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Globalisation: Statistical challenges and policy evidence needs

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This paper provides an overview of the policy demands on statistical agencies to deliver evidence on the wide range of globalisation phenomena, with a focus on the UK experience. The key measurement challenges discussed include coverage of migration, treatment of new “weightless” trade, increased specialisation in internationally engaged firms, intangible investments, unprecedented financial integration and the heterogeneous social and economic impacts on the population. Progress towards meeting these challenges has been made, but increased and more focused international co-operation is needed.

1. Introduction

Globalisation has become one of the most prominent topics in current political and economic debate. National Statistical Offices (NSOs) play a key role in documenting and communicating the complex social and economic phenomena brought about by the recent wave of globalisation. This paper provides an overview of the policy needs for an evidence base on globalisation, the key measurement challenges, and what Government statisticians and the Office for National Statistics (ONS) are doing to improve the accuracy and relevance of official statistics to meet users’ needs.

2. The policy interest in globalisation evidence and statistics

Policy makers seek to translate political vision into programmes and actions to deliver effective 'outcomes' – desired changes in the real world. ONS is committed to supporting the Government’s evidence-based policy making agenda [1], helping policy makers integrate experience, judgement and expertise with the best available evidence from systematic research.

Globalisation has become one of the most prominent topics in current political and economic discussion, as well as one of the hardest to capture in statistics. This paper considers globalisation as a multi-faceted process of structural economic and social change, characterised by the opening of national economies to trade, capital and foreign workers. Historians have documented similar episodes in the past, but the increased level of integration in recent years is very distinct from previous waves. The cumulative impact of multilateral trade negotiations, the reduced barriers to migration, the better transport and communication technologies and the rapid growth of emerging economies make the current wave of globalisation a rather unprecedented phenomenon.

Box 1. Key features of the current wave of globalisation

- Rising flows of goods, services and capital movements in international trade, both between and within companies, supported by waves of multilateral liberalisation leading from GATT to WTO, and removal of restrictions to capital flows.
- Increasing international specialisation, as emerging countries integrate into the world trading system and transnational value chains increase in importance.
- Greater rewards from innovation and skills, as firms access more and larger market with new products.
- Changes in the balance of global activity, with emerging economies in the East driving global growth, unprecedented in scale.
- Increasing pressures on resources, including energy, and the environment. Cross-boundary impacts of national economic activity on climate.
- Acceleration in migration levels, particularly from poorer to richer countries

The UK Government has looked at these changes as part of its strategic review of long-term public expenditure plans [2]. This review identifies globalisation as one of the key challenges facing the country, alongside technological change, demographic change (notably an ageing population), climate change and continuing global uncertainty [3].

Box 2. UK 2007 Comprehensive Spending Review (CSR) Challenges

The focus of the next CSR, due to report in autumn 2007, will be equipping Britain for the key long-term challenges ahead and making long-term investment decisions. These challenges can be summarised as follows:

- demographic and socio-economic change, with rapid increases in the old age dependency ratio on the horizon, and rising consumer expectations of public services;
- the intensification of cross-border economic competition, with new opportunities for growth, as the balance of international economic activity shifts toward emerging markets such as China and India;
- the rapid pace of innovation and technological diffusion, which will continue to transform the way people live and open up of new ways of delivering public services;
- continued global uncertainty with ongoing threats of international terrorism and global conflict, and the continued imperative to tackle global poverty; and
- increasing pressures on our natural resources and global climate, requiring action by governments, businesses and individuals to maintain prosperity and improve environmental care.

Recent policy documents identify globalisation more as an opportunity than as a threat, arguing that potential gains to producers and consumers in the UK and worldwide from further openness are large [4,5]. The UK Government also acknowledges the importance of complementary economic and development policies without which increased openness may not deliver sustainable benefits.

