Analysis

Inflation now explained by different factors than during the recession

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The GDP deflator reflects the cost-competitiveness of Finnish production better than consumer prices do. Changes in the GDP deflator describe the change in prices of goods and services produced in Finland regardless of whether they are consumed in Finland or abroad.



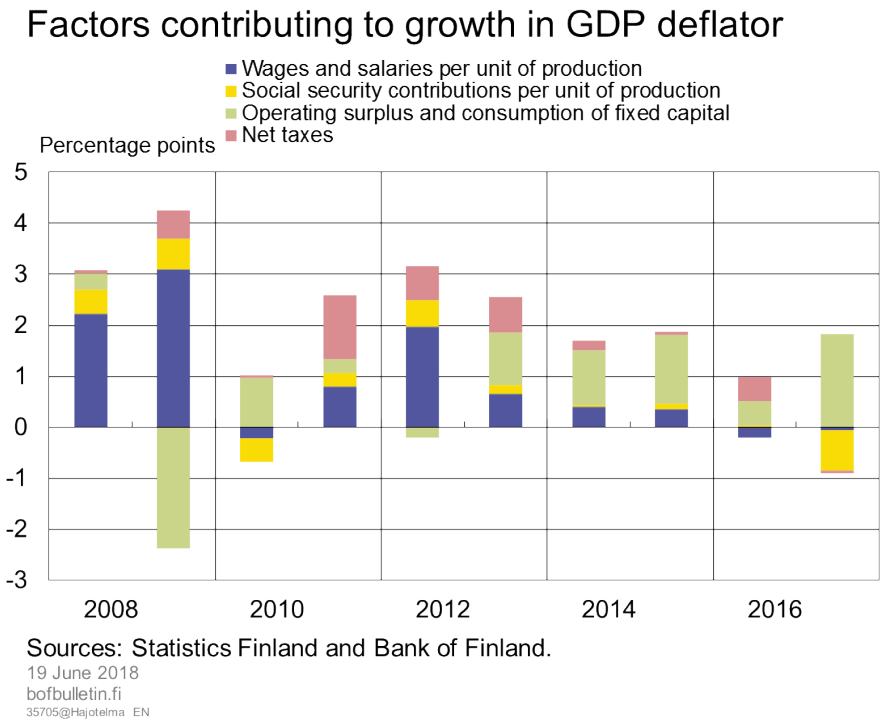
Inflation according to the GDP deflator is not the same as inflation based on the consumer price index. The rate of growth of consumer prices depends not only on domestic production but also on the price development of consumed commodities that have been imported. The advantage of the GDP deflator compared with the consumer price index is that it can be defined as a sum of income per unit of output and thereby determine to what extent inflation trends depend on various domestic cost factors. Despite differences in price concepts, changes in the GDP deflator and the consumer price index follow each other closely, because Finnish households mainly consume products and services produced in Finland.

Price developments followed economic cycle

Measured with the GDP deflator, inflation in 2008–2017 averaged 1.7%, reasonably closely mirroring consumer price inflation (Chart 1).

After the financial crisis, the rate of inflation closely followed the economic cycle, in terms of both consumption and production prices. During the deepest part of the recession, the growth rate of prices in domestic production temporarily entered negative territory, in 2010. As the economy recovered temporarily in 2011–2012, so did the costs of production factors, and inflation accelerated to about 3%. In 2012, however, inflation began to decline more permanently, and not even the current economic upswing is reflected in the rate of inflation. During 2015–2017, the annual rate of price increase has for the most part been under 1%, measured by both the consumer price index and the GDP deflator.

Chart 1.



Production price increase is the sum of many factors

The value of GDP is calculated in the national accounts as the product of real GDP (GDP) and its price (P). The value of GDP is also equal to the income created to produce it, including taxes paid thereon. This remuneration of the factors of production comprises wages and salaries, employers' social security contributions, corporate operating surpluses, and the net taxes paid by companies

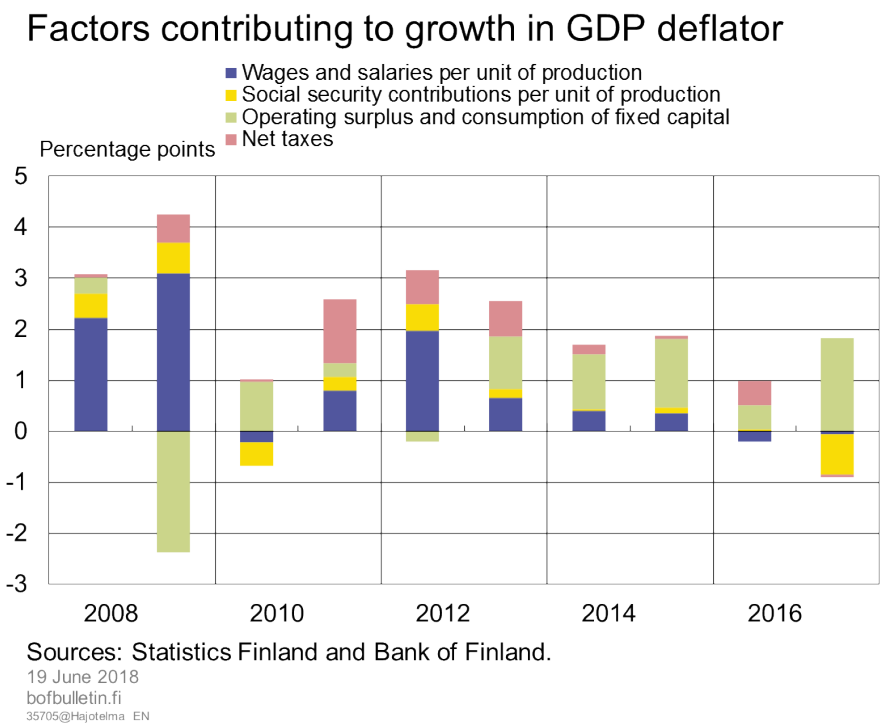
and employees for production and import:

