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The Case for Measuring Tax Gap

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Abstract

More recently an increasing number of revenue authorities have attempted to estimate the amount of tax that is legally owing to their government but not collected. This amount is commonly referred to as 'tax gap'. In the past tax gap studies were branded unreliable. Tax administrations and other bodies criticised any attempts at quantifying tax non-compliance on the basis that it was costly and inconclusive. However based on the significant number of tax gap studies undertaken recently there appears to have been a change of heart. This paper considers a range of tax gap studies for the purpose of identifying the core reasons they were undertaken, highlighting their benefits and limitations.

INTRODUCTION

Tax gap is the difference between the theoretical tax liability due in accordance with the tax legislation and the actual revenue collected. The tax gap may be classified as underreporting of income, underpayment of taxes, and non-filing of returns. However the sources of tax gap are varied and complex and will differ for each type of tax and in every jurisdiction. Sources of tax gap might include for example, uncollected taxes (ie bad debts), unintentional error, the underground economy and illegal activities. Dissatisfaction with governments and their spending, apathy and corruption are some of the reasons for non-compliance leading to tax gap. Complexity of the tax legislation may also be a contributing factor.

Understanding the sources of and reasons for non-compliance is important for the purposes of developing strategies to encourage and enforce compliance and deter non-compliance, the core business of a revenue authority. This intelligence can be gathered from many different activities undertaken by the revenue authority, particularly audits. External sources of information, such as national statistics and literature on taxpayer behaviour and risk management, will also contribute. An increasing popular method for analysing and using this information has been through the generation of tax gap estimations.

Quantifying the tax gap provides a picture of the total revenue due and from whom it should be collected (or in relation to what transactions). Mapping this information is very powerful for a revenue authority, although it was thought possible only in theory until more recently. Tax administrations and other bodies have traditionally criticised any attempts at quantifying tax non-compliance on the basis that it was costly and inconclusive. Since the 1990s however there have been a number of countries, both members of the Organisation for Cooperation and Development (OECD) and developing countries, which have been able to estimate tax gap. Many have publicised

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the results widely and use them as performance indicators, both at the organisational and employee level.

This paper surveys some of the larger studies of tax gap that are publicly available to identify the reasons why they are now considered feasible and more reliable. In doing so, the benefits and limitations of tax gaps studies are highlighted. In conclusion, the literature indicates that tax gap estimates are possible and although there are still limitations associated with tax gap studies, they are far outweighed by the potential benefits.

WHICH JURISDICTIONS ARE ESTIMATING WHICH TAX GAP AND WHY?

A number of countries undertake tax gap estimates. This section outlines a range of tax gap estimates made publicly available. Where possible a brief history of when and why the estimates have been made is included. Details on the benefits and/or ways information obtained from calculating tax gap estimates have been used are included in the following section.

Prominent examples of countries estimating various types of tax gaps include France, Sweden, the United States of America (US), and the United Kingdom (UK). Several individual states of the US also estimate tax gaps, such as Minnesota, Idaho, New York and California.

France has prepared tax gap estimates for some time. As noted by Barthelemy:

> ….., VAT fraud is detected regularly in France by the INSEE, through the method of difference in VAT. To begin with, we calculate the amount of VAT actually received by the state. Then we determine the amount of VAT which theoretically should be received, taking into account the economic activity as it is understood by the different headings in the input-output tables.
>
> The difference between the theoretical VAT and the actual VAT makes a VAT gap which is enough, with some correction, to obtain some estimation of evasion. The correction is based on legal exemptions and abatements and on the differences which arise from the legal rules for the paying in and the deduction of VAT.[1]

Sweden has also estimated tax gap on a broad range of taxes and social security levies including VAT for the years 1997 and 2000. The total gap is estimated at between 4% and 5% of GDP.[2] Sweden's tax gap estimates are calculated to provide guidance on the magnitude of the gap rather than precise year-to-year trends in tax gap.

Tax gap estimates were also routinely prepared by the US Internal Revenue Service (IRS) throughout the 1980s and 1990s. Although the IRS continues to examine available data and use it in its compliance management, data collection supporting these estimates has been suspended. The primary reason for stopping data collection (through a specifically designed audit program) was politically motivated - taxpayer

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[1] Barthelemy, P., "The macroeconomic estimates of the hidden economy: A critical analysis", (1998) 34 (2), *Review of Income and Wealth*, p 190, <www.roiw.org/1988/183.pdf> at 15 March 2006.

