

# Estimating tax gap is everything to an informed response to the digital era

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Measuring tax gap highlights 'everything' an expanding digital era might mean for tax – and not just tax non-compliance. Since tax gap measures the difference between the theoretical tax liability and actual revenue collected, its measurement transparently links tax policy design, revenue administration performance and taxpayer behaviour to the broader questions of economic

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through tax gap analysis, questions are raised which cannot be easily answered especially those which have their resolution through trade-offs between various stakeholder interests. In fact, multiple methods for informing on the same issue is a strength of tax gap analysis as different approaches add to the knowledge and insight into complex issues. Section 4 builds on the analysis in sections 2 and 3 to highlight how tax gap analysis can bring transparency and evidence to how a number of digital era 'what if' scenarios impact on revenue administration and policy design, and section 5 concludes.

What will be clear is that tax gap holistically and comprehensively framed, can do much to bring transparency through providing an evidence base on the issues arising from the tax impact of the digital era and the source of any tensions in a vedinary response.

## 2 TAX GAP FRAMED

### 2.1 Why tax gap is important

Tax gap is the difference between potential tax collections and actual tax collected. This is important not just because it highlights potential revenue lost through administration issues, but because it can demonstrate how legislated tax design intent can be compromised through its implementation and administration. In addition, tax gap can provide evidence of design inefficiencies arising from unintended tax induced economic distortions to taxpayer behaviour evident in the difference between actual and potential tax revenue. Tax gap also highlights inequities arising from not everyone paying their fair share of the intended tax burden. Issues related to the simplicity objective of good tax design will also be revealed through tax gap estimates demonstrating how complexity might result in reduced compliance because of the high costs in complying with the law. Tax system sustainability will also be impacted.

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statistical tax gap is of interest as it can provide an insight into non-observed and unregistered economic activity which has the potential to impact the official recording of national accounts statistics. In fact all government administrations that provide input into government policy and its administration have a stake in what tax compliance gap and tax policy gap might reveal, particularly agencies administering social transfer policies.

There is no reason why tax gap studies cannot be expanded beyond taxes by a revenue administration if it was also administering negative taxes (such as tax credits and subsidies) or social (income contingent) transfer programs. Taxes administered could also be linked to the main analysis burdens arising from (i) efficient tax policy (or deadweight losses) and from complex legal design that results in an administrative cost ( ) for government and a compliance cost ( ) for the taxpayer. In this case the burden of a tax ( ) when broadly cast can be defined as

**This measure is revenue lost despite all revenue administration compliance actions. If**

most recent changes in revenue administration and tax design will elicit behavioural responses which @ i









### 3 MEASURING TAX COMPLIANCE GAP

Tax compliance gap has many causes and can be linked to both known and unknown sources as shown in Figures 2 and 3. It can arise from information asymmetries which are too costly and difficult to address by the revenue administration or from capacity and capability constraints arising from budget imposed constraints. As shown in Figure 4, these can be grouped according to whether the taxpayer themselves are aware and able to report to the revenue administration when undertaking tax gap estimates. What Figure 4 highlights is that most challenging are the reasons which are beyond the revenue administration for legitimate or illegitimate reasons. The challenge for tax gap studies is how to comprehensively measure the various components contributing to the gap and, in the process, to highlight in any approach what goes still unmeasured (or unacknowledged) as with problematic arising from the non-observed economy (NOE) in Figure 3.

Fig 4 Tax Compliance Gap and the Unknowns

There are known unknowns, that is, things we know we know we do not know. We also know there are unknown unknowns, that is, things we do not know we do not know. But there are also our own unknown unknowns — the ones we do not

### 3.1 Methodological issues in measuring tax compliance gap

Tax gap has many sources and can be linked to many **as noted in Figure 4**. However, there are two basic methodologies that have been applied to measuring tax gap in empirical studies. With most studies initiated by revenue administrations, we can group these methodologies in terms of how they relate to the activities of the revenue administration.

The first method is the top-down approach based on data collected from sources to the revenue administration to estimate the theoretical liability for a particular tax based on the application of current tax policy rules. The data is usually high level and identified as capable of providing an independent verification of collection outcomes by the revenue administration through estimating and contrasting it to **. Figure 5** outlines how top-down tax gap estimates are made and **Figure 6** shows examples of data sources used.

The corollary of the top-down approach is the bottom-up approach which uses information available to the revenue administration from **sources accompanied where possible by external sources, to estimate the potential revenue from the tax being administered. Figure 5** outlines the steps in undertaking bottom-up tax gap estimates and **Figure 6** the data sources used.

publicly is that undertaken in the UK and, as shown in Figure 9, a complex range of alternative methodologies is adopted.

Importantly, no single methodology is 'best' as undertaking such studies is an evolving process of constant refinement. A review of past UK tax gap reports highlights how the methodology adopted for different taxes has changed markedly over time,<sup>9</sup> moving variously between top-down, bottom-up and a mixed methods approach, driven by experience, improved data access and methodological refinements.

**Fig 6 Information Sources for different Tax Compliance Gap Approaches**

| <b>Top Down approach</b>                      | <b>Bottom Up approach</b>                                |
|---|--|
| <b>National accounts data for GST Tax Gap</b> | <b>Operational data for personal and company tax gap</b> |

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activities that tax is “under control” and so assessed as accurate and paid (OECD, 2014, p. 51).

