Office for National Statistics

Article

Economic Statistics Transformation Programme: enhanced financial accounts (UK flow of funds) improving the measurement of company quarterly profit

Estimating private non-financial corporations' profits in the UK National Accounts.

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Release date:
21 July 2017

Next release:
To be announced

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1 . Abstract

This article describes progress made in improving the measurement of company profits using non-survey data sources.

This work is part of the UK's Enhanced Financial Accounts initiative (also known as flow of funds), which is a partnership between Office for National Statistics and the Bank of England.

Included within the article is a definition of profit, a comparison of potential data sources, a description of the methodological challenges of using these data and a summary of how we will progress this work.

The author would like to acknowledge the following contributors to this article: Richard Campbell, Eric Crane and Gueorguie Vassilev.

2 . Introduction

We have ambitious plans to transform our economic statistics over the coming years, informed by our Economic Statistics and Analysis Strategy with the aim of increasing the robustness and quality of UK economic statistics. Working in partnership with the Bank of England, an important element of our transformation work is the development of enhanced financial accounts – in particular, more detailed "flow of funds" statistics – to meet evolving user needs.

This article summarises research to identify a data source and develop a methodology to improve the measurement of profits (in private sector accounting terminology) – or more correctly, gross operating surplus (GOS) in national accounts terminology.

There are two goals for this in the context of the Enhanced Financial Accounts (EFA) initiative; to improve the measurement of GOS (and consequently gross domestic product) in the national accounts, and to provide policy-makers and the public with an improved understanding of the performance of UK companies.

3 . Definition and current practice

Profit is a term often referred to but rarely defined. Simply put, it can be thought of as the amount of revenue (or income) generated minus costs (expenditure). Loss can be considered as negative profit – that is, costs are greater than revenue. For simplicity's sake, the term "profit" is used to describe both profit and loss in this article.

This definition broadly holds for company accounting.

Profit does not feature as a concept in the national accounts. However, a similar concept known as gross operating surplus (GOS) does. GOS can be thought of as profit from production of goods and services, excluding depreciation, which is the reduction of the value of an asset over time (wear and tear). GOS is used as part of gross domestic product (GDP) using the income approach, one of the three approaches used to calculate GDP alongside the output and expenditure approaches. To learn more about the three approaches to calculating gross domestic product (GDP), please see Understanding GDP and how it is measured.

In the national accounts, GOS is currently estimated using the Quarterly Operating Profits Survey (QOPS) as the main source of information for quarterly estimates of profits and aggregated HM Revenue and Customs (HMRC) Corporate Tax data for annual estimates. We use the process of balancing the three approaches of measuring GDP (income, expenditure and output) to refine these estimates. The data currently used to estimate GOS could be improved upon, with a greater level of detail. Obtaining more granular micro-data would enable a greater understanding of how and where profits (GOS) have been generated across the economy.

4 . Data sources

For this research, we have considered the potential of existing sources of administrative data to improve the measurement of profits (gross operating surplus) in the national accounts and in the context of the enhanced financial accounts. This is in line with our Economic Statistics and Analysis Strategy to use administrative, regulatory and commercial micro-data (that is, record-level) sources, to replace or enhance existing survey data wherever possible.

Two sources of data were considered; company accounts data submitted to Companies House and a combination of company accounts and tax returns submitted to HM Revenue and Customs (HMRC). These are referred to as Companies House and HMRC data respectively for the remainder of this article.

Companies House data

UK companies and overseas companies with a physical UK presence have a statutory obligation to submit their accounts to Companies House every year in accordance with the Companies Act 2006. All limited companies have to submit their accounts 9 months after their accounting year end and Public Limited Companies (PLC) have to submit their accounts 6 months after their accounting year end. Late filing penalties are imposed on companies who miss these deadlines.

