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The implications of misleading estimates of London's output

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GLA Economics provides expert advice and analysis on London's economy and the economic issues facing the capital. Data and analysis from GLA Economics form a basis for the policy and investment decisions facing the Mayor of London and the GLA group. The unit is funded by the Greater London Authority, Transport for London and the London Development Agency.

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Abstract

Economic output estimates are widely used as indicators of prosperity and growth. Much economic policy is based on them, whether in supporting productivity growth, identifying areas of weak performance or ranking areas of need. The basis and accuracy of these estimates needs to be well understood, but published numbers are usually taken on trust.

This paper reviews the basis for regional and sub regional estimates of output (Gross Value Added – GVA) in the UK and the extent to which they may be misleading. In particular, revised calculations for London's GVA as a case study are presented and include a more refined way of estimating the output of London's important financial services industry. It is revealed that for 2004, Greater London's GVA is under estimated by £13-22 billion or around eight to ten per cent, depending on the degree to which current assumptions are relaxed. This has consequences for underestimating the value of investment in London which is significant for infrastructure choices.

1. Introduction

Aggregate output measures are one of the key comparators used to assess overall economic performance. Since these measures were first devised, much effort has been put into preparing standards for their production in order to ensure maximum credibility. This effort has indeed led to much policy reliance on output whether in comparing country performance or in targeting development policy. For example, the targeting framework for the English Regional Development Agencies (RDAs) starts by comparing growth rates and productivity performance with the RDAs eventually being judged against these measures.

The government, through both the Department for Communities and Local Government (DCLG) and in a joint Treasury, Office of the Deputy Prime Minister (ODPM) and Department of Trade and Industry (DTI) paper have aims to 'drive forward national prosperity and provide opportunity and social justice for all' through 'narrowing disparities in growth rates and maximizing the economic performances of all regions'[1].

Being able to rely on the accuracy of these measures is therefore highly important. There are already widespread worries about aspects of service sector output measurement and particularly public sector output. Professor Atkinson's Treasury review of changes that should be made to public sector estimates, largely concluded that it is all very difficult[2].

Such difficulties apply to all parts of the country, but this paper focuses on an area of uncertainty which has particular regional impacts. Since regional distribution of output is important generally to policy, this has immediate relevance. But there are also more direct impacts of any weakness in output measurement. For example, the value of an investment may be judged in part by the output and employment that would result from its implementation. If there is a poor measure of output then this investment decision may be misjudged.

It is precisely the attempt to analyse such problems which led to this paper. In analysing the likely impact of the investment into Crossrail, a major infrastructure project in London, it became apparent that the official estimates of Inner London output implied that working in Inner London was less profitable than in the rest of the country. This is an implausible result since all the evidence suggests that the profits are sufficient to cover the high costs of London and still attract more investors. In investigating this phenomenon and its reasons, this paper has constructed an alternative measure.

This paper focuses on GVA which is the key regional measure used by the Office for National Statistics (ONS) and defined by the European Union (EU). It is an important component in the estimation of Gross Domestic Product (GDP)[3]. The ONS are aware of the issues surrounding both regional GVA and the allocation of the output of the financial

[1] DCLG, Cities and regions policy, http://www.communities.gov.uk/index.asp?id=1127162
[2] Atkinson, 2005, The Atkinson Review: Final Report – Measurement of Government Output and Productivity for the National Accounts, Palgrave
[3] The link between GVA and GDP can be defined as: GDP is equal to GVA plus taxes on products less subsidies. Source: National Statistics, view: http://www.statistics.gov.uk/cci/nugget.asp?id=254. Also see: www.nomisweb.co.uk. Crown copyright material is reproduced with the permission of the Controller of HMSO.

services sector discussed here, indeed there are several committees currently working to modernise the System of National Accounts[4]. This paper is aimed at examining the size and possible effects of the current methodology for London.

GVA is not only important for regional economic strategy, it also influences national policy. For example, in 2005 economic output was included as an indicator in the government's Sustainable Development Strategy[5], aimed at monitoring progress and capturing the state of society, environment, health and culture. Accurate assessments of the growth in economic output, in light of other social and environmental indicators, will be crucial in evaluating this strategy.

More broadly, economic output is used to emphasise the significance of the world's largest cities[6] and as the basis for comparing the standard of living and labour productivity (when calculated per capita). These factors may influence global trends such as economic migration and international corporate strategy.

It must therefore be a matter of concern if there is scope for making significant adjustments in these estimates.

