Can we measure illicit financial flows?
Methods for the measurement of tax and commercial illicit financial flows

Abstract:
The 2030 Agenda identifies the reduction of illicit financial flows (IFFs) as a priority area to prevent draining of resources from sustainable development. IFFs are deliberately hidden and, as they take many forms and use varying channels, their measurement is challenging both conceptually and in practice. IFFs affecting countries differ, and methods for their measurement need to be tailored to capture different types of IFFs and to apply to varying data environments. Without reliable statistics on IFFs the high uncertainty about the size of these flows, their origins and impact on development hampers policy action to combat IFFs. As custodians of Sustainable Development Goal (SDG) indicator 16.4.1, on illicit financial flows, the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Office on Drugs and Crime (UNODC) have developed methodological guidelines to measure IFFs in country pilots. The first pilots were carried out in Latin America and in 2021, several new pilots are ongoing in Africa, Asia and the Pacific as well as in some countries in Europe and Latin America. This paper will discuss methodologies to measure IFFs, in particular from tax and commercial activities.

1. Introduction

The 2030 Agenda identifies the reduction of IFFs as a priority area, as reflected in target 16.4: "by 2030, significantly reduce illicit financial flows and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organised crime". The Addis Ababa Action Agenda (United Nations, 2015) on financing for development also calls for a redoubling of efforts to substantially reduce IFFs, with a view to eventually eliminating them.

In July 2017, the United Nations General Assembly adopted the indicator framework for the monitoring of progress towards SDGs (United Nations, 2017). Indicator 16.4.1, "total value of inward and outward illicit financial flows", was selected as one of two indicators to measure progress towards target 16.4. At the time, there was no universal agreement on what constitutes IFFs or how the component parts could be measured. Without reliable statistics on IFFs the high uncertainty about the size of these flows, their origins and impact on development hampers policy action to combat IFFs.

UNCTAD and UNODC, assigned by the General Assembly as custodians of indicator 16.4.1, published a *Conceptual Framework for the Statistical Measurement of Illicit Financial Flows* (UNCTAD and UNODC, 2020), reflecting concepts and standards approved by the IAEG-SDGs and the United Nations Statistical Commission. In 2021, the custodian agencies finalised methodological guidelines for the measurement of IFFs in country pilots.

2. Statistical methods to measure IFFs

IFFs are deliberately hidden and, as they take many forms and use varying channels, their measurement is challenging both conceptually and in practice. The challenges differ across countries, depending on main types of IFFs affecting the country, data availability, mandates of national institutions, statistical capacity and national policy priorities. This calls for space for country-specific solutions and the flexible application of methods, however still fully in line with the common framework.

There is a relevant stream of literature that proposes methods to measure IFFs from illegal economic activities, and illicit tax and commercial practices. The methods proposed can be grouped into two general approaches:

1. **Top-down methods** attempt to measure IFFs by interpreting or modelling inconsistencies in different types of aggregated data, such as currency demand, international trade, and capital account of the Balance of Payments (BoP).
2. **Bottom-up approaches** attempt to measure IFFs starting from the analysis of a given illicit activity, defining the set of flows that can be identified as IFFs and then producing estimates for each of them. Overall estimates are obtained by aggregating from a lower to a higher level.

In line with the approach, where different types of IFFs are defined in relation to the activity generating them, a bottom-up and direct measurement approach is preferred. The UNCTAD (2021) *Methodological Guidelines to Measure Tax and Commercial IFFs* for pilot testing identify main types of tax and commercial IFFs and methods for their pilot measurement.

The Guidelines are aimed at statistical and other national authorities with a mandate to collect and access relevant information. Microdata available to national authorities enable the compilation of more reliable estimates. However, simpler methods are proposed in parallel with more sophisticated methods to enable IFFs' estimation also where less data are available. The UNCTAD guidelines provide a suite of methods for pilot testing the measurement of three main types (a-c) of tax and commercial IFFs:

a) Trade misinvoicing by entities
   - Method #1 – Partner Country Method +
   - Method #2 – Price Filter Method +

b) Aggressive tax avoidance or profit shifting by MNEs
   - Method #3 – Global distribution of MNEs' profits and corporate taxes
   - Method #4 – MNE vs comparable non-MNE profit shifting

c) Transfer of wealth to evade taxes by individuals
   - Method #5 – Flows of undeclared offshore assets indicator
   - Method #6 – Flows of offshore financial wealth by country