Although all entities have to submit accounts to Companies House within the time frames, smaller companies can submit abbreviated accounts, which only consist of a balance sheet. Therefore, income and expenditure information and profits data would not be available from Companies House for small entities that choose to file abbreviated accounts. Companies House is working towards full digital filing, which will make it easier to use this data for statistical purposes.

HMRC data

Corporation Tax data incorporates the accounts of all limited companies based in the UK as well as all foreign companies with a permanent UK branch or office. Since April 2010, companies have had to file returns online, meaning there are comprehensive digital records from that period onward.

Companies have to file their Corporation Tax Returns, Corporation Tax Computations and Financial Accounts within 12 months of their accounting year end with HMRC. Companies submit their accounts together with their Corporation Tax Return(s) (known as CT600) and Corporation Tax Computations. The CT600 is self-assessed and it is trading companies' responsibility that this is filed every year. The Corporation Tax Computations are the calculations behind CT600.

If Corporation Tax Returns are filed late, HMRC impose penalties on companies – which we expect to help with the timeliness and coverage of the data. Although a set of accounts can be longer or shorter than 12 months; a CT600 cannot be longer than 12 months. The CT600 Returns also break down the tax liability into tax years (financial years).

Comparison with current sources

Both Companies House and HMRC data have the potential to improve on existing data sources due to the granularity of the data. As noted previously, quarterly estimates of gross operating surplus (GOS) are currently estimated using the Quarterly Operating Profits Survey (QOPS). QOPS surveys approximately 1,600 businesses per quarter. The survey asks companies to report on operating profit and depreciation, and the value of exceptional (that is, large or unusual) items. In comparison, both HMRC and Companies House data would essentially provide the same information and cover all UK-based businesses registered for Corporation Tax. This would enable more detailed figures, for example, more industry breakdowns to be produced.

Timeliness challenges

Both Companies House and HMRC data sources suffer from issues of timeliness due to the time frame allowed for companies to submit their returns to Companies House and HMRC. There is also a period for this data to be processed by HMRC and delivered to Office for National Statistics (ONS).

To give a sense of timelines, HMRC currently provides ONS with aggregate trading profit data (gross operating surplus) for Standard Industrial Classification 2007 (SIC 2007) at a two-digit level on an annual basis. HMRC delivers this data 16 months after the end of the calendar year to which the returns relate. For example, HMRC would deliver 2015 aggregate calendar year data to ONS by April 2017. This is because companies have 12 months in which to file their data (company accounts and tax) to HMRC and HMRC takes another 4 months to process and deliver this data to ONS.

ONS receives data based on period of account (time frame of the financial accounts). This is the timeframe for which the data relates to. For example, a company with the accounting year ending 31 July 2015 would have to deliver their accounts to Companies House by 31 January 2016 if they are a PLC (30 April 2016 otherwise). Data would have to be submitted to HMRC by 31 July 2016 and would form part of the 2015 calendar year dataset. HMRC would deliver this data to ONS about 16 months after the calendar year end.

Summary and preferred source

Both Companies House and HM Revenue and Customs data have the potential to improve on the coverage and granularity of current QOPS data. Both sources suffer from issues of timeliness as outlined previously. The trade-off between improved coverage and granularity and worse timeliness will require further investigation.

On balance, HMRC data offers the greater potential for improving the measurement of profits (gross operating surplus) because it includes information not present in the Companies House data. For example, the information included will enable better estimates of gross operating surplus to be calculated for small companies and would provide details by the type of transaction, not just their purpose, that is, what the item is used for (which is the way company accounts are produced).

To fully realise these benefits, micro-level data must be used rather than pre-defined aggregated totals. This would enable us to link entity micro-data to the Inter-Departmental Business Register (IDBR) – our comprehensive list of UK businesses that we use as our sampling frame for business surveys. Linking this data would enable entities to be classified in line with the European System of Accounts 2010 (ESA 2010) and consistently with other ONS statistics. The data can then be processed and integrated into the national accounts.

