

European Parliament, TAX3 Committee: Hearing on Evaluation of Tax Gap

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Introduction

In my responses to the questions below I am going to focus on evaluation of corporate tax gap due to tax havens (or the scale of international corporate tax avoidance or profit shifting by multinational enterprises), which is the area of my expertise. In my responses below I draw on existing evidence, in particular on two recent draft publications of mine and my co-authors: a working paper by Janský & Palanský (2018) and a book by Cobham & Janský (forthcoming). Most of the text below is adapted from these drafts.

1 Please give a description of the different ways to estimate the tax gap.

I and my co-author Alex Cobham focus on estimates of scale of the corporate tax gap due to tax havens with a worldwide coverage I provide below a relevant excerpt from the book (Cobham & Janský, forthcoming). A more general description of the different ways to estimate the corporate tax gap is provided by a recent report for the European Commission by [FISCALIS Tax Gap Project Group \(2018\)](#).

“Table 1 sums up the following research contributions to estimating the scale of profit shifting for many countries: IMF’s Crivelli et al. (2016) and a follow-up study by Cobham & Janský (2018), UNCTAD (2015) and a follow-up study by Janský & Palanský (2018), OECD (2015b), Clausing (2016), [Cobham & Janský \(2019\)](#), IMF (2014), and, very recently, Tørsløv, Wier, & Zucman (2018). We focus on these studies because most of them have been influential in the policy debate, all include an answer to what is the scale of profit shifting and how much tax revenue governments lose, in most cases providing estimates for many countries worldwide. We list these studies in an approximate order of perceived credibility and relevance of their estimates (and the most recent preliminary study as the last one). We discuss them in detail below.

IMF’s Crivelli et al. (2016) estimate losses due to profit shifting related to tax havens by looking at a counterfactual if the tax havens’ tax rates were not lower than in other countries. UNCTAD (2015) estimate tax revenue losses due to tax avoidance schemes that exploit a direct investment relationship on the basis of lower reported rate of return for investment from offshore hubs (tax havens). OECD (2015b) combines estimates of revenue losses due to both profit shifting related to tax rate differentials (differences in tax rates across countries) and differences in average effective tax rates for large affiliates of MNEs and domestic companies. Both Clausing (2016) and [Cobham & Janský \(2019\)](#) use data focused on US-headquartered multinationals only. While Clausing (2016) estimates profit shifting scale from derived semi-elasticities, [Cobham & Janský \(2019\)](#) quantify the extent of misalignment between reported profits and indicators of economic activity.

IMF (2014) for the world, and EPRS (2015) with a slightly different methodology for European countries, estimate corporate income tax revenues related to differences in countries’ corporate income tax efficiency ratio (using gross and net operating surplus, respectively) relative to the average ratio in the other countries. One of the studies itself, OECD (2015b), argues that given the many uncertainties associated with global estimates of the scale and economic impacts of BEPS, no single empirical estimate can be definitive, but they add that such estimates are generally of more value for policymakers than extrapolating from more narrow studies involving a limited number of companies or countries. On

a similar note, EPRS (2015) observe that most economists concede that estimating aggregate tax revenue losses due to tax avoidance and evasion remains elusive. Still, it is not an objective of this paper to provide their full evaluation and quite likely in due time (most of the studies were only relatively recently published) these studies are bound to receive their share of criticism, if only because some of the earlier studies' problems preserve: a number of strong assumptions, a lack of direct implications for policy and a lack of counterfactual.

Both Clausing (2016) and Cobham & Janský (2019) use data focused on US-headquartered multinationals only. While Clausing (2016) estimates profit shifting scale from derived semi-elasticities, Cobham & Janský (2019) quantify the extent of misalignment between reported profits and indicators of economic activity. IMF (2014) for the world, and EPRS (2015) with a slightly different methodology for European countries, estimate corporate income tax revenues related to differences in countries' corporate income tax efficiency ratio (using gross and net operating surplus, respectively) relative to the average ratio in the other countries. As we explain in detail below, this methodology's results, similarly to Cobham & Janský (2019), provide a comparatively very wide scope for other interpretations than international corporate tax avoidance. Most recently, Tørsløv, Wier, & Zucman (2018) provide perhaps the most persuasive evidence of the global scale of profit shifting, drawing on national accounts and other data.

