Analysis

Corporate profits not indicating changes in firms' pricing strategies

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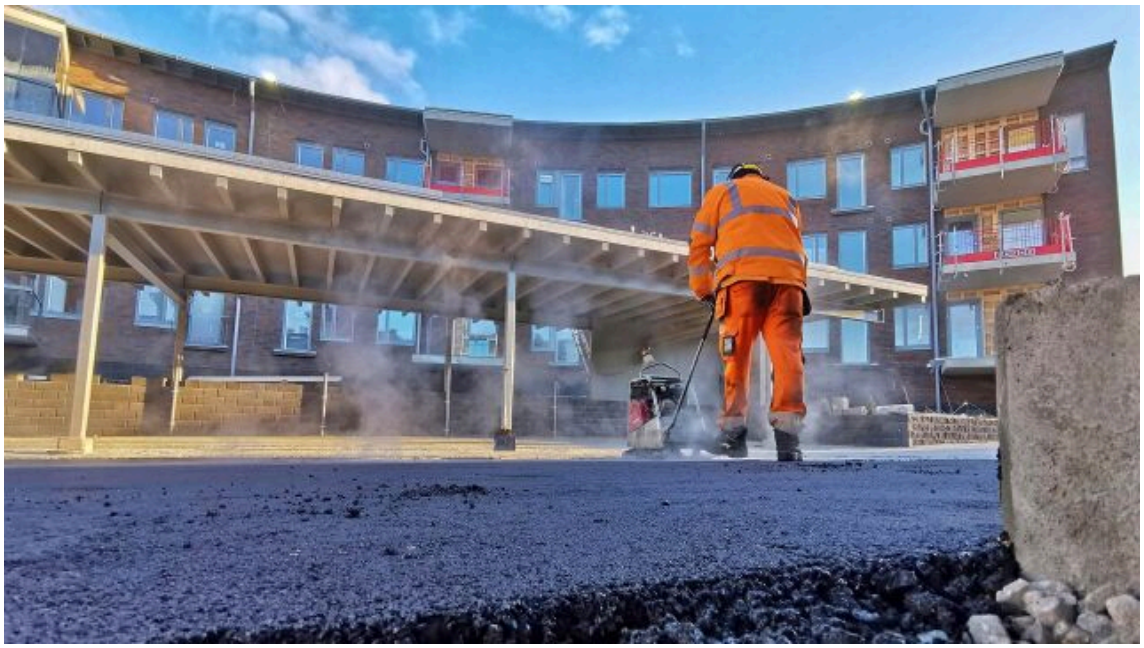


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The post-pandemic growth in corporate profits seen since the COVID-19 pandemic in countries other than Finland has been erroneously interpreted – also in Finland – as a signal of inflationary pressures generated by companies' pricing strategies. This article seeks to provide an overall picture of the evolution of corporate profits and their relationship with changes in costs in Finland by examining various indicators capturing the macro economy. None of the indicators is pointing to an unusual growth in corporate profits in recent years. Therefore, it does not appear that firms have changed their pricing strategies in such a way that their profits would be driving up inflation.



Inflation surged in the latter half of 2021 and has remained high. There are, however, some encouraging signs that it is beginning to moderate. Energy prices have declined in recent months, and underlying inflation – albeit still high – has also edged downwards. The protracted period of high inflation has sparked debate as to the root causes of current inflation rates. One explanation has received particular media attention, namely 'greedflation', which is the idea that companies would currently be taking advantage of high inflation and hiking their prices to increase profits. This in itself would drive up inflation.

The debate on the implications of corporate profits for inflation first emerged in the United States[1] and subsequently spread widely across Europe. The ECB's June projections discuss the contribution of profits to inflation in the euro area. In Finland, inflation and profit dynamics have been analysed, among others, by the Ministry of Finance[2].

The role of corporate profits in explaining inflation is a multifaceted issue and should therefore be analysed from various perspectives instead of using a single indicator alone. This article explores corporate profit dynamics on the basis of various indicators, which are also used by the ECB. First, we discuss the price of output, its evolution and components. We then examine corporate market power and its implications for corporate profits at the macroeconomic level. The last section presents three indicators of profits and analyses corporate profit trends in recent years in light of these indicators.

