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Bilateral trade data asymmetries: the UK experience and recommendations for future development

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The United Kingdom has been working collaboratively with several bilateral trading partners to identify, analyse, explain, and ultimately reduce the asymmetries in its bilateral trade data, particularly regarding trade in services. In this paper, the United Kingdom describes the methodological approach to bilateral trade data analysis that has been developed and approved, and also highlights key results.

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Bilateral trade data asymmetries: the UK experience and recommendations for future development

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1.1. Introduction

The user interest in bilateral trade data has increased substantially in recent years for a host of reasons. In the UK, following the EU referendum, user interest in UK trade data expanded beyond anything previously experienced. Within the ONS in the UK we have been heavily engaged in a wide and ambitious development programme for trade statistics, delivering more detailed data, insights and analysis.

One area of increased focus has been on trade asymmetries, particularly where these are relatively large such as between the UK and the US. We presented our experience and progress with our colleagues at the Bureau of Economic Analysis (BEA, US) at the 2018 WPTGS and in related articles. We have been heavily engaged in trade asymmetries analysis in the UK since 2016, working collaboratively with our priority bilateral partners (in terms of our trade data asymmetries), to identify, analyse, explain, and ultimately reduce the asymmetries.

As a result of this experience, we feel we are in a good position to make some recommendations to the WPTGS aimed at promoting the further development of asymmetries work. Therefore, this short paper proposes forward steps that could be taken by those countries already engaged in the analysis, as well as those countries which are yet to embark on asymmetries analysis and by international organisations already heavily engaged in this area.

This paper provides a brief outline of the work undertaken by the UK and its collaborating partner countries (section 2), and outlines recommendations arising from this experience (section 3).

Points for consideration by the WPTGS

- We kindly request the WPTGS to consider and discuss the proposals contained in this paper at the WPTGS meeting at the OECD, 27th- 29th March 2019;
- We kindly request the WPTGS takes this opportunity to form a collective agreement on the forward steps that will be taken in this important area.

1.2. The UK Experience

The UK has been working collaboratively with its priority bilateral trading partners to identify, analyse, explain, and ultimately reduce the asymmetries in its bilateral trade data. The focus has been on trade in services as this is where the largest trade data asymmetries can be found and because our colleagues at HM Revenue and Customs in the UK conduct annual asymmetries analysis and work to reduce trade in goods asymmetries.

To progress this work, the UK has developed and obtained approval for a methodological approach to bilateral trade data analysis which includes:

- downloading bilateral trade data from appropriate websites (*e.g.* bilateral partner country websites, Eurostat) and conducting asymmetries analyses
- obtaining and comparing published information on bilateral partner trade data sources and methods
- identifying appropriate contacts, and engaging and collaborating with trade data counterparts at national statistical institutions and/or central banks as appropriate
- sharing lower level bilateral data, which although unpublished, are not disclosive, where permitted by national data security legislation
- investigating the possibility of sharing business level data, subject to approval of the appropriate authorities and completion of the appropriate data sharing and confidentiality documentation
- sharing additional, more detailed (and sometimes unpublished) information on trade data sources and methods
- comparing bilateral trade data concepts, sources and methods to identify causes of asymmetries, and quantify these where possible
- agreeing with bilateral partners the bilateral asymmetries analysis to be published
- publishing articles on asymmetries analysis, including updates on progress and results.
- Using the information identified on the causes of asymmetries to improve trade data and reduce asymmetries in official trade statistics

The UK has focused its trade data asymmetries work on its priority bilateral partners, which include the USA, Republic of Ireland, Germany, France, Netherlands, Belgium and Luxembourg. These are also the bilateral partners with which the UK has its largest trade in services data asymmetries. To date, the UK has published three articles on its bilateral trade data asymmetries work as follows:

Asymmetries in trade data: a UK perspective, July 2017

Asymmetries in trade data: diving deeper into UK bilateral trade data, January 2018

Asymmetries in trade data: extending analysis of UK bilateral trade data, August 2018

This analysis and collaborative work has so far shown the bilateral asymmetries with each partner country, and the lower level service types with the largest asymmetries as shown in Table 1.

