

# Economic Commentaries

## How does prosperity growth in Sweden compare with other countries?

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Growth in GDP per capita has been relatively low in Sweden for the past three years. This has led to a discussion of how things really are in the Swedish economy and how Swedish prosperity growth fares in an international comparison.

Prosperity can be measured in many different ways. This means that the way Sweden's development is assessed in relation to that of other countries will depend on which measure one chooses and which time period one measures. In this Economic Commentary I review several different measures of prosperity based on the National Accounts (for a cohesive description of the measures included, see Table 5 in the Appendix)<sup>2</sup>. The aim is to describe the differences between the measures and to provide a nuanced and detailed picture of the relative development of prosperity in Sweden.

All in all, Sweden is a prosperous country and has for the past 20 years been around 12–20 per cent above the average prosperity level for OECD countries. However, since the financial crisis, developments have been weaker in many countries, including Sweden. During these years, real GDP per capita growth in Germany has been stronger than in Sweden, which is because employment, productivity and relative prices of exports and imports (the current account) have developed more strongly there. But although growth in Sweden has been weak since the financial crisis, average growth in Sweden has nevertheless been one of the highest in the EU15<sup>3</sup>. Swedish prosperity growth therefore fares well in an international comparison.

### Purchasing power adjusted measures and the OECD's prosperity league

Most measures of prosperity try to capture developments in national living standards. One of the most common measures is GDP per capita (GDP per inhabitant). GDP totals the value of the goods and services produced in a country during a specific period of time, which is synonymous with a country's total income during a period of time. To obtain a rough measure of how wealthy a country is, its prosperity, one needs to relate the GDP figure to the size of the population. When the population grows, GDP also tends to grow, as there are more people who can contribute to production. At the same time, a larger

Since the financial crisis, prosperity has shown weaker development in many countries and the weak developments in Sweden over the past three years have opened the doors to a discussion of how Swedish prosperity fares in an international comparison. This Economic Commentary reviews different measures of prosperity based on the National Accounts and makes an international comparison of developments in different measures to paint a picture of how developments in Sweden look in relation to other countries.

Sweden is at a relatively high level of prosperity, although the level has fallen somewhat in recent years. The fact that income growth has been lower in Sweden since the financial crisis is mainly due to productivity growth being subdued and to a smaller share of the population being of working age (poorer demographic development). Although growth in Sweden has been weak, it has on average been among the highest in the EU15. Growth in Germany has been higher, however, which is largely due to employment, productivity and the current account contributing more to developments in Germany than in Sweden.

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<sup>2</sup> There are many other sorts of prosperity measures that include other types of indicators. In addition to GDP per capita, the Government Offices, for instance, use the employment rate, unemployment, household indebtedness, public sector consolidated gross debt and various environmental indicators and social indicators to create a picture of national prosperity. For further information on these measures, see the Government's report "New measures of prosperity" (2016).

<sup>3</sup> The EU15 consists of the 15 countries that were members of the EU prior to the EU enlargement in 2004. In addition to Sweden, these are Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain and the United Kingdom.

population means that more people share the incomes. This is why GDP per capita is preferable to GDP as a prosperity measure, as it takes into account developments in the population.

If one wishes to compare prosperity in different countries, the incomes must be expressed in the same currency. Then GDP in current prices needs to be converted so that instead of being expressed in national currencies, it is expressed in a joint currency. The best way of doing this is with purchasing power parity. This also adjusts for a difference in general price levels between countries. In poorer countries, price levels are usually lower, which means that even if incomes are lower, consumption may not be. Norway is a good example of a country with high income levels, and also high price levels. If the incomes are not adjusted for the higher domestic price levels, Norwegian purchasing power and prosperity will be overestimated. When income levels are converted to, and expressed in, a joint currency with the aid of purchasing power parity, it is possible to compare domestic purchasing power in different countries in a fairer way.

Purchasing Power Parity is created by compiling the prices of goods in a basket in national currency and comparing with the prices of corresponding baskets of goods in a comparison area, such as the OECD countries<sup>4</sup>. With the aid of purchasing power parity, GDP in current prices can be converted to be expressed as a common currency with a uniform price level, what is known as purchasing power adjusted GDP. The OECD and Eurostat publish purchasing power adjusted GDP per capita in a common, artificial currency. This currency is called the OECD dollar, which is US dollars calculated to average price levels for the whole OECD area.<sup>5</sup>

The OECD's prosperity index is a list of the OECD countries' purchasing power adjusted GDP per capita. Figure 1 shows the relative level for purchasing power adjusted GDP per capita in 2018 in relation to the OECD average. Sweden was then in 11th place out of the 36 countries included in the prosperity index, with a prosperity level more than 16 per cent higher than the OECD average.

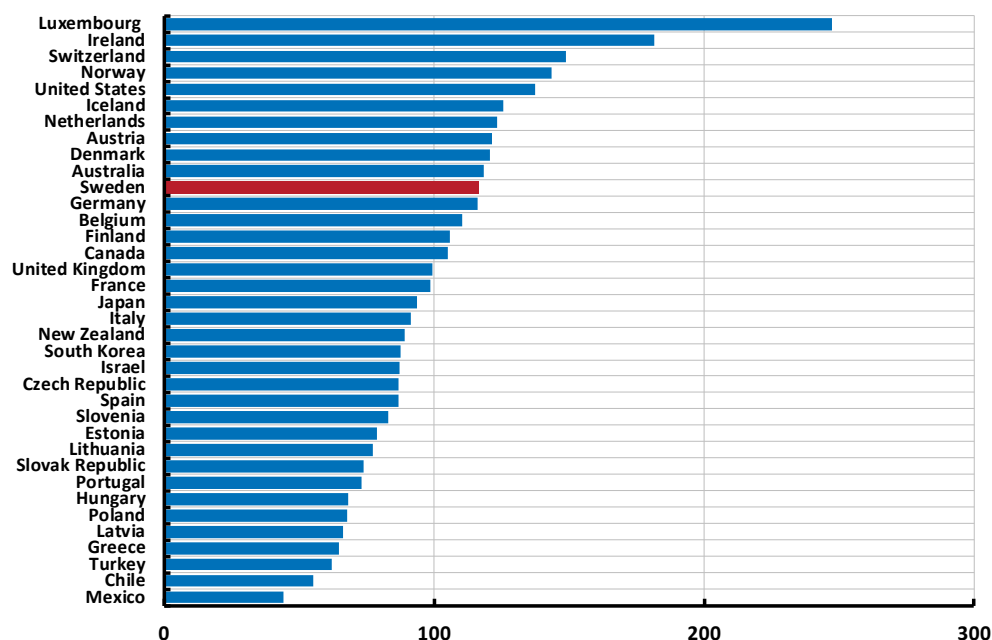
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<sup>4</sup> The parity calculations are based on price data regarding just over 2,500 consumer goods and services, 26 public services (based on average salaries for various posts within the public sector), 230 types of capital goods and 8 construction projects (OECD & Eurostat, 2012). One example of a parity calculation is the price difference for a Coca-Cola in Sweden and in Germany. A 2-litre bottle of Coca-Cola costs around SEK 22 in Sweden and EUR 2 in Germany, the purchasing power rate will then be SEK 22/EUR 2 = 11 SEK per EUR. For each euro spent on Coca-Cola in Germany, SEK 11 must be spent in Sweden.

<sup>5</sup> Eurostat publishes purchasing power adjusted GDP per capita for the euro area countries and GDP is then expressed in a currency known as PPS – Purchasing Power Standard.

**Figure 1. The OECD's prosperity index 2018**

Purchasing power adjusted GDP per capita, index OECD =100



Note. Current prices and current PPP weights.

