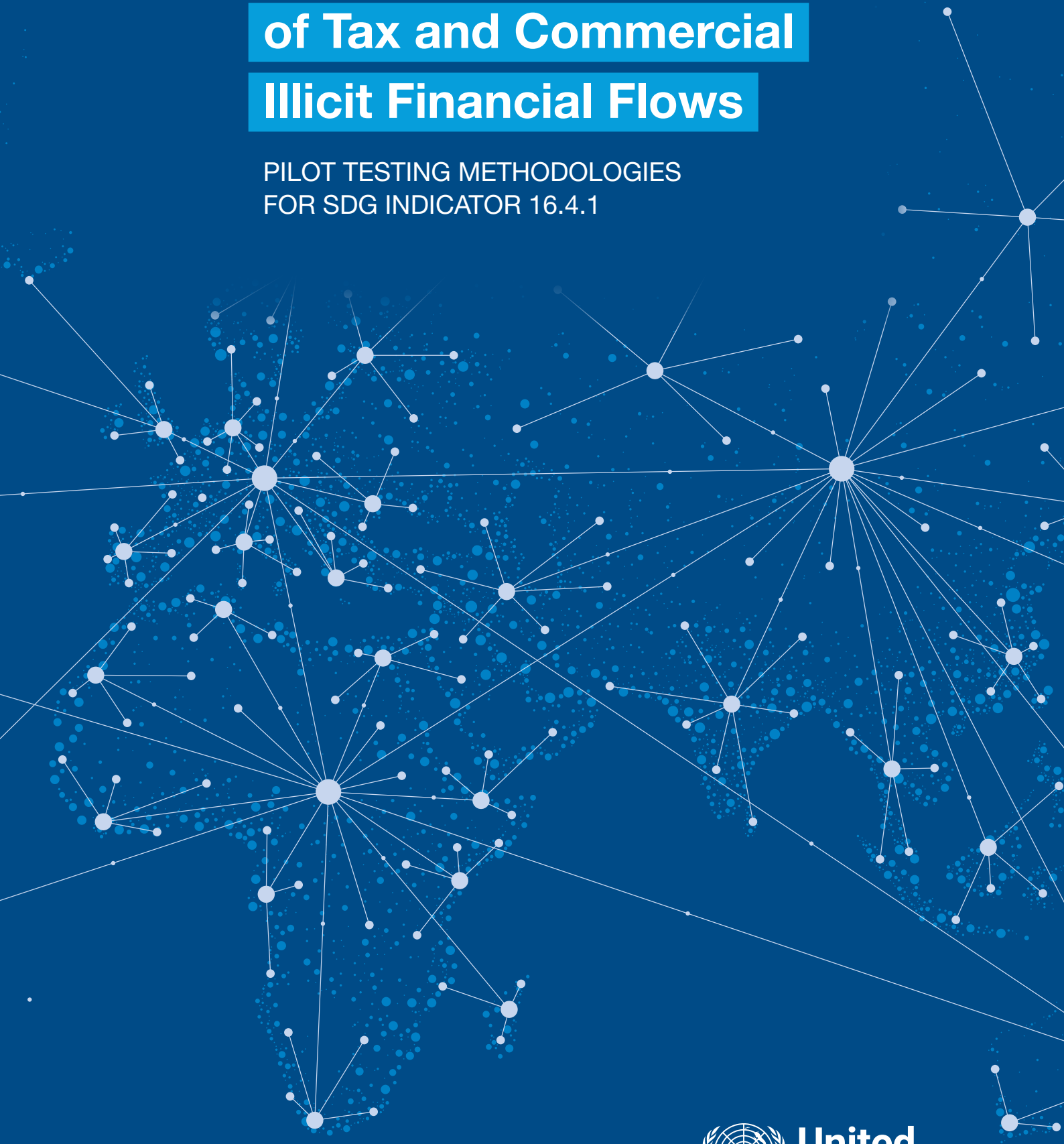
UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

# Statistical Measurement of Tax and Commercial Illicit Financial Flows

## PILOT TESTING METHODOLOGIES FOR SDG INDICATOR 16.4.1



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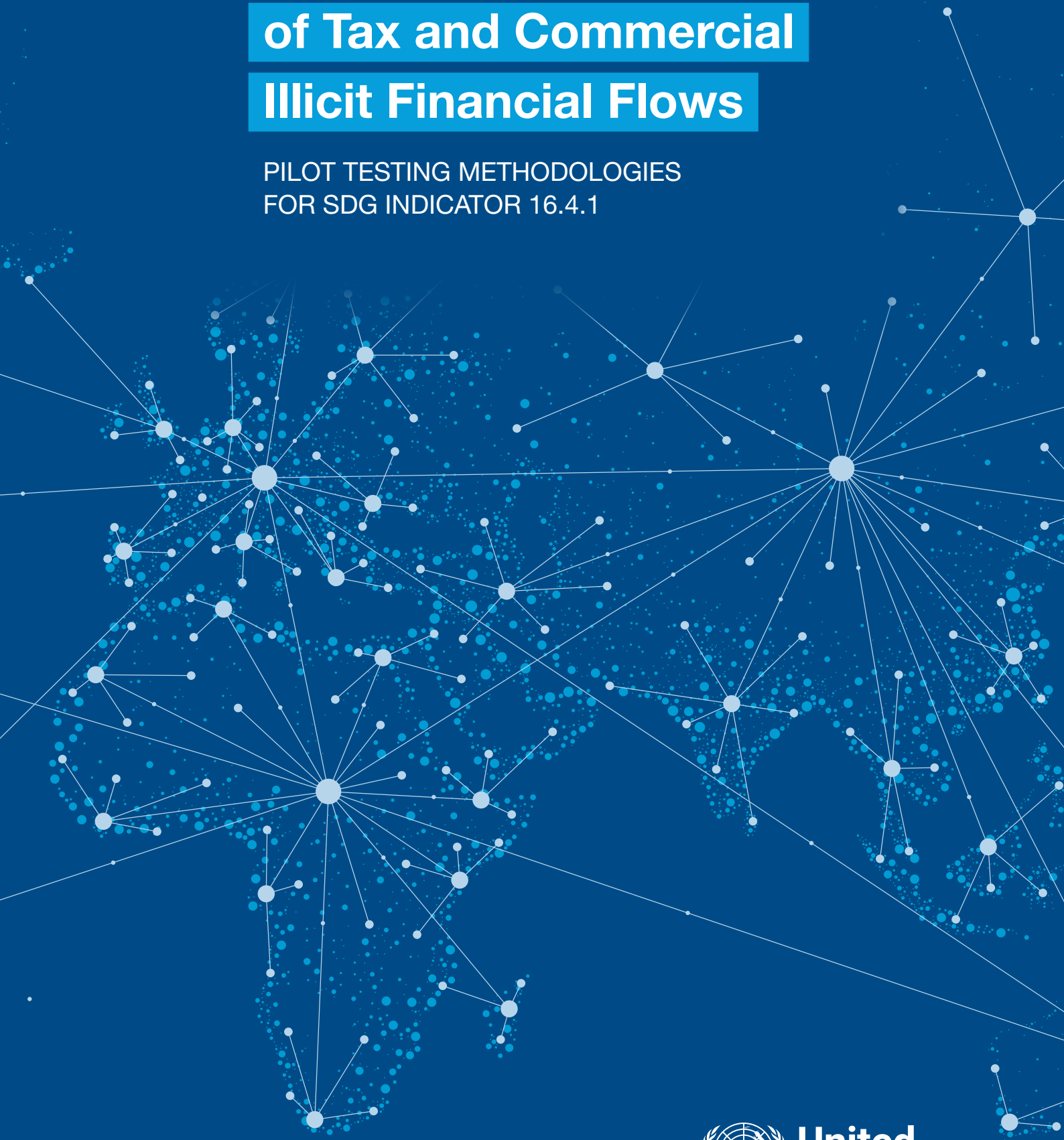

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Magali Studer prepared the overall design and cover artwork.

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# 1

# INTRODUCTION

## 1.1 Illicit financial flows and SDGs

The 2030 Development Agenda defines 17 Sustainable Development Goals (SDGs) to achieve equitable and sustainable development for all, leaving no one behind. Achieving the 2030 Agenda requires targets for the SDGs to be measured via the monitoring framework, comprising 231 SDG indicators (SDG Indicators: Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development, 2023). Compiling and disseminating statistics on these indicators is a task, recognized by many as "unprecedented statistical challenge" (MacFeely, 2020) and requiring significant financial resources for mobilizing sufficient statistical capacity in countries world-wide, but also international agencies. The COVID-19 pandemic, the war in Ukraine and the increasing costs of climate change and environmental challenges have had a particularly devastating impact on developing economies, further straining national resources and highlighting the critical need for addressing this financing gap. The ability to achieve the SDGs remains fragile when illicit financial flows (IFFs) continue to drain resources that are needed to fulfil human rights and pursue sustainable development. Domestic resource mobilization, assets recovery and curbing IFFs are more critical than ever. Governments' capacities to raise resources through return of assets will be fundamental to rescue the 2030 Agenda.