5 . Methods

Deriving statistics on company profit (gross operating surplus (GOS)) from administrative sources, such as the HM Revenue and Customs (HMRC) data, requires a different methodological approach than that used to derive comparable statistics from survey data. This is due to the fundamentally different structure of the data, which reflects the non-statistical purposes for which it was originally collected.

In this section we outline two specific challenges and potential solutions to overcoming them.

Challenge 1: obtaining an estimate of profit from HMRC data

Companies submit a large volume of data to HMRC relevant to calculating profit using a variety of different reporting mechanisms. The challenge for Office for National Statistics (ONS) is to obtain consistent estimates of profit (GOS) from these myriad of reporting formats, which is in alignment with European System of Accounts 2010 (ESA 2010) requirements.

Our preferred solution is to use HMRC Corporation Tax data, which uses financial accounts as a base. A Corporation Tax Computation fundamentally converts accounting profit into taxation trading profit (Schedule D Case 1); these are used in Corporation Tax Returns (CT600), (GOS for national accounts).

The benefit of using data from Corporation Tax Computations and Corporation Tax Returns is the data are put into a uniform format. Companies have a degree of flexibility when preparing and presenting their annual financial statements (company accounts). Corporation Tax is governed by a different set of rules, with the purpose of taking out areas of judgment – the theory being, identical companies would pay the same level of tax. Therefore, the taxation system’s purpose is to align data and reduce the level of subjectivity in treatment of financial items.

Challenge 2: timeliness

Another challenge is determining how to account for the time lag in obtaining HMRC data compared with existing data sources. It will be at least 12 months after their accounting year end before ONS receive HMRC data. Three options for developing methods that could be used as an interim measure (before Corporation Tax data is delivered to ONS) have been identified.

The first option would be to use Corporation Tax receipts of large companies. Corporation Tax receipts could be used to approximate company performance and activity in the period. This could be seen as a good quality source of data, as it is the companies themselves and their tax accountants who would be responsible for this estimate and payment on account. This would need to be tested as corporate tax payments would be dependent upon tax rules and allowances, which would influence tax receipts, for example, carried forward tax losses from previous periods offset against current tax liability.

The second option would be to use Value Added Tax (VAT) receipts, taken from VAT Returns; and Real Time Information (RTI) Pay-As-You-Earn (PAYE) data. While these data sources could not be used to estimate profit (GOS) in absolute terms, they could be used to obtain a trend or growth level to Corporation Tax Returns derived estimates of profit (GOS). This is because many of the imperfections in the estimation model would be consistent across periods, with the assumption that it would balance out. This assumption would have to be tested once we have access to the data.

If modelled results proved to be inconsistent, Gross Fixed Capital Formation (GFCF) data could be included within the forecasting model (both for Corporation Tax receipts and VAT receipts), to adjust for capital transactions. There is a challenge in using either VAT or GFCF data as both will be used in one of the three measures of gross domestic product (GDP). By re-using them to estimate GOS, we would be not be introducing any new data and therefore would not have three independent measures of GDP.

A third option would be to retain the use of survey data to provide short-term estimates of profits (GOS). This would avoid the timing and accuracy issues of the two previous options, but would place a greater burden on companies (through having to complete surveys) and would be more costly due to the costs of running the surveys.

Each of these options has theoretical advantages and drawbacks. Using tax receipts (the first option) would introduce information from outside the current quarter, as tax rules provide some flexibility on when losses and liabilities are met.

The use of VAT and PAYE data (the second option) is largely restricted to data from the period in question – which is more in line with national accounting principles. However, this option does impact on our ability to produce three independent measures of GDP. As an analogy, this could be thought of as trying to triangulate on a location from three points where two of the points are identical. The benefits and drawbacks of this option to quality will need to be investigated once data are available.

The use of survey data (the third option) would amount to maintenance of the status quo and would not be in line with our strategic aim to reduce our reliance on surveys, though it would maintain quality and timeliness.

We will investigate each of these options further and consider whether there are further options once access to the HMRC data has been granted. This will enable us to reach a conclusion on the best approach based on actual data rather than just theory.