We focus here and on estimates of scale of this corporate tax avoidance with a worldwide coverage. Table 1 below provides an overview of seven such studies and we discuss them in some detail below. The book on which this answer is based includes a sub-chapter for each of the studies from Table 1. They provide an overview of the data, methodology and results of each of seven leading approaches to the estimation of global profit shifting by multinational companies.

Table 1: Summary of estimates of global profit shifting and associated tax revenue losses

Reference	Annual corporate income tax revenue loss estimates	International corporate tax avoidance estimated	More details on methodology	Published in an academic journal	Country-level estimates
IMF's Crivelli et al. (2016), Cobham & Janský (2018)	Long-run approximate estimates are \$400 billion for OECD countries (1% of their GDP) and \$200 billion for lower-income countries (1.3%) of their GDP.	BEPS related to tax havens.	BEPS related to tax havens by looking at a counterfactual if the tax havens' tax rates were not lower than for other countries.	Yes	Yes (by a later study of Cobham & Janský (2018))
UNCTAD (2015), Janský & Palanský (2018)	Around 8% of CIT, USD 200 billion in 2012 globally and USD 90 billion for lower-income countries.	BEPS through tax avoidance schemes that exploit a direct investment relationship.	Tax revenue losses due to tax avoidance schemes that exploit a direct investment relationship on the basis of lower reported rate of return for investment from offshore hubs.	No	Yes (by a later study of Janský & Palanský, 2018)
OECD (2015b), Johansson et al. (2017)	USD 100-240 billion, or anywhere from 4-10% of global corporate income tax (CIT) revenues in 2014. It ranges from 7.5 to 14% of lower-income countries' CIT revenue.	BEPS due to tax rate differentials and differences in average effective tax rates for large affiliates due to mismatches between tax systems and tax preferences.	BEPS related to tax rate differentials and differences in average effective tax rates for large affiliates of MNEs and domestic companies.	No	No
Clausing (2016)	Between \$77 billion and \$111 billion in corporate tax revenue losses of US government due to profit shifting by 2012. Revenue losses total \$279 billion for a group of selected countries, 20 percent of their total corporate tax revenues.	Profit shifting due to tax rate differentials.	Profit shifting scale from derived semi-elasticities	Yes	Yes

Table 1, continued

Reference	Annual corporate income tax revenue loss estimates	International corporate tax avoidance estimated	More details on methodology	Published in an academic journal	Country-level estimates
<u>Cobham & Janský (2019)</u>	As much as a quarter of the global profits of US multinationals may be shifted to locations other than where the underlying real activity takes place. This estimate amounts to some \$660 billion in 2012, or almost 1 per cent of world GDP.	Misalignment between the location of US multinationals' economic activity versus the location of their profits.	They quantify the extent of misalignment between reported profits and indicators of economic activity.	Yes	Yes
IMF (2014)	5% of CIT in OECD and almost 13% in non-OECD countries in 2012.	Corporate income tax efficiency, the spillover effects of profit shifting.	Corporate income tax revenues related to differences in countries' corporate income tax efficiency ratio (using gross operating surplus) relative to the average ratio in the other countries.	No	Yes
Tørsløv, Wier, & Zucman (2018)	They find that 40% of multinationals' profits are artificially shifted to tax havens, i.e. more than 600 billion USD in 2015. They also estimate global corporate tax revenue loss around 200 billion USD per year (around 10% of global corporate tax revenue).	Profit shifting to tax havens	They argue that relative to compensation of employees, firms in tax havens are abnormally profitable. They then show, using foreign affiliate statistics, that all of the abnormal profitability in tax havens can be explained by foreign subsidiaries operating in tax havens. They assume that all profitability in tax havens above profitability of local firms reflects inward profit-shifting.	No	Yes

Source: Cobham & Janský (forthcoming)"

2 Please give a description of methodological problems and develop on the usefulness of the Balance of Payments as a tool.

