Global Tax Administration Initiatives Addressing Tax Evasion and Avoidance

Thomas Neubig (Tax Sage Network)[1]

I. Introduction

Unlike in a number of other areas, where multilateral approaches have faltered recently due to increasingly nationalistic domestic political pressures, significant progress continues to be made on a number of global tax initiatives. Countries have recognized that in the 21st century, with increasing globalization and technological change, they cannot design or administer their domestic tax systems in isolation. High wealth individuals (HWIs) and multi-national enterprises (MNEs) can evade or avoid domestic taxes easily unless limited by concerted multilateral efforts.

The continuing trend toward lower corporate tax rates and lower tax rates on capital income do not eliminate the incentives for "mobile" income and activity to evade or avoid taxes. Without significant safeguards and international cooperation, capital income can have very high "measured" tax rate elasticities (the responsiveness of economic activity to tax rates.) This has prompted many tax policy analysts to argue for lower tax rates on "mobile" activity, such as dual income tax systems that tax capital income at lower rates than labor income. But there is increasing recognition that taxable income elasticities are endogenous to other tax system features, including different types of tax administration measures of which international tax initiatives are increasingly significant.[2]

Joel Slemrod and I recently extended his Tax Systems framework to the international tax area, and noted four key issues.[3] The issues were: (1) the allocation of taxing rights among countries; (2) global information sharing about taxpayer activities; (3) global information sharing about government activities; and (4) multilateral cooperation. Tax administration plays an important role in each of these global tax system issues.

Two global initiatives by the Organization for Economic Cooperation and Development (OECD) at the behest of the G20 are the new Standard for Automatic Exchange of Financial Account Information in Tax Matters (AEOI) and the Base Erosion and Profit Shifting (BEPS) Project. Both have begun implementation, but are still at an early stage. These two global initiatives are examples of the effective use of tax system instruments to protect countries' tax sovereignty in a world of increasing globalization. These initiatives will provide tax administration and policy researchers with valuable insights on taxpayer and government behaviors. In addition, a number of other multilateral tax administration initiatives are being undertaken to increase the capacity of tax administrations in both developed and developing countries. These additional multilateral initiatives will be important sources of tax administration knowledge from which to enhance the effectiveness and efficiency of their national tax administrations.

The paper begins with a review of recent global and multilateral tax policy and administration initiatives. Tax policy design[4] is increasingly incorporating tax administration dimensions. The two largest global tax initiatives focusing on information sharing are described in the second section and then a number of additional global tax initiatives are highlighted in the third section. The fourth section reviews and analyzes government

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[1] Founding member of the Tax Sage Network and former Deputy Head of the Tax Policy Statistics Center for Tax Policy and Administration, Organization for Economic Co-operation and Development.

[2] Slemrod and Kopzuk (2002) and Slemrod and Gillitzer (2013).

[3] Neubig and Slemrod (2017).

[4] Brys *et al.* (2016).

and academic studies of global tax evasion and avoidance, as well as national tax administration efforts. The concluding section suggests some potential research opportunities as part of and following implementation of these initiatives.

II. Recent Developments in Global Transparency Initiatives Addressing Cross-Border Tax Evasion and Avoidance

Transparency is a major focus of recent global tax initiatives. Transparency and information sharing between national tax administrations will provide each country's tax administration with a holistic view of their taxpayers' global activities. It will help tax administrations better focus their audit resources where they will be most effective. Plus, anticipation of reporting systems will discourage aggressive tax planning before it occurs. Two transparency initiatives are focused on HWIs' attempts at cross-border tax evasion and on large MNEs' planning for cross-border tax avoidance.

Information exchanges focused on cross-border tax evasion

Since 2009, at the request of the G20 countries, the OECD has been working to provide exchange of information between national tax administrations about individuals' foreign financial accounts. The Global Forum on Transparency and Information Exchange for Tax Purposes (Global Forum) leads the initiative.[5] The Global Forum has 150 countries as of May 2018.

Initially, the exchange of information about a citizen's financial accounts in another country was on request (AEOR), with specific conditions. Important strides were made in the institutional structure of information exchanges between tax administrations. First, a system of peer reviews of the Global Forum members was instituted to ensure their compliance with the agreement. An example of a peer review is OECD (2018i). The peer reviews identified noncooperative jurisdictions not meeting objective criteria for tax transparency purposes. This provided an incentive for jurisdictions to make progress on their commitments. As of 2018, only one jurisdiction remained "noncompliant," after 14 others were given a provisional upgrade under a Fast-Track procedure for those with less than satisfactory ratings to demonstrate progress, subject to second peer reviews. The objective standards will change to ensure continued progress, and will include the availability of access to beneficial ownership information, which has been a constraint to full transparency.

Second, implementation of a global bilateral exchange information system, an OECD-procured Common Transmission System (CTS), enables and reduces the resource costs of greater transparency between tax administrations. The CTS is used not only for the exchange of information about foreign financial accounts, but also other information exchanges, including Country-by-Country (CbC) reports of multinational enterprises.

Exchanges by request between two tax administrations are often slow and cumbersome. More general approaches were attempted by the European Union Savings Directive in 2005 to automatically obtain information about interest payments to individual residents in other Member countries. In 2010, the U.S. Foreign Account Tax Compliance Act (FATCA) required information about U.S. persons' accounts in foreign financial institutions as well as strengthened self-reporting of ownership of foreign financial accounts.

In 2014, the G20 called for a new standard on the implementation AEOI for foreign financial accounts. The public and governments' reactions to the release of the leaked "Panama Papers" in 2017, by the International Consortium of Investigative Journalists,[6] hastened the move to widespread adoption of AEOI. The Panama Papers included over 11 million documents of more than 200,000 offshore clients from one law firm in Panama. Subsequently, release of the "Paradise Papers" in 2017 revealed additional tax haven activity of individuals and corporations through a Bermudian-based offshore specialist law firm.

AEOI began its initial exchanges in September 2017 between 45 countries. More than 90 countries have

[5] http://www.oecd.org/tax/automatic-exchange/.

[6] https://www.icij.org.

committed to implement AEOI with another 53 scheduled to commence exchanges in September 2018. As of April 2018, there were over 2,700 bilateral exchange relationships activated with respect to 80 jurisdictions.