[2] See *Taxes in Sweden*, (2004), Section 6.12 <skatteverket.se/broschyrer/104/10405.pdf> and more generally <http://skatteverket.se/infotext/om_webbplatsen/> at 15 March 2006.

dissatisfaction around the time of a change of government.[3] The IRS has however recently re-launched its research program.[4]

Several US states also currently undertake tax gap estimates of different kinds including income tax and sales tax in Minnesota[5] and income tax in California[6]. The Minnesota sales tax gap study was conducted by an organisation other than the relevant revenue authority, although the study was commissioned by the Minnesota Department of Revenue.

The UK is another example. The UK Her Majesty's Customs & Excise (HMCE) (now Her Majesty's Revenue & Customs (HMRC)) has been estimating VAT gap annually since 2001.[7] The HMCE estimates of VAT gap are based on UK Office of National Statistics (ONS) national accounts and household data. Each year, VAT gap estimates are prepared and announced to government, with considerable associated publicity. Performance agreements with employees and with government in the UK also now include VAT gap as a key performance indicator of those responsible for collecting the VAT.[8]

In addition to various jurisdictions choosing to estimate tax gap for internal management purposes, the International Monetary Fund (IMF) and the World Bank also use tax gap estimates as a performance measure. The IMF requires a tax gap estimate in relation to jurisdictions that it supports, as a condition of providing

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[3] Witte, A., Woodbury, D., 'The effect of tax laws and tax administration on tax compliance: The case of the US individual income tax', (1985), 38, *National Tax Journal*, pp 1-15.

[4] <www.irs.gov/newsroom/article/0,,id=137247,00.html>. at 15 March 2006.

[5] *Sales and Use Tax Gap Project: Final Report*, (2002), American Economics Group, Inc, Minnesota,, <http://www.taxes.state.mn.us/taxes/legal_policy/research_reports/content/tax_gap_study.shtml> at 15 March 2006.

[6] *California's Tax Gap*, (2005), Californian Legislative Analysist's Office, <http://www.lao.ca.gov/handouts/revtax/2005/Californias_Tax_Gap_030105.pdf> at 15 March 2006.

[7] *Tackling Indirect Tax Fraud*, (2001), UK (HM Customs & Escise), <http://www.hm-treasury.gov.uk/mediastore/otherfiles/Fraud%20Complete.pdf> ; and *Measuring Indirect Tax Fraud,* (2001), UK (HM Customs & Excise), <www.hmce.gov.uk/channelsPortalWebApp/downloadFile?contentID=HMCE_PROD_011638> at 15 March 2006.

[8] In the *HM Revenue and Customs: Public Service Agreement 2005-06 to 2007*-08: Technical Notes, it is stated that "PSA Target 1: By 2007-2008 - reduce the scale of VAT losses to no more than 11% of the theoretical VAT liability." See <http://www.hmrc.gov.uk/psa/psatn2005_08.HTM> at 15 March 2006.

The public service agreement also explains the VAT gap as follows:

The theoretical VAT liability (VTTL) is an estimate of the tax that should be collected in the absence of any losses. It is constructed largely from the Office for National Statistics (ONS) national accounts sources, which are independent of the VAT administrative systems. The difference between the VTTL and net VAT receipts is an estimate of VAT losses known as the VAT gap.

VAT losses are attributable to a number of causes, from error, ignorance and financial difficulty through to abusive avoidance and deliberate fraud such as Missing Trader Intra Community Fraud (MTIC) VAT fraud.

assistance.[9] The World Bank also assesses government performance using tax gap estimates amongst other measures.[10]

This section has identified just a few examples of tax gap studies undertaken in different countries around the world. A list of publicly available tax gap estimates and related documentation in these and other countries such as New Zealand, the Philippines and Brazil is provided in Appendix 1. The estimates identified cover a range of different taxes including:

- VAT gap estimates – for example in France, Sweden and the UK, as noted above.
- Sales tax gap estimates – as undertaken by Minnesota, US.
- Federal Income tax gap estimates – calculated in the US for example.[11]
- State Income Tax Gap – calculated in Idaho, California and New York State.[12]
- Corporate tax gap estimates – currently being developed by the UK HMRC.[13]

The increasing number of jurisdictions investing in the development of tax gap models indicates there is significant value in doing so. The following section summarises the associated benefits of tax gap studies.

BENEFITS OF TAX GAP STUDIES

The literature on tax administration and tax compliance suggests there are three key benefits that flow from estimating tax gap. These are:

- the identification of the types and level of non-compliance that contribute to the tax gap;
- improved efficiency of resource allocation within a revenue authority to combat non-compliance; and
- as a measure of effectiveness of a revenue authority.