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". This target is critical for financing efforts to achieve SDGs. IFFs were also identified as a global priority in the Addis Ababa Action Agenda (United Nations, 2015) on financing for development which calls for a redoubling of efforts to substantially reduce IFFs, with a view to eventually eliminating them.

Regardless of its importance, data on indicator 16.4.1, "total value of inward and outward illicit financial flows", are not yet reported as part of the SDG indicator framework (United Nations, 2017b). Comparable and reliable statistics on IFFs are needed to shed light on the activities, sectors and channels most prone to illicit finance, pointing to where actions should be undertaken as a priority to curb these flows.

## 1.2 UNCTAD supporting measurement

UNCTAD and the United Nations Office on Drugs and Crime (UNODC) are co-custodians of SDG Indicator 16.4.1 and are therefore supporting countries in measuring IFFs for future reporting. In this effort, UNCTAD, with the UN Economic Commission for Africa (UNECA), in partnership with the UNODC, have implemented the UNDA project on "Defining, estimating and disseminating statistics on illicit financial flows in Africa" focusing on developing conceptual basis and a statistical methodology to estimate IFFs.

After intensive global efforts by UNCTAD, UNODC, United Nations Regional Commissions and experts from member States and other international organizations, globally agreed concepts for measuring IFFs as SDG indicator 16.4.1 now exist. Selected methods to measure different types of IFFs have been pilot tested between 2018 and 2022 by 22 countries in Africa, Asia and Latin America, contributing towards refining global methods to measure IFFs and report on SDG 16.4.1.

## 1.3 Structure of the paper

This paper focuses on efforts by eleven African countries to measure tax and commercial IFFs within the United Nations Development Account project in Africa. It reviews and assesses development of concepts and methods, and their pilot testing. As such, it draws from existing work and documents of custodian agencies (e.g., (UNCTAD and UNODC, 2020; UNCTAD, 2021, 2022a)) and provides (further) methodological inputs into ongoing development of suggested statistical methodologies to measure tax and commercial IFFs and feed into global reporting on SDG indicator 16.4.1. The paper is structured as follows: chapter 2 reviews the conceptual framework to define IFFs; Chapter 3 details the measurement of tax and commercial IFFs by dwelling on UNCTAD Methodological guidelines; In Chapter 4, results of pilot testing and relevant methodological feedback are presented, laying out grounds for further methodological work needed by the custodian agency of SDG indicator 16.4.1; Chapter 5 concludes.

# 2

# DEFINING ILLICIT FINANCIAL FLOWS

## 2.1 Conceptual Framework

UNCTAD and UNODC, as custodians of SDG indicator 16.4.1 assigned by the General Assembly, have led the global methodological work to develop statistical definitions and methods to measure IFFs to support member States in monitoring progress towards target 16.4. In line with the General Assembly resolution (United Nations, 2017a) to ensure engagement with national statistical authorities, UNCTAD and UNODC established a Task Force on the Statistical Measurement of IFFs[1] in January 2019, involving experts from national statistical offices (NSOs), financial intelligence units, tax and customs authorities, academia, non-governmental organisations, international organisations and other IFF experts.

As a result of this work, and for the purpose of the SDG indicator 16.4.1, UNCTAD and UNODC Conceptual Framework for the Statistical Measurement of Illicit Financial Flows (UNCTAD and UNODC, 2020) reflected the approved concepts and standards from the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs), as designated by the United Nations Statistical Commission, and endorsed these concepts in a methodological proposal in October 2019. The methodological proposal reclassified indicator 16.4.1 from tier 3, indicating that no internationally established methodology or standards are available for the indicator, but methodology/ standards are being (or will be) developed or tested, to tier 2, meaning that the indicator is conceptually clear and based on internationally established standards, while data are not yet available from countries. The Framework was endorsed by the Member States and international organizations at the 53rd Session of the United Nations Statistical Commission (UNSC, 2022) in March 2022.

There is now a globally agreed definition of IFFs, which are defined as "financial flows that are illicit in origin, transfer or use, that reflect an exchange of value and that cross country borders" (UNCTAD and UNODC, 2020). The Framework identifies four main types of such activities, namely: (1) illicit tax and commercial practices, (2) illegal markets, (3) corruption, and (4) exploitation-type and terrorism financing. According to this typology, the four main categories of IFFs are described as follows:

1. Illicit tax and commercial IFFs. This category includes illicit practices by legal entities as well as arrangements and individuals with the objective of concealing revenues, reducing tax burden, evading controls and regulations and other purposes. This category can be divided into two components:

    a. IFFs from illegal commercial and tax practices. These include illegal practices such as tariff, duty and revenue offences, tax evasion, corporate offences, market manipulation and other selected practices. Some activities that are non-observed, hidden or part of the so-called shadow economy, the underground economy or the informal economy may also generate IFFs. Related activities included in the International Classification of Crime for Statistical Purposes (ICCS) comprise tax evasion, tariff, duty and revenue offences, competition offences, import/export offences, acts against trade regulations, restrictions or embargoes and investment or stock/shares offences.

    b. IFFs from aggressive tax avoidance. Illicit flows can also be generated from legal economic activities through what is sometimes called harmful or aggressive tax avoidance (see (European Commission, 2017; UNCTAD and UNODC, 2020; UNCTAD, 2021) for more detail on the distinction between legal and illegal illicit flows; also see Box 1 below). Aggressive tax avoidance can take place through a variety of forms, such as manipulation of transfer pricing, strategic location of debt and intellectual property, tax treaty shopping, and the use of hybrid instruments and entities. For the purposes of the measurement of the indicator, these flows need to be carefully considered, as they generally arise from licit business transactions and only the illicit part of the cross-border flows belongs to the scope of IFFs.

2. IFFs from illegal markets. These include trade in illicit goods and services, when the money flows generated cross country borders. Such processes often involve a degree of criminal organisation aimed at creating

[1] The Task Force is co-lead by UNCTAD and UNODC and composed of statistical experts from Brazil, Finland, Ireland, Italy, Peru, South Africa and the United Kingdom, representing NSOs, central banks, customs or tax authorities. The Task Force also includes experts from international organisations with recognised expertise in this field. Eurostat, IMF, OECD, UNECA, UNECLAC, UNESCAP, and UNSD are represented.

profit. They include any type of illegal trafficking of goods, such as drugs and firearms, or services, such as smuggling of migrants. IFFs are generated by the flows related to international trade of illicit goods and services, as well as by cross-border flows from managing the illicit income from such activities.

3. IFFs from corruption. The United Nations Convention against Corruption (UNODC, 2004) defines acts considered as corruption, which are consistently defined in the ICCS. These include bribery, embezzlement, abuse of functions, trading in influence, illicit enrichment and other acts. When the economic returns from these acts directly or indirectly generate cross-border flows, they are considered IFFs.
4. IFFs from exploitation-type activities and financing of crime and terrorism. Exploitation-type activities are illegal activities that entail a forced and/or involuntary transfer of economic resources between two actors. Examples include slavery and exploitation, extortion, trafficking in persons, and kidnapping. In addition, terrorism financing and financing of crime are illicit, voluntary transfers of funds between two actors with the purpose of funding criminal or terrorist actions. When the related financial flows cross country borders, they constitute IFFs.

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:

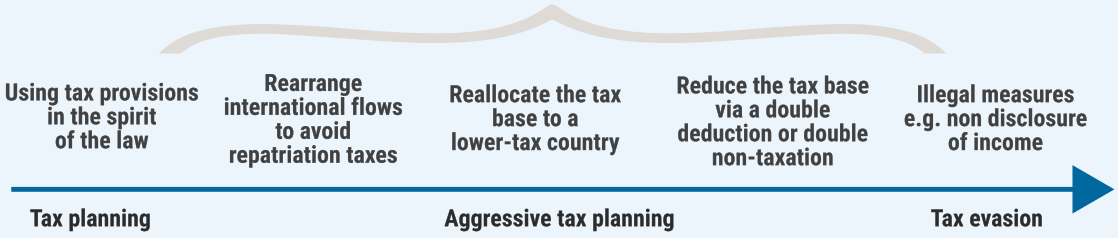
- IFFs linked to income generation, as the set of cross-border transactions that are performed in the context of the production of illicit goods and services or the set of cross-border operations that directly generate illicit income for an actor during a non-productive illicit activity. Inward or outward IFFs occur when the operation in question is performed across a 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.

## Box 1 Challenges of aggressive tax avoidance within IFFs

A specific conceptual challenge is to specify what kinds of activities should be designated as illicit or licit. It is noteworthy that SDG target 16.4 refers to 'illicit' instead of 'illegal' financial flows. Aggressive tax avoidance, including by MNEs, although usually legal, can drain resources and be considered illicit. The inclusion of tax avoidance in the definition of IFFs creates some challenges.