At least three of the studies listed above make use of the Balance of Payments: UNCTAD (2015), Janský & Palanský (2018), and Tørsløv, Wier, & Zucman (2018). For the approach of UNCTAD (2015) and Janský & Palanský (2018), the methodological limitation of the Balance of Payments are described by Janský & Palanský (2018):

“We also need information on FDI income, which we source from the IMF’s Balance of Payments Statistics (IMF, 2013). Specifically, we use three variables from this source: (i) the overall FDI income (the variable ‘Current Account, Primary Income, Investment Income, Direct Investment, Debit, USD (BMIPID_BP6_USD)’); (ii) the equity component of FDI income (the variable ‘Current Account, Primary Income, Investment Income, Direct Investment, Income on Equity and Investment Fund Shares, Debit, US Dollars (BMIPIDE_BP6_USD)’); and (iii) the debt component of FDI income (the variable ‘Current Account, Primary Income, Investment Income, Direct Investment, Interest, Debit, US Dollars (BMIPIDI_BP6_USD)’). We then compute the three rates of return on FDI (overall, equity component, and debt component) as the ratio of the corresponding FDI income to the total FDI stock in each country. We believe that this is the best approach, but it comes with three limitations. First, while investment from different countries may yield different returns across countries, the FDI income data are only available at country level (and not at a bilateral level), which hides some of the information that could potentially be used to obtain better estimates of the size of corporate profit shifting (for example by distinguishing between FDI income from tax havens and from other countries; such data is available for OECD countries, but not for the majority of other countries, including developing ones). Second, although both sources (for FDI income and FDI stocks) that are combined into a single number (the rate of return on FDI) come from the IMF, they may use slightly inconsistent methodologies to identify what is classified as FDI. Third, while we use not only the overall FDI income, but also its equity component and its debt component, we divide all these three measures of FDI income by the same overall FDI stock, rather than the equity component and the debt component of the FDI stock. Despite these data limitations, we believe that these sources provide us with as good information as there is on the true rate of return on FDI.”

3 What are your estimation of the amounts of respectively: tax avoidance, tax evasion, tax fraud.

The estimates discussed do not distinguish between tax avoidance, tax evasion and tax fraud. For the sake of this question, I assume that the estimates overwhelmingly capture tax avoidance, but the estimated scale might include tax evasion and tax fraud.

Table 2: Summary of estimates of global profit shifting and associated tax revenue losses

Reference	Annual corporate income tax revenue loss estimates
IMF's Crivelli et al. (2016)	Long-run approximate estimates are \$400 billion for OECD countries (1% of their GDP) and \$200 billion for lower-income countries (1.3%) of their GDP.
Cobham & Janský (2018)	Global revenue losses of around US\$500 billion annually.
UNCTAD (2015)	Around 8% of CIT, USD 200 billion in 2012 globally and USD 90 billion for lower-income countries.
Janský & Palanský (2018)	Around 420 billion USD in corporate profits are shifted from the 79 countries in the sample, accounting for almost 1 per cent of these countries' GDP, which represents 6% of all corporate profits and 37% of MNEs' corporate profits. This estimate of shifted profits implies that at least 125 billion USD is lost in tax revenue, which is around 10% of corporate tax revenue.
OECD (2015b), Johansson et al. (2017)	USD 100-240 billion, or anywhere from 4-10% of global corporate income tax (CIT) revenues in 2014. It ranges from 7.5 to 14% of lower-income countries' CIT revenue.
Clausing (2016)	Between \$77 billion and \$111 billion in corporate tax revenue losses of US government due to profit shifting by 2012. Revenue losses total \$279 billion for a group of selected countries, 20 percent of their total corporate tax revenues.
Cobham & Janský (2019)	As much as a quarter of the global profits of US multinationals may be shifted to locations other than where the underlying real activity takes place. This estimate amounts to some \$660 billion in 2012, or almost 1 per cent of world GDP.
IMF (2014)	5% of CIT in OECD and almost 13% in non-OECD countries in 2012.
Tørsløv, Wier, & Zucman (2018)	They find that 40% of multinationals' profits are artificially shifted to tax havens, i.e. more than 600 billion USD in 2015. They also estimate global corporate tax revenue loss around 200 billion USD per year (around 10% of global corporate tax revenue).