The U.S. has not committed to the AEOI, but has undertaken automatic information exchanges pursuant to FATCA from 2015. The U.S. has entered into intergovernmental agreements (IGAs) with other jurisdictions to do so. The Model 1A IGAs entered into by the U.S. acknowledge the need for the U.S. to achieve equivalent levels of reciprocal automatic information exchange with partner jurisdictions.[7,8]

As the first exchanges under the CRS approach, close to 93 billion euros in additional tax revenue was identified as a result of voluntary compliance mechanisms and offshore investigations.[9] In the U.S., over $10 billion in taxes, interest and penalties has been collected through offshore voluntary compliance efforts, with over 100,000 individuals coming into compliance between 2009 and 2016.[10]

Audit analysis of the first AEOI exchanges and statistical analysis of the effectiveness of the exchanges will be important. Continued exposure of hidden wealth, including the recent Paradise Papers, indicates that anti-tax evasion enforcement in the cross-border area will need to evolve. For example, the Global Forum recently released new disclosure rules on intermediaries and advisors.[11]

Information exchanges focused on cross-border tax avoidance

Although there is often a fine line between illegal tax evasion and legal tax avoidance, the G20/OECD BEPS Project began in 2013 focused on addressing double nontaxation due to legal gaps in the international tax structure. Parliamentary and Congressional hearings in several countries identified large MNEs that were paying little, if any, corporate income taxes on significant amounts of their global income.[12]

The BEPS Project, undertaken by 44 countries, agreed on 15 Action reports in 2015 to increase transparency and coherence in the international tax rules. Four of the reports included minimum standards for participating countries to implement. As of May 2018, a total of 116 jurisdictions have joined the BEPS Inclusive Framework, agreeing to the four minimum standards and working on an equal footing on additional international tax standard setting.

Two of the minimum standards include increased transparency requirements. The harmful tax practices framework includes spontaneous exchange of government tax rules, which have in some cases facilitated MNEs' profit shifting into certain countries. BEPS Action 5 recognized that information sharing about actions previously hidden by governments, as illustrated by the disclosure of hundreds of advance tax rulings of the Luxembourg tax authority to PwC clients ("LuxLeaks"), is as important as information sharing about actions by taxpayers.

A second global information-sharing minimum standard requirement is CbC reports for the largest global MNEs, in BEPS Action 13. The CbC reports includes three sets of information that will be supplied by MNEs to the tax administration in their headquarters' country, or in some cases directly to countries in which they operate. These reports will then be shared by that tax administration to other tax administrations in the countries in which the MNEs operate. The companies' information will remain confidential with tax administrations and will be used for high-level transfer pricing risk assessment and assessing other BEPS risks.

Approximately 9,000 large MNEs began filing the CbC reports with their tax administrations in 2017 for Tax Year 2016, with the first exchanges between tax administrations scheduled for June 2018. The CbC report exchanges will take place over the CTS, also used for the AEOI.

These information exchanges will have at least two effects. First, transparency (even private transparency

7 http://www.oecd.org/tax/automatic-exchange/commitment-and-monitoring-process/AEOI-commitments.pdf.

8 https://www.treasury.gov/resource-center/tax-policy/treaties/Pages/FATCA.aspx.

9 OECD (2018h).

10 https://www.irs.gov/newsroom/offshore-voluntary-compliance-efforts-top-10-billion-more-than-100000-taxpayers-come-back-into-compliance.

11 http://www.oecd.org/tax/game-over-for-crs-avoidance-oecd-adopts-tax-disclosure-rules-for-advisors.htm.

12 OECD (2015c).

between tax administrations) will discourage the most egregious tax planning activity of MNEs by making tax administrations aware of such behavior. The increased risk of detection will discourage some tax evasion and planning. Second, the information provides tax administrations with the ability to identify and better target noncompliant taxpayers and evasive activities. With respect to the latter, there is recognition that many governments need assistance in building their tax administration capacities to use the additional information effectively. Some of these capacity-building initiatives are described in the next section.

Much of the focus has been on the CbC report template, which includes 13 data items for each country in which the MNE is operating.[13] This information is designed for high-level transfer pricing risk assessment. But as stated in the BEPS Action 13 report: "It may also be used by tax administrations in evaluating other BEPS related risks and *where appropriate for economic and statistical analysis*." (Emphasis added.) The OECD plans on publishing some of the aggregated and anonymized CbC template information as part of a new OECD Corporate Tax Statistics publication, based on tabulations from individual country tax administrations. The IRS should consider publication of aggregated anonymized CbC tabulations to complement its publication of tabulations from the current Forms 5471 and 5472 from domestic and foreign-based MNEs. In addition, the IRS should consider analyzing more than just the CbC template, taking advantage of the detailed, but nonstandard (nontemplate) formatted, data on related party transactions. Although analyzing nonstandard formatted data is more difficult and resource intensive, statistical sampling can be used to gain insights from a representative sample of filings, and text-mining techniques can reduce the cost of analyzing nonstandard information.

Other tax transparency measures

Some of the new tax information has emerged through leaks of private information (United Bank of Switzerland bank records, LuxLeaks, Panama Papers, Paradise Papers), but some has been through government required as well as voluntary, public-disclosure initiatives.

The U.S. accounting rules have required reporting of unrecognized tax benefits (UTBs) in public companies' financial statements since 2006. The IRS has required disclosure of Uncertain Tax Positions (UTPs) on corporations' tax returns' Schedule M-3 since Tax Year 2010. The OECD BEPS Action 12 report recommends mandatory disclosures for aggressive or abusive transactions, arrangements or structures, with a focus on international tax schemes, and information sharing of those international tax schemes. The report notes that audits remain a key source of information about tax planning, but audits have limits on their ability for early detection of tax planning schemes. This is not a BEPS minimum standard, but a recommendation for individual countries to adopt it. Israel, Mexico and the United Kingdom have adopted tougher mandatory disclosure rules since the BEPS recommendations.[14]

The European Union (EU) requires public reporting of MNEs' activities, including taxes, within the EU for financial services and extractive industries. That reporting began in 2014 for financial institutions and in 2016 for extractive companies. It is important to note that the reporting of taxes by country was part of a EU financial accounting directive, not a tax law requirement. Proposals to extend the public reporting of country-by-country tax information within the EU have stalled. Australia initiated a public reporting requirement of total income, taxable income and taxes for its top 1,500 corporate companies and 320 private companies with more than $200 million AUD (or about $150 million USD). It has published that information, which is reported and analyzed by Hoopes, *et al.* (2017), and described in more detail in Section IV.