The demand for a forward-looking, comprehensive evidence base for policy making continues to evolve with new issues and challenges. Key questions raised include:

- What are the key economic and social impacts of recent and expected globalisation trends to report on over the next years?
- Who are the main winners and losers?
- What policies work to harness opportunities and support those faring worse as a result of these structural changes?
- How will demand for, and delivery of, public services be affected by globalisation?

As in many other countries, official statistics play a significant role in supporting public sector accountability. The widespread use of targets and performance indicators seeks to focus government on delivering results while sending out a message to the public about what they can expect the Government to deliver. Aspects of globalisation emerge in some of these performance indicators, relating to objectives such as the removal of trade barriers, achieving relative improvements in international competitiveness rankings and increasing the level of inward foreign direct investment.¹ The growing use of performance indicators by government raises questions about the role of statistics, particularly in relation to the globalisation phenomena that are the focus of this paper.

3. The globalisation measurement challenges

The position of ONS as a provider of evidence on globalisation is comparable to other NSOs. ONS's primary responsibility is the production of key statistics about the society and economy of the UK, delivered in partnership with statisticians and other analysts in government departments who are not only users but also key providers of UK official statistics.

3.1 *Why measurement matters*

From a policy viewpoint, poor measurement of the economic and social aspects of globalisation can be very damaging. Potential consequences may include:

- poor planning of public services delivery and resource allocation, if insufficient provision is made for immigrant communities when forecasting local demand for services;
- underestimating the economy's productive potential and overall competitiveness;
- errors in the forecasting of inflationary pressures when setting out monetary policy if cheaper imports or migration levels have not been well accounted for;

- inappropriate allocation of foreign aid to developing countries as a result of poor indicators of need and opportunity;
- poorly informed public opinion about globalisation trends and policies, with prejudice substituting for real information;
- partial understanding by policy makers of public perceptions and preferences about policies and their outcomes, with potential impacts on their long term sustainability.

3.2. *What are the key measurement challenges and what can be done about them?*

NSOs need to reassess their approach to measurement to deal with workers, firms, consumers and technologies that interact across borders. Measurement needs to be brought in line with new developments and policy evidence demands [6]. In doing so, it is vital to treat economic and social issues in an integrated fashion because of the benefits from a co-ordinated approach in terms of consistency and efficiency.ⁱⁱ This section describes some of the main issues that NSOs need to deal with in modernising their analysis of transboundary economic activity and population mobility.

3.2.1 *Migration*

From a public point of view, migration is probably the most visible feature of the recent wave of globalisation. Migration matters for policy because it feeds into population estimates and projections. These are used for planning, resource allocation, business decisions and a broad range of public policy purposes. Migration figures also provide essential contextual information, for in-depth analysis and in calculating rates for key demographic measures, such as dependency ratios, and key economic indicators, such as unemployment rates. With greater mobility, population and migration statistics have assumed increased importance for macroeconomic policy. They are crucial for judging the size of the potential labour supply and therefore the extent to which the economy can grow in a non-inflationary way.

Understanding the causes of migration is also critical for policy. Migratory flows are very heterogeneous, as are individual motives to relocate. These relate to differences in economic conditions between countries but could reverse as economic conditions change. Information and communication technologies also increase awareness about living standards abroad. Relative economic prosperity across countries is a key driver of migration. Global instability also contributes to increases in numbers of refugees and asylum seekers. Understanding what drives people to migrate is crucial for the design and eventual success of a wide range of policies.

The legal framework for migration differs across countries and over time. Since statistics are often built around national administrative processes, there are questions about the reliability and comparability of records over time and across countries. In the UK, the inter-departmental taskforce on migration statistics has noted the multiplicity of potential but imperfectly co-ordinated administrative and statistical sources on migration. The taskforce has recommended to progress the work towards achieving full coverage by *e-Borders* by 2014.ⁱⁱⁱ In the meantime, it has proposed extending the coverage of our passenger surveys and further developing our household surveys and Population Census.