Source: Cobham & Janský (forthcoming)

4 Could you give an estimation of the amount of tax evasion by income level?

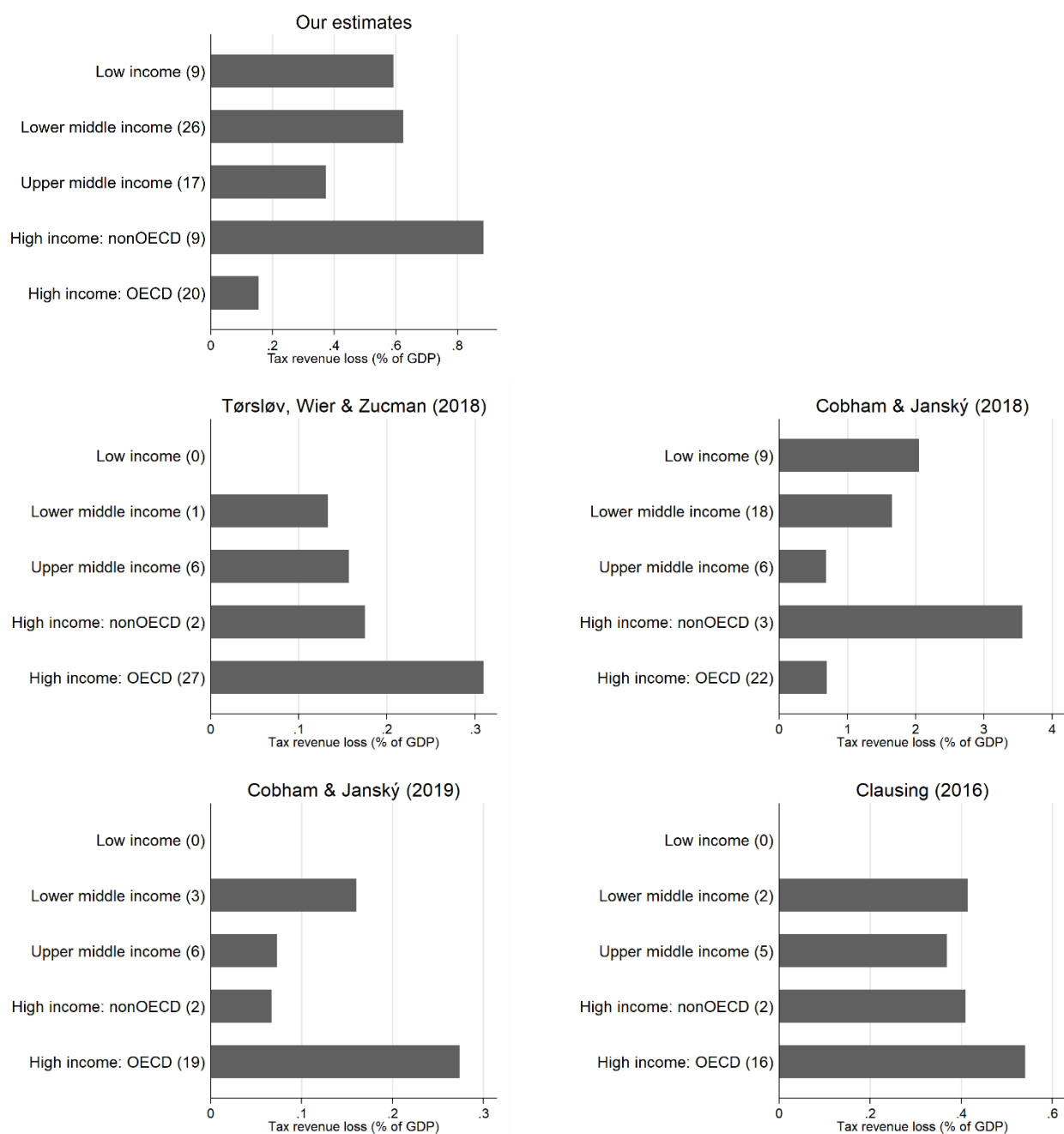
As discussed above, the existing estimates on profit shifting do not address tax evasion specifically. Instead, I provide a relevant discussion on international corporate tax avoidance below. The following paragraphs and graphs are adapted from Janský & Palanský (2018):