Source: The OECD

**Purchasing power adjusted GDP per capita over time**

The relationship between prosperity levels in different countries has varied over the years. Figure 2 shows purchasing power adjusted GDP per capita in Sweden, Germany, EU15, EU28<sup>6</sup> and our Nordic neighbouring countries in relation to the OECD average. To capture changes in relative prices over time one expresses the measure in current prices and current PPPs.

Over the past seven years, GDP per capita in Sweden, Denmark and Germany has not diverged very much at all, and the level has been around 15-20 per cent above the average for the OECD countries. However, developments have been somewhat slower in Sweden than in Denmark and Germany. Danish prosperity is now higher than Swedish, and Sweden is no longer on a higher level than Germany. Minor differences in levels should be interpreted with caution, as both GDP calculations in the National Accounts and Eurostat's/the OECD's purchasing power calculations are very uncertain.<sup>7</sup> In Finland, GDP per capita has been lower since the financial crisis and it is now at a level close to the average for all EU15 countries.

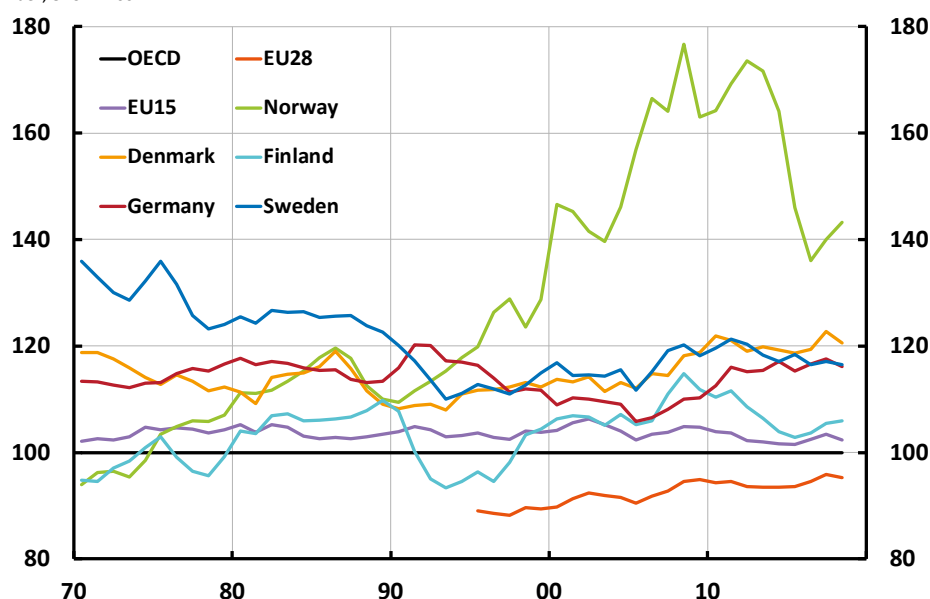
Variables that are purchasing power adjusted also correct for changes in the current account, something that can play a decisive role for countries with substantial foreign trade. At the end of the 1990s, the Swedish current account deteriorated, import prices rose more than export prices. This meant that we could receive a smaller volume of goods and services for each good or service that we exported. The increase in purchasing power adjusted GDP was therefore not particularly large during this period, despite Swedish productivity increasing rapidly in relation to that of other countries. For this reason, it may be important to adjust GDP growth for changes in the current account. Another example of this is Norway, which stands out with a comparatively strong growth in prosperity since the mid-1990s. The development in Norway is primarily due to the oil price increasing, which has improved Norway's current account and thereby strengthened the Norwegians' real purchasing power.

<sup>6</sup> As of 2013, the EU consists of 28 member states (which is where the designation EU28 comes from).

<sup>7</sup> The uncertainty margins for purchasing power adjustments are high for lower aggregates of GDP, but lower for aggregate GDP. The OECD states that when there is a difference greater than 2 percentage points for two different countries' index figures for GDP per capita, it is usually statistically proven.

**Figure 2. GDP per capita, purchasing power adjusted**

Index, OECD = 100



Note. Current prices and current PPPs. Data for EU28 aggregate is not available prior to 1995.

Source: The OECD

**Actual individual consumption per capita and GNI per capita**

Actual individual consumption is a measure that could be expected to better capture households' prosperity<sup>8</sup>. According to purchasing power adjusted individual consumption, Sweden was close to the OECD average in 2016 (see Table 1). Finland, Denmark, Germany and Norway were all at a higher level than Sweden. However, Swedish households have saved and invested a lot over a long period of time, which could have contributed to consumption being lower. It is thus not entirely clear that lower household consumption is a sign of relatively low prosperity.

A further measure of prosperity is gross national income (GNI) per capita. GDP measures the value of all production and thereby all incomes that are generated within the country, while GNI measures all income accruing to people living in the country. The difference between the two measures consists of remuneration for work and capital that go abroad and come from abroad. Gross national income is obtained by adding the net total of capital incomes and work incomes going abroad and coming from abroad<sup>9</sup> to GDP. The difference between GDP and GNI is relatively small for the countries examined in Table 1<sup>10</sup>. The difference in levels is particularly small in Sweden and Finland. It is slightly larger in Norway, which has a higher GNI than GDP, which means that Norway has more work and capital incomes flowing into the country than flowing out of it.

All in all, the three measures reinforce the picture of Sweden, Germany, Denmark and Norway having relatively high prosperity levels. Moreover, it is clear that Norway's relative prosperity level was clearly higher than those of its neighbours in 2016. Denmark and Germany also had slightly higher prosperity levels than Sweden. In Finland, however, the relative prosperity level was lower, more in line with the level of the EU15 aggregate.

<sup>8</sup> Consumption of individual services provided by the public sector is included, such as medical care and education.

<sup>9</sup> Such as interest rates, share dividends, return on direct investment abroad, salaries and some taxes and subsidies.

<sup>10</sup> The largest difference between GNI and GDP in the OECD can be seen in Luxembourg and Ireland, where GNI is much lower than GDP. There are a lot of people working in Luxembourg who live in other countries. Their salaries are declared in their home countries, which brings down Luxembourg's GNI in relation to its GDP. In Ireland, large parts of the business sector are foreign owned and the profits in these companies thus fall due to inhabitants of other countries and mean that GNI becomes lower than GDP.

**Table 1. Purchasing power adjusted measure relative to the OECD, year 2016**

Index, OECD = 100, ranking in prosperity index in brackets

|  | Sweden     | Germany    | Finland    | Denmark    | Norway    | EU15** |
|--|------------|------------|------------|------------|-----------|--------|
| GDP per capita                           | 116.4 (12) | 116.7 (11) | 103.7 (15) | 119.4 (9)  | 136.0 (5) | 102.5  |
| GNI per capita*                          | 115.8 (10) | 118.9 (8)  | 103.9 (14) | 121.8 (6)  | 142.0 (3) | 101.9  |
| Actual individual consumption per capita | 101.9 (14) | 110.4 (6)  | 102.5 (13) | 103.4 (11) | 115.9 (4) | 98.2   |

Note. Current prices and current PPP weights. As a result of data restrictions, the comparison refers to the year 2016 (GNI for OECD is only available until the end of 2016). However, the ranking of GDP and households' individual consumption would not be very much affected if 2017 had been chosen. \*Purchasing power adjusted GNI per capita is not available for Iceland, which affects the ranking. Iceland was in 6th place with regard to purchasing power adjusted GDP per capita in 2016 and it is therefore possible that Sweden, Denmark, Germany and Finland would move down a place if Iceland has been included. \*\*EU15 is not included in the prosperity index, so no ranking is given.