These three main benefits are discussed in more detail below. However it should also be noted that in the UK, the VAT gap estimates have had the added benefit of helping to identify areas where legislative amendment might be required in order to address problems when taxpayers interpret the law in a way that attracts a particular VAT

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[9] See the IMF involvement in the Caribbean Regional Technical Assistance Centre (CARTAC) program which involves tax gap estimates in Caribbean countries at <www.cartac.com.bb/CARTAC%20Activity%20Report%20Oct%2003%20-%20April%2004.doc > at 15 March 2006.

[10] *Afghanistan Managing Public Finances for Development*, Report No. 34582-AF, 2005, World Bank, <http://siteresources.worldbank.org/AFGHANISTANEXTN/Resources/305984-1137783774207/afghanistan_pfm.pdf> at 15 March 2006.

[11] <http://www.irs.gov/newsroom/article/0,,id=137246,00.html> at 15 March 2006.

[12] See Appendix 1 and <http://www.lao.ca.gov/handouts/revtax/2005/Californias_Tax_Gap_030105.pdf>, <http://www.taxadmin.org/fta/meet/05rev_est/bolognino.pdf>, <http://www.legislature.idaho.gov/ope/publications/reports/rt_generalgov.htm>

[13] Although the UK HMRC corporate tax estimates are not yet publicly available, preliminary studies by an independent body are documented in 'Mind the Gap', (2006), *Tax Justice*, <http://www.taxjustice.net/cms/upload/pdf/Mind_the_Tax_Gap_-_summary_-_13_Jan_2006.pdf> at 15th March 2006.

treatment (such as GST-free/zero rated) when this is not intended. Tax gap estimates can therefore potentially highlight inequities and economic inefficiencies which arise from non-compliance with taxes.

The UK VAT gap research has also highlighted data availability problems which have subsequently been addressed to improve the reliability of time series estimates, particularly the National Accounts methodology applied in relation to cross-border and trade.[14] What has resulted is a better understanding of the size and operation of the underground economy, its impact on UK VAT raised and its implications for tax system integrity.

Identifying the sources and level of non-compliance

Identifying sources of non-compliance is a complex and difficult task but it is a key aspect of managing tax compliance. In order to identify sources of tax gap, a revenue authority needs to have a sound understanding of the tax(es) administered and associated types of compliance requirements, taxpayers and their compliance behaviours, and the environment in which they operate. This requires access to various sources of information which is typically gathered from audit and other compliance activities.

This process of identifying sources of non-compliance is often referred to as risk management. Tax gap estimates can assist in this process by providing considerable guidance on what the sources of risks are. The tax gap has three components: underreporting of income, underpayment of taxes, and non-filing of returns. The IRS allocates total tax gap across each of these types of non-compliance and then disaggregates the tax gap further by type of taxpayer (refer to Figure 1). Another example of how the sources of non-compliance can be identified and used as a result of tax gap estimates was highlighted by the OECD,

> The tax gap can be divided into the assessment error (i.e. the difference between the theoretical tax and the tax actually billed to the taxpayer) and the collection loss (the difference between the tax bill and the tax actually paid). In Sweden collection losses are small, less than 1% of the total tax bill. Although difficult to estimate, the assessment error can safely be assumed to be much larger. Most estimates of the assessment error indicate that it falls within the range of 5–10% of the theoretical tax. Other estimates are much higher.[15]

Tax gap estimates also assist in the risk management process by providing considerable guidance on prioritising identified risks. Quantifying tax gap provides a means for comprehensively and more accurately assessing and ranking areas of risk to compliance. For example, using time series data associated with its VAT gap estimates, the UK has been able to identify the magnitude and high priority for

[14] See for example <www.statistics.gov.uk/articles/economic_trends/ETAug03Ruffles.pdf> at 15 March 2006.

[15] Olsson in Hôgye, Mihály, (ed), 'Local And Regional Tax Administration In Transition Countries', (2000), *Local Government and Public Reform Initiative*, Budapest., p 424, <http://lgi.osi.hu/publications/default.asp?id=95> at 15 March 2006.

addressing the case of 'missing trader intra-community fraud'[16] and other areas of increasing non-compliance.

Some revenue authorities however argue that they have a sufficient risk management system in place that allows them to identify and prioritise risks. These organisations believe that because they have access to a wide range of information and intelligence they can sufficiently group and rank non-compliant activities. However tax gap estimates used in conjunction with these data sets and indicators have been shown to enhance the value of risk assessment activities significantly. The detailed knowledge the tax administrator usually generates regarding risk areas are essentially sources of tax gap. Taking the additional step of estimating the tax gap enables:

- verification of the level of risk assessed in relation to risk areas identified;
- a comprehensive analysis of all areas of compliance and non-compliance;
- identification of areas of risk not previously ranked;
- monitoring of the quantification of risk areas over a period of time using a comparable estimate;
- assessment of the effectiveness of attempts to reduce the non-compliance in a risk area;
- assessment of the effectiveness of attempts to reduce the non-compliance in aggregate (as pressure on one form of non-compliance often merely manifests in another form rather than actually reducing non-compliance); and
- comparison of relative risks across all areas.