“Differences across income groups are identified by every study, but the nature of these differences varies across the studies. Figure 1 compares the various studies' results by showing the estimated tax revenue losses as weighted shares of GDP for the five income groups used above and also includes the number of countries per income group for each of the studies in parentheses. In the first such comparison made, we find that, for example, for high income OECD countries the results range from 0.15% of GDP in our estimates to around 0.7% of GDP in those by Cobham and Janský (2018). In theory, this might be driven by the differences in total revenue losses discussed above, but in practice it is not because there are also substantial relative differences across studies. To generalise, we can divide the studies into two groups according to their high level findings in terms of income groups. The three studies by Tørsløv, Wier, and Zucman (2018), Cobham and Janský (2019) and Clausing (2016) identify high income OECD countries as those most affected by profit shifting, but that is also the group of countries by far most represented in these studies.

The results are different in the two studies with better country coverage. Although on different levels, since Cobham and Janský (2018) estimate higher levels of tax revenue losses overall, both their and our results point to a similar pattern: the tax revenues of low and lower middle income countries are relatively more affected than those of high income OECD countries. Another way to look at the results is through Figure 2, which shows the share for each income group of the total tax revenue losses, respectively, as estimated by the studies. Since these are absolute numbers, it is not surprising that the higher-income economies' losses account for the bulk of global shifted profits and tax revenue losses. However, the two studies that do cover a number of low and lower middle income countries suggest that these countries are indeed subject to significant profit shifting and incur large corporate tax revenue losses as a result.

We now discuss the likely reasons why there are differences between the studies. The various differences between this and the other four studies are hard to reconcile and we argue that there are two main reasons behind this. First and foremost, the methodologies used in the five studies are very different and some of them, such as Cobham and Janský (2018), are not very reliable, as we discussed in the related literature section. Second, there are important differences in the overall coverage of countries per study – ours covers 79, while Tørsløv, Wier, and Zucman (2018) cover 37, Cobham and Janský (2018) 102, Cobham and Janský (2019) 30, and Clausing (2016) 25. Importantly, the number of countries included in the individual income groups varies greatly. For example, neither Tørsløv, Wier, and Zucman (2018), nor Cobham and Janský (2019), nor Clausing (2016) have any low income countries in their sample and only a few lower middle income countries (1, 3 and 2, respectively), while our paper, as well as that by Cobham and Janský (2018), have a relatively good coverage of low- (9 and 24, respectively) and lower middle income countries (24 and 29). Tables A9 and A10 provide a more detailed look at each study's coverage of countries and the economic activity measured by GDP in each income group. In addition, we provide results for common subsamples across studies. Although we observe differences in both methodologies and country coverage, they do not lead to a definitive reconciliation of the observed differences in distributional effects.