Table 0.1. Summary of export and import asymmetries by partner country 2016 (£bn)

Partner Country	Export Asymmetry (£bn)	Service type(s) displaying largest export asymmetry & value (£bn)	Import Asymmetry (£bn)	Service type(s) displaying largest import asymmetry & value (£bn)
US	17.1	Other business services (10.6)	-19.6	Financial services (-5.6)
Republic of Ireland	1.4	Insurance & pension services (-1.1)	-11.4	Telecommunications, computer & information services (-4.8)
Germany	-1.6	Financial services (2.5) Other business services (-2.5)	-10.5	Other business services (-3.0)
France	-2.7	Financial services (4.2)	-7.5	Other business services (-3.4)
The Netherlands	-0.8	Financial services (3.6)	-10.4	Other business services (-3.8)
Belgium	-2.7	Other business services (-2.0)	-4.8	Other business services (-1.9)
Luxembourg	-7.2	Financial services (-4.9)	-8.4	Other business services (-1.9)

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For example, the charts below display UK/US trade in services data asymmetries by service type.

Figure 0.1. UK-US trade in services asymmetries: UK exports – US imports by service type (£bn)
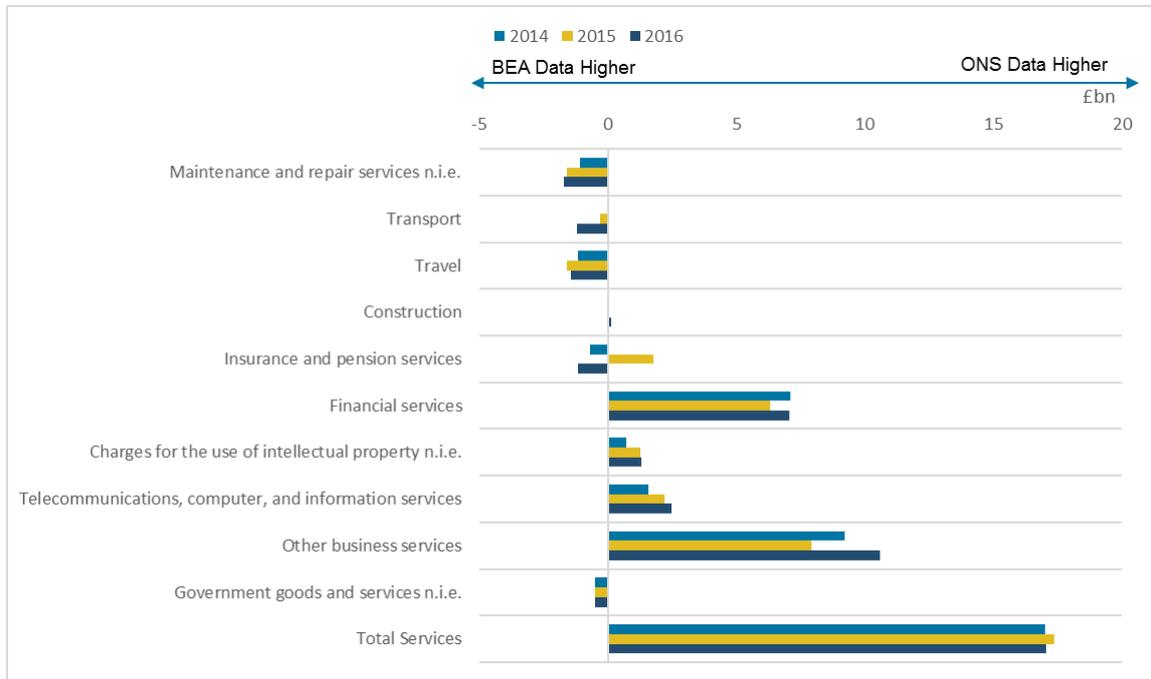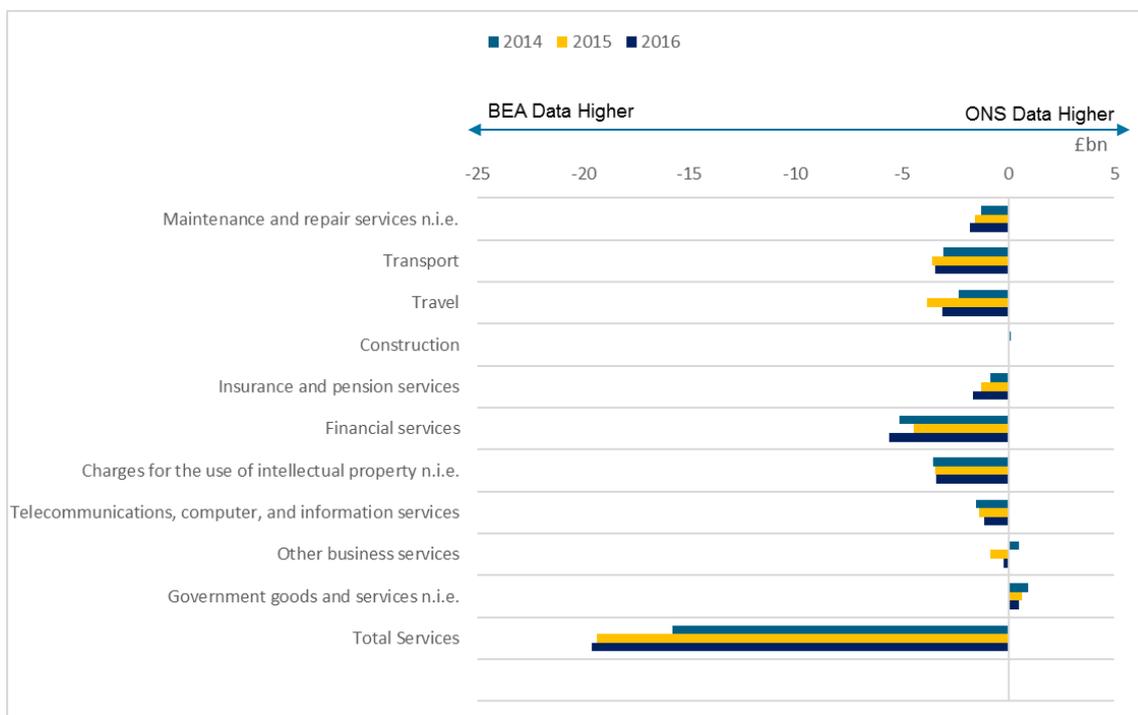