The ability to monitor and compare the risk associated with all areas and/or a type of non-compliance associated with a theoretical tax liability ensures that the eradication or reduction of one type of risk does not manifest itself in another form (which is most likely to go undetected for some period of time). Furthermore, the quantification of the tax gap in all types of transactions and/or required forms of compliance allows for the prioritisation or ranking of risk on a more reliable and comparable basis than some other arbitrary ranking processes that might only be used in relation to suspected risk areas.

This cross analysis of the possible sources of tax gap and the causes of it based on the revenue authority's intelligence and data and tax gap estimates has proved very powerful in practice. For example, the IRS, as a result of measuring tax gap, was able to conclude that the largest components of the tax gap are non-compliance with the reporting requirements[17] and individual taxpayers.[18] In fact, the IRS has developed a

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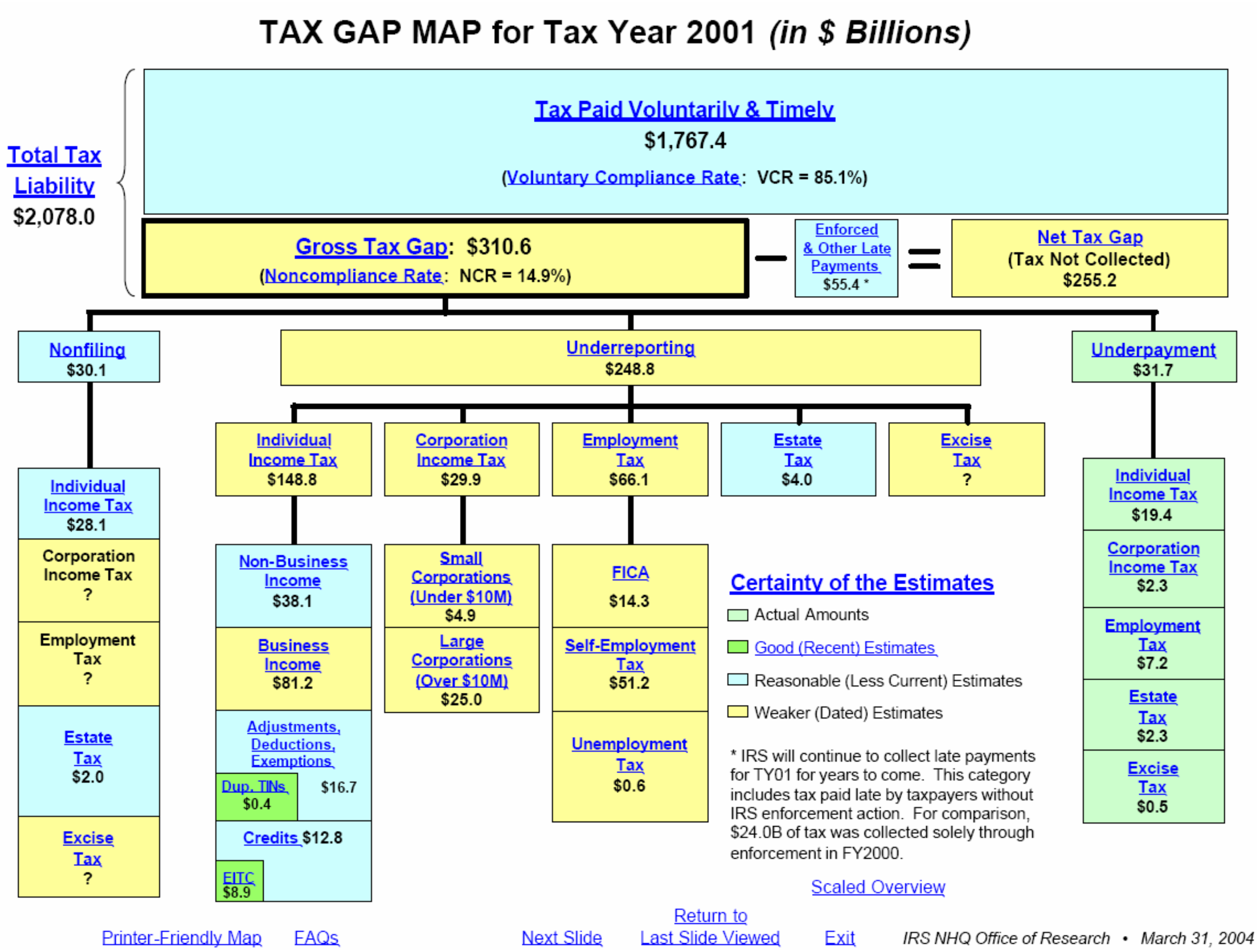
16 *Measuring and Tackling Indirect Tax Losses*, (2004), UK (HM Customs & Excise), pp.4 and 7, <www.hmce.gov.uk/channelsPortalWebApp/downloadFile?contentID=HMCE_PROD_011582/> at 15 March 2006.