Figure 1: Estimated tax revenue loss as a share of GDP - weighted averages by income group, 2016



Source: Janský & Palanský (2018); data from Tørsløv, Wier and Zucman (2018), Cobham and Janský (2018), Cobham and Janský (2019), and Clausing (2016).

Note: The number of countries in each income group is included in parentheses.

Figure 2: Share of estimated tax revenue losses on total global estimated revenue losses, by income group, 2016.



Source: Janský & Palanský (2018), which stands for “Our estimates”; data from Tørsløv, Wier and Zucman (2018), Cobham and Janský (2018), Cobham and Janský (2019), and Clausing (2016). “

5 What are your proposals to improve the estimation of the corporate tax gap.

The data quality and availability is crucial for tax gap estimation. Almost any improvement in the estimation seems to be conditioned on improved data. A case in point is so called country-by-country reporting data. However, some of the existing and publicly available country-by-country reporting data has proven not very useful for tax gap estimation: extractive industries (Janský, Stausholm, & Šedivý, forthcoming) and banks (Janský, 2018). Confidential corporate tax returns, as recently analysed for the UK (Habu, 2017) or the US (Dowd, Landefeld, & Moore, 2017), are an obvious source of information for estimation of tax gap, but to shed even more light on corporate tax gap due to tax havens they should perhaps be merged and harmonised across countries and thus taking the existing studies a step further.

One promising source is the MNE country-by-country reporting data to be published in aggregate and anonymised form in 2019 (OECD, 2018). (This text is adapted from Janský, 2018). Following a recent agreement among governments, all large multinational enterprises now need to share CBCR information with their headquarter country’s tax authority. OECD is in charge of facilitating the publication of partially aggregated CBCR for these large multinational enterprises (as outlined in Annex C of a recent report by OECD, 2018), but the data are not going to be made public in full and detailed form. This is an interesting opportunity if the governments wanted to share more data with researchers. So, the firms are doing the reporting, but not publicly, at least not yet. A proper evaluation is needed in the future, but the public CBCR requirement for all firms already seems a good candidate for a cost-benefit analysis winner. The costs seem low - banks seem to be copying quite well with preparation and publication of CBCR - and the benefits might be high and provide useful insights on tax gap. As legislated, this MNE country-by-country reporting data will suffer from other insufficiencies and the obvious

recommendation would be to improve on this in the medium term. A case in point is that MNEs should include in the CBCR data the information they already report to the tax authority privately.

6 Which are the most relevant problems or mechanisms explaining the tax gap and what are your recommendations to reduce it.

For the corporate tax gap due to tax havens or international corporate tax avoidance, the most relevant mechanisms are, by definition, the tax-induced profit shifting channels (the three main ones recognised in the economics literature are debt shifting through loans within one MNE group, location of intangible assets and intellectual property, and strategic transfer pricing).

Among the unproven and uncertain recommendations to reduce this tax gap, the recent European Commission's proposed Common Consolidated Corporate Tax Base (CCCTB) stands out due to its other expected beneficial effects, its advance stage of preparation as well as support from some member states.

The potential impact of the CCCTB, however, remain largely unknown, since the data available for its impact evaluation is limited, similarly to tax gaps discussed for the previous question. As recently pointed out by Cobham, Jones, Janský, & Temouri (2017, pages 2, 3, and 22): “ Our primary finding is that the coverage limitations of the Orbis dataset are serious – despite being the best public source – and are shown to gravely understate the degree of profit-shifting by US multinationals in particular. Analysis using this data, including our own presented here, should be treated with significant caution – especially for policy purposes.” And “The most immediate recommendation for policymakers is to address the weakness of the evidence base by taking advantage of the new, comprehensive data resource created by the introduction of an OECD standard for country-by-country reporting. Collating the data received by each EU member state tax authority will allow a precise analysis of the impacts of the CCCTB and CCTB proposals, within a matter of a few months; going ahead without such analysis would be deeply irresponsible.”

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