Price of output driven up in Finland by both wages and corporate profits

The impact of profits on the price of domestic production can be analysed by decomposing the price of output – the GDP deflator – into its subcomponents.[3]

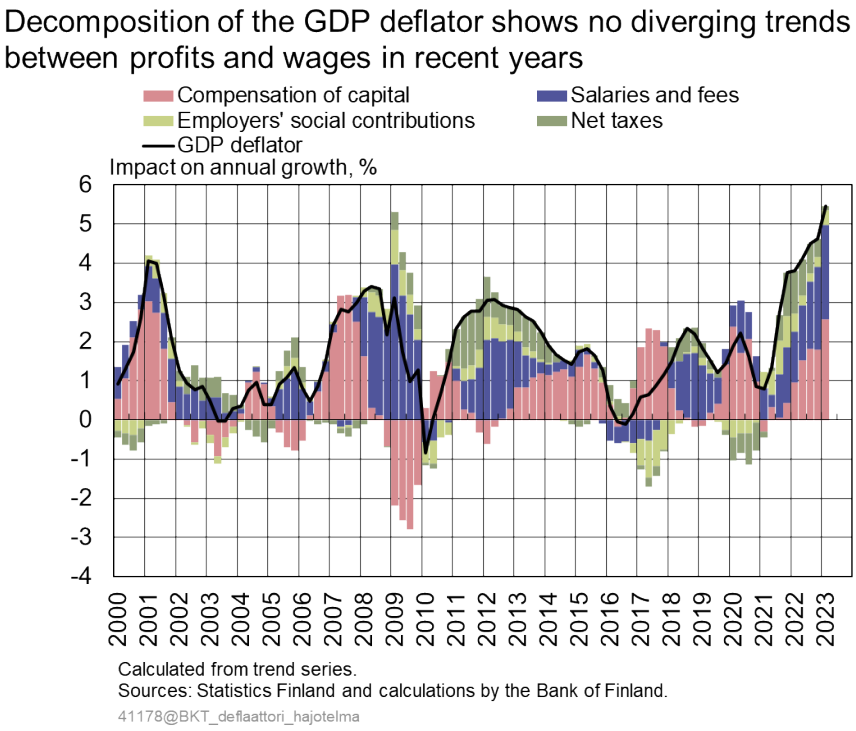
The value of GDP is calculated in the national accounts by multiplying the volume of domestic output (GDP) with the price of output (GDP deflator). The value of GDP is also equal to the income generated to produce it, including taxes paid thereon. This remuneration of the factors of production comprises compensation of employees (wages and salaries and employers' social contributions), corporate profits (operating surplus), and the net taxes paid by companies and employees for production and imports.

By decomposing the GDP deflator, a rough estimate can be made of the extent to which an increase in the price of output is attributable to the compensation paid to employees on the one hand, and the compensation paid to owners of capital, on the other hand. In addition to wages and salaries, employers' social contributions, too, accrue to employees. For the sake of simplicity, these items – compensation of employees – are hereinafter also referred to as wages. Corporate profits, in turn, are income received by owners of capital, or compensation of capital, and are referred to in the national accounts as operating surplus.

The relative importance of wages and profits for the price of output varies with the economic cycle. Labour costs play a greater role when profits are low, i.e. in downturns and recessions, and vice versa. Profits tend to respond to cyclical fluctuations quickly, while wages are typically sluggish in their response. Right before the financial crisis, for example, corporate profits surged and accounted for most of the increase in the price of output. After the crisis broke out, however, corporate profits contracted and growth in the price of output was supported by higher labour costs.

From 2021 to the first quarter of 2023, despite the fairly strong cyclical conditions and surging prices, compensation of capital and compensation of employees have made roughly an equal contribution to the rise in the price of domestic output. This implies that the trend in companies' wage costs has not diverged from the trend in compensation of capital.

Chart 1.



Therefore, in light of the current statistical data, the decomposition of the GDP deflator is not pointing to a substantial increase in the contribution from corporate profits in Finland. According to the ECB, firms' profits have been supported by exceptional factors in recent years. That does not mean, however, that the larger contribution from profits would – even in the euro area – stem from changes in firms' pricing strategies, as also evidenced later in this article. In addition, the ECB's projections suggest that, among the components of the GDP deflator, unit labour costs will play a greater role over the forecast horizon 2023–2025. It should also be noted that the recent debate on greedflation has focused on consumer price inflation, not on the price level of GDP. When analysing the factors underlying changes in consumer prices, there is good reason also to take into account supply chain delays, due to which considerable changes in input prices, such as energy, may feed through into consumer prices even after a long time lag.