In addition, the extractive industry's concerns about taxes paid in a country not benefiting the citizens of the country resulted in the Extractive Industries Transparency Initiative (EITI), where individual countries report on the payments received from extractive companies and extractive companies report payments made. Fifty-one countries are currently participating in the Initiative, with varying degrees of implementation of the EITI standards.[15] The U.S. as part of the 2010 Dodd-Frank financial service legislation required extractive

[13] The template items include the tax jurisdiction, unrelated party revenue, related party revenue, total revenue, profit (loss) before income tax, cash and accrued income tax paid, stated capital, accumulated earnings, number of employees, tangible assets other than cash and cash equivalents, and constituent entities resident in the tax jurisdiction, and main business activity(ies).

[14] http://www.ey.com/gl/en/services/tax/ey-beps-developments-tracker.

industries to publicly report in their financial statements their taxes and economic activities across countries. However, due to court challenges from the U.S. Chamber of Commerce, the final regulations were delayed, and the current Administration canceled the regulations.

The Joint International Taskforce on Shared Intelligence and Collaboration (JITSIC)[16] provides tax administrations with a mechanism for information exchange and collaboration. The exchanges are in accordance with the provisions of bilateral or multilateral tax conventions or tax information exchange agreements (TIEA). Membership of the JITSIC, currently at 38 national tax administrations, entails an active commitment to sharing information and intelligence to combat tax evasion and avoidance. JITSIC was originally established in 2004 as the Joint International Tax Shelter Information Centre to combat cross-border tax avoidance. Building on its initial achievements, the JITSIC was re-established in 2014 with many new members and an expanded mission, which enables tax administrations to collaborate with other countries without needing to negotiate new engagement frameworks each time.

Cross-border economic activity through digitalization offers an additional area where cross-border transparency combined with the availability of big data could enhance tax administration efforts, in particular, with respect to information on the users of online platforms as part of the gig and sharing economies and electronic marketplaces. This type of information sharing can help ensure that income and indirect (consumption and payroll) taxes are paid where and when they are due. The Forum on Tax Administration (FTA) is working with the BEPS Inclusive Framework to develop tools and cooperation in this area and will be examining the tax consequences of new technologies, such as crypto-currencies and block-chain distributed ledger technology.[17]

Academic studies have found substitution effects resulting from disclosure initiatives, as well as diminishing returns from any single disclosure initiative.[18] However, as the tax systems approach suggests, there may be complementary effects of transparency on other tax dimensions, such as reducing the tax responsiveness of tax evasion or avoidance to individual country tax rates. Are there additional synergies from global initiative investments, such as the CTS, which will provide tax administrations with additional benefits beyond their initial uses?

III. Other Global and Multilateral Tax Administration Initiatives

Although increased cross-border tax transparency has been an important achievement in multilateral tax initiatives, other multilateral efforts are also occurring to strengthen the objectives and capabilities of national tax administrations. The initiatives fall into at least five categories: capacity building, reducing tax uncertainty, knowledge sharing, analytics, and whole-of-government approaches.

Global tax administration capacity building

The G20 and other international organizations recognize that just as developed countries need to closely cooperate and coordinate on tax policy and tax administration in the international area, developing countries also need to be included and need support for building their capacity in the complex areas of international tax.

The two initiatives described above now include over 115 countries actively participating on an equal footing in setting new standards and identifying approaches that can be used effectively in countries with fewer tax administration resources. For example, transfer-pricing regulations can be simplified for greater ease of tax administration and reduced complexity for both tax administrations and taxpayers.

Tax technical assistance is provided to developing countries through training and other resources by many countries and international organizations. The four main international economic organizations (the International Monetary Fund (IMF), the OECD, the United Nations (UN), and the World Bank Group (WBG)) in 2016 formed the Platform for Collaboration on Tax (PCT) to strengthen their ability to provide capacity-

[15] https://eiti.org/sites/default/files/documents/2018_eiti_progress_report_en.pdf.

[16] http://www.oecd.org/tax/forum-on-tax-administration/jitsic.

[17] OECD (2018g), p. 208.

[18] Paramonova (2017).

building support to developing countries and help them deliver jointly developed guidance. The first PCT conference was held in 2017 with a major focus on increasing domestic revenue mobilization of many developing countries to meet the UN's Medium-Term Sustainability Development Goals.[19] Many developing countries have very low tax-to-GDP ratios, insufficient to provide the health and education services and public infrastructure necessary for their citizens' well-being. Stronger tax administration enforcing their current tax rules is a key element of domestic revenue mobilization.

In addition, countries are participating in a new program called Tax Inspectors Without Borders (TIWB).[20] The program, by the OECD and the UN Development Program, sends retired tax officials to provide on-the-ground real-time audit assistance and training to developing countries that have requested help. The program has already raised several hundred million dollars in tax revenues in six countries, with ten more countries requesting assistance. Tax administration is not one-size fits all, and capacity building must fit into the overall tax and political systems of each country, but also with sufficient resources and capabilities to address the difficult cross-border as well as domestic tax issues.

The OECD Tax and Development Programme[21] helps developing countries strengthen their regimes to address transfer pricing and other BEPS-related issues, through two-to-three year-long capacity development programs. Most of the programs are delivered in co-operation with international agencies such as the African Tax Administration Forum, the European Commission, and the WBG.

The IMF provides new tools for tax administration and compliance. Their Tax Administration Diagnostic Assessment Tool (TADAT)[22] was formally launched in 2015. More than 30 TADAT assessments have been conducted and used as a baseline to prioritize and implement reforms in areas of identified weaknesses, which often include: inaccuracies in the taxpayer registration database; weak risk management approaches; poor on-time declaration and payment of tax liabilities; and inattention to accuracy of tax reported in declarations.