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- For 2016, ONS reports that UK exports to the US are higher than imports from the UK recorded by the BEA (Figure 1). The total exports asymmetry with the US is £17.1bn.
- Breaking down this asymmetry by individual services, ONS data are higher than the BEA for other business services (£10.6bn); financial services (£7.1bn); telecommunications, computer and information services (£2.5bn); charges for the use of intellectual property (£1.3bn), and construction (£0.1bn)

Figure 0.2. UK-US trade in services asymmetries: UK imports – US exports by service type (£bn)

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- The import asymmetry is presented in Figure 2, the total asymmetry is -£19.6bn which means the BEA estimates of exports to the UK are higher than imports from the US reported by ONS.
- Where there are negative asymmetries, that is BEA data are higher than ONS data, financial services has the largest asymmetry (-£5.6bn). For imports, there is a small asymmetry of -£238 million for other business services, which has the largest exports asymmetry (£10.6bn).
- There are some differences by service type as ONS reports imports from the US greater than the BEA reports exports from the US for two services. Government goods and services (n.i.e.) has an asymmetry of £0.5 billion and construction has a small asymmetry of £5 million

Asymmetries can be understood as having methodological, definitional and statistical causes. There are also differences in the timeliness of taking on international best practice. The UK is compliant with the international standards for the production and presentation of balance of payments, including trade in goods and services, as specified in the IMF Balance of Payments Manual Version 6 (BPM6). For methodological differences, we present components that are classified in one service type by ONS and in another service type by the BEA. These methodological differences do not help explain the trade asymmetry at a total services level, as the component is included somewhere in total services, but can help explain asymmetries between service types. The methodological differences that have currently been identified are shown in Table 2.

Table 0.2. Currently identified methodological differences where UK and US classify a particular type of trade in different service categories (£bn)

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	Table Column Heading (Alt+O)		UK Exports/US Imports (£bn)	UK Imports/US Exports (£bn)	
Component	Service category where ONS classify component	Service category where BEA classify component	2016	2016	Source for quantification
Personal, cultural and recreational (PCR) services	PCR services. Separately identified.	Within intellectual property & other business services. Not separately identified.	1.2	0.2	ONS
Construction services	Construction services. Separately identified.	Within other business services. Separately identified.	0.2	0.1	ONS
Outright sales/purchases of patents	Within research & development services within other business services. Not separately identified.	Within intellectual property. Not separately identified.			ONS
Indicates that data might be disclosive and have therefore been omitted					
Source: ONS					

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Definitional differences can help explain the total services asymmetry as well as the asymmetry for a particular service type. These differences are where one country includes a type of activity in their services trade, whilst the other excludes this activity from their services trade and may or may not include it in other accounts. Depending on the nature of the definitional difference, adjusting for it may reduce or increase the asymmetry.