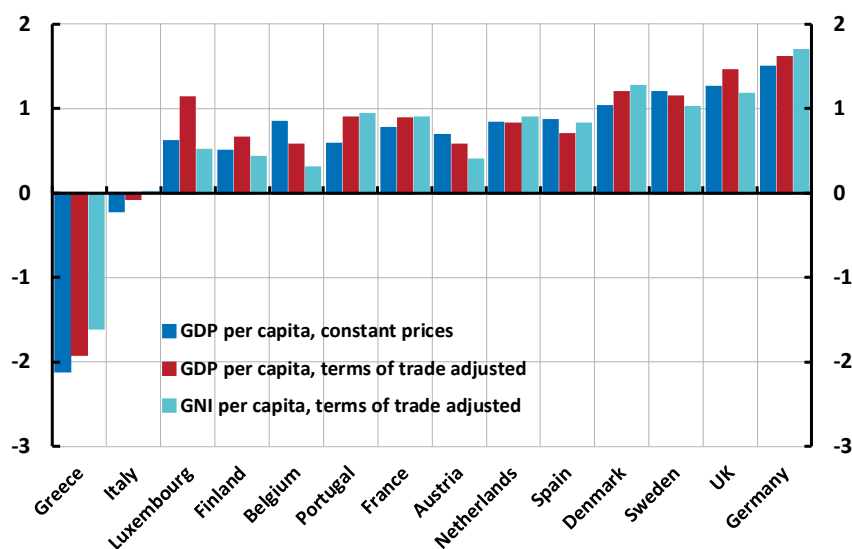
Source: The OECD

## Development of real GDP per capita over time

Purchasing power adjusted GDP or GNI per capita are the preferred measures when comparing relative levels. However, it is also interesting to know how the prosperity of individual countries grows and changes over time. A common measure used to study this kind of change is the annual percentage growth in real GDP per capita.

Figure 3 shows an average of annual percentage growth in real GDP per capita, GDP per capita at fixed prices and real GNI per capita during 2011–2017<sup>11</sup>. GDP expressed in fixed prices adjusts for price developments in what is produced and thus describes the development in production volumes. The calculation of real GDP and real GNI takes into account not just price changes in production, but also changes in the current account, and thereby captures the development of the domestic purchasing power in GDP and GNI respectively.

**Figure 3. Growth in real GDP and GNI per capita and GDP per capita at fixed prices in EU15 (excluding Ireland)**  
Average annual percentage change, 2011–2017



Note. Outcome of real GNI 2018 is not available for several countries and therefore the average only goes to 2017. If 2018 is included, the average for real GDP and GNI at fixed prices will be somewhat higher for most countries, but marginally lower for Sweden. Ireland is excluded as Irish GDP growth was 24 per cent in 2015<sup>12</sup>, which had a big impact on the averages for Ireland that were almost 6 per cent. Sources: Eurostat and the OECD

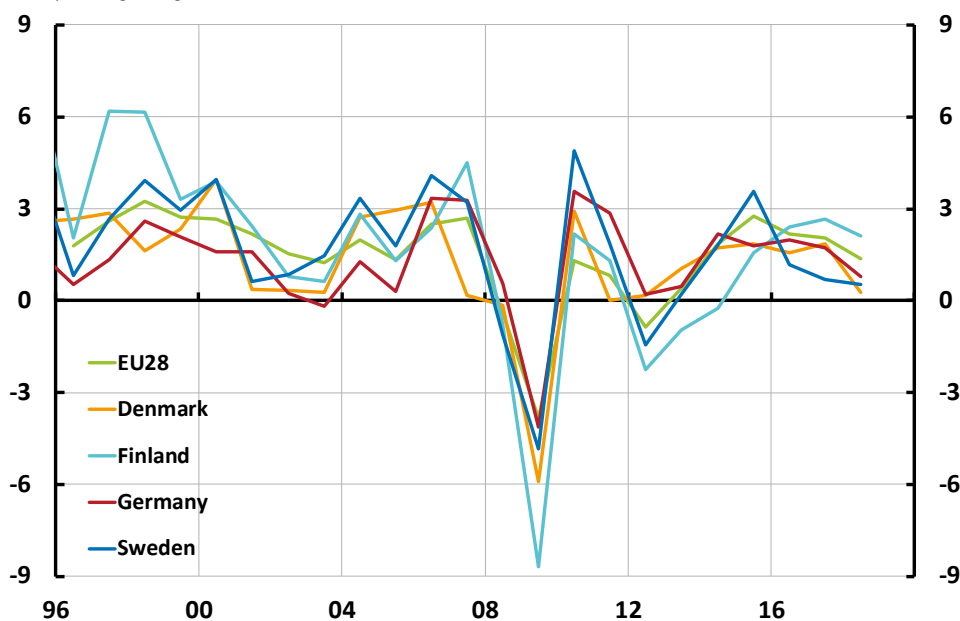
<sup>11</sup> The average refers to the years following the financial crisis, as growth during 2008–2010 was unusually low or high. If, for instance, 2010 is included, the average will be 0.5 percentage points higher for Sweden.

<sup>12</sup> Ireland's low corporate taxes have attracted multinational companies that have moved their financial operations (in particular intellectual property rights) to Ireland. Sales created through the use of these intellectual property rights therefore contribute to Irish GDP.

The difference in average growth measured by the different measures has been relatively small for most of the countries in EU15. In Sweden, the average growth per capita in real GDP, real GNI and GDP at fixed prices has on average been 1.1, 1.0 and 1.2 per cent respectively per year during the period 2011–2017. The main explanation for the two real measures being lower than GDP at fixed prices is that Sweden's current account has deteriorated, which has subdued the development of real incomes. Moreover, the fact that growth in real GNI was lower than growth in real GDP indicates that the net total of capital incomes and work incomes from abroad has been weaker. On average, Swedish real GDP and GNI per capita have grown the 5th fastest among the EU15 countries and GDP per capita at fixed prices has grown the 4th fastest.

Three countries that are relevant comparison countries for Sweden are Finland, Germany and Denmark. Figure 4 shows the development of real GDP per capita over time<sup>13</sup>. With the exception of individual years, the growth rates have been similar in the four countries. In Sweden, growth was high in 2015, at 3.5 per cent, but has since then slowed down and been around 0.6 per cent in the past two years. However, it is not only in Sweden that growth has been weak in recent years; Germany and Denmark have also experienced lower growth. Finland was hit harder by the financial and sovereign debt crisis and has therefore had much weaker growth than the other countries up to 2016. After that, however, Finnish growth picked up speed and over the past two years it has been about 2 percentage points higher than in Sweden.

**Figure 4. Growth in real GDP per capita**  
Annual percentage change



Sources: Eurostat and the OECD

## Decomposition of growth in real GDP per capita

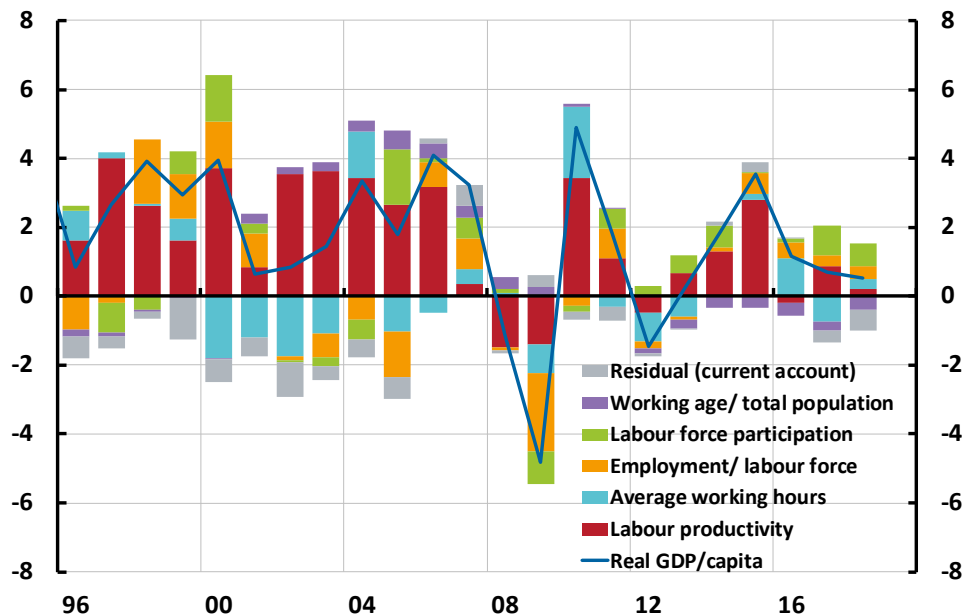
Growth in real GDP per capita can be divided up in different ways. One way to describe the development is to break down growth into different components, known as growth