The challenge for household and business surveys, registers and Censuses is formidable. Some countries like the UK have no unified, comprehensive register framework for individuals. In its absence, migration accentuates the difficulties for a co-ordinated delivery of “cradle to grave” policies providing integrated personal services over the lifetime, including health, education and pensions.

3.2.2. “Weightless” electronic trade and new trade in services

The widespread use of the internet has enabled consumers to purchase goods such as books, music and films, without the need for these products to be shipped across borders in the form of DVDs or books. Substantial statistical, taxation and trade policy issues arise because these products are being increasingly transmitted via data files through borderless virtual networks. These trades may fail to be picked up by statistics if transaction values are below customs authority thresholds and because many small e-commerce companies are poorly reflected on business registers. Furthermore, most surveys miss final consumers’ e-commerce purchases from abroad, partly because they may not be fully aware of its overseas origin.

We are therefore concentrating on keeping our surveys on trade in services up to date with new developments. We will also seek to build on customs administrative sources to improve the accuracy of our estimates, complementing these with further evidence from household and e-commerce surveys. This is an area where international co-ordination, particularly within the EU, can deliver substantial benefits, as exemplified by the ongoing pilot study led by Eurostat on international sourcing.

Co-ordination is also crucial in terms of establishing how NSOs address questions on relatively controversial topics such as offshoring. Our approach should be fair and objective. Firstly, this implies that the exports and imports of services should be treated similarly – public opinion is

certainly more sensitive to increases in imports and the potential, short-term job losses. Secondly, attributing changes in labour markets to changes in trade patterns requires analysis that is beyond the scope of usual NSO activity. We should instead concentrate on providing the evidence for policy makers and external analysts to draw those inferences using the identifying assumptions they find appropriate and are willing to justify.^{iv}

3.2.3. Increased specialisation in supply chains

ICT developments and reduced tariffs and transport costs have enabled many firms to set up profitable production chains that span across national boundaries. This process of increased specialisation is now occurring both within vertically integrated multinational companies (i.e. foreign direct investment) and across companies without ownership links. Independent statistical analysis of our sources at a disaggregated level has provided a great deal of valuable insights to policy makers on the behaviour of multinationals and internationally engaged companies and their contribution to economic activity. This research shows us, for example, that multinationals no longer replicate their domestic structures horizontally across countries. They focus instead on locating their activities to get the best from their integrated operations.

The UK and international statistical communities are very much aware of the measurement problems resulting from forcing our national frameworks into companies that behave as if there were no frontiers, or that adjust their financial reporting to minimise their overall tax liability. International specialisation challenges some of our working assumptions on structural ratios of businesses such as turnover to gross value added that are used to produce key economic statistics.

We need to continue to develop measurement frameworks that are easily recognisable by internationally engaged firms. The UK has been involved in the development of a reporting model for multinationals, supporting the reporting requirements of international institutions such as the ECB, the European Commission and the IMF. This work revealed a lack of cross-country consistency in the treatment of business units that needs to be resolved before multinationals are approached to reveal their full range of activities across the EU.

Box 3. An example of measurement challenges exacerbated by globalisation: The case of “Phantom GDP”.

The US magazine *Business Week* (18 June 2007) has recently stirred up the debate on the treatment of imports in calculating GDP and productivity growth. The argument goes that import prices do not reflect the big cost savings from switching to buying goods and services abroad as opposed to producing them in the home country. The suspicion is that price inflation for new imported goods could be systematically overstated as it is not possible to establish that the domestic goods are being replaced by others of similar characteristics. If offshoring intensifies, the real, inflation-adjusted growth rate of imports is likely to be reported as lower than it really is. This would lead to a higher measure of GDP growth than the actual figure, the excess being described by as “phantom GDP”.