Table 3 shows the definitional differences that have been identified through discussions with the BEA and an indicative estimate of the magnitude of each difference, where available. The inclusion of Crown Dependencies in US trade statistics by the BEA has been identified as a source of asymmetry, and indicative estimates from the BEA indicate the value, although it is important to note that these are not official statistics as trade with the crown dependencies is not separately identifiable in the BEA's data.

Table 0.3. Currently identified definitional differences between UK and US trade figures which affect total services trade and indicative estimates (£bn)

			UK Exports/US Imports (£bn)	UK Imports/US Exports (£bn)	
Difference	Services category affected	Conceptual basis	2016	2016	Source for quantification
BEA include Crown Dependencies in definition of UK, ONS excludes as conceptually incorrect to include (European System of Accounts 2010)	All	Crown Dependencies should be excluded	1.2	0.6	BEA
Manufacturing services on physical inputs owned by others are included in services trade by ONS and in goods trade by BEA	Manufacturing services on physical inputs owned by others	Should be included in services trade	0.1	0.1	ONS
Passenger sea transport is included in services trade by ONS, not captured by BEA	Transport	Should be included in services trade	1.6	+0.0	
Construction imports related to work done in the US are included by ONS, not captured by BEA	Construction	Should be included in services trade	+0.0	0.1	ONS
Pensions trade is included in services trade by ONS, not captured by BEA	Insurance and pension services	Should be included in services trade	..	..	ONS
Financial Intermediation Services Indirectly Measured (FISIM) included in services trade by ONS and implicitly included in income in the balance of payments statistics by BEA	Financial services	Should be included in services trade	1.9	1.0	ONS
'Margins on Buying and Selling Transactions': Net Spread Earnings (NSE) included in services exports by ONS, not captured by BEA[1]	Financial services	Should be included in services trade	4.7		ONS
Outright sales/purchases of franchises and trademarks are included in services trade by BEA and in the capital account by ONS	Intellectual Property	Should be included in the capital account			ONS
Total of currently identified definitional differences			9.5	1.8	

[1] Users should note that Net Spread Earnings have been revised in Pink Book 2018

Reference					
Total trade in services asymmetry in published figures					

.. Indicates that data might be disclosive and have therefore been omitted. Components may not sum to totals due to rounding.

Notes:

1. The estimates for a particular activity are given a positive sign where we include the activity in trade in services and the BEA excludes the activity in trade in services. The estimates for a particular activity are given a negative sign where we exclude the activity in trade in services and the BEA includes the activity in trade in services. Therefore, the signs are consistent with the total asymmetry shown (ONS - BEA data). Therefore the sum of each of the differences shows how much of the total asymmetry has been estimated.

2. Where estimates are between £0 and £0.05bn, a value of +£0.0bn is shown. Where estimates are between £0 and -£0.05bn, a value of -£0.0bn is shown.

3. NSE estimates shown are calculated using monetary financial institutions data only.

Since the publication of its third article in August 2018, the UK has continued its trade data asymmetries work with its priority bilateral partners. This work has included:

- updating trade in services asymmetries analyses to include the latest UK and bilateral partner trade data.
- exchanging information on trade in services data sources and methods, including the use of benchmarking Censuses (*e.g.* 5 yearly US Benchmarking Census), regulatory data (*e.g.* German regulatory monthly reporting system for international transactions), and VAT data (*e.g.* EC Sales List, VAT Monthly One Stop Shop (MOSS), and the EU VAT Information Exchange System (VIES)).
- conducting analysis of UK International Trade in Services (ITIS) survey microdata to identify trade in services by business size for specific service types.
- conducting analysis of the largest contributors to the services types displaying the largest trade in services data asymmetries.
- conducting 'triangulation' of trade in services data asymmetries to compare the size and direction of the UK's bilateral asymmetries with priority bilateral partner trade in services asymmetries.
- The next steps in the UK's work on trade data asymmetries include:
- sharing analysis of the largest contributors to the services types displaying the largest trade in services data asymmetries, pending approval of the ONS Legal Branch, the UK Government Legal Service and the UK National Statistician.
- obtaining access to VAT data (EC Sales List, VAT MOSS, VIES data) for use in linking VAT-registered traders to the UK's business register (IDBR) to improve coverage of the International Trade in Services Survey (ITIS); to quality assure ITIS survey data; and possibly to benchmark survey data
- applying Thomas Baranga's (Harvard University) theoretical approach to trade in services reconciliation to UK trade in services data, analysing results, including comparison with alternative approaches to asymmetries reconciliation.
- Publishing a fourth UK article to inform stakeholders of progress in reducing and/or reconciling trade data asymmetries.
- Pursuing opportunities and making recommendations for how our UK work can help others engaged in or planning trade asymmetries analysis

- Working with international organisations such as the OECD to aid their efforts to develop and improve international trade statistics and further reconcile trade data by reducing asymmetries.