<sup>13</sup> Going forward I will use real GDP per capita instead of GDP per capita at a fixed price since the real measure takes into account changes in the current account. In addition, GDP per capita is used instead of GNI per capita as it is a more common measure of prosperity and there is more data available. Moreover, growth in real GDP and real GNI per capita has been similar in the countries surveyed in the period 1996–2018.

accounting. GDP is broken down into hours worked and production per hour. The hours are further broken down into hours worked per employee (average working hours) and number of employed. Employment in its turn depends on how large a percentage of the population are taking part in the labour force (labour force participation) and what percentage of the labour force has a job. Figure 5 shows the contribution to growth from the percentage of the population of working age (refers here to those aged 15-74), labour force participation, number of employed as a percentage of the labour force, average working hours, labour productivity and by a residual. The residual captures the difference between growth in GDP per capita at fixed prices and growth in real GDP per capita. The difference should primarily be explained by the current account, which is supported by the correlation between growth in the residual and the current account being 0.97. A positive residual is therefore primarily linked to an improved current account.

**Figure 5. Decomposition of growth in Swedish real GDP per capita**

Annual percentage growth



Note. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Employment and labour force in 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended.

Sources: Eurostat, the OECD and own calculations

**Table 2. Average contribution to growth in Swedish real GDP per capita**

Annual percentage growth, average

|   | 1996–2008  | 2011–2018  | 1996–2018  |
|---|------------|------------|------------|
| Percentage of the population of working age       | 0.2        | -0.3       | 0.0        |
| Labour force participation                        | 0.2        | 0.5        | 0.2        |
| Employment as a percentage of the labour force    | 0.2        | 0.3        | 0.1        |
| Hours worked per employee (average working hours) | -0.3       | -0.1       | -0.1       |
| Production per hour (labour productivity)         | 2.3        | 0.8        | 1.7        |
| <b>GDP/capita at fixed prices</b>                 | <b>2.6</b> | <b>1.2</b> | <b>1.9</b> |
| Residual (current account)                        | -0.4       | -0.1       | -0.3       |
| <b>Real GDP/capita</b>                            | <b>2.2</b> | <b>1.0</b> | <b>1.6</b> |

Note. The contributions have been rounded off. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. 2009 and 2010 are excluded as these years have a very large impact on the average, although the years are included in the average for 1996–2018. Employment and labour force in 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended.

Sources: Eurostat, the OECD and own calculations

Between 1996 and 2008 it was especially high productivity that contributed to the development in real GDP per capita (see Figure 5 and Table 2). On average, labour productivity grew by 2.3 per cent a year, which was somewhat faster than real GDP per capita, which grew by an average of 2.2 per cent a year. The fact that Swedish productivity growth was unusually high during this period is largely explained by productivity growth in the information and communication technology (ICT) branch being exceptionally strong.<sup>14</sup> The contribution to growth from average working hours and the current account was negative during the same period.<sup>15</sup>

From 2011 to 2018, growth in real GDP per capita has been lower; on average growth has been 1.0 per cent a year. This can be linked to the fact that productivity growth has slowed down and that demographic developments have meant that a lower share of the population is of working age (15–74). Instead, growth during this period has been combined with increased employment, which in turn is linked to increased labour force participation and a higher percentage of persons employed in the labour force (lower unemployment). According to Statistics Sweden’s population forecast, the percentage of the population of working age is expected to fall going forward, as a larger share of the population becomes older than 74. This development will thus dampen the conditions for growth in GDP per capita, as it will probably mean that a smaller percentage of the total population will work and contribute to production.

### Decomposition of the difference between growth in Swedish and German real GDP per capita

Although growth in Swedish real GDP per capita has developed reasonably in line with growth in other European countries (see Figure 4), there have been major differences in some years. The difference between Swedish and German growth in real GDP per capita can also be broken down using growth accounting (see Figure 6). Positive figures in Figure 6 mean that Swedish growth has been higher than German growth.

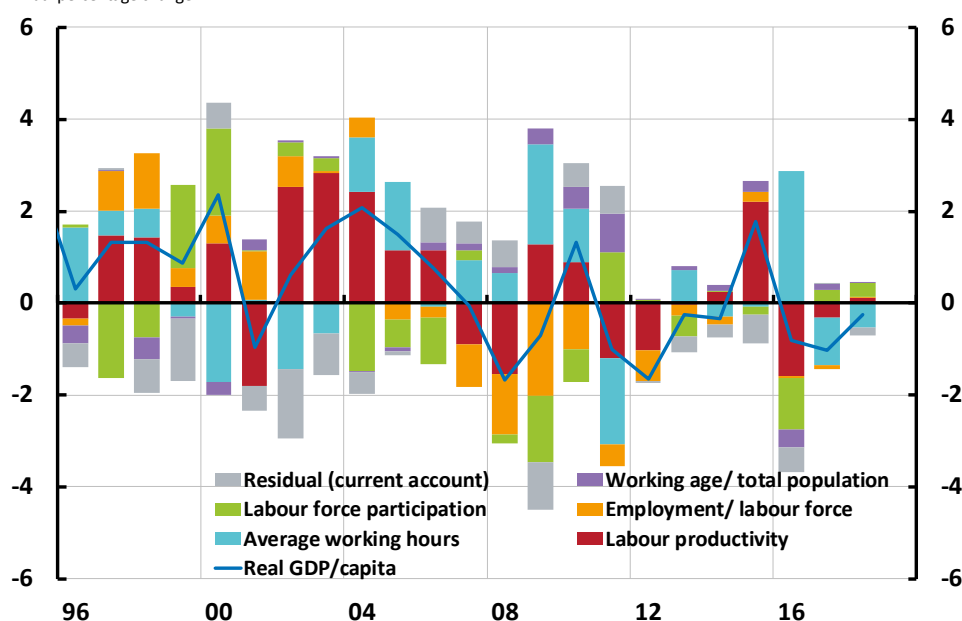
<sup>14</sup> A more thorough description and explanation of Swedish productivity growth can be found in the section “BNP-per capita – en historisk jämförelse med åren framöver” (GDP per capita – a historical comparison with the coming years) in the Swedish Economy Report October 2019, “Produktiviteten i Sverige” (Productivity in Sweden) in Wage Formation in Sweden 2017 and “Produktivitetsutvecklingen i Sverige” (Productivity growth in Sweden) in Wage Formation in Sweden 2019.

<sup>15</sup> For a decomposition beginning 1970 instead of 1996 and which focuses more in depth on Swedish developments in each decade, see the section “GDP per capita” in the Fiscal Policy Council’s report (2019).



**Figure 6. Decomposition of Swedish growth relative to German growth in real GDP per capita**

Annual percentage change



Note. The series refer to Swedish growth minus German growth. Positive figures thus mean that Swedish growth has been higher than German growth. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. German population aged 15-74 has had a time series break in 2010 and has therefore been spliced with an average of growth in 2009 and 2011. Swedish employment and labour force 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended.