P*GDP =
wages and salaries +
employers' social security contributions +
gross corporate operating surplus +
production and import taxes – subsidies +
consumption of fixed capital

Dividing the income items by GDP volume enables calculation of the growth rate of the GDP deflator as the sum of the changes in national income per unit of output.

Chart 2 shows how many percentage points various types of income per unit of output have contributed to the annual GDP inflation rate in 2008–2017. Operating surplus refers to either a surplus or deficit caused by business activity, i.e. once intermediate consumption, wage and salary costs including social security contributions and net taxes have been subtracted from the value of production. Operating surplus has been defined in the chart in net terms, i.e. once not only wage and salary costs and net taxes, but also consumption of capital has been subtracted from corporate added value.

Chart 2.



At the beginning of the review period, in 2008–2013, the rise in the price of domestic production was largely due to a rapid rise in unit labour costs. Unit labour costs refer to compensation of employees per unit produced, consisting of not only wages and salaries but also social security contributions paid by employers. The effect on inflation from each of these is reported separately in the chart.

The change in unit labour costs may also be divided into the change in the wage sum and the change in labour productivity. Of these, a rise in wages and salaries accelerated inflation by an average of 1.7 percentage points per annum, which accounted for about three quarters of the cumulative increase in production prices. The proportion of the increase in annual inflation due to social security contributions averaged 0.3 of a percentage point over the same period.

The rise in wages and salaries was rapid, especially in the early part of the recession, due to the high general pay increases agreed for 2008 and 2009. Average pay per employee in 2008–2010 increased by about 3.1% per annum.

The rise in unit labour costs was also accelerated by poor development of labour productivity, as the number of employees fell only moderately compared with the lower production figures. In 2009 alone, productivity per employee declined by 6.0%. Productivity improved temporarily in 2010 during an economic upswing, but after that productivity remained unchanged for a

prolonged period, occasionally even dipping into negative territory. Labour productivity growth in 2008–2013 contracted by an average of 0.8% per annum.

Owing to the recession and a rise in unit costs, companies had to lower their profitability targets, which helped to moderate the rise in production costs. The effect of smaller operating surpluses on the price of production was an average of -0.7% in 2008–2013.

During the deepest recession, net operating surpluses were eroded not only by poor profitability but also by erosion of the capital stock, exacerbated by structural changes in industry that coincided with the recession. The quick contraction of the electrical engineering and electronics industries made part of the existing capital base redundant. The eroded capital base contributed an average of almost 0.9 of a percentage point per annum of the price growth rate.

After the middle of the current decade, the Finnish economy began to recover gradually from recession, helped in part by better corporate cost-competitiveness. Non-financial corporations have been able to recover some of the profitability they lost during the recession partly because pay increases have been low in recent years. In 2014–2016, average pay increased by only about 1% per annum. Towards the end of the review period, unit labour costs fell largely as a result of the Competitiveness Pact signed in 2016.

In fact, growth in unit labour costs only accounts for 0.1 of a percentage point of the speed of growth in production costs in the period 2014–2017. Growth in unit labour costs has, in addition to low pay increases, been limited by labour productivity development, which in 2014–2016 increased by an average of 0.7% per annum.

Seen from this point of view, the rise in production prices has since 2014 been mostly in connection with larger corporate operating surpluses. As the economy has improved, so has corporate pricing power, enabling companies to increase their prices and thereby improve their profitability. Operating surplus growth accelerated inflation in 2014–2017 by an average of 1.2 percentage points per annum, accounting for about 90% of the total increase in prices. Consumption of capital only accounted for about 0.1 of a percentage points of this. Now that the most rapid phase of industrial restructuring has been concluded, the capital base is also being consumed at a slower rate.

The effect of higher taxes on inflation was at its height in 2016, when net taxes accounted for almost 0.5 of a percentage point of the growth in production costs. On the other hand, increases in non-wage labour costs have not caused any major inflationary pressures in recent years. In 2017, employment-related social security contributions actually decreased as non-wage labour costs paid by companies were reduced as part of the Competitiveness Pact. Lower social security contributions slowed inflation by about 0.8 of a percentage point.

Based on the inflation decomposition presented here, inflation is now explained by other factors than during the recession. In the years since the financial crisis, all the way until about 2015, price increases were explained primarily by rises in unit labour costs. Unit labour costs were pushed up by a relatively rapid rise in wages and salaries coupled with weak labour productivity. Following the turn in the economic cycle, growth in unit labour costs slowed down, and inflation as measured by production prices has been most clearly linked to higher corporate operating surpluses.

Keywords

gross domestic product, operating surplus, production price, unit labour costs