Reducing cross-border tax uncertainty

For many years, international organizations, particularly the OECD, led efforts to reduce potential double taxation to facilitate the growth of cross-border trade and investment. The OECD/G20 BEPS Project expanded the focus to ensure neither double taxation nor double nontaxation of cross-border trade and investment. The BEPS Project recognized that attempts to reduce double nontaxation could result in more cross-border tax disputes, which, if increasing uncertainty and costs, could adversely affect cross-border trade and investment without better dispute resolution mechanisms in place.

A key issue in the allocation of taxable income among countries in cross-border investment is the arms'-length transfer pricing rules, which are fact-based rather than formulaic economic measures of geographic income. Countries' tax administrations have competent authorities to resolve international transfer pricing disputes through negotiations with tax authorities of treaty partner jurisdictions.[23] Competent authorities can negotiate bilateral advance pricing agreements (APA) between a MNE and two countries to provide greater certainty on transfer pricing arrangements. Competent authorities can also negotiate mutual agreement procedures (MAPs) to resolve transfer-pricing disputes for a single MNE's allocation of income between two countries. The BEPS Action Report 14, which is a minimum standard of the BEPS Inclusive Framework, strengthens the MAP dispute resolution process, and more than 20 countries have agreed to explore the use of mandatory, binding arbitration for their MAP cases.

A new voluntary program, the International Compliance Assurance Programme, (ICAP) will use CbC reports and other information to facilitate co-operative multilateral engagements between MNE groups and

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19 http://www.worldbank.org/en/programs/platform-for-tax-collaboration.

20 http://www.oecd.org/tax/taxinspectors.htm.

21 http://www.oecd.org/tax/tax-global/tax-and-development.htm.

22 http://www.tadat.org.

23 https://www.revenue.ie/en/companies-and-charities/documents/role-competent-authority.pdf.

tax administrations. Eight countries started a pilot program in January 2018 to provide a more effective use of transfer pricing information, and more efficient use of resources of participating MNEs and tax administrations. This will hopefully result in fewer MAP cases and provide greater tax certainty to MNEs and tax administrations.

At the request of the G20, the OECD and IMF prepared a 2017 report[24] on the sources of tax uncertainty and some tools to reduce tax uncertainty. Improved tax dispute resolution is important, but even better would be reducing the sources of uncertainty before there is a tax dispute. Some of the uncertainty arises at the policy level, but uncertainty also occurs in tax administration, including ineffective and unpredictable implementation of existing tax laws.

Multilateral tax administration knowledge sharing

Although tax administration is inherently national, tax administrations increasingly need to collaborate to effectively address cross-border tax evasion and avoidance. Also, with the need to do more with fewer resources, tax administrations can learn from best practices of other countries' tax administrations.

The FTA was created in 2002 and is a unique forum on tax administration for Commissioners from 50 OECD and non-OECD countries. The FTA is designed to create an institutional structure through which Commissioners can identify, discuss and influence relevant global trends and develop new ideas to enhance tax administration around the world. The FTA helps tax administrations increase the efficiency, effectiveness and fairness of their tax administration and reduce the costs of compliance through reports and information or guidance notes.

The FTA is tackling the issue of the shadow economy,[25] the effective use of data, both domestically and internationally, the management of tax debt and how to minimize identity fraud through effective tax registration and identification. The FTA is working on options for sharing of information on payments made by online intermediaries in the sharing economy, the digital transformation of tax authorities through new technologies, analytical tools, and enhanced data sources. In addition to increased third-party reporting and information sharing, these initiatives address more effective risk assessment, co-operative compliance, joint audits, advanced analytics of shared information, and implications of digitalization for tax administration as well as for tax evasion—including crypto currencies.

Tax administration analytics

Countries are working on improving their tax risk assessment tools and capabilities plus using technology to take advantage of increasing digitalization of their economies. Tax administration also involves core functions, including registration of taxpayers, assessments and processing of returns and payments, verification through audits and investigations, taxpayer services and education, collections, and resolving disputes.

A valuable source of comparative information about different national tax administrations is collected in a biennial survey, the Tax Administration Survey (TAS). It has been collected since 2004, but the 2017 edition is the first joint web-based survey—the International Survey on Revenue Administration (ISRA)[26]—developed by the OECD, IMF, the Inter-American Center of Tax Administration (CIAT), and the Intra-European Organization of Tax Administrations (IOTA). It examines the fundamental elements of modern tax administration systems, their performance on a variety of metrics, as well as key trends, recent innovations and examples of good practice. The primary purpose of the series is to share information that will facilitate dialogue among tax officials and other stakeholders on important tax administration issues, including identifying opportunities to improve the design and administration of their systems both individually and collectively. The latest survey includes more quantitative information and more countries, but is not directly comparable to earlier years.

[24] OECD (2017h), and updated in OECD (2018h).

[25] OECD (2017b).

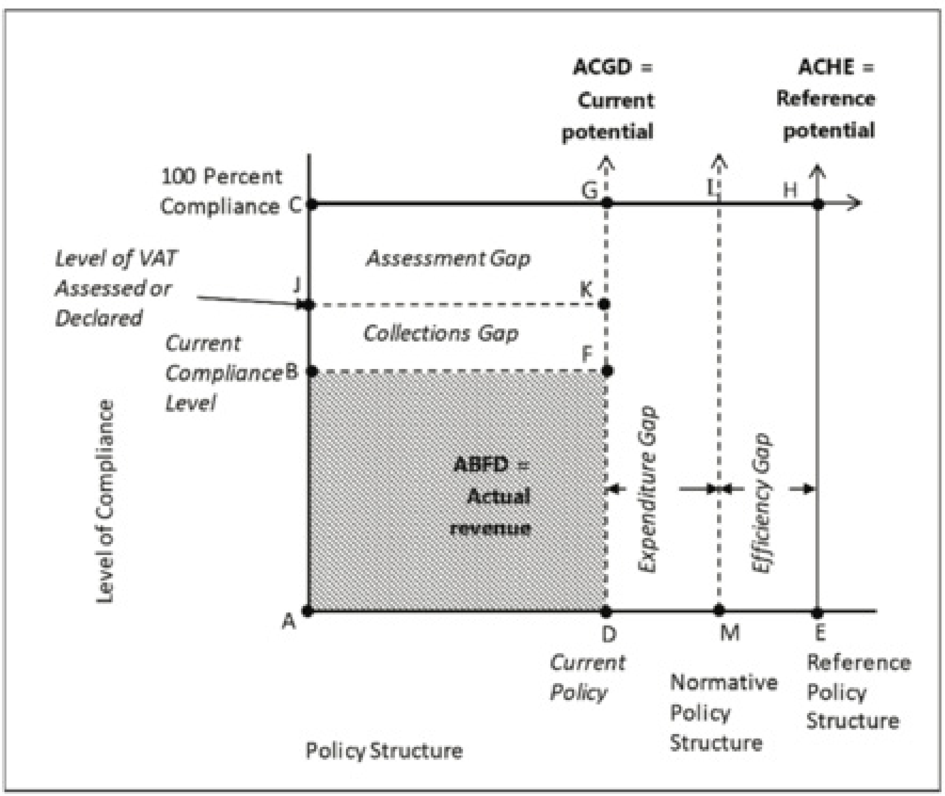
[26] http://www.oecd.org/tax/forum-on-tax-administration/database/.