Sources: Eurostat, the OECD and own calculations

During the entire period examined, growth in real GDP per capita has on average been somewhat higher in Sweden than in Germany (see Figure 6 and Table 3). This is mainly due to productivity and average working hours contributing more to growth in Sweden. Instead, labour force participation and the residual have on average contributed more to growth in Germany. As the development of the current account has a high level of correlation with the development of the residual<sup>16</sup>, the latter indicates that the current account has on average deteriorated more in Sweden than in Germany during the period 1996–2018.

**Table 3. Average contribution to the difference between growth in real GDP per capita in Sweden and Germany**

Per cent, average difference between annual percentage growth rates

|   | 1996–2008  | 2011–2018   | 1996–2018  |
|---|------------|-------------|------------|
| Percentage of the population of working age*      | 0.0        | 0.1         | 0.1        |
| Labour force participation                        | -0.1       | 0.0         | -0.1       |
| Employment as a percentage of the labour force    | 0.2        | -0.2        | -0.1       |
| Hours worked per employee (average working hours) | 0.2        | 0.0         | 0.3        |
| Production per hour (labour productivity)         | 0.8        | -0.2        | 0.5        |
| <b>GDP/capita at fixed prices</b>                 | <b>1.0</b> | <b>-0.2</b> | <b>0.5</b> |
| Residual (current account)                        | -0.3       | -0.2        | -0.2       |
| <b>Real GDP/capita</b>                            | <b>0.8</b> | <b>-0.4</b> | <b>0.3</b> |

Note. The contributions have been rounded off. The series refer to Swedish growth minus German growth. Positive figures thus mean that Swedish growth has been higher than German growth. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. 2009 and 2010 are excluded, as developments in these years were extreme and have a major impact on the averages. German population aged 15-74 has had a time series break in 2010 and has therefore been spliced with an average of growth in 2009 and 2011. Swedish employment and labour force 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended.

Sources: Eurostat, the OECD and own calculations

<sup>16</sup> The correlation between the German current account and the residual is 0.99.

From 1996 to 2008, real GDP per capita and labour productivity grew by an average of 0.8 percentage points faster in Sweden than in Germany every year (see Table 3). The difference between the contributions in 1996–2008 is similar to the difference measured throughout the entire period examined, except that productivity and employment as a percentage of the labour force contributed more to growth in Sweden than in Germany during 1996–2008.

It is primarily since 2004 that labour force participation and employment as a percentage of labour have increased rapidly in Germany. This coincides with the introduction of the Hartz reforms 2003–2005, which reformed the German labour market. The reforms aimed to increase the supply of labour and as Figure 6 shows, labour force participation has increased somewhat faster in Germany than in Sweden. However, reforms have also been implemented in Sweden, which have contributed to increasing the labour supply during this period. Labour force participation is still at a higher rate in Sweden than in Germany; in 2018 the labour force participation rate in the ages 15–74 was 73 per cent in Sweden and 69 per cent in Germany<sup>17</sup>.

During the past eight years, growth in real GDP per capita has on average been stronger in Germany than in Sweden, on average 0.4 percentage points higher per year. The component that really stands out here is the current account, as the growth contribution here has been negative in Sweden, but positive in Germany<sup>18</sup>. Additionally, labour productivity and the percentage of the labour force with jobs have contributed more to growth in Germany than in Sweden.

#### **Decomposition of the difference in growth in real GDP per capita in Sweden and various comparison countries**

Below, the same calculation has been made for Finland, Denmark and EU28 (see Table 4 and figures in the Appendix). The table shows the average relative difference between the contributions during 2011–2018.

During 2011–2018, growth in real GDP per capita has been higher in Sweden than in Finland. The financial crisis in 2008 and the debt crisis in 2012 hit Finland harder than Sweden, and it was not until 2016 that growth in real GDP per capita was as high in Finland as in Sweden. It is largely labour force participation and employment as a percentage of the labour force that have contributed more to growth in Sweden than in Finland. At the same time, the current account's contribution to growth has been negative in Sweden, but positive in Finland<sup>19</sup>.

<sup>17</sup> Statistics Sweden has detected quality problems in the Labour force surveys (LFS) that arose in June 2018. The whole year figure for 2018 may therefore be misleading. However, the first quarter of 2018 should be correct and in that period Swedish labour force participation was 72.2 per cent (not seasonally-adjusted).

<sup>18</sup> See Figure 7 in the Appendix for a decomposition of growth in real GDP per capita in Germany.

<sup>19</sup> See Figure 8 in the Appendix for a decomposition of growth in real GDP per capita in Finland.

**Table 4. Average contribution to the difference between growth in real GDP per capita in Sweden and other countries, 2011–2018**

Per cent, average difference between annual percentage growth rates

|   | Finland    | Denmark    | EU28        |
|---|------------|------------|-------------|
| Percentage of the population of working age       | -0.2       | -0.3       | -0.1        |
| Labour force participation                        | 0.4        | 0.7        | 0.2         |
| Employment as a percentage of the labour force    | 0.2        | -0.1       | -0.1        |
| Hours worked per employee (average working hours) | 0.0        | 0.1        | 0.0         |
| Production per hour (labour productivity)         | 0.1        | -0.2       | -0.2        |
| <b>GDP/capita at fixed prices</b>                 | <b>0.5</b> | <b>0.2</b> | <b>-0.1</b> |
| Residual (current account) <sup>20</sup>          | -0.3       | -0.2       | -0.2        |
| <b>Real GDP/capita</b>                            | <b>0.2</b> | <b>0.0</b> | <b>-0.3</b> |

Note. The contributions have been rounded off. The series refer to Swedish growth minus the comparison country's growth. Positive figures thus mean that Swedish growth has been higher than the comparison country's growth. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Swedish employment and labour force 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended.

Sources: Eurostat, the OECD, Statistics Finland and own calculations

Compared with Denmark, growth in GDP per capita at fixed prices has on average been higher in Sweden during 2011–2018. At the same time, the current account has generally been negative in Sweden, but not in Denmark, so on average there has not been any difference between Swedish and Danish growth in real GDP per capita. Labour force participation has on average risen in Sweden, but fallen in Denmark, and has on average contributed 0.7 percentage points more per year to Swedish growth. At the same time, productivity growth has on average been higher in Denmark and the growth contribution from demographic development has been more negative in Sweden.

It has on average gone somewhat better in the entire EU28 aggregate than in Sweden. Growth in both real GDP per capita and GDP per capita at fixed prices has been higher in EU28 than in Sweden. This is mainly due to growth contribution from the current account being negative in Sweden, but not in EU28, and to labour productivity contributing more to growth in the EU28 aggregate.

## Summary – Sweden has a high level of prosperity

During 2011–2017, growth in GDP per capita at fixed prices was on average 1.2 per cent per year in Sweden, which was the fourth highest growth in EU15. At the same time, our current account deteriorated, which reduced our real purchasing power. Real GDP is adjusted for changes in the current account and during 2011–2017 real GDP per capita grew on average by 1.1 per cent a year in Sweden, which was the fifth highest growth in EU15.

Growth in real GDP per capita was high in 2015, but has since then slowed down. The lower growth in the past three years is largely due to the current account declining and labour productivity being lower. Moreover, demographic developments (a smaller percentage of the population being of working age) and lower average working hours have weighed down growth since the financial crisis. Demographic developments will probably continue to weigh down the Swedish economy going forward. According to Statistics Sweden's population forecast, the percentage of the population that is of working age is expected to continue falling. A smaller percentage of the total population will probably work and contribute to production, which will continue to dampen the conditions for growth in GDP per capita.