While the OECD (2014) provides no specific practical guidance on how to measure tax assessed, Figure 10 contrasts this measure with other administration performance measures such as audit yield, total revenue effects and wider revenue effects. In a practical sense, tax assessed ( ) arises when the revenue administration can be assured it has ‘justified trust’ in ( ) such as when it is pre-filling personal income tax returns using third party information. Where there is a reliance on the taxpayer to volunteer information without third party corroboration (as with income deductions claimed without verification), the tax related to it ( ) is not tax assessed as there is no ‘justified trust’ in the information submitted.

**Fig. 10 Measures of Revenue Outcomes**

Source: Author's adaptations to OECD (2014, Figure 32).

The concept of tax assessed is gaining some acceptance with the ATO adopting it as a

can be added to to estimate the proportion of in which the revenue administration have 'justified trust'.

From (6), (7) and (11), by definition

where theoretical tax liability assured theoretical tax liability  
not assured

The proportion of assured ( ) and not assured ( ) therefore becomes

The approach above assumes is not tax assured on the basis that, without the compliance activity by the revenue administration, this revenue would not have been assured. What is then of particular interest to the revenue administration is the proportion of tax actually collected ( ) that can be assured ( A) or not assured ( ), defined as

(iv) Components related to are interpreted as tax assessed but should be defined as not tax assessed if they were identified as relevant only as a result of compliance activity; and

(v) There is no consideration of tax compliance gap

Withholdable income and tax being a net calculation() *f*

Tax gaps can be readily incorporated into this approach. For a tax with no deductions or reliefs the tax assured proportion of  $\alpha$  is

The proportion of tax revenue that can be assured using the absolute approach in the presence of deductions and reliefs is

In both cases, incorporating tax gaps into the tax assured calculations significantly impacts the ratio of tax to total tax. The focus is on the ratio of tax to total tax.

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administration claiming success in increasing compliance while ignoring the fiscal and economic cost of its overall impact on other sectors of both the economy and government

Undertaking tax gap studies over time can clearly highlight the counterpoint to increased compliance being decreased economic activity and the imposition of non-tax

perception is higher than the reality) and, as Allingham and Sarno (1972) highlighted, tax morale can explain sustained high levels of tax compliance which are quite independent of tax policy design and how tax revenue is expended by authorities.

Determining the level of audit activity designed to reduce tax gap must ultimately involve issues beyond the revenue administration, such as the appropriateness of the base definition and of the rate structure. Equally, consideration of rate and base design cannot be considered in isolation from tax gap. What should be clear is that estimating tax gap has the potential to provide information for evidence-based responses to compliance actions as well as rate and base design.







**Bottomup Tax Compliance Gap Contextualisation Case Study of**  
**Income Tax**

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and) SKAT<sup>20</sup> as a basis on which to propose and draft new legislation designed around compliance data and with the planning process and enabling evidence based actions

Clearly, the great strength of tax gap analysis is that it enables quantification of what is too often only able to be qualified, facilitating an overview of actions too often based only on anecdotal evidence, to those which are evidence based and where policy responses



compliance gap may also be an issue for the official statistician inasmuch as data concerns arising from tax gap estimation by the revenue administration might have implications for official statistics as occurred in the UK as a result of carousel fraud impact on VAT collections and therefore VAT gap (Ruffles et al., 2008)..











is possible that many of these taxpayers might have received refunds which they previously had not claimed. However, it is equally likely they are in receipt of other income sources, particularly cash wages for which additional taxes due.

Another personal income taxpayer trend post-GFC of concern is that demonstrated in Table 1. This Table shows that in the seven years to 2014/15, over 500,000 young people, relative to the base year of 2007/08, were no longer taxpayers, all at a time when the casualisation of the workforce would imply that the opposite should be the case. If the trends in Figure 15 and in Table 1 are in any way related to, or potentially reflective of, how the digital era is impacting economic activity, then a personal income tax gap study could help in highlighting whether these two trends are related to non-compliance (or not) such as a response to an economic environment where increased market competition and increased opportunity has encouraged employees to avoid their tax responsibilities under the law in an effort to minimise costs.

**Table 1: Explaining the Unknown Case of the Disappearing Young Taxpayers**

| Age | 15/17yo | 18/24yo |
|-----|---------|---------|
|     |         |         |

Small businesses have available to them a raft of tax expenditures such as accelerated



if a bottom up tax compliance gap study revealed that the digital era is enabling significant wage and salary non-reporting? Such under-reporting not only impacts tax integrity, but the integrity of official survey findings on average wages and salaries and for the compensation of employee value included in the national accounts data. Correct reporting of wages and salaries has implications well beyond tax such as where it is used to index transfer payments or income tax thresholds.

If a bottom up tax compliance gap study reveals private expenses are being claimed as a deduction against business income, this not only has implications for personal and business income tax revenue but also for the related aggregates in the national accounts including gross mixed incomes (ABS, 2013), intermediate inputs into business, final expenditure by households and capital expenditure by businesses.

Tax gap analysis clearly asks many questions and undertaken comprehensively, has the potential to provide the evidence base for not just better revenue administration but better tax policy design and improved official statistics.

#### 44 'What if' issues for other non-revenue administrations

Tax gap analysis and related estimates ch