Although not directly related to tax administration, the OECD publishes important information about countries' tax systems, which recently expanded beyond the 35 OECD countries to 80 countries.[27] The OECD is expanding its publications to include a Corporate Tax Statistics publication starting in 2018 as part of the recommendations in the BEPS Action 11 report. A future addition will include national tabulations from the CbC reports. The Global Forum on VAT publishes comparative statistics on Value Added Taxes, including tax administration features.

One of the metrics of tax administration is the tax compliance gap. A limited number of countries estimate their tax gap. The IMF has introduced a standardized methodology for measuring compliance gaps for different types of taxes in different countries. The RA-GAP, presented in Figure 1, measures the components of the overall tax gap, including both the tax compliance gap and tax policy gap.[28] The IMF has completed 20 RA-GAP assessments, particularly for VAT, but it could be used for any tax. The compliance gap is shown separated in two elements: the assessment gap and the collection gap. The policy gap is shown separated in two elements: the tax expenditure gap and the efficiency gap.

FIGURE 1. Components of the Tax Gap: Compliance and Policy Gaps

SOURCE: Hutton (2017).



For purposes of economic analysis and resource mobilization, the combination of both compliance and policy gaps provide policymakers with a holistic approach to the possibilities of each type of tax. Although

[27] http://www.oecd.org/tax/oecd-launches-largest-source-of-comparable-tax-revenue-data.htm.

[28] Hutton (2017).

cross-country comparisons of tax systems, tax compliance gaps, and tax expenditures are difficult due to the unique nature of each country's tax system, such comparisons can help policymakers with some benchmarking with similar countries or tax systems, identification of "sore thumbs," and best practices.[29]

Tax administration as part of whole-of-government issues

Just as Al Capone, the mob leader in the 1930's, was finally brought to justice on tax evasion charges, tax administrations are working closely with other global organizations fighting financial crimes, corruptions, money laundering, and terrorism financing. The Financial Action Task Force (FATF) has 35 member countries plus 2 regional organizations working together to combat financial crimes, including tax evasion.[30]

The OECD's Task Force on Tax Crimes and Other Crimes (TFTC) has a mandate to improve cooperation between tax and law enforcement agencies, including anticorruption and antimoney-laundering authorities, to counter financial crimes more effectively. The TFTC's work is carried out in connection with the OECD's Oslo Dialogue, a whole-of-government approach to tackling tax crimes and other financial crimes.[31] Countering these activities requires greater transparency, more effective intelligence gathering and analysis, and improvements in cooperation and information sharing between domestic government agencies and between countries to prevent, detect and prosecute criminals and recover the proceeds of their illicit activities. The TFTC recently released a report on the 10 essential principles of fighting global tax crimes,[32] which can be used by countries to benchmark their legal and operational frameworks.

Not only is cross-border cooperation needed, but also inter-agency cooperation within each country is necessary to effectively fight tax crimes, and to use tax compliance in the fight against other crimes. A TFTC report describes 51 countries' practices of inter-agency cooperation in fighting tax and other financial crimes.[33]

Finally, oft-neglected government agencies with a keen interest in measuring national income, consumption, and other tax bases are national statistical offices (NSOs). As the world economies become more global with technology and business models blurring national boundaries, both national tax systems and national statistical offices face the same challenges of measuring national activities. In many cases, the NSOs use tax measures for their statistical measures. So non-arm's-length-pricing and other profit shifting activity within multinational groups can distort not only taxable income but also Gross Domestic Product, trade statistics and productivity statistics. One estimate suggests that the U.S. trade deficit could be overstated two times by profit shifting, with adverse policy decisions (such as tariffs to attempt to reduce trade deficits) based on distorted national statistics.[34]

Although tax administrations must protect the confidentiality of taxpayer information and NSOs worry about survey response rates if their national surveys are used by tax administrations, closer cooperation between tax administrations and NSOs for research purposes will help both agencies' missions. The U.S. has a best practice in the close cooperation between the IRS and the Bureau of Economic Analysis. The OECD BEPS Action 11 report noted that many countries' tax administrations don't have agreements with their NSOs to take advantage of the data and research synergies. In addition, many countries' tax administrations don't have the framework or capability of taking advantage of qualified academic researchers, when data analytics is so important yet the tax administrations are facing strict budget constraints.

[29] Kassim and Mansour (2017). Redonda and Neubig (2018).

[30] http://www.fatf-gafi.org.

[31] http://www.oecd.org/tax/crime/about-tax-and-crime.htm.

[32] OECD (2017d).

[33] OECD (2017c).

[34] Guvenen *et. al.* (2018).

IV. Government and Academic Studies of Global Tax Evasion and Avoidance

Analysis of tax evasion and tax avoidance is limited by the available data. As I have noted elsewhere, the *best available data* have the acronym: BAD.[35] Researchers need to be humble in their conclusions when using the best available data. In the OECD/G20 BEPS Project, some analysts were strongly confident of their results since the regressions were robust across different subsets of the data. Of course, they were torturing the same BAD database, which was missing most US-based multinationals as well as most multinationals from non-European countries and subsidiaries in tax havens.[36]

But both tax policy and tax administration decisions need to be made with incomplete and imperfect data. Researchers need to highlight the limitations of their BAD research and be clear about their assumptions, while still providing useful insights. Researchers need to be creative in their analytical approaches, which often means combining multiple data sources. Large ranges are the likely result given sensitivity analysis, but orders of magnitude can still flag key issues. Trends over time using similar data will at least hold constant some of the issues affecting the overall level of an estimate.