First, it blurs the line between legal and illegal activities. Noting that the boundary between legal and illegal tax practices may be unclear, the European Commission (2017) described the continuum of activities from legal tax planning to illegal tax evasion (see Figure 1). In this context, aggressive tax planning is described as "taking advantage of the technicalities of a tax system or of mismatches between two or more tax systems for the purpose of reducing tax liability."

### Figure 1 Aggressive tax avoidance/planning




*Source:* European Commission (2017).

### Box 1 Challenges of aggressive tax avoidance within IFFs (continued)

Second, stemming from this underdefined (legal) barrier, caution is required when comparing various workstreams from different organizations. OECD, for example, focuses work on IFFs on illegal aspects only, recognizing as members of Task Force on Statistical Measurement of IFFs within the Conceptual Framework (UNCTAD and UNODC, 2020) that aggressive tax avoidance plays an important developmental element and is as such to be considered within the 2030 Development Agenda and within SDG indicator 16.4.1. Moreover, OECD's work includes base erosion and profit shifting (BEPS) activities through interest payments, strategic location of intangible assets, abuse of tax treaties, artificial avoidance of permanent establishment and transfer pricing manipulation, which constitute the aggressive tax avoidance as defined here (refer also to chapter 2.3).

The third challenge directly associated with this is the poor data availability, their interoperability and comprehensiveness. This requires methodologies proposed to assume certain behaviours and patterns by entities, in turn rendering them less methodologically sounds for statistical measurement of IFFs (see Chapter 3). International data sources are increasingly allowing more detailed and robust analysis, exploring, for example the Country-by-country reporting statistics that are released publicly in an aggregated and anonymised form and can be analysed at the microdata level by country authorities (see Bratta et al., 2021; Fuest et al., 2021; 2022), or national tax authority tax-returns microdata (e.g., Reynolds and Wier, 2016; Wier and Reynolds, 2018).

Finally, challenges may arise from purely linguistic aspect: during pilot testing within another United Nations Development Account project in Asia and the Pacific, it has been revealed that official translation of IFFs into Russian (official language of the United Nations) uses the word for illegal, as a direct word for illicit – and as such it cannot be applied in the context. Deliberations are being made by custodian agencies and United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) to provide sufficient guidance to Russian-speaking member States in addressing the issue from legal and statistical aspects (i.e., ensuring proper and sufficient coverage of the IFFs phenomenon in their measurement efforts) (refer to Chapter 4).

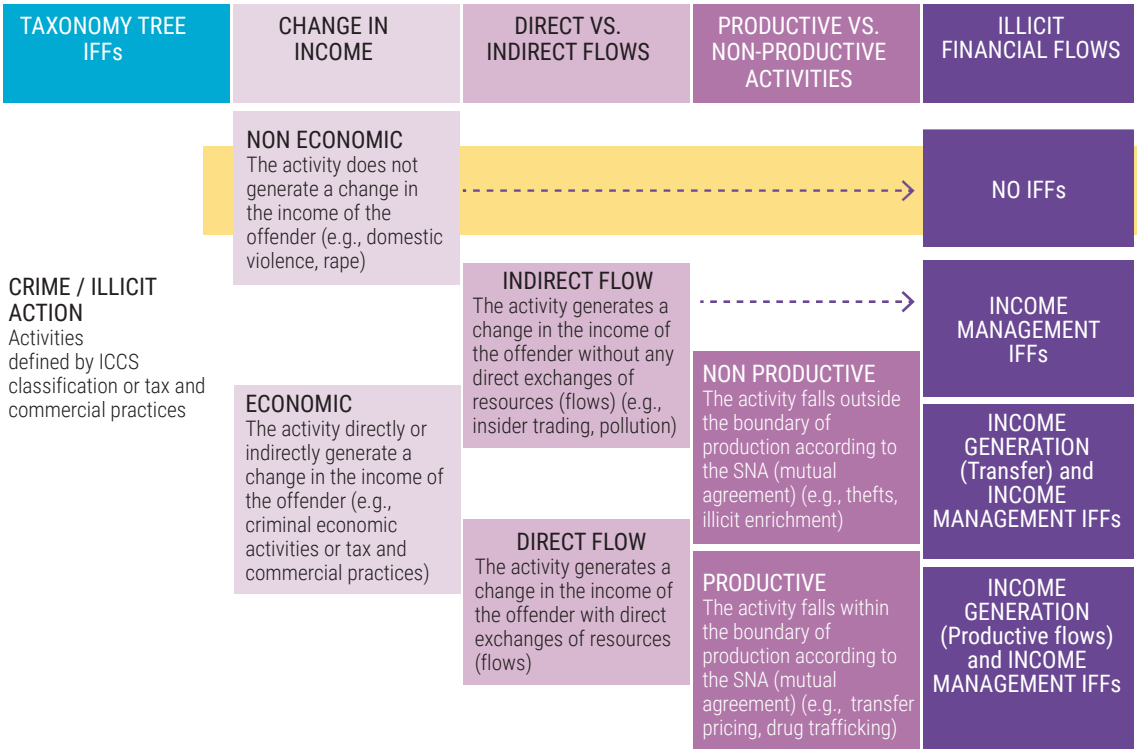
## 2.2 Classification of activities generating illicit financial flows

IFFs need to be classified using a discrete, exhaustive and mutually exclusive statistical classification aligned with existing statistical frameworks and principles. The ICCS (UNODC, 2015) is a good point of departure for identifying the activities that could generate IFFs. The ICCS does not cover all tax and commercial activities that may generate IFFs, for instance IFFs related to aggressive tax avoidance. Therefore, the classification of IFFs needs to be wider. A more exhaustive classification is being developed, where each activity is being analysed considering three aspects:

- Change in income: whether the activity is economic (directly or indirectly generating a change of income) or non-economic;
- Direct or indirect flows: activity generating a change of income with or without direct exchange of resources;
- Productive or non-productive activities: falling within or outside the production boundary as defined in the SNA.

Such taxonomy (see Figure 2) allows for addressing not only whether each activity generates IFFs, but also which part, i.e., income generation or income management, thus guiding IFF measurement.

## Figure 2 The decision tree for IFF taxonomy




*Source*: UNCTAD (2022a).

This paper concentrates on tax and commercial IFFs (see more in chapter 2.3 below) and the following Table 1 presents deliberations of the Task Force on classifying activities generating tax and commercial IFFs. Note that the classification starts off from the ICCS, but expands it for classifying elements that are not illegal (hence criminal). Tax and commercial IFFs are generated by tax and commercial practices that involve economic action by individuals or corporations. Those illicit economic acts can be traced back to some acts classified in the ICCS for the illegal (only) elements of tax and commercial IFFs.

The ICCS, a classification framework for crimes, has the main structure composed of different types of acts grouped into 11 level 1 categories (2 digits), each of them being in turn broken down in sub-levels (level 2: 4 digits, level 3: 5 digits; level 4: 6 digits). The level 1 code '08' '*Acts against public order, authority and provision of the state*', in particular its level-3 code '08041' '*Acts against revenue provisions*' seems to fit well with the aim of classifying tax and commercial IFFs-related economic action starting from the ICCS. Other codes that may potentially contain some tax and commercial IFFs-generating practices may be found in code '07019' '*Other acts of fraud*'. However, the classification explicitly excludes tax fraud from that code (referring instead to code '08041').

Building on this, code '08041' includes tariff, taxation, duty and revenue offence, while excluding social welfare and tax fraud, deception and corruption, which is included in the code '07' 'Acts involving fraud, deception and corruption'. Moreover, choosing code '08041' excludes from the statistical measurement of tax and commercial IFFs other codes within its higher-level code '0804', which relate to financial regulations ('08042'), betting regulations ('08043'), smuggling of goods ('08043'), market manipulation ('08044') and the miscellaneous acts against the public administration or regulatory provisions ('08049').

Tax and commercial IFFs can be therefore classified by "creating a new" set of codes at level 4 starting from the level-3 code '08041' of ICCs, including the different channels of tax and commercial IFFs stressing the economic action (the act) that generate the related IFFs. These are presented in Table 1 with addition of the 6$^{th}$ digit next to 5-digit code '08041' – noting again that these does not bear a direct link to ICCS (especially for codes 080413, 080414 and 080415 referring to aggressive tax avoidance). Flows referred to in the table (F1-F5) are further explained in Chapter 2.3.