17 Brown, R. & Mazur, M., 'The National Research Program: Measuring Taxpayer Compliance Comprehensively', paper presented at the *2003 Kansas University Law Review Symposium*, Lawrence, 2003, p 2, <www.irs.gov/pub/irs-soi/01tgapmp.pdf> at 15 March 2006.

18 US Treasury Report on IRS Tax Gap Study, (2005), Section 9, p. 2, <http://www.irs.treas.gov/pub/irs-utl/tpi_2005_sec9_tax_gap_ir2005_38.pdf> at 15 March 2006.

summary of tax gaps and their sources as a result if its studies to assist in identifying and monitor them (refer to Figure 1).

FIGURE 1 - IRS TAX GAP MAP



Source: <www.irs.gov/pub/irs-soi/01tgapmp.pdf>

Resource allocation efficiencies

An associated benefit of prioritising or ranking risk of non-compliance on a more reliable and comparable basis through tax gap estimates rather than other arbitrary ranking processes, is a more efficient resource allocation within the revenue authority. Because tax gap estimates allow the revenue authority to monitor changes in risk areas they are able to better identify what areas they should allocate resources to in order to achieve optimum results. This is a particularly important benefit given the limited resources available to revenue authorities.

For example, the IRS have shifted resource allocations as a result of completing their most recent tax gap estimates. Mr Everson, IRS Commissioner, said:

> We are ramping up our audits on high-income taxpayers and corporations, focusing more attention on abusive shelters and launching more criminal investigations. [19]

The results of the UK VAT gap studies also provide an example of this potential use of tax gap information. The UK gap estimates were the stimulus for the development of a VAT Compliance Strategy (VCS) which was launched on 1 April 2003, with the claim of reversing the trend of an increasing difference between total 'theoretical' VAT liability and actual VAT receipts - the VAT gap.[20]

Managing resources efficiently impacts on the level of effective performance in combating non-compliance. Tax gap estimates are also able to help revenue authorities assess their overall performance by monitoring changes in the estiamted gap.

Revenue authority performance measure

In addition to being a valuable tool to tax administrators, tax gap studies can also be used by government to monitor performance of their tax administration agencies in maintaining integrity in their tax system. It is not uncommon for a government and revenue authority to enter into contracts for funding and other conditions based on achieving agreed levels of key performance indicators. One important indicator is effectiveness.

Effectiveness relates outcomes to objectives. The OECD acknowledges that, "reliable measures of effectiveness are highly desirable, but often difficult to find."[21] Amongst the most commonly adopted indicator of effectiveness of revenue authorities are revenue targets. However revenue targets are not necessarily a good measure of the effectiveness of the revenue authority. Although revenue is easily measured and compared to a target, revenue collected depends on far more than effective management. The OECD hightlights,

> The problem with revenue as a target and measure of effectiveness is that in most countries the amount of revenue collected depends much more on economic growth and changes in tax legislation than on the general performance of the tax administration.[22]

In relation to determining the *effectiveness* of the revenue authority, a tax gap estimate is a conceptually more relevant and valuable indicator, making it preferable. The OECD advocate tax gap studies particularly as a performance measure for the effectiveness of revenue authorities, despite past concerns expressed regarding the practical issues associated with estimating tax gap. Essentially effectiveness is about minimising the tax gap, i.e. the gap between theoretical tax (the tax that would have

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[19] US Treasury report on the IRS, Tax Practitioner Institute, (2005), Section 9, p. 1.

[20] *Measuring and Tackling Indirect Tax Losses*, (2004), UK (HM Customs & Ecise), p4, <http://www.hmce.gov.uk/channelsPortalWebApp/downloadFile?contentID=HMCE_PROD_011582/> at 15 March 2006.

[21] 'General Administrative Principles – GAP005 Performance Measurement in Tax Administrations, Performance Measurement in Tax Administrations – Practice Note', (2001), *Centre for Tax Policy and Administration,* Tax guidance series, prepared by the OECD Committee of Fiscal Affairs Forum on Strategic Management.

