
[114] From 2021, structural net lending is 1.2 per cent of potential GDP in both the present forecast and the previous forecast. The NIER assumes that net lending will not improve further after that but hold at this level through to 2024. This level is consistent with the current budget surplus target. If the principle of full funding for additional spending to maintain the public sector commitment is applied after 2021, structural net lending will continue to improve in both the present forecast and the August forecast.

Effects of higher refugee numbers on macroeconomic developments

The increase in refugees coming to Sweden will affect macroeconomic developments and the basis for economic policy. As mentioned in the introduction, it is important for stabilisation policy – and especially for monetary policy – that an assessment is made of how the effects of the refugee influx on aggregate supply and demand will impact on resource utilisation and thereby inflation. The NIER believes that the demand effects will be considerably greater than the supply effects over the next five years. This will lead to higher resource utilisation, higher inflation and a need for less expansionary monetary policy.

Diagram 172 Revisions to general government consumption and potential GDP forecasts

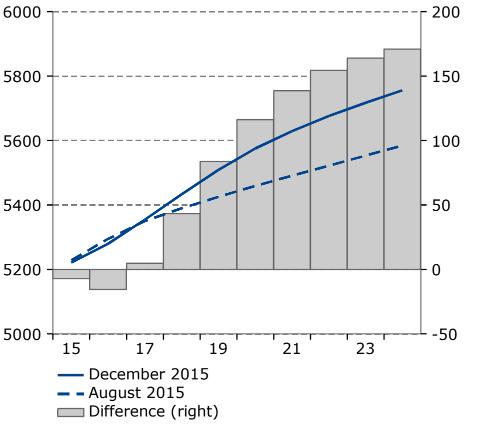
Per cent, constant prices



Sources: Statistics Sweden and NIER.

Diagram 173 Labour force participation

Thousands of persons



Sources: Statistics Sweden and NIER.

GOVERNMENT CONSUMPTION TO RISE MORE THAN POTENTIAL GDP OVER THE NEXT FEW YEARS

One important factor for how demand is affected is the impact of higher refugee numbers on government consumption. As described above, government consumption will be affected mainly through higher funding for the Migration Agency and increased costs for public services in education, health care and elderly care. At its peak in 2020, the upward revision of government consumption relative to the August 2015 forecast is nearly 5 per cent (see Diagram 172). This revision is due predominantly to the increase in refugee numbers.

Since it takes time for new immigrants to have their asylum applications considered and, if they are approved, to become established in the labour market, the labour supply will rise only slowly in the next couple of years as a result of the revised forecast for refugee numbers (see Diagram 173). In addition, a relatively large share of those entering the labour force are expected to have a low job-finding rate in the Swedish labour market in the short term, with the result that the employment rate among new arrivals will initially be lower than for others (see Table 23). Those who do find work are assumed to have an average productivity of 80 per cent of that of existing employees in the business sector.

Taken together, this means that supply in the economy – potential GDP – is only just under 1.5 per cent higher in 2020 in the present forecast, which is much smaller than the revision of growth in government consumption (see Diagram 172). Since the increase in government consumption will only to a limited extent be funded through taxes during this period, the increased inflow of refugees will contribute to rising resource utilisation in the Swedish economy in the coming years.

REFUGEE INFLUX TO BOOST INVESTMENT

There are several reasons why a larger population spells an increased need for investment in both the public and private sectors. One is that there is already a substantial shortage of housing in many cities, which means that there will be a need for increased housing investment. Another is that more than 35 per cent of the upward revision in the population forecast is due to growth in the 0–19 age group.[115] Public investment in preschools and schools in particular will need to rise faster. Another reason for an increase in investment is that the labour force and the number of employed in the economy will gradually rise, with the result that the capital stock in the business sector will have to be expanded.

Investment has been revised up considerably further than GDP for many years to come (see Diagram 174). The upward revision in 2015 is due to strong data for the third quarter and revisions of the national accounts for previous quarters. In the long term, investment is expected to amount to around 24 per cent of GDP, and in the absence of the new population forecast this level would have been reached within a few years. For the reasons described above, however, the refugee influx means that investment will be higher than normal for a long time to come.