## Table 1 Classification of tax and commercial IFFs

| Code | Description | Inclusion/exclusion | | Code of flow | Type of flow | Flow | Typology |
|---|---|---|---|---|---|---|---|
| 080411 | Acts of concealing revenues or wealth in order to evade taxation | Inclusion | Outright undeclared (concealed e.g., in secrecy jurisdictions); Undeclared via instruments (Phantom corporations or shell companies, tax havens) | F1 | Income management | Transfer of wealth to evade taxes, i.e., flows related to undeclared offshore wealth | Revenue offences |
| | | Exclusion | Fraud, deception or corruption (07) | | | | |
| 080412 | Acts of fraudulently misdeclaring the object, the quantity or the value of traded goods in invoicing transactions | Inclusion | Under/over reporting prices; Multiple invoicing; Over/under reporting of quantities; Misclassification of tariff categories | F2 | Income management (income transfer) / Income generation (Tariff avoidance) | Misinvoicing | Tariff, taxation and/or duty offences |
| | | Exclusion | Transfer mispricing (080413) | | | | |
| 080413 | Acts departing from the arm's length principle | Inclusion | Setting up over/under priced exchange of goods and services with the intent of moving profits among MNEs units | F3 | Income generation | Transfer mispricing | Taxation offences |
| | | Exclusion | Misinvoicing (080412) | | | | |
| 080414 | Acts related to strategic location of debt, other financial assets, risks, or other corporate activities | Inclusion | Intracompany loans; Interest payments | F4 | Income generation | Debt and other financial assets shifting | Taxation offences |
| | | Exclusion | Transfer mispricing (080413) | | | | |
| 080415 | Acts related to strategic location of intellectual property products and other non-financial assets | Inclusion | Strategic location of intellectual property; Strategic location of other assets; Cost-sharing agreements; Royalty payments | F5 | Income generation | Intellectual property and other non financial assets shifting | Taxation offences |
| | | Exclusion | Transfer mispricing (080413) | | | | |

*Source*: Deliberations by Task Force on the Statistical Measurement.

## 2.3 Activities generating tax and commercial illicit financial flows

The activities that may generate tax and commercial IFFs, as seen previously, can arise from, and are broken down into two categories, namely IFFs from illegal commercial and tax practices, and from aggressive tax avoidance. For the purposes of pilot testing, Table 2 provides an indicative list of tax and commercial activities that may generate IFFs and identifies types of flows.

Identifying the main types of flows[2] that carry IFFs helps to set up a measurement framework and identify relevant data sources. Moreover, knowing the types of flows can help to identify traces of IFFs in the official economy.

### Table 2 Activities that may generate tax and commercial illicit financial flows and types of flows

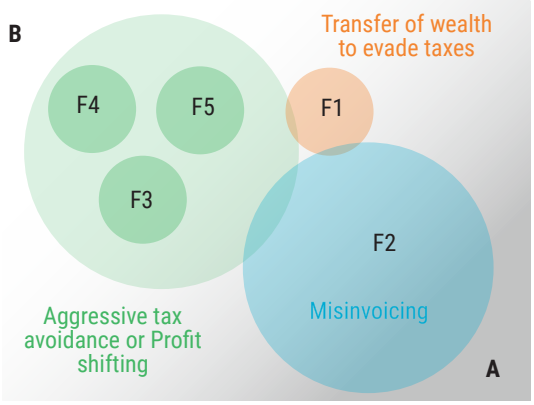
| Categories | Activities | Flows |
|---|---|---|
| ***A.*** *IFFs from illegal commercial and tax activities* | **A1** Acts against public revenue provisions [08041]<br>**A2** Acts against commercial or financial regulations [08042]<br>**A3** Market manipulations or insider trading [08045]<br>**A4** Acts of commercial fraud [07019]<br>**A5** Other illegal commercial and tax acts [08049+] | **F1** Transfer of wealth to evade taxes, i.e., flows related to undeclared offshore wealth<br>• Outright undeclared (concealed e.g., in secrecy jurisdictions)<br>• Undeclared via instruments (Phantom corporations or shell companies, tax havens)<br>**F2** Misinvoicing<br>• Under/over pricing<br>• Multiple invoicing<br>• Over/under reporting of quantities<br>• Misclassification of tariff categories |
| ***B.*** *IFFs from aggressive tax avoidance* | **B1** Acts departing from the arm's length principle<br>**B2** Acts related to strategic location of debt, assets, risks, or other corporate activities<br>**B3** Other acts of aggressive tax avoidance | **F3** Transfer mispricing<br>**F4** Debt shifting<br>• Intracompany loans<br>• Interest payments<br>**F5** Assets and intellectual property shifting<br>• Strategic location of intellectual property<br>• Strategic location of other assets<br>• Cost-sharing agreements<br>• Royalty payments |

*Note:* Activities in category A are based on level-3 categories of the ICCS (with corresponding codes in brackets).
*Source:* UNCTAD (2021).

While further details are available in UNCTAD (2021), the following Figure 3 groups the five identified flows F1-F5 into three main types of flows that can be identified: first, the transfer of undeclared wealth to offshore locations or tax evasion by individuals (F1); second, trade misinvoicing by entities (F2); and third, aggressive tax avoidance or profit shifting by MNEs (F3-F5). Depictions in Figure 3 are for purely illustrative purposes and do not represent actual relations between the flows in terms of respective sizes or overlaps. Corresponding methodologies for the three types are presented in the next chapter and their pilot testing in Chapter 4.

[2] Referred to in some texts as channels or means. Further work in setting up a classification in this field will address the issue of terminology.

## Figure 3 Main types of tax and commercial illicit financial flows




**A Illegal commercial activities and tax evasion**

F1 Transfer of wealth to evade taxes
F2 Misinvoicing

**B Aggressive tax avoidance**

F3 Transfer mispricing
F4 Debt shifting
F5 Assets and intellectual property shifting

*Source:* UNCTAD (2021).

# 3

# STATISTICAL MEASUREMENT OF ILLICIT FINANCIAL FLOWS

IFFs are deliberately hidden and, as they take many forms and use varying channels, their measurement is challenging both conceptually and in practice. UNCTAD and UNODC, therefore, provide different methods for the measurement of different types of IFFs. The measurement challenges also differ across countries, depending on main types of IFFs affecting the country, data availability, mandates of national institutions, statistical capacity and national policy priorities. Thus, a suite of methods is suggested for selection allowing country-specific solutions and the flexible application of the most suitable methods in each country.

## 3.1 Methodological Guidelines

In May 2021, Methodological Guidelines to Measure Tax and Commercial Illicit Financial Flows (UNCTAD, 2021) were published for pilot testing. They identify a suite of methods for the measurement of the main types of tax and commercial IFFs for pilot testing. The guidelines put preference on bottom-up and direct measurement of IFFs based on using all microdata available to national authorities.

The Methodological Guidelines are aimed at statistical and other national authorities with a mandate to collect and access detailed data. 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.

Effective policies to curb IFFs require reliable and granular IFF statistics, tailored to national circumstances. Part III of the Methodological Guidelines (UNCTAD, 2021) provides concrete and operational recommendations for national statistical authorities, NSOs and other compilers of official statistics for the measurement of tax and commercial IFFs. It provides guidance on steps to take to start compiling estimates of tax and commercial IFFs.

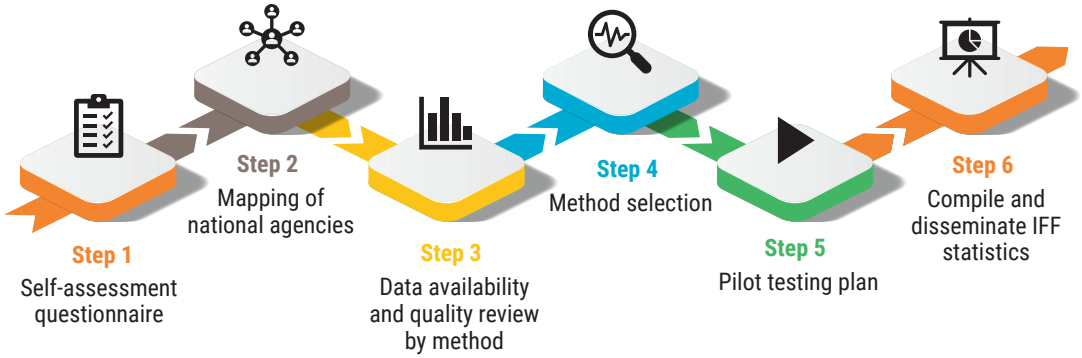
First, it suggests a consideration of national circumstances, information needs and prominent types of IFFs – a preliminary IFF risk assessment using the self-assessment questionnaire. These can also help identify relevant stakeholders, as it is important to map out the national system of relevant authorities to organize the necessary collaboration to measure IFFs. It may be also useful to identify the relevant authorities and stakeholders before conducting a preliminary IFF risk assessment to seek their input on the assessment from the outset. These steps could be reversed, intertwined, or processed in iterations.