[4] ONS, 23 February 2007, Media release: ONS outlines plans to modernise National Accounts. View: http://www.statistics.gov.uk/pdfdir/oienr0207.pdf

[5] Department for Environment, Food and Rural Affairs, 2006, Sustainable development indicators in your pocket. View: http://www.sustainable-development.gov.uk/progress/data-resources/documents/sdiyp2006_a6.pdf

[6] Which are the largest city economies in the world and how might this change by 2020?, Price Waterhouse Coopers. View: http://www.pwc.com/uk/eng/ins-sol/publ/ukoutlook/pwc_ukeo-section3-march07.pdf

2. A case study, London's GVA

This section of the paper explores the implications for London of the current method for allocating the impact of financial services both for the UK as a whole and for London. Financial services attracts special treatment because not all its services are sold in the normal manner. Much activity is financed by the difference between borrowing and lending rates, but standard national accounts rules do not treat interest payments as part of output.

To deal with the difficulty that such interest payments are measured in the income of banks and other financial institutions and that interest payments are also measured in the costs of corporations and others who borrow, the concept of FISIM was established.

2.1 Financial Intermediation Services Indirectly Measured (FISIM)

FISIM is a component in the calculation of national GVA. It is a measure of the indirect charges made for financial services, for example the difference between interest paid by consumers and interest received by lenders, across the whole of the UK economy. Other direct financial charges, such as charges for overdrafts or mortgages, are not included in FISIM[7].

The consumption of indirect financial services can be divided into two components, first is intermediate consumption, which includes the use of financial services by firms and institutions. Second is final consumption, which includes use by consumers, government and the net exports of financial services. While final consumption of indirect financial services acts positively on national GVA, intermediate consumption is contributing to the output of other sectors and recorded elsewhere as part of the output of other business sectors (e.g. manufacturing, agriculture and retail).

The ONS currently has no official figures for the split between this intermediate and final consumption, so to avoid any double counting the total value of indirect financial services is removed from the National Accounts as the FISIM adjustment. Therefore the National Accounts are underestimated by an amount equal to the final consumption component of FISIM. Furthermore it is assumed that financial services are consumed where they are produced. Since London's financial services are consumed nationwide, the current methodology implies that Central London in particular, gains very little output from its global financial services.

In terms of quantifying the potential size of the underestimation, in 2004[8] the UK's GVA, unadjusted for FISIM, was £1,094 billion with a subsequent negative FISIM adjustment of 4.6 per cent[9].

[7] ONS, Financial Intermediation excluding Insurance and Pension Funding Industry Review. View: http://www.statistics.gov.uk/iosmethodology/downloads/Financial_Intermediation_Review.pdf
[8] 2004 is focussed on because this is the most recent year for which all the data is available.
[9] National Statistics, Regional, sub regional and local gross value added. View: www.statistics.gov.uk. Crown copyright material is reproduced with the permission of the Controller of HMSO.

2.2 Output of headquarters

As part of the methodology used by the ONS to calculate national GVA, organisational headquarters are assumed not to produce 'output'. For non-manufacturing industries a part of the firm's productivity is reallocated to their headquarters pro rata with earnings. However for manufacturing industries productivity is allocated solely to the local units, i.e. the factories and production centres of organisations.

Since London is a centre for headquarters of not only national but international businesses, the affect of this allocation is to reduce London's GVA relative to the other UK regions.

2.3 Consequences of the current methodology

The impact of the two issues outlined in Sections 2.1 and 2.2 is to reduce the national level of GVA and to reduce the share of this national output allocated to London. This has several implications in the application and evaluation of the government polices discussed in Section 1.

A more specific consequence of this methodology is that the productivity and 'value added' of workers in the capital is underestimated, implying that firms may be better off locating elsewhere. This is illustrated in Table 1 which implies that the return to companies from their investment in employees in Inner London is lower than in Outer London. However the fact that Central London is both a desirable corporate location nationally and internationally indicates central locations are worth the additional high costs to firms. Borough level definitions of the sub-regions presented in Table 1 are shown in Figure 1.