This section reviews some of the academic and other economic analyses of global tax evasion and tax avoidance. These analyses will serve as a useful foundation from which to analyze more comprehensive and detailed data available in the future from the AEOI and CbCR initiatives. We are currently in the twilight where the global tax initiatives are hopefully positively affecting taxpayer behavior, yet prior to when the new data become available to measure the potential effects. In the meantime, anecdotal evidence and reported behaviors through business surveys provides some expectation that the initiatives are having their desired effects,[37] but remain unclear on the magnitude of the effects.

Clearly more research is needed at both the global and individual country level. In addition to estimates of aggregate tax evasion and avoidance, the effectiveness of specific tax law provisions and tax administration tools and initiatives are needed for actionable decision-making. The next few years will provide many case studies of different tax administration and policy initiatives for analysis. The recent requirement that U.S. Treasury regulations be subject to Office of Information and Regulatory Affairs (OIRA)[38] will hopefully result in more resources provided to do more extensive cost-benefit analysis of those regulations, including the effects of tax regulations on improving tax certainty.

Global estimates of tax evasion

Zucman (2013) has done the most extensive research on global wealth held in tax havens. He estimates that $8.6 trillion of household wealth was held offshore in tax havens in 2015. That is roughly 10 percent of world GDP and 8 percent of the world's financial wealth.[39] The use of tax havens varies greatly by countries' citizens from a few percent of GDP in Scandinavia, to about 15 percent in Continental Europe, and 60 percent in Gulf countries and some Latin American economies.[40] The lost revenue can be very significant for many less developed countries.

Zucman (2014) estimates that 7.3 percent of U.S. GDP was held in tax havens in 2007. He estimates that tax haven wealth by U.S. citizens has grown from 0.6 percent of U.S. wealth in 1980 to 0.8 percent in 1990, 1.6 percent in 2000, and 2.8 percent in 2010. With the passage of FATCA in 2010, combined with other transparency initiatives and publicized leaks of tax shelters, more recent estimates of U.S. tax evasion will be of considerable interest. The IRS has reported that they have collected almost $10 billion in additional taxes, interest and penalties from several voluntary disclosure programs since 2009.

[35] Neubig (2016).

[36] OECD (2015c), p. 143.

[37] OECD (2016c).

[38] https://home.treasury.gov/news/press-releases/sm0345.

[39] Pellegrini, et.al. (2016) obtained a similar estimate.

[40] Alstadsæter, et al. (2017).

Alstadsæter, *et al.* (2018) estimate the wealth distribution of tax evasion from data on random audits, tax amnesties, and leaks from offshore financial institutions matched to wealth records in Scandinavia. Tax evasion rises sharply with wealth: 3 percent of personal taxes are evaded on average, versus 25 percent-30 percent in the top 0.01 percent of the wealth distribution. They find that after tax amnesties, evaders do not increase legal tax avoidance, suggesting that fighting evasion can allow governments to collect more taxes from the wealthy.

Zucman (2014) notes some important limitations to these estimates. Some of the aggregate estimates are based on Bank for International Settlements data only on bank deposits, so the data or analysis do not include equities, bonds or mutual funds that households entrust to offshore banks. Estimates generally capture just a subset of financial wealth, thus missing wealth held in the form of real estate, gold, jewelry, works of art and other nonfinancial assets. The use of shell companies makes identifying the true beneficial owners difficult.

The estimates of wealth held in tax havens is an important starting point for estimating the potential tax revenue lost from offshore tax evasion. Several additional analytical steps are required to get to the lost revenue. First, did the transfer of the stock of wealth out of a country evade taxes due to corruption, money laundering, or illegal activity? If so, then the one-time lost revenue could be 30–50 percent of the total tax haven wealth due to foregone income and payroll taxes on the transferred income. Second, what is the investment income earned on the tax haven wealth? Zucman used an 8-percent rate of return while Pellegrini, *et al.* (2016) used a 3-percent rate of return. If the evasion is only on the investment income in the tax haven, then the annual lost revenue may only be 1–4 percent of the stock of tax evaded wealth. Third, some of the income from tax haven wealth might be reported to tax authorities annually or through an amnesty voluntary disclosure, or through the future AEOI.

Some organizations have reported very large amounts of illicit financial flows, which might be indicative of lost tax revenues from tax evasion or avoidance. Maya Forstater has provided some cautions about the weak links between these large illicit financial flow estimates and actual tax effects.[41]

The OECD has collected information from countries that have used voluntary compliance programs to bring tax haven wealth back into their countries' tax systems. As of early 2018, more than 93 billion euros have been collected prior to the start of the AEOI exchanges and $10 billion has been reported through the U.S. Offshore Voluntary Disclosure Program since 2009. Amounts reported through disclosure programs may represent multiple years, penalties and interest, which would overstate actual annual tax collections going forward. But the voluntary disclosures may be just the tip of the iceberg, with significantly more revenue collected from improved voluntary compliance overall.[42] Key questions will be to what extent evaders switch to jurisdictions that aren't participating in the AEOI, and to what extent evaders switch to alternative forms of wealth not subject to AEOI.[43] Tax system tools will need to evolve to prevent new leakages and to continue improved voluntary compliance and effective enforcement.

Global estimates of tax avoidance

Cross-border tax avoidance through base erosion and profit shifting has been more extensively analyzed, despite numerous data issues. The OECD BEPS Action 11 report summarized the academic and government research through 2015, and estimated that cross-border tax avoidance ranged from 4 to 10 percent of global corporate income tax revenue, or $100–$240 billion annually at 2014 levels.

Various estimates have been made showing an even larger range, as shown in Table 1. Many of the estimates have been based on U.S. data given their availability through the U.S. BEA aggregate tabulations and IRS individual company tax return data. European data have been available from financial account data. Global estimates have generally relied on aggregate country tabulations.