This enables the review of data availability and selection of data sources across agencies to capture the most prominent types of tax and commercial IFFs. A tier classification of methods (see Section 2.2.4) considers national setup and capacity, existing data sources and related methods used in official statistics, legal and regulatory frameworks, and other criteria. This guides the selection of method to measure IFFs. Often an operational definition of IFFs is needed to meet the national data needs and ensure feasibility considering available data, methodology and capacity.

The definition is influenced by which methods is used (again, also the reverse holds, these processes being intertwined, running in parallel, and/or in iterations). Finally, the compilation and dissemination of IFF statistics require some consideration due to the requirements of SDG reporting. It would start with a setup of national pilot-testing or measurement plan and ultimately compile and disseminate IFF statistics. Within Methodological Guidelines, a listing of practical recommendations and tools are provided to NSOs in their work in coordinating and/or compiling tax and commercial IFFs.

Schematic guidance through the process of measuring IFFs is depicted in Figure 4. Notable is the iterative nature of the measurement exercise, relying on additional information at each step, reinforcing the reliability of the entire process of compiling IFF statistics, starting with preliminary IFF studies and gradually implementing regular production of IFF statistics. The latter envisage also an in-depth production for base year, with years in between base years covered with annual, light(er) production. Continuous improvement is key in IFFs measurement.

## Figure 4 Schematic presentation of steps to measure IFFs




*Source*: UNCTAD and United Nations Economic Commission for Africa (2023).

The UNCTAD Guidelines provide two methods for each of the three main types (see Chapter 2) of tax and commercial IFFs:

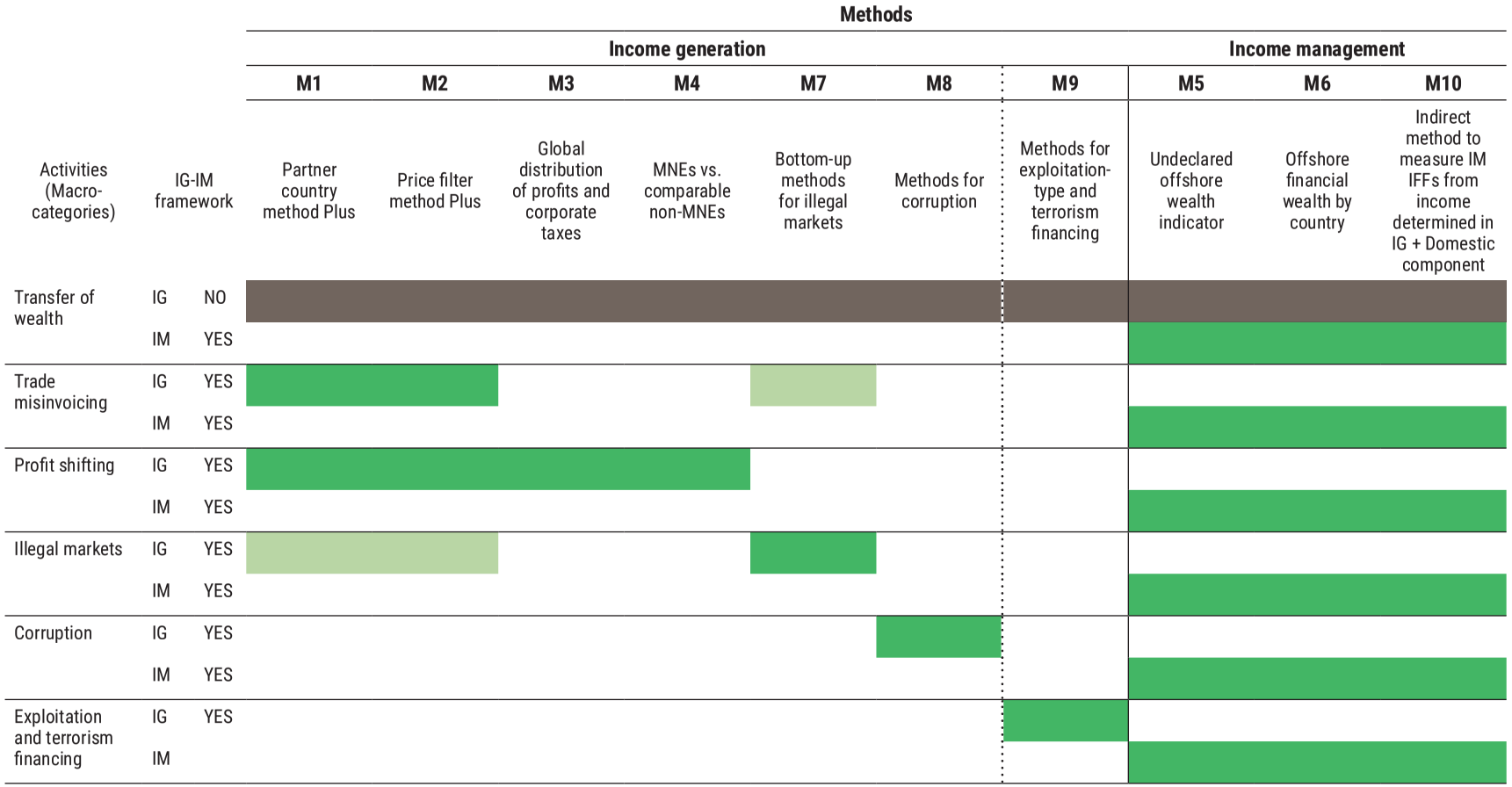
1. Trade misinvoicing by entities (covering flows within F2 in Table 2)
   a. Method #1 - Partner Country Method Plus
   b. Method #2 - Price Filter Method Plus
2. Aggressive tax avoidance or profit shifting by multinational enterprise groups (MNEs) (covering flows F3-F5)
   a. Method #3 - Global distribution of MNEs' profits and corporate taxes
   b. Method #4 - MNE vs comparable non-MNE profit shifting
3. Transfer of wealth to evade taxes by individuals (flows F1)
   a. Method #5 - Flows of undeclared offshore assets indicator
   b. Method #6 - Flows of offshore financial wealth by country

In parallel, UNODC has developed and continues to enhance methods to address IFFs from criminal activities, such as smuggling of migrants, drugs trafficking, illegal mining, wildlife trafficking, and corruption, providing guidance and expert support to national authorities undertaking measurement. Guidelines, tested for smuggling of migrants, trafficking in persons, wildlife trafficking, and drugs trafficking encompass data sources mapping, streamlining data collection processes and defining data collection strategies, conducting practical exercises and guiding institution in work on data collection.

The approach taken by UNCTAD and UNODC considers the multi-dimensional nature of IFFs, identifies the main types of IFFs to be measured and lays out a framework in line with existing statistical definitions, classifications and methodologies, in particular with the SNA and Balance of Payments (BoP). Work by custodian agencies continues to develop a comprehensive classification of IFFs and design methods to aggregate various types of IFFs into a single indicator on IFFs, towards measuring and reporting on SDG indicator 16.4.1.

Deliberations of Task Force on the Statistical Measurement on aggregation to measure IFFs as a single SDG indicator propose a matrix approach, allowing activities identified to be analysed with respect to an aggregated income generation (IG) and income management (IM) approach as well as according to methods used to measure IFFs from these activities (see Figure 5). Using such a matrix, areas of (potential) overlap between different methods and types of IFFs can be identified – in the figure, by observing which areas are covered by a specific method (marked in green; light green indicates merely partial coverage by a particular method). Further practical studies in countries will be needed to design suitable and robust aggregation methods in the future.

## Figure 5 Activity-method matrix for aggregated IG-IM representation of IFF measurement




*Source*: Deliberations by Task Force on the Statistical Measurement.

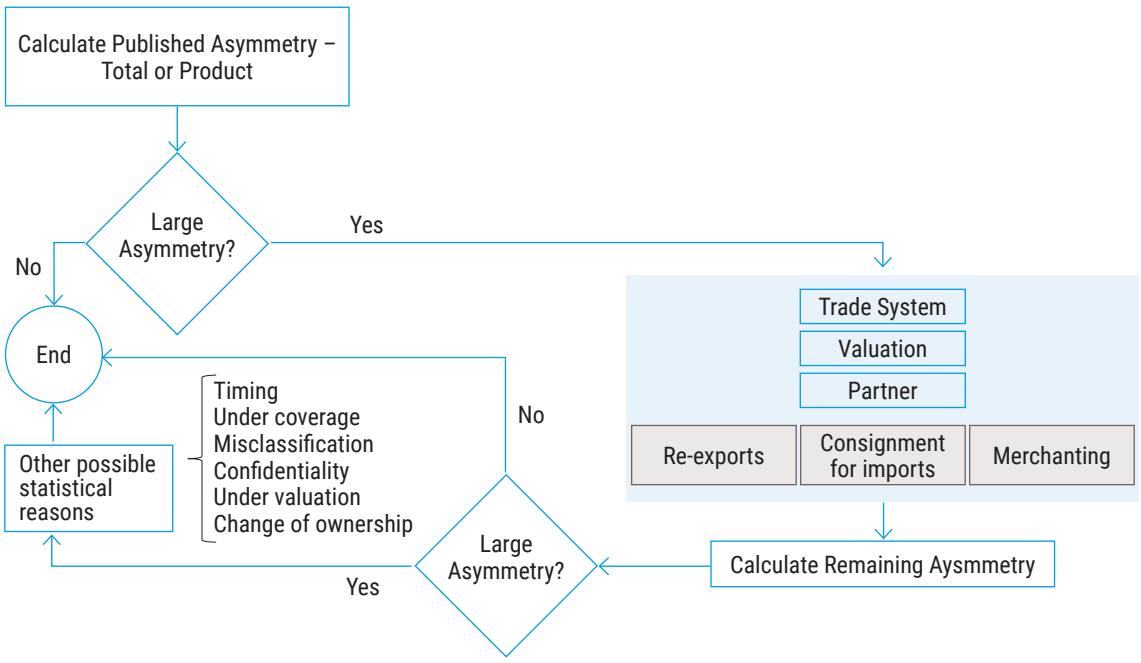
## 3.2 Methods to measure tax and commercial illicit financial flows

This section presents the proposed six methods to measure tax and commercial IFFs in the UNCTAD Methodological Guidelines (UNCTAD, 2021) that have been further used in the pilot testing.