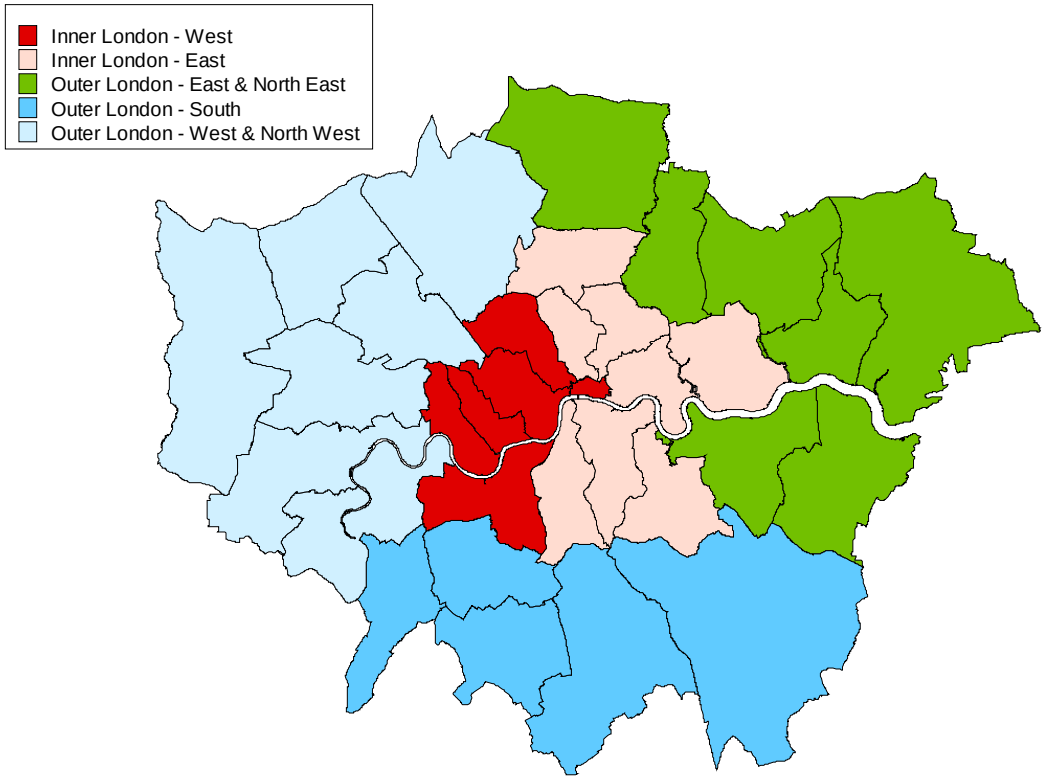
Table 1: GVA, total earnings and their ratio for sub regions of London

Region/Sub-region	GVA (£bn) 2004*	Total Earnings (£bn) 2004**	Uprate
Inner London – West	79.23	61.89	1.28
Inner London – East	45.02	30.02	1.50
Outer London - East and North East	18.09	10.00	1.81
Outer London – South	17.39	9.86	1.76
Outer London - West and North West	35.37	19.48	1.82

* Headline GVA using workplace analysis. Source: National Statistics, Regional, sub regional and local gross value added. View: www.statistics.gov.uk. Crown copyright material is reproduced with the permission of the Controller of HMSO.

** Calculated using mean gross annual earnings from the Annual Survey of Hours and Earnings (workplace analysis) and employment numbers from the Annual Business Inquiry (employee analysis) for full- and part-time employees. Source: National Statistics. View: Nomis: www.nomis.co.uk.

Figure 1: Borough level definitions of London's sub-regions presented in Table 1



3. London's output with a financial services adjustment

This paper presents an adjustment to the national GVA calculation methodology, which attempts to addresses the issue pertaining to FISIM. This is aimed at improving the misleading figures currently released as well as providing an estimate of the size of the correction. No methodology for a correction to the way in which output is allocated to headquarters is presented, although it is thought to be the smaller of the two effects.

This correction became possible in 2006 when Jenkinson et al reported experimental estimates for the split in intermediate and final consumption for the UK, with the latter further divided by domestic consumption and net exports[10]. This data has been generated as part of ONS' efforts to improve the national estimates and in response to EU directives. It is shown in Table 2.

Table 2: GVA and experimental figures for the split in intermediate and final consumption of FISIM

Year	GVA* (£bn)	FISIM (£bn)	Domestic final consumption of FISIM (£bn)	Net exports of FISIM (£bn)	Net final consumption of FISIM (£bn)
2001	882.8	33.6	13.1	2.4	15.5
2002	930.3	41.1	14.1	2.6	16.7
2003	985.6	45.4	14.6	3.3	17.9
2004	1044.2	50.2	16.5	2.7	19.2

* Headline GVA using workplace analysis, taken from ONS publication: Regional, sub regional and local gross value added[11].

Several assumptions have been made about the reallocation of consumption of FISIM throughout the UK economy. Firstly the intermediate component of FISIM provided to other businesses is reallocated. The location of this consumption is relevant to how the adjustment is made. Many businesses outside London use financial services based in London. A reasonable assumption this paper makes is that the intermediate consumption of financial services is best described by where organisations are located, rather than where financial services are based. The intermediate component of FISIM of £31 billion[12] for 2004 is then allocated by region according to its GVA[13] (using headline GVA using workplace analysis). This negative adjustment for London calculates at £5.65 billion, if all of the remaining assumptions are left unchanged, this alone increases Greater London's GVA by £13 billion.