[22] Ibid. p 14.

been collected if no one tried to cheat and no mistakes were made) and the tax actually collected.[23]

The IMF supports this view as it now routinely undertakes tax gap estimates in it review of the tax capacity of countries.[24] National auditors and accountability authorities are following suit and supporting the use of tax gap estimates and encouraging regular updates.[25] Where they have not been undertaken recommendations are being made to do them.[26]

In summary the generally acknowledged benefits from undertaking tax gap estimates are that government will be better informed about:

- tax system integrity;
- risks to revenue buoyancy;
- performance of their tax collection agency and processes;
- evolving risks to revenue (and potential failures by their tax collection agencies);
- problems with the tax legislation;
- problems with the national statistics; and
- the impact of the non-observed economy on revenue.

These assurances are increasingly important to governments worldwide. For government, increasing demands for the provision of services (such as for health and welfare) means it is imperative that taxes due are paid. For the general public, any evidence of tax non-compliance has a direct impact on the equity and economic efficiency of taxes and this can lead to a loss of public confidence in the integrity of the tax and the revenue authority.

The significant benefits and overwhelming support for tax gap studies from a broad range of members of the tax community however should be considered in light of the various limitations claimed of such estimates.

LIMITATIONS OF TAX GAP STUDIES

While tax gap estimates are an important compliance management tool capable of complementing other performance indicators, such measures do have their limitations. These limitations include both conceptual issues, as well as those arising from data availability and integrity.[27]

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[23] Ibid. pp 5.6 and 29.

[24] See the IMF involvement in the Caribbean Regional Technical Assistance Centre (CARTAC) program which involves tax gap estimates in Caribbean countries at <www.cartac.com.bb/CARTAC%20Activity%20Report%20Oct%2003%20-%20April%2004.doc > at 15 March 2006.

[25] US Government Accountability Office, (2005), Tax Gap: Multiple Strategies, Better Compliance Data and long term goals are need to improve taxpayer compliance.

[26] See for example, *The ATO's Strategies to Address the Cash Economy*, (2006), Australia (Australian National Audit Office), Performance Audit, Audit Report No. 30, 2005-06.

[27] See for example the discussion in the OECD *General Administrative Principles – GAP005 Performance Measurement in Tax Administrations*, (2001), p 29.

When estimating tax gap, data is required from both the national statistician and the revenue authority. Broad issues which must be considered include the data's currency, reliability, validity and availability.

In relation to the data used in the tax gap estimates, a number of data problems have been raised regarding accuracy, reliability and cost. Specific concerns include the:

- timeliness of relevant data available, for example the latest Input-Output data in Australia relates to the 1998-99 financial year;
- lack of data on specific transactions such as capital stock/transfers;
- lack of a detailed industry break-up of data;
- inability to accurately map the national statistician's industry classification to those used by the revenue authority; and
- access to and/or of the revenue authority's data (based on privacy laws or tax laws relating to the use of information provided to the revenue authority, for example).

The data sources and their quality have a significant impact on the estimation not only in the validity of the result but in the design or ultimate methodology adopted. The data sources must match the required information that is dependent on both the approach adopted and the relevant tax legislation.

Although concerns regarding data are branded as limitations, recent experience shows that attempts to estimate tax gap can in fact assist in identifying data constraints and how they can be addressed, as has been the UK experience noted above. As a result the data limitations can be overcome and additional benefits arise. Overtime, with the improvement or changes in data collection and the refinement of the model for estimating the tax gap, valuable information can be obtained both regarding the sources and trends in the tax gap; and the performance of the tax administration.

Despite the fact that the data issues raised regarding tax gap issues can be addressed and in fact can produce additional benefits, some countries have still opted not to directly pursue tax gap estimates for data related and other reasons. For example,

> ...Australia does not attempt to estimate the total tax gap, but undertakes rigorous risk assessments to identify and address areas where this gap may be significant or have the potential to become significant.[28]

The Australian Taxation Office (ATO) has indicated the reasons tax gap estimates could not be undertaken, include:

- the Australian Bureau of Statistics (ABS) confirms that the underground economy is 2% of GDP;
- PRISMOD [An Australian Treasury model] is of minimal use;
- tax gap estimates are unlikely to provide pertinent information for understanding the overall efficacy of the range of measures undertaken by the ATO;
- changes in trends identified as a result of tax gap estimates are not useful.[29]

[28] OECD Practice Notes on *Performance Measurement in Tax Administrations*, (2001), p 30-31.