Market power enables divergences between prices and production costs

There is nothing special in companies' pursuit of profits as such – that is what they are meant to do. As perfect competition is unusual in the markets, firms have market power that allows their prices to diverge from production costs. According to economic theory, companies set their prices by charging a markup over marginal costs. Inflationary pressures can therefore reflect either

increases in the (marginal) cost of production or increases in markups (firms' strategic behaviour), or both.

There are many reasons why a firm can have market power, such as technological advantage over competitors, barriers to entry, or monopoly power due to regulation. Market power is therefore largely explained by long-term structural factors, but its level can vary because of temporary factors.

Markups – price over marginal cost – capture market power and illustrate how much the prices set by a company to its products differ from prices under perfect competition. Markups are not directly measurable or observable from statistics, as hypothetical prices under perfect competition, corresponding to firms' marginal costs, are not known. However, the level of markups can be estimated with statistical methods.

Firms' market power and markup ratios may rise for various reasons, which are not easily identifiable.[4] Market power can increase as a result of, for example, a reduction in consumers' price sensitivity or growth in a company's pricing power due to lower competition. There is evidence of such dynamics in the United States, for example, where single 'superstar' firms in the technology sector have very high market shares.[5] Although there are no similar superstar firms in Finland, certain markets are highly concentrated.[6] Laine (2018) has examined the development of Finnish firms' market power in 1976–2016 and has found no evidence of a clear upward trend. Vanhala and Virén (2018) have come to the same conclusion by analysing various indicators of market concentration using Finnish firm-level data.

Even if companies' market power would not change in a long term, last years' exceptional circumstances may have had a temporary effect on it. For example, supply chain bottlenecks may temporarily improve the competitive position of some firms. Prices and therefore profits may also fluctuate even considerably in the short term, in line with the economic cycle, and yet this fluctuation does not necessarily signify changes in market power. Profits fluctuate because of shocks, but structural factors may remain unchanged.

ⓘ Profit indicators derived from national accounts are manifold

$$Profit\ share = \frac{Operating\ surplus\ (gross)}{Value\ added\ (gross)}$$

$$Unit\ profits = \frac{Operating\ surplus\ (gross)}{Value\ added\ (real)} = GDP\ deflator - Unit\ labour\ costs$$

$$Profit\ margin = \frac{GDP\ deflator}{Unit\ labour\ costs}$$

Indicators measuring corporate profits are manifold

As market power cannot be measured exactly, particularly in real time, corporate profits are often estimated on the basis of the ratio of profits to value added derived from national accounts statistics. The three indicators of profits analysed in this article have been computed based on Statistics Finland's national accounts data, and their definitions are presented in the information box above. Annual changes in the indicators are shown in Chart 2.[7]