3.2.4. *Intangible transactions*

Policy makers are becoming increasingly aware that trade statistics designed for an earlier age may fail to capture the sizeable flow of intangible assets such as business and technological knowledge across national borders. Companies exchange these intangibles with their foreign suppliers and subsidiaries as they set up global supply chains. Little is known about flows on these assets defined as “dark matter” by some economists because they have real impacts; one cannot see them in the data but they appear to explain some data inconsistencies. Although the likely magnitude of these flows is uncertain, it has been suggested that trade in intangibles could explain puzzles such as the persistently high levels of the US current account deficit. Central bankers and policy makers in general react to these theories with a mixture of enthusiasm and scepticism. They expect statistical agencies to play an important role in assessing whether these asset flows are statistically and economically significant.

These measurement problems are often interrelated. For example, in an increasingly globalised world, cheaper imports could be the counterpart to unmeasured exports of knowledge and intellectual capital, often transacted within individual multinational corporations. Judging from recent trends on investment in intangible assets in the UK and the dynamism of particular sectors such as finance, we expect an increased policy interest in this subject.

In the face of this, NSOs need to assess whether National Accounts should continue to exclude certain intellectual assets from the production boundary and treat as them current expenditure. Failure to address this problem within our accounting frameworks could lead to ever diverging views of the economy and increasing difficulties in reconciling different sources. ONS has worked with Eurostat, Treasury and the Department of Trade and Industry to analyse the treatment of different forms of intangible investment. If we are serious about counting these investments, we need to ask difficult questions about what trade in these assets actually means, particularly if no change in ownership is involved.

3.2.5. Greater financial integration

A major feature of the recent wave of globalisation is the unprecedented level of financial integration. This is evidenced by the increasing volume and variety of financial transactions, reflecting a combination of financial markets deregulation, sharp reductions of foreign exchange and capital controls, and the creation of new financial instruments. For example, residents in a given country now own more foreign assets and foreign residents own more domestic assets. The widespread use of financial derivatives also means that risks are more spread across the population but the potential for contagion can also be higher.

In the UK, responsibility for financial statistics is shared with the Bank of England. This is also an area of particular interest to UK policy makers because of the relative importance of the financial sector. A key area of current development work at ONS is the measurement of financial intermediation services. International co-ordination in the area of financial statistics is facilitated by guidance provided by the IMF.

3.2.6. Inequality and disaggregated statistics

Globalisation, like any process of structural change, can have very different impacts on different groups of society. Macroeconomic aggregates may fail to reflect individual perceptions of the impact of economic and social transformations. ONS contributed to the recent UK Equalities Review and is leading a cross-government review of social equalities data. The Equalities Review addressed the underlying causes of inequality, disadvantage and persistent discrimination in society and recognised globalisation as a key driver of changes to inequality.

The evidence suggests that global integration delivers high rewards to successful enterprise and specialist skills, but can also lead to perceptions of unfairness. Globalisation can prove a challenge to unskilled individuals and, possibly, to relatively skilled individuals whose services can be purchased abroad. As the range of tradable goods and services increases, migration is no longer the only way in which workers from different countries interact in the labour market. Globalisation also impacts on individuals as consumers, as relative prices of purchased goods change.

In response to these issues, ONS has developed a range of new products that ultimately help individuals make sense of some of these changes and reconcile them with their personal experience. Two initiatives clearly stand out: “Neighbourhood Statistics” is a web-based tool that provides quick web access to a wealth of information on demographic, economic, health and other characteristics of the chosen local population. Another web-based tool, the “Personal Inflation

Calculator”, allows users to calculate an inflation rate based on their personal expenditure patterns, rather than the average basket used in published statistics. The calculator weighs together price indices from the RPI to arrive at a personal inflation rate. It shows for example that households with relatively higher levels of expenditure on goods and services open to international competition have experienced lower rates of inflation in recent years.

4. Concluding remarks

NSOs most valuable asset is probably the trust and confidence of the public, and policy users in particular, on the quality of their statistical outputs. Maintaining this level of trust requires continuous investment. This is why the globalisation measurement challenge needs to be openly and effectively communicated to our users. There are mutual gains from engaging in this dialogue, as customers are the main source of evidence for our organisations to evolve and continue to provide reliable and relevant statistical outputs.

