

Impact of ESA 1995 Changes on Current Price Gross National Income Estimates, 2002 to 2010

Author Name(s): **Andrew Walton, Office for National Statistics**

Abstract

This article covers the changes to Gross National Income (GNI) on the European System of Accounts 1995 (ESA 1995) basis that will be introduced when revised figures for the UK National Accounts, consistent with Blue Book 2015, are published in September 2015. There are three main ESA 1995 changes and a number of smaller ones summarised in this article with links to more detailed methods available in associated articles. ESA 1995 changes improve the measurement of GNI and ensure increased comparability of GNI across the European Union (EU). This article focuses on the period from 2002 to 2010, as these are the years for which only the remaining ESA 1995 changes are relevant in EU budget contribution terms. The improvements described in this article will also be applicable to subsequent years, but these years are additionally subject to regular data updates and other methodological changes which will be presented in future articles. It is important to note that the net impact on the UK's contribution to the EU budget from these changes is independently calculated by the European Commission and cannot be estimated at this stage. The net adjustment to any individual Member State's past contributions is relative to the GNI figures returned across all Member States, and other countries are also likely to be revising their GNI returns in light of remaining ESA 1995 changes. The ESA 1995 changes being presented today, over the period 2002 to 2010, have the combined impact of reducing the UK's total GNI by approximately £11.9 billion which is 0.1% of total UK GNI over the whole period. The adjusted EU budget contributions resulting from the Blue Book 2015 update are likely to be announced during November 2015.

1. Introduction

Gross National Income (GNI) is an important statistic within the National Accounts, and it is used in the calculation of a Member State's contribution to the EU budget. Many users of official statistics will be more familiar with Gross Domestic Product (GDP). GNI or, as it was previously known, Gross National Product (GNP), describes the total primary income received by residents of a country and links the economic activity described by GDP with the destination of the income so generated.

To give a full definition, GNI is equal to GDP plus net property income from abroad. Property income is not (as might be suggested by the name) the income generated by the ownership of

buildings (rental). It is in fact, made up of interest, the distributed income of corporations (dividends, repatriated profits and so on) and rent on land. This means that countries can have very high levels of GDP, but GNI would be significantly lower if, for example, many of the production units were owned by multi-national corporations with their headquarters in other countries.

Due to the administrative importance of the GNI statistic, the EU statistical office (Eurostat) carries out regular audits of the methods and data used to estimate GNI. In 2012, following a comprehensive audit of the methods used across EU countries, a number of areas for improvement were identified which all Member States needed to address. These improvements are known as 'reservations'. The UK National Accounts addressed a number of these reservations in [Blue Book 2014](#), and all the remaining outstanding UK reservations are being addressed in the Blue Book 2015 consistent update of the Quarterly National Accounts, that will be published in September 2015.

The areas for improvement highlighted by Eurostat focus on the period from 2002 to 2010. Years prior to 2002, while being open to further changes in methodology in the UK National Accounts publications, are not open to change in the GNI returns made to Eurostat. GNI data for the periods 2002 to 2010 can only be changed in light of reservations raised by Eurostat in their 2012 report. More recent periods will be fully open to data and methodology changes in the GNI data submission in September 2015 and the reservations described in this article will also be implemented for years after 2010 at the same time.

The 2002 to 2010 GNI return will be submitted during September 2015 and will be used to produce the adjustments to the UK contribution to the EU budget for this period. Figures are being published today to provide UK users with an indication of the likely magnitude and direction of GNI changes as a result of the outstanding ESA 1995 GNI improvements. At this stage it is not possible to estimate the net impact on the UK's contribution to the EU budget from these changes because the net adjustment to any individual Member State's past contributions is relative to the GNI figures returned across all Member States, and other countries are also likely to be revising their GNI returns in light of remaining ESA 1995 reservations. The adjusted EU budget contributions are calculated by the European Commission and are likely to be announced during November 2015.

This article provides a summary of each of the ESA 1995 improvements being implemented in Blue Book 2015, the estimated impact on the GNI data being provided to Eurostat across the period from 2002 to 2010, and a link to a more detailed methodological article for each improvement. For each ESA 1995 change the range of impacts and the estimated total impact across all years from 2002 to 2010 can be found in the summaries provided, and the full detail for each change is shown to the nearest £0.1 billion in Annex A. An official description of the reservations being addressed in Blue Book 2015 is included in Annex B. In addition, a further five reservations previously addressed are currently being verified by Eurostat. These, though, will not impact on GNI estimates unless Eurostat request additional work to be conducted.

These figures are still indicative at this stage and final quality assurance is currently being undertaken. A finalised version of these data will be provided in an updated article during June 2015 ahead of formal submission and publication in the UK National Accounts in September 2015.