The ATO has also more recently stated that it in its opinion,

> the cost of inconveniencing compliant taxpayers through a program of rigorous, large scale, random audits is not commensurate with the benefits of the comparative, raw information obtained from these audits. The cost is further compounded by consuming resources that would otherwise be targeted at substantive compliance risks.[30]

The lack of tax gap estimates has however been a point of concern in Australia. In 2004 the Australian National Audit Office (ANAO) recommended that the ATO explore the possibility of undertaking GST gap estimates.[31] This recommendation was supported by the *Joint Committee of Public Accounts and Audit of the Commonwealth* (JCPAA). The Committee stated that it,

> …feels that a rigorously derived estimate of the tax gap is required as an input to successful monitoring of prevention and control of Goods and Services Tax fraud.[32]

Additionally, the JCPAA noted that it

> 4.51…believes that ATO should establish and maintain a dynamic mechanism to determine an estimate of the tax gap using appropriate Australian Bureau of Statistics economy-wide business indicators.[33]

In a written response to the JCPAA the ATO indicated that appropriate indicators are being used and further developed, using ABS data.[34] For example, the ATO prepares indicators for:

- GST growth in relation to ABS household expenditure data;
- GST growth by surveys of enterprise;
- GST trends by industry; and
- indicators of ATO efficacy in relation to GST fraud.

However, some of the conceptual issues raised with regard to tax gap estimates may also apply to the indicators that the ATO currently and/or propose to calculate. Consequently, provided these issues are borne in mind in preparing and interpreting

[29] Australia (ATO), 2005, ATO response to Recommendation 5 of Joint Committee of Public Accounts and Audit, *Review of Auditor-General's Reports 2002-2003: Fourth Quarter*, 2004, <http://www.aph.gov.au/house/committee/jpaa/agfourth02_03/execmin.htm> at 15 March 2006.

[30] *The ATO's Strategies to Address the Cash Economy*, (2006), Audit Report No.30 2005–06 Performance Audit, Australia (ANAO), p 32, <www.anao.gov.au> at 1 March 2006.

[31] *Goods and Services Tax Fraud Prevention and Control by the Australian Taxation Office,* Audit Report No.55 2002–03, Australia (ANAO), <www.anao.gov.au> at 1 March 2006.

[32] *Review of the Auditor-General's Reports 2002-2003*, Report No. 398, (2004), Australia (JCPAA), p ix.

[33] Ibid.

[34] Australia (ATO), 2005, ATO response to Recommendation 5 of Joint Committee of Public Accounts and Audit, *Review of Auditor-General's Reports 2002-2003: Fourth Quarter*, 2004, <http://www.aph.gov.au/house/committee/jpaa/agfourth02_03/execmin.htm> at 15 March 2006.

the results, they should not pose barriers for estimating tax gap or the other performance indicators.

Clearly outlining the purpose and the limitations of performance indicators renders them valid and useful. As the ATO state, a trend increase in GST gap need not solely reflect increased GST fraud.[35] However, what the trends and changes in trends (in all relevant indicators, including tax gap) can do is complement other intelligence gathered by the revenue authority and allow it to make measured decisions about how resources should best be used.

The literature on tax gap supports this assertion as it contains no express intention for tax gap studies to be used in place of other work undertaken by revenue authorities in their pursuit of reducing non-compliance. The ideal situation is in fact quite the contrary. Tax gap estimates are typically used to not only assist in interpreting the revenue authority's existing data and intelligence but can be used to develop and refine the techniques used to gather that data. Furthermore tax gap estimates are designed to drive the development of an effective mix of a range of compliance strategies.

Finally, data limitations and concerns about the information value of tax gap estimates should be distinguished from the inertia that might arise against undertaking such estimates. It seems that the limitations of tax gap estimates identified in the past can be overcome and/or minimised and are not significant enough to dismiss the use of tax gap estimates. Any resistance to calculating tax gap estimates that might still exist is possibly due to the pressure that quantifying tax gap may impose on governments to collect additional revenue, revenue which it is difficult to collect (without generating adverse public reaction). Additionally there may be public concern that the additional revenue raised might be spent and therefore increase the size of government without comparable improvement in services. Nonetheless, these are not limitation or even concerns about the concept or process of estimating tax gap but the politics of taxation and the implications for government of public knowledge of the tax gap.

DEVELOPMENTS ENABLING BETTER TAX GAP ESTIMATES

The most important development that helps overcome the perceived conceptual issues regarding the possibility of estimating tax gap and the value of doing so is the documentation of the process and creation of models that have been used to estimate tax gap in various countries around the world.