### *3.2.1 Trade misinvoicing by entities*

**Partner Country Method Plus** (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. However, such an identified discrepancy in trade flows cannot be attributed to IFFs alone. As UNSD (2019) clearly points out, there are various reasons for such discrepancies and they need to be handled specifically to obtain the clear indication, or potential measurement of IFFs. Reasons for discrepancies are valuation of trade flows (following different valuation of exports as free on board (FOB) and imports (usually) as cost-insurance-freight (CIF) values), differences in trade systems used by partner countries, and partner country attribution, among the major ones (see Figure 6); many additional ones, including time lags in shipping or misclassification of commodities, need to be accounted for. For proper application of the method, they are to be addressed step-wise. This approach therefore requires exploiting the detailed trade flows data available within national statistical system from national and bilateral partners Customs Authorities. In many instances, in the absence of detailed partner-country data, international data sources, such as the UN Comtrade are used.

**Figure 6 Flow chart for analysing and reducing bilateral asymmetries**




*Source*: UNSD (2019).

IFFs are determined using the careful inspection of discrepancies, specifically referring to under- and over-invoicing of both exports and imports using the following formulas:

$$InwardIFFs_{c,r,p,t} = Overinvoiced\ EX_{c,r,p,t} + Underinvoiced\ IM_{c,r,p,t} \quad \text{Equation (1)}$$

$$OutwardIFFs_{c,r,p,t} = Underinvoiced\ EX_{c,r,p,t} + Overinvoiced\ IM_{c,r,p,t} \quad \text{Equation (2)}$$

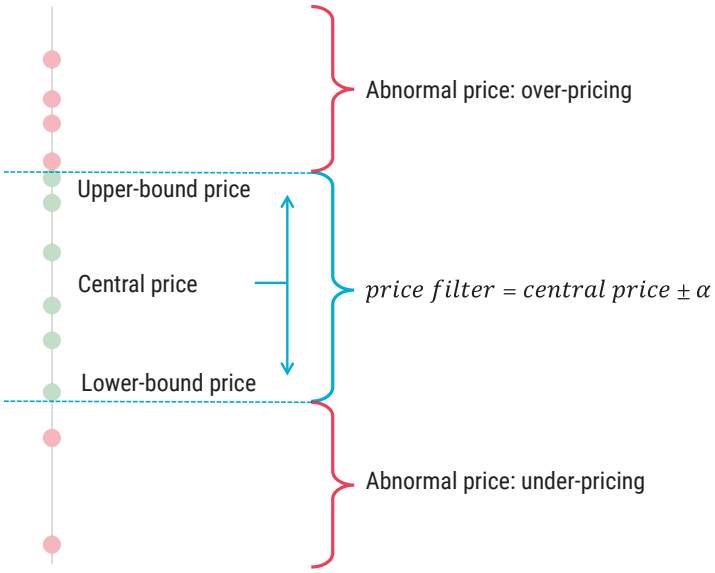
for specific commodity *c*, reported *r*, partner *p* in time *t*.

**Price Filter Method Plus** (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. As such, the price filter is a range of normal, or acceptable prices for a specific commodity (see Figure 7 where green dots refer to normal observed prices and abnormal ones are red-dotted). It refers to concepts of arms-length price or free-market price at international markets and as such, the method uses granular, transaction-level microdata and does not rely on partner's transaction data. In absence of internationally available commodity prices and/or expert knowledge, usually from customs officials, statistical price filter, relying on observed transactions unit-prices employing, for example, interquartile range, define (ab)normality of observed prices. IFFs are, similarly as in method #1 determined by the following formulas:

$$InwardIFFs_{c,r,p,t,u} = Overvalued\ amount^{EX}_{c,r,p,t,u} + Undervalued\ amount^{IM}_{c,r,p,t,u} \quad \text{Equation (3)}$$

$$OutwardIFFs_{c,r,p,t,u} = Undervalued\ amount^{EX}_{c,r,p,t,u} + Overvalued\ amount^{IM}_{c,r,p,t,u} \quad \text{Equation (4)}$$

**Figure 7 Price filter to determine abnormal prices**




*Source*: Authors' deliberations.

Steps, outlined in Methodological guidelines provide national authorities with guidance in application of the method.

### 3.2.2 *Aggressive tax avoidance or profit shifting of multinational enterprise groups*

**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. The method relies on tax semi-elasticity to, in step 1, identify the cases of profit shifting using econometric modelling (equation 5) and using the estimated parameters to determine the amount of profits being shifted in and out of the jurisdiction in step 2 (equation 6), hence determining inward and outward IFFs (equations 7 and 8):

$$log(y_{i,c,t}) = \alpha_i + \beta_1 T_{i,c,t} + \beta_2 T^2_{i,c,t} + \gamma' Firm_{i,c,t} + \delta' Country_{c,t} + \theta_t + \varepsilon_{i,c,t} \quad \text{Equation (5)}$$

where:

$y_{i,c,t}$ … sum of profits before taxes of MNE unit's i in country c

$T_{i,c,t}$ … tax variable of MNE unit's i in country c

$Firm_{i,c,t}$ … vector including variables describing unit's i activities in country c

$Country_{c,t}$ … vector including variables describing conditions in country c

$\theta_t$ … year fixed effects

… Subscript t denotes time.

$$S_{i,c,t} = \frac{y_{i,c,t} * \hat{\beta} T_{i,c,t}}{1 + \hat{\beta} T_{i,c,t}} \quad \text{Equation (6)}$$

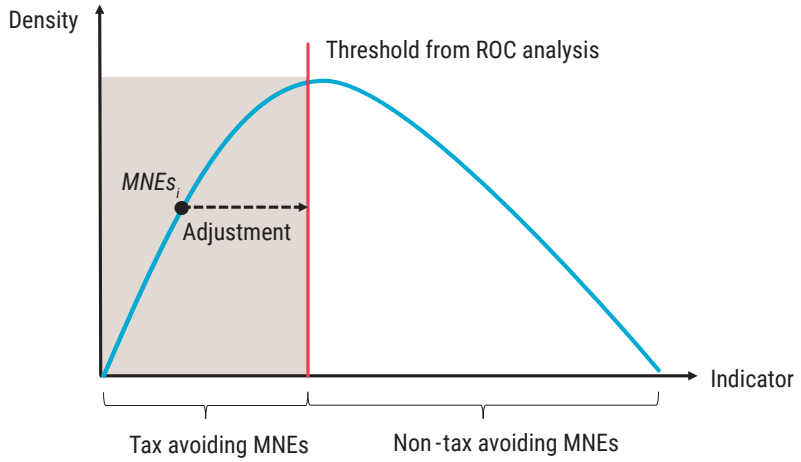
$$OutwardIFFs_{i,c,t} = \left| min\left(0, S_{i,c,t}\right) \right| \quad \text{Equation (7)}$$

$$InwardIFFs_{i,c,t} = max\left(0, S_{i,c,t}\right) \quad \text{Equation (8)}$$

This method requires unit-level microdata on units of MNEs[3] operating in a country and in other (partner) countries, comprising their profits declared, taxes paid, as well as values of employees (or salaries) and tangible assets, and other country-level data (values of gross domestic product and population size).

**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 (in the first phase of the method using propensity score matching), and then determine the amount of profit shifted as a measure of IFFs. This is determined during the second phase by the Receiver operating characteristics (ROC) by the level of adjustment needed so that a specific firm, given its values of employment, turnover, imports, exports and other related statistics, would reach the predicted profitability (see Figure 8).

## Figure 8 The correction for tax avoidance by MNEs during the application of method #4




*Source*: Sallusti (2021).