2. Reservation: Exhaustiveness

The [exhaustiveness](#) changes cover improvements to the estimation of concealed income/activity and also under-coverage of unincorporated small businesses, both of which form part of wider exhaustiveness adjustments that are applied to account for any production, income and expenditure that is not picked up in source data.

Hidden activity generating concealed income forms part of output and intermediate consumption in the production approach to Gross Domestic Product (GDP), while concealed income itself forms part of Compensation of Employees (CoE), mixed income (MI) and Gross Operating Surplus (GOS) in the income approach. The improvements here for Blue Book 2015 are to replace the existing National Accounts concealed income/activity model with a new, more comprehensive model based, in part, on analysis by HMRC of missing corporation and income tax.

Adjustments for the under-coverage of unincorporated small businesses form part of output and intermediate consumption in the production approach to ensure consistency with data already feeding into the income and expenditure approaches. Enterprises falling below the VAT and/or PAYE thresholds, by construction, are not recorded on the Inter-Departmental Business Register (IDBR). The IDBR provides the sample frame for the Annual Business Survey (ABS), which itself forms the largest source for the production approach to estimating GDP. In Blue Book 2015 these estimates of missing production by unincorporated businesses below the VAT and/or PAYE thresholds will be updated for 2009 and later years using more recent administrative data provided by HMRC.

The impact on GNI from the exhaustiveness changes ranges from an increase of £3.1 billion in 2003 to £9.9 billion in 2009, with the larger impacts in the years 2009 and 2010 where the adjustment for under-coverage of unincorporated small businesses is applicable in addition to the changes to concealed income/activity estimates. The cumulative impact on total GNI across all years from 2002 to 2010 is an upward change in the level of the series of approximately £47.3 billion, which is an average of +£5.3 billion per year.

3. Reservation: Non-Profit Institutions Serving Households (NPISH)

Changes to estimates of Non-Profit Institutions Serving Households' (NPISH) activity were first implemented in [Blue Book 2014](#), including new estimates of activity within the NPISH sector based on National Council for Voluntary Organisations (NCVO) data. The further changes in [Blue Book 2015](#) cover improvements to the impact on [other sectors](#). While the estimates for the NPISH sector itself remain unchanged, a subsequent review of the potential overlap between NCVO data and existing National Accounts production data from the Annual Business Survey (ABS) has led to a reduction in the Private Non-Financial Corporations (PNFCs) output and households' final consumption expenditure (HHFCE). In addition, an assessment of the new offsetting revisions against any coherence adjustments used to align the three approaches to measuring GDP in the Supply and Use balancing process has brought about a further reduction in the final, balanced economic impact.

The impact on GNI from the NPISH changes ranges from a decrease of £6.0 billion in 2010 to a decrease of £1.4 billion in 2002. The cumulative impact on total GNI across all years from 2002 to

2010 is a downward change to the level of approximately £33.3 billion, which is an average of -£3.7 billion per year.

4. Reservation: Measurement of Cross-Border Property Income

There are three changes being made relating to the [measurement of cross-border property income](#):

- The measurement of Foreign Direct Investment (FDI) income where Monetary Financial Institutions' (MFIs') income changed in Blue Book 2014 from being measured on an all-inclusive (AI) basis to a current-operating performance (COP) basis, which consisted of removing holding gains and losses from MFIs' FDI income;
- Improvements to the measurement of mutual funds profits where these profits are reinvested into the fund on behalf of the investor. The National Accounts are concerned with measuring the economic reality of the transaction, which is not necessarily the same as the movements of money in the real economy so in this case a method was implemented in Blue Book 2014 that reflected a payment of profit to the investor and reinvestment to the fund manager;
- Within 'withdrawals of income from quasi-corporations' (which forms a part of cross-border property income) National Accounts estimates must include the recording of the transactions associated with UK residents with second homes abroad and conversely foreign residents with second homes in the UK.

Although the first two of these changes were included in the UK's published National Accounts in 2014 they were not included in the figures for submission to Eurostat for GNI purposes on an ESA 1995 basis. This was because when work began to address this ESA 1995 reservation for inclusion in Blue Book 2015 it was established that these two improvements made in 2014 were also applicable to address this reservation. Therefore, whilst these two changes will not have an impact on previously published UK estimates, they will be included for the first time in the 2015 Eurostat GNI questionnaire for the GNI estimates on an ESA 1995 basis for the years 2002 to 2010.

The total impact on GNI from the cross-border property income changes ranges from a decrease of £39.1 billion in 2008 to an increase of £8.4 billion in 2005. In particular 2008 and 2009 are showing large downward changes as a result of removing the large trading losses and provisions for bad debt experienced by MFIs during the economic downturn. The cumulative impact on total GNI across all years from 2002 to 2010 is a downward change to the level of approximately £41.2 billion, which is an average change of -£4.6 billion per year. For more detail on this change see the [associated methodologies \(109.5 Kb Pdf\)](#) published with Blue Book 2014. GNI estimates for the three changes separately can be found in Annex A.