1.3. Recommendations for future development of trade data asymmetries analysis and reconciliation

Arising from the UK's experience of trade data asymmetries work over the past few years outlined in the previous section, we offer a number of recommendations to support the development of further work by countries currently engaged in asymmetries analysis and reconciliation, and countries who have yet to embark on this work. The UK's experience has given rise to four broad recommendations as outlined below.

1.3.1. Recommendation One

The first recommendation arises from the experience of the bilateral asymmetries meetings coordinated by the OECD on two days immediately prior to the annual OECD WPTGS. The UK has found these bilateral asymmetries meetings to be extremely useful, not only because they have proved to be very productive in terms of sharing information and analysis, but also due to their success in promoting an escalation in asymmetries activities in advance of (and immediately following) the meetings. As a result, and in the interests of maintaining momentum in asymmetries work at other times of the year, the UK proposes the co-ordination by the OECD of asymmetries bilaterals on a more frequent basis, possibly twice yearly. This would provide an more frequent opportunity to share experience, discuss progress and agree forward steps within year for how to further reduce asymmetries and provide the OECD with more regular information with which to enhance its reconciliation of trade data in its global TiVA database.

1.3.2. Recommendation Two

In order to obtain the bilateral data, information on sources and methods, and bilateral partner country contact names, which are required to conduct asymmetries analysis, the ONS in the UK has accessed a large number of international organisation and country-specific internet sites. We recognise, appreciate and acknowledge that the OECD already invest a lot of time and effort in providing and maintaining valuable information and extensive trade data on its website, particularly within and attached to the TiVA database. However, it would be extremely beneficial and promote greater efficiency in conducting asymmetries work, if bilateral trade data, asymmetries analyses, information on sources and methods, and international and country-specific contact details for asymmetries work, were available in a single place, ideally on an asymmetries section on the new OECD trade website. Therefore, the UK recommends that the OECD set up a section (or repository) specifically for asymmetries work on its new trade website.

1.3.3. Recommendation Three

Over the past couple of years, the UK has been in the privileged position of benefiting from the availability of a dedicated team to conduct trade data asymmetries work. However, our collaborative activities with our priority bilateral partners have highlighted the fact that for most countries, asymmetries analysis has to be accommodated with a large number of other activities, including ongoing data production and publication commitments, and other improvement and development programmes. The absence of a dedicated resource for trade

data asymmetries work considerably slows progress in analysing and reconciling asymmetries. The position could be alleviated with the availability of additional resources. Therefore, the UK recommends that the OECD consider ways to increase the prioritisation allocated by countries to asymmetries work, possibly by making available additional resources such as dedicated funding and/or secondments for collaborative asymmetries analysis.

1.3.4. Recommendation Four

Through its work on trade data asymmetries, the UK is aware of numerous developments planned by countries to improve their trade data and reduce asymmetries, as well as numerous approaches to reconciling trade data asymmetries (e.g. OECD approach to balanced merchandise trade statistics; OECD balanced trade in services statistics; Thomas Baranga, 2018). However, there would appear to be no formal process through which country-specific improvements aimed at reducing asymmetries are able to feed into international approaches to trade data asymmetries reconciliation. Therefore, the UK recommends that the OECD develop a formal process for reconciling trade data asymmetries in which country-specific approaches to data improvement and asymmetries reconciliation feed into formally recommended international approaches to asymmetries reconciliation.

1.4. Conclusion

The UK has taken a leading role, and developed considerable experience in identifying, analysing and explaining bilateral trade data asymmetries. A summary of the activities in which it has been engaged and the some of the outcomes of this work, have been outlined in this paper. Arising from this experience, the UK is now able to make a number of recommendations for further development and improvement of collaborative international work aimed at asymmetries reduction and reconciliation, and these have been outlined in this paper. We have made these recommendations with the objective of promoting the development of further asymmetries analysis by those countries which are already engaged in the work, and to promote collaboration in asymmetries work by those countries which have not yet embarked upon it. We hope our recommendations will be accepted in the positive light in which they are presented, with the objective of promoting greater momentum and efficiency in trade data asymmetries analysis, reduction and reconciliation.