<sup>20</sup> The correlation between growth in the Finnish current account and the residual is 86 per cent, which is lower than the corresponding correlation in Sweden and Germany. The residual can nevertheless be assumed to capture parts of the development of the Finnish current account. The corresponding correlation in Denmark and EU28 is 0.95 and 0.998, respectively.

In a longer perspective, the development of prosperity has been fairly stable. Over the past 20 years, Sweden has vacillated between eighth and twelfth place on the OECD's prosperity index for purchasing power adjusted GDP per capita. Sweden is thus a relatively prosperous country. However, for the past six years the relative prosperity level according to purchasing power adjusted GDP per capita has developed slightly slower. Danish prosperity is now higher than Swedish, and Sweden is no longer on a higher level than Germany.

That Germany has developed more strongly than Sweden in recent years can also be seen in the development of real GDP per capita. From 1996 to 2008, the average growth rate was 0.8 per cent higher per year in Sweden than in Germany, but since the financial crisis the development has been reversed. Growth has instead been on average 0.3 per cent higher per year in Germany. This is especially due to employment and labour productivity having grown more strongly in Germany, but also the current account weighing down income development in Sweden while contributing to a positive development in Germany.

The Swedish economy will face several challenges going forward. Demographic developments, integration of new arrivals into the labour market, the development of the current account and the recent weak development in productivity are all factors that risk dampening the development of incomes. There are difficulties for new arrivals to get into the labour market and even if integration of new arrivals into the labour market has been somewhat faster in recent years<sup>21</sup>, it is still important that integration continues to improve. If new arrivals continue to experience difficulties getting into the labour market, it could slow down growth in GDP per capita. Productivity growth has been relatively weak in many countries, including Sweden, which can be explained by both structural and cyclical factors<sup>22</sup>. It is reasonable to assume that productivity growth will rise somewhat in the near future, but if growth does not increase income development may remain weak. There are thus many challenges, which are shared with most other wealthy countries. But on the whole, Sweden is a wealthy country with a high level of prosperity.

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<sup>21</sup> According to register data on integration from Statistics Sweden, asylum seekers are now finding jobs more quickly.

<sup>22</sup> See "Produktiviteten i Sverige" (Productivity in Sweden) in Wage Formation in Sweden 2017 and "Produktivitetens utvecklingen i Sverige" (Productivity growth in Sweden) in Wage Formation in Sweden 2019 for a description of Swedish productivity growth.

## Appendix

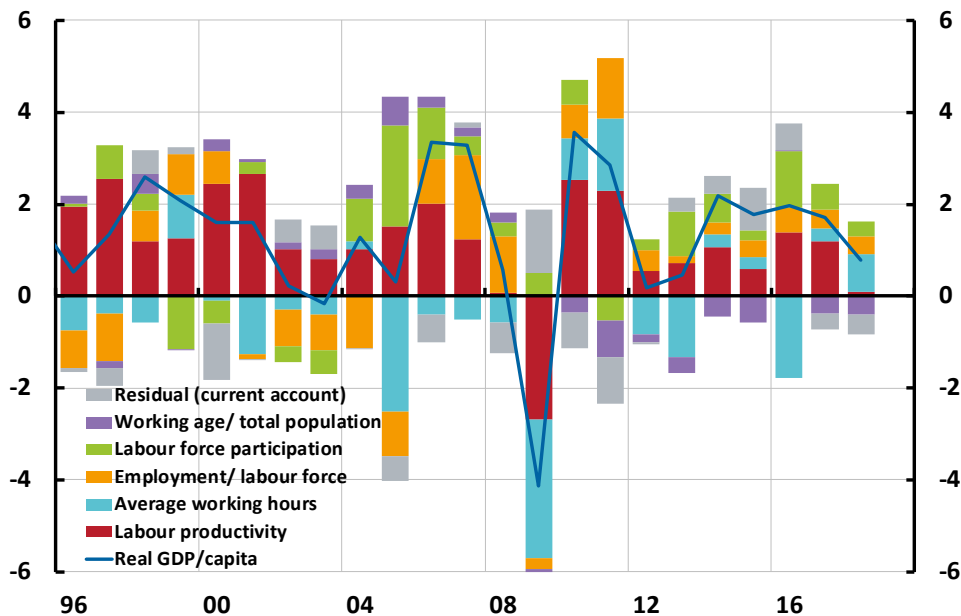
**Table 5. Definitions and descriptions of the prosperity measures included**

| Measure   | Description  |
|---|--|
|   | GDP (gross domestic product) measures the total economic activity in a country during a specific period of time.   |
|   | When variables are expressed in terms of per capita (per inhabitant), this means that the measure has been divided by the population and thus it takes into account developments in the population.  |
| <b>Purchasing power adjusted GDP per capita</b>                                 | The purchasing power adjustment is made to convert a variable from national to common currency and to adjust for the difference in general price levels between countries. The purchasing power adjustment is made with the aid of Purchasing Power Parity, which is created by compiling the prices of goods in a basket in national currency and comparing with the prices of corresponding baskets of goods in a comparison area, such as the OECD countries. Purchasing power adjusted variables also correct for changes in the current account, which can play a decisive role for countries with substantial foreign trade.   |
| <b>Purchasing power adjusted GNI per capita</b>                                 | GNI (gross national income) includes all incomes in a country during a certain period of time. GDP measures the value of all production and thereby all incomes that are generated within the country, while GNI measures all income accruing to people living in the country. The difference between the two measures consists of remuneration for work and capital that go abroad and come from abroad. Gross national income is obtained by adding the net total of capital incomes and work incomes going abroad and coming from abroad <sup>23</sup> to GDP.<br><br>See purchasing power adjusted GDP per capita for a description of “per capita” and purchasing power adjustment. |
| <b>Households’ individual consumption per capita, purchasing power adjusted</b> | Households’ individual consumption covers all goods and services consumed by the household (even services provided by the public sector).<br><br>See purchasing power adjusted GDP per capita for a description of “per capita” and purchasing power adjustment.   |
| <b>GDP per capita at a fixed price</b>  | GDP (gross domestic product) measures the total economic activity in a country during a specific period of time.<br>GDP expressed in fixed prices adjusts for price developments in what is produced and thus describes the development in production volumes. GDP per capita also adjusts for developments in the population.   |
| <b>Real GDP per capita</b>  | GDP (gross domestic product) measures the total economic activity in a country during a specific period of time.<br>Real GDP adjusts for both inflation and changes in the current account (relative price developments on exports and imports). GDP per capita also adjusts for developments in the population. When real GDP is calculated, it is natural to deflate using price developments on domestic final use.   |
| <b>Real GNI per capita</b>  | GNI (gross national income) includes all incomes in a country during a certain period of time. See more about the difference between GDP and GNI under purchasing power adjusted GNI per capita.<br>Real GNI adjusts for both inflation and changes in the current account (relative price developments on exports and imports). GNI per capita also adjusts for developments in the population. When real GNI is calculated, it is natural to deflate using price developments on domestic final use.   |

<sup>23</sup> Such as interest rates, share dividends, return on direct investment abroad, salaries and some taxes and subsidies.