With scarce resources, we need to be aware of our strengths and limitations in dealing with new social and economic phenomena. Maintaining public confidence in the integrity of statistical outputs requires us to focus on the description of the phenomena we are best placed to measure, leaving to policy makers, think tanks, academics and analysts the role of analysing what this means for policy. It is not our organisations’ responsibility to try to offer answers to questions such as whether globalisation is good or bad or whether government policies are making things better. The governance and publication of official statistics is our responsibility; others are best placed to explain to the public whether the achievement of a target validates policy or failure to meet it is actually due to other confounding factors or events. Doing otherwise would compromise the integrity of the statistics.

Official statistics also need to respond to other challenges with a clear global dimension, such as climate change and sustainability. In order to meet the evidence needs of markets and policy makers, we need to assess how to develop or improve measurement frameworks, including environmental satellite accounts, that are comparable across countries.

International comparability and consistency become particularly important in the handling of transboundary phenomena. While economic and social changes require us to re-examine our conventions, we also need to think seriously about the value our customers place on the stability of

the measurement frameworks and statistical series. International discussions, led by Eurostat, UN and OECD among others, provide a useful forum for testing new proposals and solutions to new problems. For example, Eurostat plays a key role in helping the EU assess its progress towards the Lisbon goal of becoming “the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”. The reporting system in place is the outcome of intense co-operation between our agencies and Eurostat. It has made a substantial contribution to European-wide evidence-based policy making, demonstrating how much progress can be made. We are also breaking into new ground through joint work on a Multinational Enterprise Register. We are also in the early stages of a project delivering a co-ordinated analysis of ICT microdata that should help improve the comparability of statistics in this area and could potentially be applied to many others.

These examples show that addressing the complexity of the globalisation challenge requires us to share expertise and be open to innovative solutions. They also demonstrate the importance of the fruitful leadership of Eurostat in the area of globalisation statistics. This is highly valued by ONS and we expect to see this model being further developed in the coming years.

5. References

- [1] Cabinet Office (1999). The Modernising Government White Paper. TSO.
- [2] HM Treasury (2004). Long-term global economic challenges and opportunities for the UK. Pre-budget report.
- [3] HM Treasury (2006) Long-term opportunities and challenges for the UK: analysis for the 2007 Comprehensive Spending Review
- [4] Department of Trade and Industry (2004) Trade and Investment White Paper. TSO
- [5] Department of Trade and Industry (2004). Liberalisation and Globalisation: Maximising the Benefits of International Trade and Investment. DTI Economics Paper No 10.
- [6] Clayton, Tony and Robin Lynch (2003). ‘Globalisation: new needs for statistical measurement’. *Economic Trends*, 598, pp. 48-57, September

Endnotes

ⁱ These examples are derived from the UK Department of Trade and Industry's Public Service Agreements from the 2004 Spending Review.

ⁱⁱ For example, ONS sees the future development of labour accounts as a potential bridge between the social and economic statistics workstreams. This is likely to be particularly fruitful as we address the challenges of globalisation, particularly on migration, inequality and skills.

ⁱⁱⁱ E-Borders is a Home Office-led programme that aims to deliver timely data and intelligence on passengers seeking to enter or leave the country.

^{iv} Attributing changes in the number of jobs to services imports requires making assumptions about what would have happened had a firm not opened a subsidiary abroad or decided to import certain services. While some firms may explicitly report on that link, other companies may choose to alter new investment plans and this would go unnoticed. Some plants might just shut down if the option to import services was not available. It would be also extremely difficult to attribute the reverse phenomenon, namely how many jobs are "inshored". NSOs comparative strength is to provide accurate and detailed estimates of job flows and trade in goods and services, but without aiming to draw causal links when the inference requires value judgements.