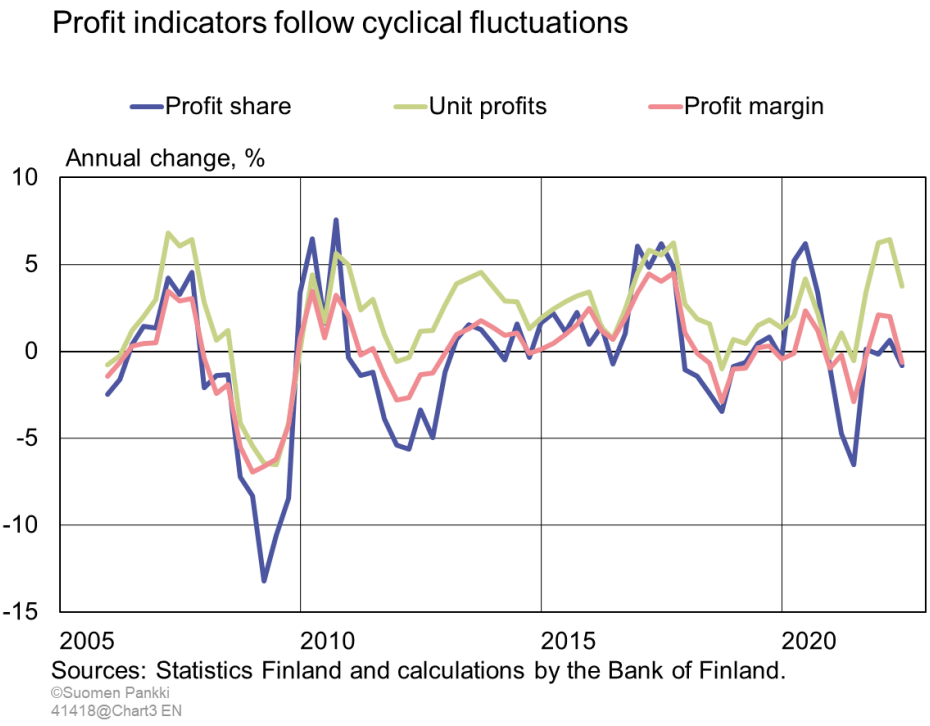
The first indicator measuring profits is the profit share, which is calculated simply as the ratio of (gross) operating surplus to (gross) value added.[8] Hence, operating surplus in the national accounts is a rough equivalent of firms' total operating profits. The profit share, although being one potential indicator of markups, can increase even if markups remain constant. Colonna et al.

(2023) show that this is the case particularly when the prices of intermediate inputs rise faster than labour costs (as in recent years in Finland and elsewhere in the euro area) or when input substitutability is limited in the short term, as has likely been the case in the previous year's energy crisis.[9]

The profit share has remained unchanged on average in Finland even during the crisis years (Chart 2). The indicator still rose in the early phase of the COVID-19 crisis, driven by strong economic growth at the outbreak of the crisis, but fell following the pandemic-induced recession. Prior to Russia's invasion on Ukraine, the economy, and by extension corporate profits, were experiencing a strong recovery, but the outbreak of the war reversed the positive trend. Based on the evolution of profit shares over the recent years, it cannot be concluded that higher corporate profits would have created particular price pressures or that firms' pricing strategies would have changed markedly.

The second indicator analysed here is the profit margin, i.e. the ratio of the GDP deflator to unit labour costs.[10] The profit margin illustrates whether profits grow *in relation* to labour costs and represents the distribution of profits and wages. Chart 2 shows that, as with to the profit share, the profit margin indicator has not risen in recent years either even though it, too, has fluctuated slightly with the economic cycle.

Chart 2.



The third indicator is unit profits, computed as the GDP deflator less unit labour costs and shown in Chart 2 in terms of annual changes. The indicator is based on the decomposition of the GDP deflator, just as the profit margin indicator, but yields a different picture of the evolution of corporate profits. This is because changes in unit profits measure the absolute contribution of profits to the growth of the GDP deflator, not the relationship between profits and wages in that growth. Thus, unit profits may increase and contribute to the rise in the price of output, but if unit profits grow at the same pace as unit cost, the profit margin, – the relationship between profits and wages – remains constant.

Chart 2 also shows the diverging trends in profit margins and unit profits. Unit profits have risen rapidly for well over a year, driving up the price of output, but profit margins have remained relatively unchanged during the same period, as unit labour costs, too, have grown roughly at the same pace. Chart 2 plots annual changes and shows that the annual change in unit profits has been positive on average, meaning it has grown over time. The annual change in the profit share and profit margin, which illustrate the relationship between profits and wages, has in turn averaged at approximately 0%. None of the indicators is pointing to an unusual growth in corporate profits. Therefore, it does not appear that firms have changed their pricing strategies in recent years in such a way that their profits would be driving up inflation.

The supply chain bottlenecks created during the COVID-19 pandemic partly continue to persist, sustained by the Ukraine war and sanctions. Demand, in turn, has recovered rapidly, leading to a clear imbalance in the markets and consequently to exceptional price increases. In such a situation, corporate profits temporarily grow faster than wages, which adjust to cyclical fluctuations with a lag. However, the evidence presented in this article does not suggest that, in the long term, profits would have driven up the price of output in Finland more than unit labour costs. As demand has waned sharply over the past year in the euro area and Finland alike, both the Bank of Finland's and the ESCB's projections are pointing to slower inflation and lower corporate profits in the near term. Unit labour costs will also grow markedly in the immediate years ahead.