6 . Conclusion

This article sets out a new approach to estimating gross operating surplus (GOS) for national accounts using administrative data sources. Through using corporation tax data from HM Revenue and Customs (HMRC), we will improve both the granularity and coverage of our estimates to derive GOS. We will investigate a range of options to overcome timeliness challenges with these data.

While there are advantages to this approach, there are challenges that will require further consideration.

The advantages of the proposed new approach is that we will have more granular data (in line with the aims of the Enhanced Financial Accounts initiative) and potentially lower reporting burden on businesses through reducing the volume of data they will need to report through surveys.

The challenges are the timeliness of data and the effect the proposed method has on the independence of the three estimates of gross domestic product (GDP). Before either of these challenges can be addressed, we will need to gain access to the HMRC corporation tax data.

7 . Next steps

This article has set out the potential of using company financial accounts data to improve the granularity and coverage of estimates of gross operating surplus. Methodologies for using the data and for addressing timeliness issues have been identified and outlined.

We are currently working with HM Revenue and Customs (HMRC) to determine whether access can be given to the necessary data to further our investigation into the improvement of our financial statistics in this area.

Once data are obtained, we will look to test and refine the methodologies proposed and work towards the development of experimental estimates of profit (gross operating surplus) from these data in time frames, before working towards implementation into the national accounts. This will include testing results against existing data sources such as the Quarterly Operating Profits Survey and the Annual Business Survey. The exploitation of this data is dependent on us obtaining these data from HMRC and subsequently interrogating these data.

We welcome your thoughts on the contents of this article and whether there are other avenues of investigation that we should pursue.

Please contact us via email at FlowOfFundsDevelopment@ons.gsi.gov.uk or by telephone at +44 (0)1633 456315 if you have any views that you would like to share with us.

8 . Further information

Flow of Funds archived background information

3 July 2017 Article - Economic Statistics Transformation Programme: Enhanced financial accounts (UK flow of funds) progress on financial derivatives data

31 May 2017 Article – Economic Statistics Transformation Programme: Enhanced financial accounts (UK flow of funds) commercial data use

31 May 2017 Article – Economic Statistics Transformation Programme: Enhanced financial accounts (UK flow of funds) improving the economic sector breakdown

27 April 2017 Article – Economic Statistics Transformation Programme: Enhanced financial accounts (UK flow of funds) employee stock options

29 March 2017 Article – Economic Statistics Transformation Programme: Enhanced financial accounts (UK flow of funds) Government tables for the special data dissemination standards plus (SDDS plus)

30 January 2017 Article – The UK Enhanced Financial Accounts: changes to defined contribution pension fund estimates in the national accounts; part 2 – the data

16 January 2017 Article – The UK Enhanced Financial Accounts: changes to defined contribution pension fund estimates in the national accounts; part 1 – the methodology

8 August 2016 Article – Economic Statistics Transformation Programme: UK flow of funds experimental balance sheet statistics, 1997 to 2015

14 July 2016 Article – Economic Statistics Transformation Programme: Flow of funds - the international context

14 July 2016 Article – Economic Statistics Transformation Programme: Developing the enhanced financial accounts (UK Flow of Funds)

10 March 2016 Article – Identifying Sectoral Interconnectedness in the UK Economy

24 February 2016 Article – Improvements to the Sector & Financial Accounts

12 January 2016 Article – Historical Estimates of Financial Accounts & Balance Sheets

6 November 2015 Article – Comprehensive Review of the UK Financial Accounts including explanatory notes for each financial instrument covered in the article

13 July 2015 Article – Introduction Progress & Future Work

Financial Statistics Expert Group Minutes:

- 21 October 2014
- 22 January 2015
- 22 July 2015
- 7 December 2015 can be requested from FlowOfFundsDevelopment@ons.gov.uk
- 2 August 2016 can be requested from FlowOfFundsDevelopment@ons.gov.uk