HIGHER RESOURCE UTILISATION AND LOWER UNEMPLOYMENT

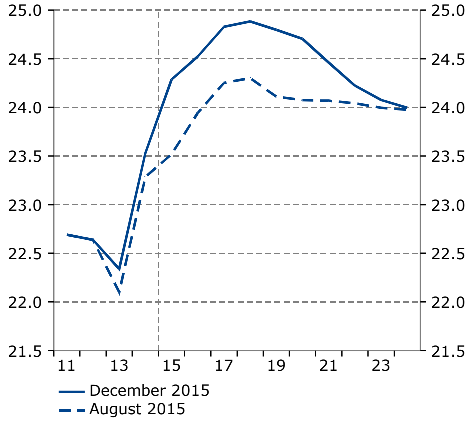
Together with the limited growth in potential GDP in the short term, the relatively sharp rise in demand means that resource utilisation as measured by the output gap will be higher (see Diagram 175). Since the forecast for developments outside Sweden is similar to that in August, the upward revision can be attributed primarily to the effects of incoming refugees. The output gap will be a positive 1.4 per cent in 2017 and is higher than in the August forecast in all years from 2015 to 2019. The demand effects of higher refugee numbers are thus expected to dominate the effects on supply in both the short and medium term.

This higher demand, not least in the employment-intensive public sector, means that unemployment will drop back more

[115] Statistics Sweden's November population forecast contains an upward revision of around 330,000 people in 2020, of whom around 120,000 are in the 0–19 age group.

Diagram 174 Gross fixed capital formation

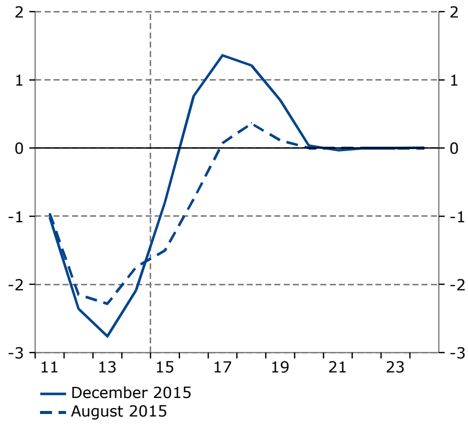
Per cent of GDP, current prices



Sources: Statistics Sweden and NIER.

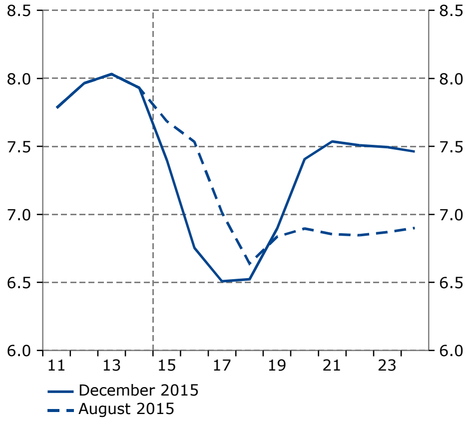
Diagram 175 Output gap

Per cent of potential GDP



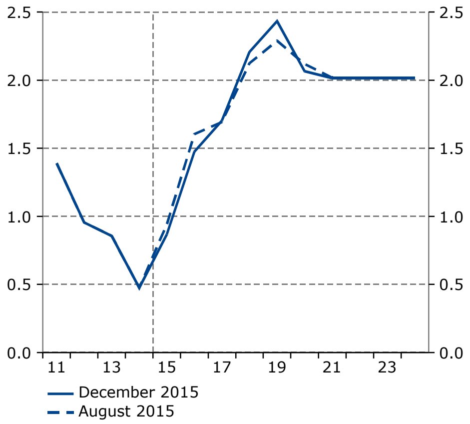
Source: NIER.

Diagram 176 Unemployment
Per cent of labour force



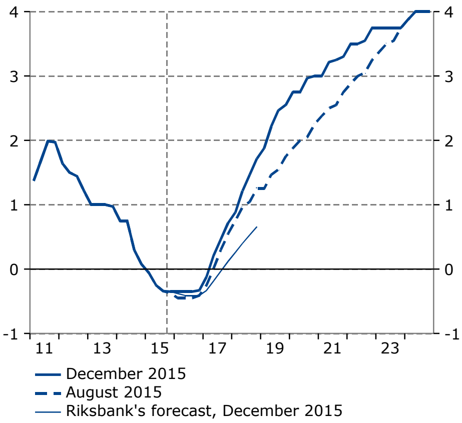
Sources: Statistics Sweden and NIER.

Diagram 177 CPIF
Percentage change



Sources: Statistics Sweden and NIER.

Diagram 178 Repo rate
Per cent, quarterly values



Sources: The Riksbank and NIER.

quickly (see Diagram 176) despite a larger labour force (see Diagram 173). Unemployment will be some way below the NIER's estimate of equilibrium unemployment for a number of years before rising towards the new higher level of equilibrium unemployment of around 7.5 per cent.