The method's concept allows the determination of only either inward or outward IFFs (based on prior determination of a country as a whole as IFFs generating or receiving) from profit shifting using the following formula:

$$OutwardIFFs_i = \left(\tilde{x}_{h,i} - x_{j,i}\right) * Turnover_i \quad \text{Equation (9)}$$

[3] As noted in Box 1, research uses various data sources, such as (Bratta et al., 2021; Fuest et al., 2021, 2022; Reynolds and Wier, 2016, 2016)

The method is based on business statistics microdata that are available to statistical authorities in many countries yet residing across various statistical domains and registers. In small economies, its implementation may pose (additional) challenges related to identifying sufficient domestic control group(s).

### 3.2.3 Transfer of wealth to evade taxes by individuals

**Flows of undeclared offshore assets indicator** (method #5) looks at undeclared offshore assets held by individuals by comparing what has been declared by citizens of a country A and what internationally reported data say about these assets held abroad by citizens of that same country A. This is best depicted in the following equation:

$$\phi_i = \sum_j \beta_{j,i} - \alpha_i \qquad \text{Equation (10)}$$

where:

$\phi_i$ … undeclared assets of citizens of country i

$\beta_{j,i}$ … the sum of assets of citizens of country i reported as being held in country j

$\alpha_i$ … the sum of assets declared by citizens of country i as being held in other countries j=1, …, n, where j≠i

Apart from severe data unavailability (data sources would include both national tax records, as well as international, through for example, OECD Common Reporting Standard (CRS)), several assumptions are required to transform stock measures into flow measures and to account for capital gains to approximate outward IFFs for a country using the equation:

$$OutwardIFFs_{i,t} = max(0, flow_{i,t}) \qquad \text{Equation (11)}$$

where:

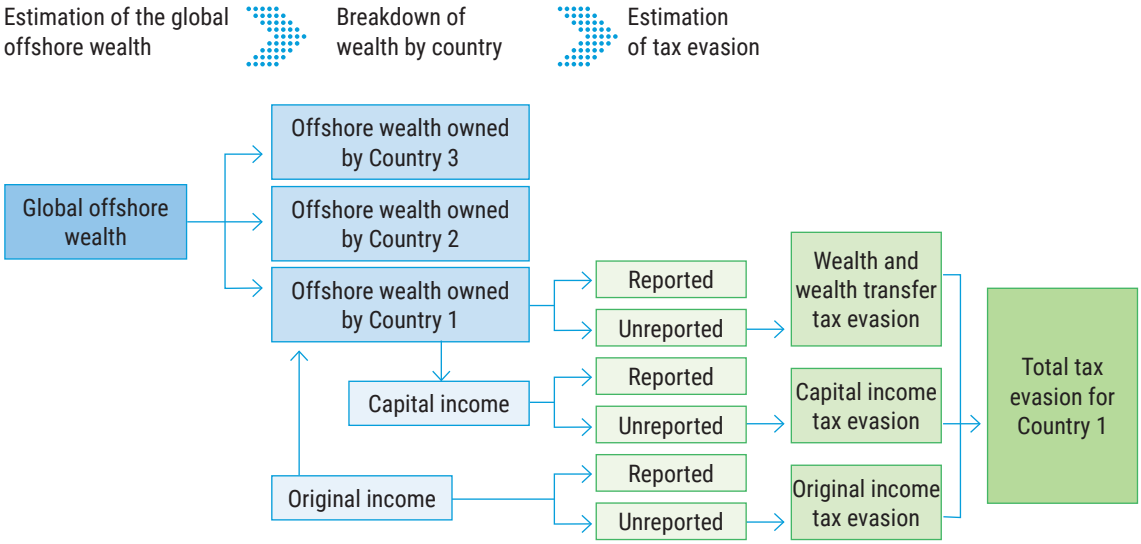
$$flow_{i,t} = \phi_{i,t} - \phi_{i,t-1}(1 + v_t)$$

$v_t$ … yearly rate of increase of assets, the MSCI world price index (MSCI, 2023).

**Flows of offshore financial wealth by country** (method #6) is a top-down method that 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. Relevant steps and equations to follow are presented in the Guidelines and omitted here as the method has not been applied in African pilot countries. Similarly to previous method, also here data (un)availability (and overall relying on internationally reported and publicly available data) is a significant challenge. Its process is depicted in Figure 9.

Source data are spread across various international databases and are found in statistics on international portfolio securities and on foreign deposits. Three global databases provide reliable first-stop global data on portfolio securities: the International Monetary Fund (IMF) Coordinated Portfolio Investment Survey (CPIS), the IMF's International Investment Position (IIP) and the External Wealth of Nations Mark II database (EWN). Each comes with their own limitations and combining them needs to be processed with care. The updated, more recent application of the method as originally proposed in (European Commission, 2019) can be found in (Maga and Marshall, Forthcoming) in the application of the method to measure these IFFs for selected countries in Asia.

## Figure 9 Three-step approach to estimating tax evasion by individuals




*Source*: European Commission (2019).

### 3.2.4 *Evaluation framework*

The above methods are tier classified, allowing countries to exercise flexibility and select a feasible method. 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. Generic results of the classification exercise of the suggested six methods are presented in Table 3 with more detailed information available in Methodological Guidelines (UNCTAD, 2021). It should be noted that the evaluation framework's resulting classification of methods is at this stage generic and different countries may evaluate methods slightly differently, especially with respect to nationally available data. It is to be used as guidance in the process of pilot testing and applying methods (as referred to in Chapter 3.1; see also Figure 4).

## Table 3 Tier classification of suggested methods

| Group | Method | Soundness | Source data | Results | Overall | Tier class |
|---|---|---|---|---|---|---|
| Trade misinvoicing by entities | #1 Partner Country Method (PCM+) | 11 | 11 | 12 | 34 | 2 |
| | #2 Price Filter Method (PFM+) | 14 | 15 | 15 | 44 | 1 |
| Aggressive tax avoidance or profit shifting by MNEs | #3 Global distribution of MNEs' profits and corporate taxes | 12 | 8 | 9 | 29 | 3 |
| | #4 MNEs vs comparable non-MNEs | 13 | 14 | 14 | 41 | 1 |
| Transfer of wealth to evade taxes by individuals | #5 Flows of undeclared offshore assets indicator | 9 | 10 | 10 | 29 | 3 |
| | #6 Flows of offshore financial wealth by country | 8 | 9 | 10 | 27 | 3 |

*Source*: UNCTAD (2021).

# 4

# PILOT TESTING AND REFINING METHODOLOGIES

## 4.1 Pilot testing methods to measure tax and commercial illicit financial flows

SDG indicators are constructed with the aim to provide monitoring of the SDGs achievement. SDG indicator 16.4.1 therefore, specifically, is set out to measure the value of IFFs (both inward and outward) to provide proper and sufficient evidence base for policy formulation. Being aligned with the idea that "[Indicators] have a specific job to do, namely to condense and communicate the informational content contained in statistics in such a way that it can be understood and used by the respective target group" (Radermacher, 2020: 93), the inward and outward IFFs are to be reported, with specific disaggregation provided, such as by types of IFFs. In this line, and given current status of methodological work on the IFF statistics, specific measurement of tax and commercial IFFs alone is aligned with requirements set above and envisaged in indicator's metadata (United Nations, 2022a).

Although SDG indicator 16.4.1 itself does (or will, eventually) require aggregation techniques in bringing estimates of different types of IFFs into a single indicator as per its definition (i.e., total inward and outward IFFs), current paper dwells on (lower-level) methodologies to measure each specific (basic) aspect, or type of IFFs (e.g., IFFs from trade misinvoicing or from drugs trafficking). Nevertheless, the logic of constructing an indicator and linking statistics for its purpose as a process inevitably closely linked to the system using this very information can be applied here as well. Radermacher (2020) argues that a co-construction is required bringing together all relevant stakeholders to pass through various phases, such as awareness raising with using, when appropriate, less precise statistics and slowly progressing through the laboratory phase. Learning process in constructing indicators (or any metric for that matters) inevitably also addresses its methodology.

Important element of development and refinement of methodological guidelines to measure IFFs, both from criminal side and tax and commercial, is therefore the pilot testing of proposed methodologies and related tools. Pilot studies focus initially on types of IFFs that are most prominent in a country and for which data are available only. Coverage of different IFFs will be improved gradually along with data improvements. A series of pilot studies have been conducted with partners, UNODC and relevant United Nations Regional Commissions, in 22 countries to date. The pilots have provided or continue to provide critical information for refining statistical methods to measure IFFs, either in terms of modifying the methodological approach (e.g., due to unreliable quantity information in trade statistics, related proposed reliability weighting procedure for Partner Country Method Plus on trade misinvoicing turned out to be unattainable in parts), or specifying national adaptations in applying methods (e.g., enhancing trade misinvoicing methods by studying so-called grey re-exports – (Maga et al., 2023)), or proposing alternative avenues (e.g., inspecting remittance flows or tax compliance (OECD, 2022)). Further refinements are expected as additional countries take on the measurement exercise of SDG indicator 16.4.1, either within the upcoming global United Nations Development Account project with United Nations Regional Commissions and custodian agencies, or other efforts.