41 Forstater (2018).

42 Johannesen *et. al.* (2018).

43 https://www.fincen.gov/news/news-releases/fincen-expands-reach-real-estate-geographic-targeting-orders-beyond-manhattan.

TABLE 1. Estimates of Global and Developing Countries Fiscal Effects From BEPS

Fiscal estimate approach	Scope	Range USD (billions)	Year (level)
OECD aggregate tax rate differential	Global	100–240 (4–10% of CIT)	2014
Other Estimates			
IMF CIT efficiency (2014)	Global	5% of CIT	
UNCTAD Offshore investment matrix (2015)	Global	200 (8% of CIT)*	2012
Clausing (2016)	Global	279	2012
Cobham and Jansky (2018)	Global	494	2013
Torslov, Weir and Zucman (2018)	Global	10% of CIT	2015
IMF CIT efficiency (2014)	Developing countries	13% of CIT	
UNCTAD Offshore investment matrix (2015)	Developing countries	66–120 (7.5-14% of CIT)*	2012

* Includes only investment-related BEPS, not trade mispricing.
SOURCE: Compiled by author.

Academic studies find that cross-border tax avoidance takes the form of transfer mispricing to shift income from high-tax-rate countries to low-tax-rate countries, the strategic location of debt in high-tax-rate countries, and the strategic location of intangible assets in low-tax-rate countries. Other forms of tax avoidance through hybrid structures, tax treaty planning, and avoidance of permanent establishment have not been analyzed to the same extent.

The OECD/G20 BEPS project relies heavily on increased transparency to change taxpayer behavior and to provide more tools for tax administrations to focus their resources on transfer pricing issues. Transparency through information exchange between tax administrations has not been analyzed much. Bruan and Weichenrieder (2015) found that bilateral TIEAs were associated with fewer operations in tax havens.[44] They conclude that firms invest in tax havens not only for their low tax rates but also for the secrecy they offer. The reduction in the use of tax havens with a TIEA may have simply resulted from a reallocation of operations into other tax havens, but with the CbCR covering all countries that reallocation will be transparent in the future.

No studies have been done on the effect of transparency of government rulings, which is addressed in the harmful tax practice BEPS Action 5. Exposure of favorable tax rulings through Parliamentary and Congressional hearings, plus through the LuxLeaks, has resulted in changes to several countries' tax rules and has resulted in a number of European Commission State Aid Cases imposing additional taxes, including a $15 billion assessment on Apple Corporation from prior Irish rulings.[45]

Estimates of the effects of tax system provisions

Although aggregate estimates of revenue lost help focus policymakers' and administrators' attention, the effects of specific tax system tools are critical for the benefit-cost decisions necessary for deciding which tools to focus resources.

Keen and Slemrod (2017) provide a framework for analyzing optimal interventions by tax administrations,[46] similar to the framework for optimal tax policy. Their paper develops a summary measure of the impact of administrative interventions, called the 'enforcement elasticity of tax revenue', similar to the elasticity of taxable income in the context of tax policy responses to changes in tax rates. The paper discusses the optimal balance of policy and administrative measures as well as the optimal compliance gap.

Neubig and Slemrod (2017) show graphically in Figure 2 the conditions under which administrative enforcement efforts are optimal in the international context in addressing tax compliance compared to reductions in tax rates. Enforcement actions are most effective when economic activity is more sensitive to tax rate

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[44] Braun and Weichenrieder (2015).

[45] http://europa.eu/rapid/press-release_IP-16-2923_en.htm.

[46] Keen and Slemrod (2017).

changes and also are more sensitive to enforcement actions. This is likely the case where taxable income is "mobile" due to reporting or tax planning without real economic changes required.

FIGURE 2. Situations When Enforcement Actions v. Tax Rate Changes Are Most Effective

Item		Taxable income elasticity	
		High	**Low**
Enforcement elasticity	**High**	Enforcement actions effective	Ambiguous
	Low	Ambiguous	Rate change effective

SOURCE: Neubig and Slemrod (2017).

Several studies have found that increased documentation to support transfer-pricing decisions reduces profit shifting from that country.[47] Unilateral action to protect a country's tax base either through a policy change or tougher enforcement actions can raise the cost of capital in that country, resulting in reduced foreign investment and fewer jobs.[48] A country may increase its own revenue, but at the expense of base erosion being shifted to other countries. Enforcement elasticities are likely to be higher in the presence of multilateral agreements, such as the BEPS Inclusive Framework's minimum standards. Increased transfer pricing documentation from CbCRs will be applicable in all countries, so can't be avoided by shifting activity to another country, and will have lower compliance costs than nonuniform transparency rules by different countries.

The European Union is considering public country-by-country reporting for more than just the extractive and financial industries. The effects of public reporting are likely to be different than the effects from nonpublic reporting just to tax administrations. Australia began requiring its largest companies to report a limited amount of tax information publicly. Hoopes, *et al.* (2017) found that some large private companies experienced some consumer backlash from disclosure of low tax rates, some reacted to avoid disclosure, while some others paid some additional tax. Investors generally reacted negatively to the anticipated and actual public disclosures.

Finally, the 2017 U.S. tax act included a number of anti-BEPS provisions. Most important was the reduction of the Federal corporate statutory tax rate from 35 percent to 21 percent, which significantly reduced the incentive to shift profits out of the U.S. The 21 percent rate is below the statutory tax rate of most other countries, so there could be an incentive to shift both economic activity as well as reported profits into the U.S. from higher tax rate countries. In addition, the 2017 act tightened transfer pricing rules for intangible assets, tightened interest limitations to prevent the strategic location of debt in U.S. subsidiaries, imposed a new minimum tax on foreign source income, and a new minimum tax on related party payments subject to transfer pricing issues. The Congressional Budget Office estimates that the 2017 Act will reduce profit shifting out of the U.S. by slightly over 20 percent due to the reduction in the tax rate.[49] This will pick up an additional $14 billion of revenue annually. The other anti-BEPS provisions are estimated to pick up an additional $43 billion in 2020, although not all of that is from cross-border tax avoidance. The 2017 U.S. tax change would be in addition to the anti-BEPS provisions of the BEPS Inclusive Framework minimum standards, particularly the CbC reporting.[50]

V. Potential Research Opportunities as Part of and Following Implementation of These Initiatives

The IRS is one of the world's leading tax administrations, and its Research, Applied Analytics, and Statistics organization (RAAS) is clearly a global best practice. The tax environment is ever changing, and new research

[47] Lohse and Riedel (2013), OECD (2015c).