HIGHER INFLATION AND FASTER INTEREST RATE INCREASES

The higher demand and lower unemployment mean that firms will raise their prices more quickly in 2018–2019 (see Diagram 177). This is because firms will increase their margins as demand grows more rapidly, and wages will grow more quickly as unemployment drops back.

The NIER assumes that the Riksbank will not raise the repo rate until late 2016 despite the effects of the refugee influx on resource utilisation and inflation. This assumption is based on the Riksbank's communications, where it has signalled that it will not necessarily respond with higher interest rates in the near term even if inflation is expected to be higher. This reaction pattern will contribute to inflation exceeding the inflation target for several years beyond 2017. Once the Riksbank does begin to raise interest rates at the end of 2016, they will be raised further than in the NIER's August forecast and substantially further than in the Riksbank's own forecast in December (see Diagram 178).

GDP PER CAPITA HARD TO INTERPRET GIVEN THE REFUGEE INFLUX

Economic commentators and central banks generally focus on movements in GDP when comparing a country's economic performance over time and with other countries. When assessing a country's standard of living, however, it is generally more appropriate to look at GDP per capita.[116] In the current situation with increased numbers of refugees coming into the country, this measure is harder to interpret than usual.

GDP growth will be high in 2016–2017, and so GDP per capita will grow strongly compared with subsequent years (see Diagram 179). It should be noted, however, that the refugees will not be registered in the Swedish Population Register until they have been granted residence permits. The Migration Agency's processing times are currently up to 24 months, so it will

[116] See the special analysis "BNP kan tolkas på många olika sätt" [GDP can be interpreted in many different ways] in the Swedish-language edition of NIER (2015b).

take time for incoming refugees to show up in the population statistics. GDP per capita will therefore be temporarily inflated during this period.

As residence permits are granted and the population increases, GDP per capita will grow more slowly and even fall slightly in 2018–2020. This is a natural consequence of the change in the composition of the population. The new immigrants will initially make a limited contribution to production of goods and services, while aggregate production will need to be distributed among more people.

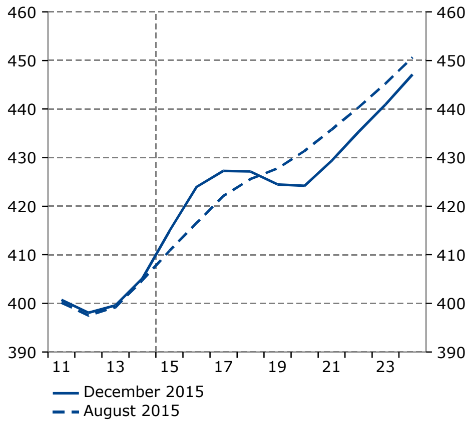
This change in the composition of the population also means that the relationship between GDP growth per capita and standard of living will be more complex than normal. For asylum seekers who are granted residence permits, the standard of living will increase very considerably. What happens to the standard of living for the existing population from before the refugee crisis depends above all on two factors: the level of welfare services and the tax burden. The level of welfare services per capita is assumed to remain the same as before in the NIER's scenario. This means that no displacement in health care, education and elderly care services is anticipated as the population grows.

When it comes to the tax burden, the tax-to-GDP ratio is around 0.6 percentage points higher on average in 2016–2024 in the present scenario than in the scenario in August (see Diagram 169). This corresponds to around SEK 25 billion per year based on today's GDP, or just under SEK 3,500 per person aged 20 and over in the current population. This increase is due principally to the rise in refugee numbers.

The difference in the tax-to-GDP ratio narrows considerably in 2022–2024 (see Diagram 169). This is due both to a gradual decrease in the Migration Agency's costs and to an increase in employment among the new members of the population. The difference in the tax-to-GDP ratio is then expected to fall further in the years after 2024. Whether the tax-to-GDP ratio increases or decreases in the long term in this scenario depends on the employment rate among the new members of the population.[117] The NIER has not performed any calculations in this area, but the effect on the tax-to-GDP ratio will probably be limited in the longer term given the assumptions presented in this analysis.

Diagram 179 GDP per capita

SEK thousand, calendar-adjusted, constant prices, reference year 2014



Sources: Statistics Sweden and NIER.

[117] Simulations in Flood and Ruist (2015) show that the long-term effects of increased immigration on public finances are greatly dependent on the employment rate in the foreign-born population.

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