**Figure 7. Decomposition of growth in German real GDP per capita**

Annual percentage growth

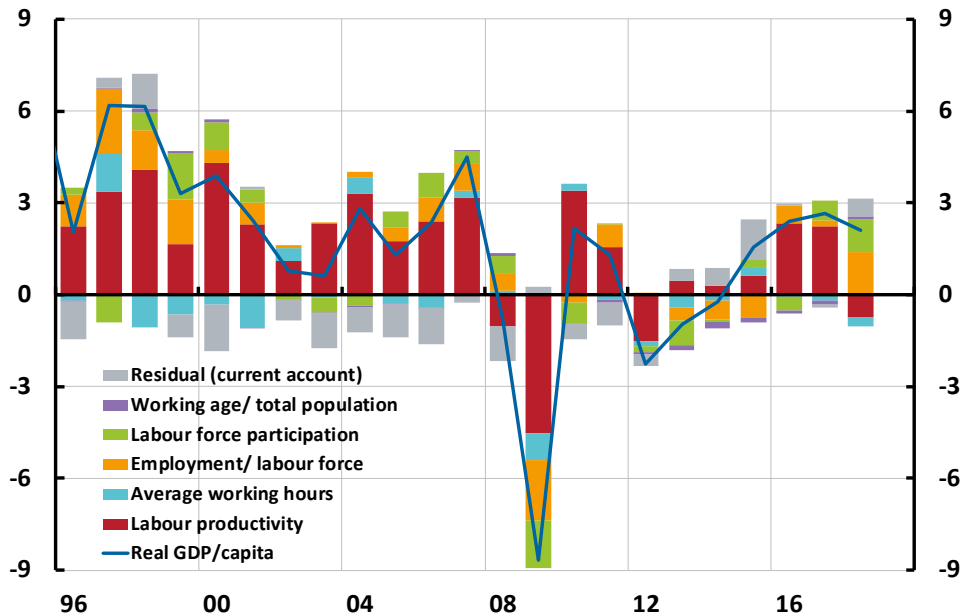


Note. Residual (current account) refers to the contribution to growth in real GDP per capita that is not explained by the other variables. German population aged 15-74 has had a time series break in 2010 and has therefore been spliced with an average of growth in 2009 and 2011

Sources: Eurostat, the OECD and own calculations

**Figure 8. Decomposition of growth in Finnish real GDP per capita**

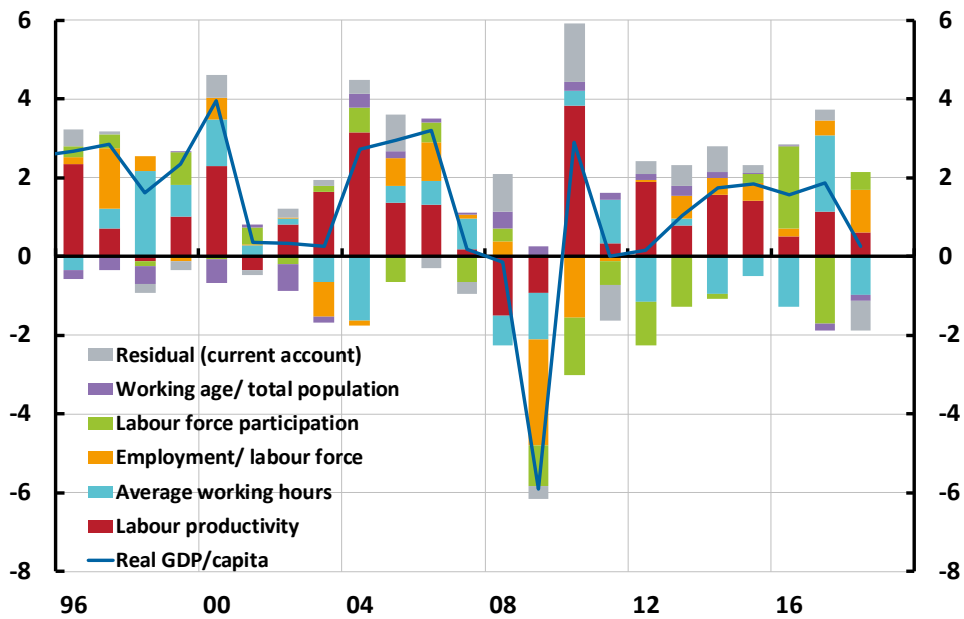
Annual percentage growth



Note. Residual (current account) refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Sources: Eurostat, the OECD and own calculations

**Figure 9. Decomposition of growth in Danish real GDP per capita**

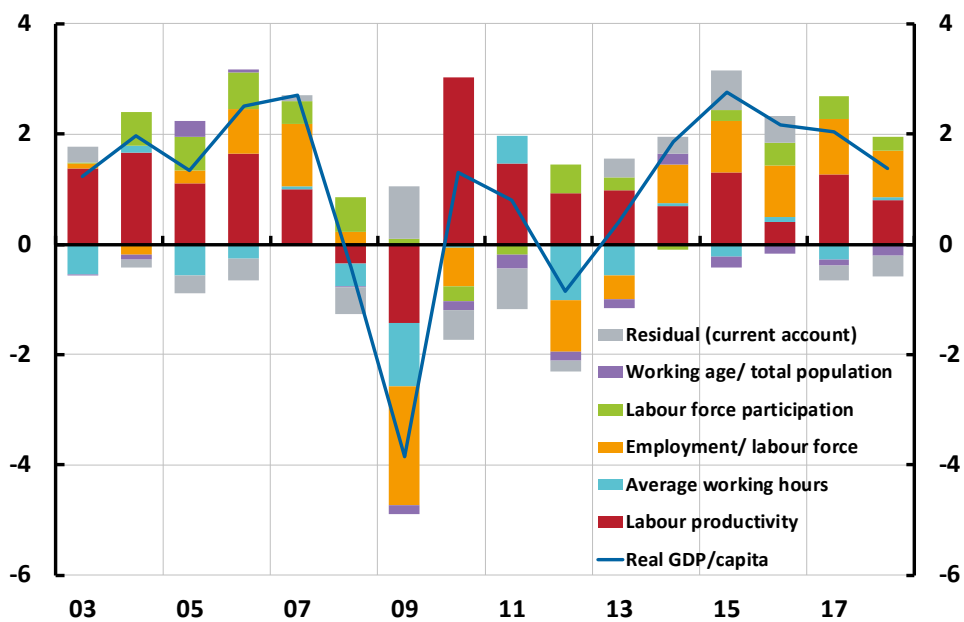
Annual percentage growth



Note. Residual (current account) refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Sources: Eurostat, the OECD and own calculations

**Figure 10. Decomposition of growth in real GDP per capita in the EU28**

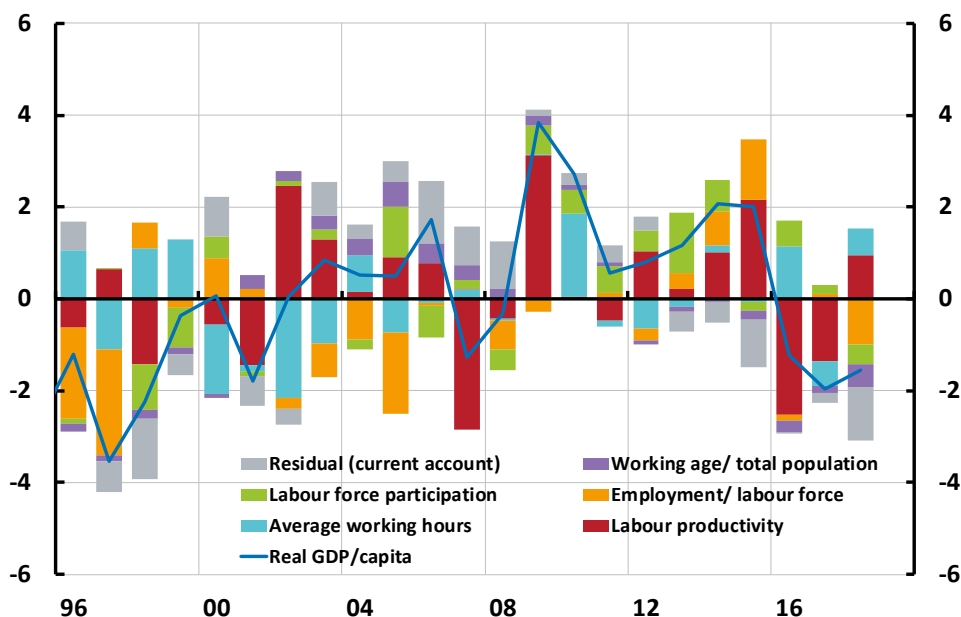
Annual percentage growth



Note. Residual (current account) refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Sources: Eurostat, the OECD and own calculations

**Figure 11. Decomposition of Swedish growth relative to Finnish in real GDP per capita**

Annual percentage change.