5. Other ESA 1995 GNI Reservations

There are three other ESA 1995 reservations being implemented in [Blue Book 2015](#) and these are all described in:

- Improvements to the estimation of spending on repairs and maintenance of dwellings by householders. In the National Accounts, minor repairs and maintenance by owner occupiers are recorded as intermediate consumption, and major repairs, that extend the service life

of dwellings, are recorded as Gross Fixed Capital Formation (GFCF). Improvements to the estimates in this area will have an impact on both of these components;

- Improvements to the estimation of the consumption of fixed capital on roads. This change categorises the major maintenance and repair of trunk roads as GFCF rather than the previous treatment as intermediate consumption and to adjust the Perpetual Inventory Model accordingly for the estimation of capital stocks and consumption of fixed capital. At the same time ONS is also bringing the life length of roads into line with the rest of the EU. Previously the UK National Accounts assumed a life length for roads of 75 years, but this change reduces that life length to 55 years. A shorter life length leads to higher capital consumption figures for each year that the asset is productive and an upwards change to GDP and GNI.
- A change to the recording of vehicle registration tax is a fee paid on a vehicle when it is first registered. The fee covers the costs associated with registration of the vehicle throughout its life i.e. the transfer of ownership each time the vehicle is sold. ESA 1995 requires vehicle registration tax to be recorded as a tax on products. Within the data provided to ONS, vehicle registration taxes had been included as receipts for sales of goods and services and hence recorded as market output. As a result of this change market output has been reduced by the vehicle registration tax value provided and the same value has been added to taxes on products.

In total the GNI change from these three improvements ranges from an increase of £1.4 billion in 2002 to an increase of £2.0 billion in 2010. The cumulative impact on total GNI across all years from 2002 to 2010 is an upward change to the level of approximately £15.2 billion, which is an average change of +£1.7 billion per year. GNI estimates for the three changes separately can be found in Annex A.

6. Impact on GDP

Some of the changes described for Blue Book 2015 GNI will affect GDP, others will not for various reasons already mentioned (e.g. some were already included in the UK National Accounts and others affect GNI through changes to net property income that is not included in GDP). As outlined in the publication table in Section 8, ONS will inform users of the impacts on GDP for all years from 1997 to 2010 over the summer period, with an article on current price GDP impacts provisionally planned for 12 June 2015 and chained volume measure GDP estimates on 24 June 2015.

7. Conclusions

The cumulative impact on the UK GNI return for the period 2002 to 2010 from these ESA 1995 changes will be a downward adjustment to the level of the series of approximately £11.9 billion, an average of -£1.3 billion per year. This amounts to approximately 0.1% of total GNI over this period. These figures are still subject to further quality assurance and therefore there is a possibility that they will change further before publication in September 2015.

The net impact on the UK contribution to the EU Budget for the period 2002 to 2010 as a result of these improvements cannot be estimated at this stage because the net adjustment to the UK's past contributions is dependent not only on the UK data being submitted, but also on changes to the GNI returns from all other Member States. The European Commission independently calculates the UK contribution from the data provided by all Member States.

This article is the first in a series of impact articles ahead of the Quarterly National Accounts consistent with Blue Book 2015 publication on 30 September 2015. The focus here is on the years 2002 to 2010 and only on the ESA 1995 changes impacting on GNI at this stage. The improvements described in this article will also be applicable to subsequent years, but these years are additionally subject to regular data updates and other methodological changes which will be presented in future articles. The outline for the full publication timetable is shown in section 8.

8. Plans for Future Updates

Four detailed methodological articles were also published on 19 May 2015 and links to these articles can be found in Section 11. Table 1 gives a draft schedule for the remaining articles leading up to the publication of Blue Book 2015 on 30 October 2015. These dates are provisional and provided as an illustration of the detail that will be provided to all users ahead of publication. Final dates will be announced at least one month before each publication.

Table 1 - Provisional publication schedule for Blue Book and Pink Book 2015

Content of Article	Provisional date of publication
Impact on GDP Current Price annual estimates 1997-2010 - to include changes due to new methods or data which are not ESA 1995 based	Friday 12 June 2015
Impact on GDP Chained Volume Measure annual estimates 1997-2010	Wednesday 24 June 2015
Impact on GDP Current Price and Chained Volume Measure quarterly and annual estimates 1997-2013	Wednesday 5 August 2015
Summary of impact of changes on Sector and Financial Accounts 1997-2013	Wednesday 9 September 2015
Summary of impact of changes on Balance of Payments 1997-2013	Wednesday 9 September 2015
Quarterly National Accounts Q2 2015 (consistent with Blue Book 2015)	Wednesday 30 September 2015
Balance of Payments Q2 2015 (consistent with Pink Book 2015)	Wednesday 30 September 2015
Impact of changes in the national accounts and economic commentary for Q2 2015 (Apr to June)	Wednesday 30 September 2015
GDP(Output) improvement project report	Wednesday 30 September 2015
Blue Book 2015	Friday 30 October 2015
Pink Book 2015	Friday 30 October 2015