[48] For example, see DeMooij and Li (2018).

[49] U.S. Congressional Budget Office (2018), pp. 124-5.

[50] Neubig (2018).

opportunities will be available with the new global tax initiatives for the IRS and other countries' tax administrations. Opportunities include:

- *Taking advantage of the new information from CbC reports of the largest global MNEs.* While the U.S. has good information about U.S.-headquarter MNEs (Form 5471) as well as subsidiaries of foreign headquarter MNEs (Form 5472), the new CbC information will supplement those forms. The CbC reports will be valuable for many other countries that don't have similar information as the U.S. The U.S. can help other countries better analyze their data. For example, the Action 11 report noted that many countries' tax analysts did not have corporate income tax data divided between multinational and domestic-only corporations.
- *Taking full advantage of available CbC report data.* This includes analyzing the data beyond the standardized template, particularly important information on related party transactions. Analysis of non-standard data can be done through text-mining techniques and sampling. In addition, tax administration researchers should link the non-public CbC reports with national tax return data and available public financial account data. Insights from such linking could assist researchers limited to analyzing just public financial account data.
- *Taking advantage of the new information exchange from the AEOI reporting on financial assets held in other countries.* The AEOI information will be valuable particularly for developing countries where offshore tax haven accounts are more common.
- *Researching nonfinancial assets held offshore, and the extent to which they are substituted for financial accounts, is needed to determine future opportunities for greater information sharing.* Analysis of property records from the IRS pilot studies can be linked with existing FATCA data.
- *Conducting additional research on BEPS with the significant reduction in the largest economy's statutory corporate tax rate, plus its anti-BEPS provisions.* Research on BEPS needs to focus not only on tax rate differences, but also on the effects of anti-BEPS instruments, such as CbC reports, interest limitation rules, hybrid restrictions, and treaty limitations.
- *Researching the BEPS Inclusive Framework's minimum standard for spontaneous exchange of government tax rulings.* What changes in governments' behaviors are resulting from greater government tax ruling transparency?
- *Conducting cross-country analysis using the improved TAS survey data.* The TAS survey data have been presented as descriptive statistics, and now contain more quantitative comparable information. More sophisticated analysis could provide additional insights.
- *Conducting more research on tax uncertainty from administrative rulings and practices.* This may be possible with the TAS survey data combined with other data sources. The OIRA review may be an opportunity in the U.S. to conduct detailed benefit-cost analyses of alternative tax regulatory approaches.
- *Conducting more research on tax administration instruments of nonincome taxes.* VAT, payroll and property tax fraud and noncompliance are important issues for subnational governments and other countries.
- *Collecting and analyzing more data on withholding taxes.* Withholding taxes are an important tax instrument to ensure tax is collected on certain types of cross-border payments. Data on aggregate withholding tax collections on cross-border payments, and by type of payment, are generally not available. More research in this area is needed, but won't be possible without better data compilation and reporting.
- *Leveraging tax administration research with qualified academic researchers and agreements with National Statistical Offices.* The IRS has a best practice in both dimensions, although further leveraging these arrangements would be worthwhile given budget constraints. This is an important area for other countries' tax administrations especially with the additional future information exchanges.

- *Considering whether a tax administration research Working Party should be created as part of the OECD, FTA, PCT, or other international organization.* Such a Working Party could share more systematically best practices, increase the effectiveness of data collection and research methodologies, and identify joint tax administration research projects.

The bottom line is that global cooperation and coordination in tax is a best practice in terms of multilateral government efforts. It strengthens countries' national tax sovereignty, rather than harming it. Governments should compete for jobs and investment with sound tax policies, effective and efficient tax administration, and strong public policies for health, education, property protection and infrastructure. But multilateral efforts are essential to combating cross-border tax evasion and tax avoidance, and preventing harmful tax practices through beggar-thy-neighbor tax policies and nontransparent tax administrative rulings.

Greater transparency, more effective intelligence gathering and analysis, and improvements in co-operation and information sharing between government agencies and between countries are important steps to fairer, more efficient, and more certain global tax systems.

Abbreviations and Acronyms

AEOI	Automatic exchange of information
APA	Advance pricing agreement
AUD	Australian dollars
BAD	Best available data
BEP	Base erosion and profit shifting
CbC	Country-by-country
CIAT	Inter-American Center of Tax Administration
CTS	Common Transmission System
EOIR	Exchange of information upon request
EITI	Extractive Industries Transparency Initiative
EU	European Union
FATCA	US Foreign Account Tax Compliance Act
FATF	Financial Action Task Force
FTA	Forum on Tax Administration
G20	Group of 20 countries
Global Forum	Global Forum on Transparency and Information Exchange for Tax Purposes
HWI	High wealth individuals
ICAP	International Compliance Assurance Programme
IGA	Intergovernmental agreement
IMF	International Monetary Fund
IOTA	Intra-European Organization of Tax Administrations
IRS	Internal Revenue Service
ISRA	International Survey on Revenue Administration
JITSIC	Joint International Taskforce on Shared Intelligence and Collaboration
MAP	Mutual agreement procedures
MNE	Multinational enterprise
NSO	National statistical organizations
OECD	Organization for Economic Cooperation and Development
OIRA	U.S. Office of Management and Budget's Office of Information and Regulatory Affairs
PCT	Platform for Collaboration on Tax (IMF, OECD, UN, WBG)
RA-GAP	IMF's Revenue Administration – Gap Analysis Program
RAAS	IRS' Research, Applied Analytics, and Statistics Organization
TADAT	IMF's Tax Administration Diagnostic Assessment Tool
TAS	OECD's Tax Administration Survey
TFTC	OECD's Task Force on Tax Crimes and Other Crimes
TIEA	Tax information exchange agreement
TIWB	Tax inspectors without borders
UN	United Nations
USD	U.S. dollars
UTB	Unrecognized tax benefits
UTP	Uncertain tax positions
WBG	World Bank Group

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