Unlike in Finland, the indicators presented in this article have been historically high in the euro area despite the negative terms of trade shock and the economic slowdown. This has likely been attributable to the pandemic-related pent-up demand, supply bottlenecks and imperfect substitutability of production inputs. The moderate wage increases until recently have also played a role.

Strong corporate profitability and profits are goals worth aiming for, as firms' success or lack of success is reflected in the whole economy. Successful firms invest and create jobs, which increases economic growth. Profitable firms can build up buffers that enable them to emerge from downturns more easily and experience fewer furloughs and redundancies, for example. Successful

firms also support the public finances by generating tax revenue. Contrary to the recent debate, small rather than large corporate profits are what we should be concerned about.

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Notes

1. Andler and Kovner (2022). ↑
2. See related column on the Ministry of Finance's website (in Finnish). ↑
3. Nominal GDP can be computed as follows: GDP (nominal) = compensation of employees + employers' social contributions + operating surplus (compensation of capital) + net taxes. To calculate the GDP deflator, both sides of the equation must be divided by real GDP. GDP deflator is on the left-hand side of the equation, and the components on the right-hand side express the prices of each component per unit of output. This allows for an analysis of changes in the individual components. After this, the relative weight of each component in GDP must be computed. This yields the relative contribution of each component to GDP. Here, the original equation presented above is used, which is divided, on both sides, by nominal GDP. The left side of the equation becomes 1, and on the right side is each component's relative contribution to GDP, with the sum of these naturally being 1. With this relative contribution of an individual component, the change in that component is multiplied. This allows for an analysis of each component's relative contribution to a change observed in the GDP deflator. ↑
4. For example, economic megatrends – digitalisation and globalisation – may create a ↑

competitive advantage for the most productive and largest companies in a sector. Sectors may evolve to 'the winner takes most' markets where one or a few firms in a sector effectively control the market and reap most of the profits. This can create 'superstar companies' with large profits but low labour costs in relation to value added and net sales (see Autor et al. 2017 and Hall 2018). Such development may be explained by new competitive online platforms enabling easy comparison of prices and quality, and increased use of information-intensive commodities, the production of which has high fixed costs but low marginal costs.

5. Large firms and competitive situation in the United States has also been studied by Autor et al. (2017) and Hall (2018). ↑
6. One example is Nokia, which was a market leader before the breakthrough of Apple and Android. The example also shows that a company can also lose its market share: Nokia's markups contracted, while Apple's grew. ↑
7. The indicators have also been analysed in terms of levels, and the conclusions drawn do not differ from those based on the analysis in terms of annual changes. This suggests that the indicators follow cyclical fluctuations rather consistently, irrespective of the method of analysis. ↑
8. Gross value added is defined as output less intermediate consumption, giving the added value generated by factors of production. After deducting compensation of employees and taxes and adding subsidies, this yields the gross operating surplus. In a sense, the ratio of gross operating surplus to gross value added represents the contribution of capital to value added generated in production. The distribution of value added between labour and capital, i.e. between compensation of employees and profits, is referred to as the functional distribution of income (see e.g. related article on Statistics Finland's website (in Finnish)). In this case, the analysis usually looks at net figures, which exclude depreciation of capital. Compensation of employees and operating surplus often make up roughly 100% of value added. The share is not always exactly 100%, however, as value added also includes the component "other taxes less subsidies on production". According to historical data, the component has accounted at most for 1.5% of value added at the level of the whole economy and has therefore had a minor impact on the contribution from operating surplus. However, the exceptionally high subsidies on production paid in some countries in recent years due either to the COVID-19 crisis or the energy crisis may be reflected in profit indicators to some extent. ↑
9. This is explained by the fact that the profit share is calculated in relation to value added, while, according to theory, if the markup ratio remains constant, profits will rise relative to the total income generated in production. Therefore, if profits grow in relation to income generated in production, relative to value added they grow even more. ↑
10. GDP deflator, or the price of value added, is the price of output less the price of intermediate consumption. From the perspective of companies, it shows the difference between sales prices and prices of inputs (excl. labour). Unit labour costs in turn measure, as the term suggests, the cost of labour required to produce one unit of output. ↑

Keywords

inflation, market power, prices, profits