[10] G Tily and H Jenkinson, 2006, Recording payments for banking services in the UK National Accounts: A progress report, ONS. View:
http://www.statistics.gov.uk/CCI/article.asp?ID=1461
[11] National Statistics, Regional, sub regional and local gross value added. View: www.statistics.gov.uk. Crown copyright material is reproduced with the permission of the Controller of HMSO.
[12] This is the total FISIM adjustment of £50.2 billion minus the net final consumption of £19.2 billion.
[13] In fact the aggregate GVA of all non-financial services sectors was used.

This paper now moves on to relax the assumptions regarding final consumption of FISIM. Firstly it's assumed that, as a world class financial centre, London provides 90 per cent of the UK's net exports of indirect financial services. Therefore from the 2004 figures in Table 2, London is allocated £2.43 billion of the net exports. Secondly it is assumed that a suitable method of distributing final domestic consumption of FISIM is to allocate it pro rata by population. In other words the use of financial products by individuals and government is better represented by relative levels of population than where the services are provided. In 2004 London's population share was 12.8 per cent[14], therefore London is allocated an additional £2.11 billion. Overall the final consumption for London is £4.54 billion, because final consumption was previously a negative adjustment and here it is positive, its effect is amplified.

The net negative adjustment for FISIM for London is therefore £1.11 billion. This is in stark contrast to the £23.3 billion correction applied to Greater London in 2004. Therefore London's GVA should be approximately £22 billion higher than the ONS figure, taking it to £217 billion, while the remaining regions should have a collective fall in GVA of approximately £3 billion. Using this calculation London's share of national GVA in 2004 rises from 18.7 per cent to 20.4 per cent.

[14] National Statistics, Mid year population estimates. View: www.statistics.gov.uk.

4. Conclusion

This paper discusses the importance of a sound basis for the calculation of economic output and highlighted one particular case study illustrating how the current methodology contains an inherent bias against Central London. A more intuitive methodology for dealing with the national allocation of FISIM indicates that the GVA for London in 2004 could be underestimated by as much as £22 billion, or around ten per cent. This magnitude of correction has strong consequences when estimating the value of investment in London which is significant for infrastructure choices such as Crossrail.

In the case of Crossrail, considerable analysis was undertaken to establish how many potential Central London workers might be driven away by the crowding and congestion on the transport system in the absence of additional rail investment. The value of these workers depends crucially on the additional productivity that is generated in Central London, since it is assumed that such workers would always find work, it is the differential that is crucial.

Yet an examination of the estimates shows that the official figures misjudges this differential because it counts the people working in the area but fails to allow that their work adds value either in headquarters or in the City of London. It is quite surprising to realise that one of the strongest global industries based in the UK has its contribution measured only by fees and charges and not at all by the margin it makes in fund management, trading and so on.

By failing to measure this differential correctly, the contribution that additional investment can bring is assessed incorrectly. Crossrail is an expensive project and its fate has been debated over many years. Yet even on quite conservative assumptions of the net numbers of additional workers it could easily create more than three times its costs and generate enough tax revenues to pay back in less than twenty years from its opening.

Glossary of terms

DCLG	Department for Communities and Local Government
DTI	Department of Trade and Industry
EU	European Union
FISIM	Financial Intermediation Services Indirectly Measured
GDP	Gross Domestic Product
GLA	Greater London Authority
GVA	Gross Value Added
ODPM	Office of the Deputy Prime Minister
ONS	Office for National Statistics
RDA	Regional Development Agency
UK	United Kingdom

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Chinese

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Vietnamese

Nếu bạn muốn có văn bản tài liệu
này bằng ngôn ngữ của mình, hãy
liên hệ theo số điện thoại hoặc địa
chỉ dưới đây.

Greek

Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

Turkish

Bu belgenin kendi dilinizde
hazırlanmış bir nüshasını
edinmek için, lütfen aşağıdaki
telefon numarasını arayınız
veya adrese başvurunuz.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

Hindi

यदि आप इस दस्तावेज की प्रति अपनी
भाषा में चाहते हैं, तो कृपया निम्नलिखित
नंबर पर फोन करें अथवा नीचे दिये गये
पते पर संपर्क करें

Bengali

আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি
(কপি) চান, তা হলে নীচের ফোন্ নম্বরে
বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

Urdu

اگر آپ اِس دستاویز کی نقل اپنی زبان میں
چاھتے ھیں، تو براہ کرم نیچے دئے گئے نمبر
پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

Arabic

إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى
الاتصال برقم الهاتف أو مراسلة العنوان
أدناه

Gujarati

જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં
જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર
ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.