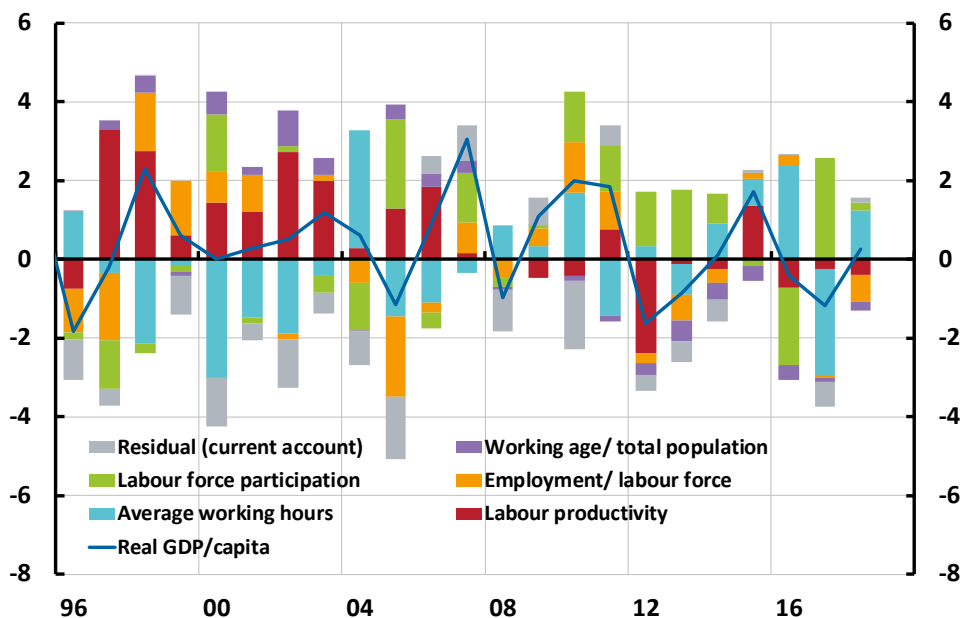


Note. The series refer to Swedish growth minus Finnish growth. Positive figures thus mean that Swedish growth has been higher than Finnish growth. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Swedish employment and labour force 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended

Sources: Eurostat, the OECD, Statistics Finland and own calculations

**Figure 12. Decomposition of Swedish growth relative to Danish in real GDP per capita**

Annual percentage change



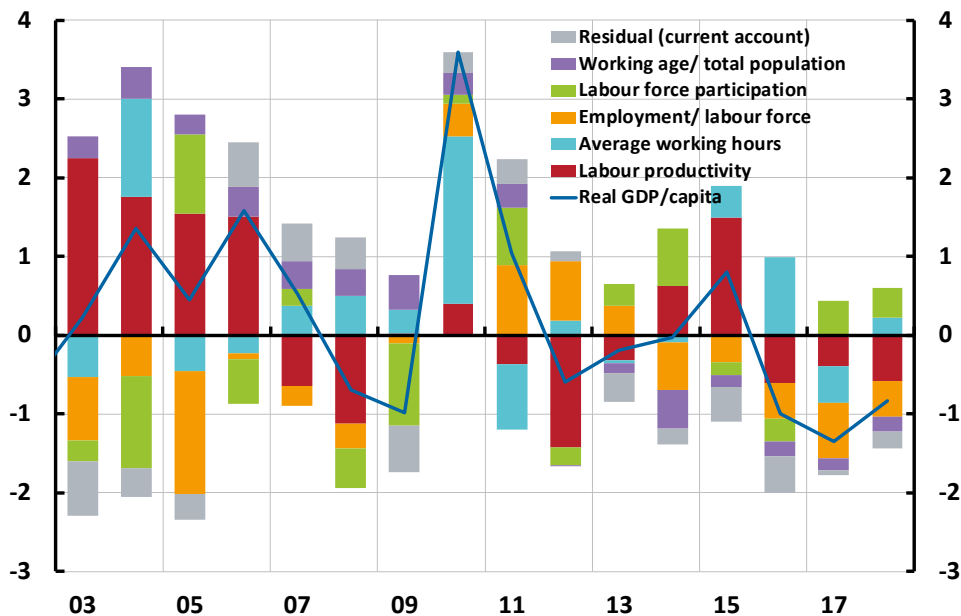
Note. The series refer to Swedish growth minus Danish growth. Positive figures thus mean that Swedish growth has been higher than Danish growth. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Swedish employment and labour force 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended

Sources: Eurostat, the OECD and own calculations



**Figure 13. Decomposition of Swedish growth relative to growth in real GDP per capita in the EU28**

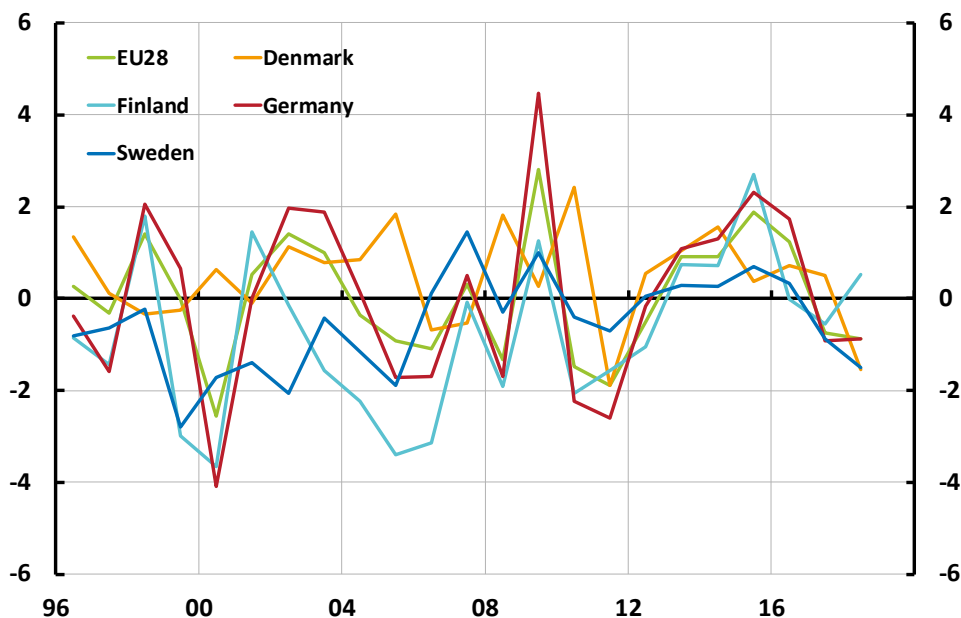
Annual percentage change



Note. The series refer to Swedish growth minus growth in the EU28 aggregate. Positive figures thus mean that Swedish growth has been higher than growth in the EU28 countries. Residual refers to the contribution to growth in real GDP per capita that is not explained by the other variables. Swedish employment and labour force 2018 are affected by quality problems in the statistics that arose in 2018 H2, the outcomes for 2018 may therefore be amended  
Sources: Eurostat, the OECD and own calculations

**Figure 14. Current account in Sweden, Germany, Finland, Denmark and the EU28**

Annual percentage change



Source: OECD