Partner Country Method + (method #1) reviews bilateral discrepancies in reported trade flows, i.e. what country A reports as its imports from country B is cross-checked against country B's exports into country A. The challenge of multiple and varying reasons for these discrepancies, such as valuation and partner country attribution, but also trade systems in place and others, are addressed step-wise in the method to identify the amount of asymmetries to be contributed to IFFs. This approach is made possible by exploiting the detailed trade flows data available within national statistical system from national and bilateral partners Customs Authorities.

Price Filter Method + (method #2) builds on identifying abnormally priced transactions in international trade by first designing the price filter and then identifying abnormally priced transactions, to identify signs of IFFs. The method uses granular, transaction-level microdata and does not rely on partner's transaction data. Limitations and uncertainties of the method are partially offset by involvement of national Customs experts.

Global distribution of MNEs' profits and corporate taxes (method #3) looks at the distribution of profits of an MNE among its units globally and relates it to the corresponding corporate (effective) tax rates and underlying economic activity of a particular unit. It assumes that an MNE unit is likely to shift profits out of the country if another unit's tax regime induces a lower

tax rate. Depending on data availability, using unit-level microdata may produce the most reliable estimates of profit shifting by MNEs.

MNE vs comparable non-MNE profit shifting (method #4) compares units belonging to MNEs with comparable domestic (non-MNE) units to identify potentially tax-avoiding behaviours, and then determine the amount of profit shifted as a measure of IFFs. The method is based on business statistics microdata that are available to statistical authorities in many countries, although it may be tricky to fully implement in small economies where the number of business is lower.

Flows of undeclared offshore assets indicator (method #5) looks at undeclared offshore assets, essentially by comparing what has been declared by citizens of a country A and what internationally reported data say about the assets held abroad by citizens of country A. Assumptions are required to transform stock measures into flow measures to approximate outward IFFs for a country. This method's data requirements are significant.

Flows of offshore financial wealth by country (method #6) starts from global level imbalance between international portfolio liabilities and assets, thus identifying global offshore financial wealth. This is then broken down by country of ownership and by International Financial Centre, and finally, assuming the non-compliance rate on offshore wealth to identify the level of illicit flows. Again, transforming stock into flow measure is required and similarly to previous method, also here data (un)availability is a significant challenge.

The above methods are tier classified, allowing countries to exercise flexibility and select a feasible method reflecting on national capacity, existing data, feasible statistical methods, legal and regulatory frameworks, and other conditions. A three-tier classification is proposed, with tier 1 as the preferred method based on the soundness of methodology, data requirements, and expected quality of estimates. Tier 2 is proposed as a fallback option if tier 1 method cannot be applied. If neither are applicable, a tier 3 method could be used. Tier classification of methods may vary country to country, given national capacities, data availability and similar.

An important distinction is made to avoid double counting and link to the System of National Accounts (SNA) between two different stages leading to IFFs:

- **IFFs linked to income generation**, as the set of cross-border transactions that are performed in the context of the production of illicit goods and services or the set of cross-border operations that directly generate illicit income for an actor during a non-productive illicit activity. Inward or outward IFFs occur when the operation in question is performed across border.
- **IFFs linked to income management**, as the set of cross-border transactions finalised to use the (illicit) income for investment in (legal or illicit) financial and non-financial assets or for consuming (legal or illegal) goods and services. If spent abroad, the operation is an outward IFF. If stemming from illicit activity outside a jurisdiction but is spent in the domestic jurisdiction, an inward IFF is generated.

3. **Data requirements for measuring IFFs**

National statistical systems already have some of the data needed for the measurement of IFFs, but these data are scattered across a range of authorities and statistical domains. For instance, existing national accounts and BoP statistics include estimates of illegal economic activities and the non-observed economy; they provide a good starting point for the measurement of IFFs.