More specifically, in relation to the primary limitation noted above, relevant data, there have been and must continue to be a revision of the data that national statisticians need to be collecting and how that data should be aggregated. Measures of GDP based on the United Nations System of National Accounts (SNA93)[36] are an essential ingredient in tax gap estimates. The concepts used in SNA93 are broad and inclusive of all productive activities regardless of their legality. Barthelemy reminds us that,

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[35] Ibid.

[36] *SNA*, (1993), United Nations, <http://unstats.un.org/unsd/sna1993/introduction.asp>, at 15 March 2005.

> …the fact that the GDP consists, in part, of incomes which undeniably come from the hidden economy means that in no case should we confuse hidden with unrecorded.[37]

Clearly consideration of both the observed and non-observed economy is important. In relation to the latter, SNA93 includes consideration of underground production, illegal production, informal sector production, and production of households for own final use. The OECD and IMF have more recently worked together to provide further guidance on this reporting.[38]

Specific examples of recent developments relating to relevant data also exist. Revisions of UK National Accounts methodology and trade and GDP estimates[39] were noted above. Additionally, recent changes to the secrecy provisions of Australia's *Income Tax Assessment Act 1936*[40] allow the ABS broader access to data collected by the ATO which could enable them to match their surveys with the respondents actual data report to the tax authorities.

On a more practical level, the positive view of tax gap estimates enforced by national auditors and accountability offices as well as revenue authorities have acted as the greatest enabler for the practice of tax gap estimates. The shift in attitude regarding tax gap studies appears to have arisen as a result of the recognition that undertaking time series estimates of tax gap - conditional on the estimates not having fundamental conceptual and data limitations - has merit in being able to illustrate trends which are important to government in relation to the performance of the revenue collection agency. That is, even if GST gap estimates are subject to various qualifications, as long as they do not fundamentally flaw the results, then resultant trend estimates can be highly informative.

CONCLUSION

A number of countries are now calculating tax gap estimates for their consumption based taxes and income taxes, encouraged by international institutions such as the OECD and the IMF which indicates that not only can tax gap be estimated but that the exercise is proving useful. Bird encapsulates the importance of tax gap estimates for a revenue authority in terms of maintaining and improving existing levels of compliance:

> … in reality not all taxpayers are honest in any country. The second important task of any tax administration is to keep them that way. To do so, one must first have a good idea of the extent and nature of the potential tax base, for example, by estimating what is sometimes called the "revenue gap." This is not always easy to do, but it is essential if an administration is to have some idea of the size and nature of those not in the tax net. In some instances, the major problem may be that many potential taxpayers are

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[37] Barthelemy, P., op. cit.

[38] *Measuring the Non-Observed Economy: A Handbook*, (2002), OECD; and *Tax Revenue, Uncollectible Tax, Tax Credits,* (2004), International Monetary Fund (Task Force on Harmonization of Public Sector Accounting), <http://www.imf.org/external/np/sta/tfhpsa/2004/060104.pdf> at 15 March 2006.

[39] See for example <www.statistics.gov.uk/articles/economic_trends/ETAug03Ruffles.pdf> at 15 March 2006.

[40] ITAA, 1936 (Cth), s 16(4)(ga), amended 9 Dec 2005.

> simply not known to the authorities. In others, it may be that many taxpayers who are in the system are substantially underreporting tax base. In still others, both problems may be important. Unless a careful study of the unreported base, and its determinants, is undertaken, no administration can properly allocate its resources to improving fiscal outcomes – whether through "sweeps" to find unregistered taxpayers or the generally more productive, if technically much more demanding, route of auditing.[41]

As Bird enumerates the main benefits of tax gap, highlighting the necessity of estimating it in terms of compliance, it is important to note that tax gap estimates are not a replacement for other forms of compliance management (which includes but is not limited to risk management) but can act as an effective complement to them. Concerns regarding the reliability of tax gap estimates and their perceived limitations must also be taken into consideration in evaluating them.

However it is noted that despite a number of concerns regarding tax gap estimates, there is growing international recognition that there is value to be gained from estimating tax gap. This is due in part to the fact that the potential limitations, particularly in relation to data, can be overcome. Furthermore, there is acceptance that there are limitations to any compliance measure and performance indicator available. Consequently it is concluded that the clear trend towards the growing acceptance and widespread adoption of tax gap estimates in recent years, as indicated throughout this article (and in Appendix 1), signifies that the benefits of tax gap estimates far out weigh any limitations, costs or risks. Tax gap estimates are becoming increasingly important in reassuring governments and taxpayers that the tax in question has integrity from a revenue authority, economic efficiency and an equity perspective.

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APPENDIX 1 - EXAMPLES OF TAX GAP STUDIES

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