Regional Gross Value Added (production approach) development project – Note on progress - April 2013

This an update on progress in the development of regional GVA estimates using a production approach (GVA(P)). It follows on from the article produced March 2012[1].

Background

The project was initiated in response to the Review of Economic Statistics for Policymaking in 2003 (Allsopp Report)[2] which recommended the development of deflated constant price regional GVA. More recently the European System of Accounts 2010 (ESA10)[3] included a requirement for the production of "real" (i.e. deflated) regional GVA growth indices.

Regional GVA is currently estimated by the income approach (GVA(I)) which does not lend itself to removal of price inflation. The production approach does allow deflation of current price GVA to produce constant price ("real") measures. This will allow GVA to be related to a specific year (the base year) and consequently reveal "real" growth (i.e. change with effects of inflation removed).

In March 2012 the project produced experimental regional GVA(P) at both current and constant prices, for the NUTS1[4] level of geography (13 regions, including offshore activity which cannot be assigned to a geographic region, this known as "Extra-regio" (ER)). The new ESA10 requirement is for output at the NUTS2[4] geography (38 sub-regions, including ER). Therefore, the focus since March 2012 has been to expand the regional GVA(P) production system to include NUTS2 data.

The development of NUTS2 GVA(P) estimates

The methods and data sources for the NUTS2 system, where possible, correspond to those used in the NUTS1 system as reported in 2012[1]

The same top-down approach was used to calculate 38 sub-regional proportions for each of the 112 industry components. These NUTS2 proportions were then used to allocate the UK total for that industry as published in the UK National Accounts Blue Book[5].

A change in method was required for the industry component for Owner Occupied Imputed Rental (representing the rental value which owner occupiers are considered to "pay" themselves). At NUTS1 the regional values are calculated by using the regional GVA(I) system to assign proportions. The equivalent data are unavailable at NUTS2. Therefore, NUTS2 proportions are calculated using imputed rental data taken from the Gross Disposable Household Income (GDHI) system.

The NUTS2 system has been integrated with the NUTS1 system to ensure results are coherent. That is: sub-regional values sum to regional values and both sum to national totals.

NUTS2 constant price GVA(P) is also derived by the same method as NUTS1. Each of the 112 industry current price GVA(P) estimates is deflated using national deflators obtained from the UK Gross Domestic Product (Output) (GDP(O)) system. This is a single deflation method. However, the system has been designed to allow for future use of double deflation (deflating output and intermediate consumption independently – the ideal method) should suitable deflators become available.

Geographic changes

The regional GVA(P) system has been built to produce annual estimates dating from 1998. Over this time series some geographic boundary changes have taken place which required that adjustments be

made to all NUTS2 input data. The regional GVA(P) system reflects the latest boundary changes resulting from the 2010 NUTS2 Review which came into force 1st January 2012.

Data Quality Assurance

As a result of the previously published NUTS1 data it was evident that the volatility of the input datasets produced some problems with estimates. This problem was further amplified at the lower NUTS2 geography. As a result a programme of quality assurance has been initiated to examine all input data for both NUTS1 and NUTS2 for the period from 1998 to 2011. This work is ongoing.

Future Plans

It is envisaged that experimental estimates will be published by the end of 2013, for both current and constant price regional GVA(P), at both NUTS1 and NUTS2 geographic levels. We are currently exploring further methodological and quality improvements to both input data and compilation processes.

References:

(1) http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/regional-accounts/development-of-a-regional-measure-of-real-gross-value-added-using-a-production-approach.pdf

(2) http://webarchive.nationalarchives.gov.uk/+/http://www.hm-treasury.gov.uk/consultations_and_legislation/allsopp_review/consult_allsopp_index.cfm

(3) http://www.ons.gov.uk/ons/guide-method/development-programmes/esa2010/index.html

(4) http://www.ons.gov.uk/ons/guide-method/geography/products/names--codes-and-look-ups/names-and-codes-listings/names-and-codes-for-eurostat-geography/index.html

(5) http://www.ons.gov.uk/ons/rel/naa1-rd/united-kingdom-national-accounts/the-blue-book--2012-edition/united-kingdom-national-accounts---blue-book--2012-edition.pdf

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