Download table

XLS [XLS format](#)

(26 Kb)

9. Contact

Andrew Walton

National Accounts Coordination Division

Office for National Statistics

+44 (0)1633 456408

blue.book.coordination@ons.gsi.gov.uk

Background notes

1. A [list](#) of those given pre-publication access to the contents of this article is published as part of this release.
2. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

Copyright

© Crown copyright 2015

You may use or re-use this information (not including logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit www.nationalarchives.gov.uk/doc/open-government-licence/ or write to the Information Policy Team, The National Archives, Kew, London TW9 4DU, or email: psi@nationalarchives.gsi.gov.uk.

This document is also available on our website at www.ons.gov.uk.

References

1. Methodological improvements to National Accounts for Blue Book 2015: [Exhaustiveness](#)
2. Methodological improvements to National Accounts for Blue Book 2015: [Cross-Border Property Income](#)
3. Methodological improvements to National Accounts for Blue Book 2015: [Non-Profit Institutions Serving Households](#)
4. Methodological improvements to National Accounts for Blue Book 2015: [Vehicle Registration Tax, Roads and Minor Repairs](#)

Annex A

Impact of ESA 1995 changes on Gross National Income (GNI) estimates for 2015 GNI submission

Figures are approximate at this stage and are shown to the nearest £0.1 billion

All figures £ billion unless stated, current price

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total 2002 to 2010
Non-Profit Institutions Serving Households	-1.4	-1.9	-2.6	-3.2	-3.7	-4.2	-4.9	-5.5	-6.0	-33.3
Exhaustive changes coverage of unincorporated small businesses adjustment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	4.8	9.0
Concealed income/ activity adjustment	3.1	3.1	3.4	3.9	4.1	4.6	5.9	5.7	4.4	38.3
Cross-border property income Current- Operating Performance basis	-3.0	-1.7	0.2	5.4	3.3	-11.5	-43.2	-22.3	0.3	-72.4
Mutual Funds profit reinvestment	0.6	0.7	0.8	1.1	1.5	1.9	1.3	0.9	2.3	11.0
Withdrawal of income from quasi- corporations	1.7	1.8	1.8	1.9	2.0	2.4	2.8	2.8	3.0	20.2
Other ESA 1995 changes	0.9	0.9	1.1	1.0	0.8	0.8	0.9	1.0	1.0	8.4

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total 2002 to 2010
of dwellings										
Consumption	0.4	0.4	0.5	0.5	0.6	0.7	0.8	0.9	0.9	5.6
of fixed capital on roads										
Vehicle registration tax	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1.2
Total GNI revision	2.5	3.4	5.3	10.8	8.8	-5.2	-36.3	-12.1	10.9	-11.9
2014 GNI submission	1,104.9	1,173.8	1,243.4	1,313.9	1,375.0	1,467.8	1,515.9	1,471.7	1,575.5	12,241.8
Proposed new GNI estimates	1,107.4	1,177.2	1,248.7	1,324.7	1,383.8	1,462.6	1,479.6	1,459.6	1,586.4	12,229.9
Percentage change	0.2%	0.3%	0.4%	0.8%	0.6%	-0.4%	-2.4%	-0.8%	0.7%	-0.1%

Table source: Office for National Statistics

Table notes:

1. Components may not sum to totals due to rounding.

Download table

[XLS](#) [XLS format](#)

(31 Kb)

Annex B

Details of UK specific reservations being addressed in Blue Book 2015

Reservation Number	Description
1	Minor repairs and maintenance of dwellings by owner-occupiers of a kind typically carried out by owners need to be separately identified and classified as intermediate consumption in the production of dwelling services.
2	A review of the new compilation process of Non-Profit Institutions Serving Households (NPISH) has to be carried out with a view to improving the estimation methods and the coverage of the NPISH units.
3	A review of the methods to ensure exhaustiveness has to be carried out with a view to updating the benchmarks and/or modifying the methods where needed.
8	Improvements need to be made in the estimation of consumption of fixed capital on roads, bridges, etc.

Download table

XLS [XLS format](#)
(27 Kb)

Details of transversal reservations being addressed in Blue Book 2015

Reservation Number	Description
i	The treatment of cross border income – specifically the change relating to withdrawals of income from quasi-corporations.
vii	The recording of vehicle registration tax - to be recorded under D214 (taxes on products, except VAT and import taxes) regardless of the tax payers.

Download table[XLS](#) [XLS format](#)

(27 Kb)