Relevant data may be held by the police and ministries and councils of justice, financial intelligence units and other government agencies collecting information on seizures and criminal offences. In addition, tax authorities collect relevant data for assessing the tax gap, and they exchange country-by-country reporting data on multinational enterprises. Customs' data and statistics on international trade in goods and services provide useful information on commercial IFFs.

Compiling statistics on IFFs requires access to many data sources held by different authorities. Central banks, customs, tax authorities and national statistical offices often have the strongest mandate to collect and access such data. Several global databases also contain relevant data for the compilation of IFF estimates, for instance the Organisation for Economic Co-operation and Development (OECD) country-by-country reporting data, UNCTAD Global Transport Costs Dataset for International Trade, the United Nations Comtrade database and the locational banking statistics by the Bank of International Settlements.

Eventually, the many types of IFFs should be measured in one indicator. That will require close collaboration within the national statistical system and with administrative data providers. The compilation of SDG indicator 16.4.1 is a technical, statistical activity to be based on statistical considerations only in line with the Fundamental Principles of Official Statistics (United Nations, 2014). National statistical offices, as the focal point for coordinating the compilation of SDG indicators, should lead and coordinate the work to bring the necessary stakeholders together to measure IFFs.

4. Country pilots to measure illicit financial flows

While some elements of IFFs are more readily measurable, others are highly challenging to estimate, including bribery, abuse of functions, illicit enrichment and illicit tax practices. Country pilots are central to building the capacity to measure IFFs and testing the feasibility of selected methodologies starting from types of IFFs for which data are available. Coverage of different IFFs will be improved gradually along with data improvements.

In 2021-2022, UNCTAD and UNODC, with partner organizations, United Nations Economic Commission for Africa (UNECA), Economic and Social Commission for Asia and the Pacific (ESCAP) and Economic Commission for Latin America and the Caribbean (ECLAC), will support countries in improving their statistical capacity to estimate IFFs. A series of pilot studies will provide critical information to refine the *Conceptual Framework* and guidance on statistical methods to measure IFFs.

The first pilots carried out in Latin America in 2019, by UNODC and ECLAC, show the way forward for other countries. In the first pilots, Columbia, Peru, Ecuador, and Mexico measured IFFs from selected illegal markets, such as drugs trade, trafficking in persons, smuggling of migrants and illegal mining. First estimates in Mexico, for instance, show that outward IFFs from smuggling of migrants increased from US$10 billion in 2017 to almost US$14 billion in 2018. A similar pilot in Afghanistan estimated illicit gross income of the opiate economy to be worth between US$1.2 and US$2.2 billion in 2018, a value corresponding from 6 to 11 per cent of the country's GDP, and more than its officially recorded exports of goods and services, estimated at 4.3 per cent of gross domestic product (GDP).

In 2021, interested African countries will pilot test the measurement of IFFs with UNCTAD and UNECA focusing on tax and commercial IFFs. UNCTAD and UNODC are also pilot testing IFFs' measurement with ESCAP and six countries in Asia and the Pacific in 2021–2022.

Pilot testing starts by a review of national circumstances in the form of an IFF risk assessment, followed by a mapping of relevant national stakeholders, a review of data availability and data

quality; and finally, the pilot calculation of IFF estimates with one or two selected methods. Challenges and opportunities encountered in the pilots will help refine the *Methodological Guidelines* and contribute to the reporting of progress towards SDG target 16.4 in the future.

5. Discussion and Conclusion

It will be useful to have many countries test the measurement of IFFs that affect their economies. Estimating IFFs will not only provide clarity on the scope of IFFs, but also help improve the quality of key macroeconomic statistics, such as GDP.

UNCTAD and UNODC, jointly with Regional Commissions, will support countries in the pilot testing of the measurement of IFFs with a view to developing a *Statistical Framework for the Measurement of Illicit Financial Flows* with practical and methodological guidance for countries. This will include a classification of activities generating IFFs, linked to the SNA and BoP concepts, and with recommended methods to measure different types of IFFs and aggregate them into SDG indicator 16.4.1.

This will involve development of methods to aggregate estimates of different types of IFFs into one single SDG indicator, e.g., to adjust for double counting. In the future, the measurement of IFFs as a satellite account taking into consideration national accounts concepts and definitions could be worth exploring.

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