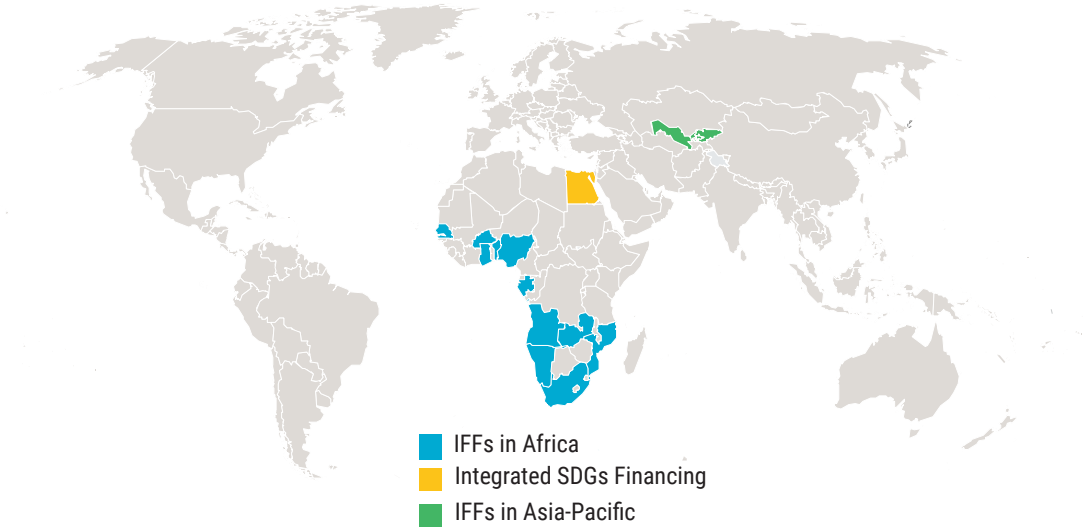
Tax and commercial IFF Methodological Guidelines have been or are being tested in 14 countries in Africa and Asia up to 2022 (see Figure 10):

1. The United Nations Development Account project on Defining, estimating and disseminating statistics on illicit financial flows in Africa, includes eleven countries[4] and co-led by UNECA;
2. The United Nations Joint Fund Support on Integrated SDGs Financing with Egypt and,
3. The United Nations development account project on "Statistics and data for measuring illicit financial flows in the Asia-Pacific region" with two countries[5] measuring tax and commercial IFFs. This project is implemented with UNESCAP and UNODC.

[4] Angola, Benin, Burkina Faso, Gabon, Ghana, Mozambique, Namibia, Nigeria, Senegal, South Africa, Zambia.

[5] Kyrgyzstan and Uzbekistan.

## Figure 10 Pioneering countries measuring tax and commercial IFFs, by project



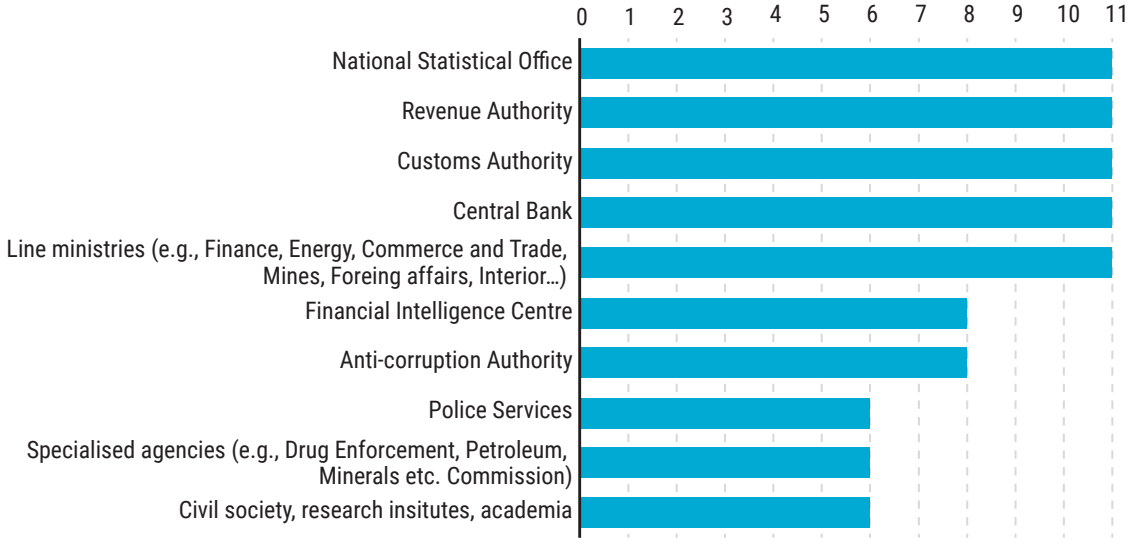

*Source*: UNCTAD (2022b).

It is worth noting that the aim of pilot testing in this phase and within the project in Africa was to test methods in different national settings with respect to data sources, data availability and overall robustness of methodologies. Such feedback enters the refinement of methodologies, but also addresses the evaluation framework and checks whether methods may require a change in their tier classification (see Chapter 3.2.4).

Due to the sheer scope of efforts required by national authorities in applying each of the methods, UNCTAD with partners invited pioneering countries to test only one or two methods to measure tax and commercial IFFs. Of the 11 countries in focus of this paper (from IFFs in Africa project), all tested Method #1 – 'Partner Country Method Plus' and 7 countries tested Method #2 – 'Price Filter Method Plus' to measure trade misinvoicing. Two countries ultimately tested Method #3 to measure aggressive tax avoidance by MNEs and one country attempted the measurement using Method #4. The selection of methods is based on data availability for national institutions and as a result, methods #5 and #6 have not been tested in the 11 countries in Africa at this stage. Alternatively, or rather, complementary to method #5, one country applied a granular-data assessment of tax compliance by individuals to measure IFFs from tax evasion.

To get measurement process of tax and commercial IFFs in a country underway, following guidance as in Chapter 3.1 (see Figure 4), a national team of experts was set up in a so-called Technical Working Group (TWG) to coordinate, guide and process the tasks at hand. Addressing tax and commercial IFFs, NSO, Tax/Revenue and Customs Authorities, as well as Central Bank and Ministry of Finance (or other line ministry) were directly engaged in all instances (see Figure 11).

## Figure 11 The number of institutions involved in measuring tax and commercial IFFs in African countries




*Source*: UNCTAD (2022b).

Members of TWG contribute to nationally owned and driven process, guided by methodological backstopping by custodian agencies on SDG indicator 16.4.1, and provide relevant expertise and knowledge, data and/or other support (e.g., technical infrastructure of a statistically safe data-sharing environment). For example, in Zambia, the TWG was led by the NSO (Zambia Statistics Agency), supported and data provided by Ministry of Finance and National Planning, Ministry of Mines and Minerals Development, Financial Intelligence Centre, Bank of Zambia and Zambia Revenue Authority – among others (Figure 12 provides further information). Organisations of TWG in other ten countries can be found in country profiles of the report on project activities in Africa (UNCTAD and United Nations Economic Commission for Africa, 2023).

## Figure 12 Organization of Technical Working Group to measure illicit financial flows in Zambia


*Source*: UNCTAD and United Nations Economic Commission for Africa (2023).

To support the process of national TWGs, UNCTAD and UNECA have conducted several training sessions, delivered to the eleven pilot countries on-line, in-person or hybrid throughout the course of the project in 2021 and 2022. In that period, 24 various workshops have been organized by UNCTAD and UNECA in/for African countries, including regional kick-off and closing event, national training workshops and a 6-day interregional training workshop, which included also participants from Asia (see Table 4). Combining all methodological trainings and excluding any potential double-counting of follow-up events, 602 different individuals were trained in Africa, of whom approximately one quarter female.

### Table 4 Workshops on measuring tax and commercial illicit financial flows in Africa, by type

| Type of workshop | Number of workshops | Total number of participants | Average share of women |
|---|---|---|---|
| Regional workshop | 3 | 482 | 21% |
| National kick-off workshop | 11 | 280 | 23% |
| National training workshop | 10 | 366 | 24% |
| Interregional training workshop | 1 | 236 | 35% |
| **Total** | **24** | **1290** | **25%** |

*Notes:* Several countries have combined the kick-off and training workshops. Number of participants therefore includes double-counting of distinct participants. Benin and Senegal have combined their training workshops. The six-day online interregional training saw an overall participation of 1185 participants, including several from Asian countries, from 146 to 236 participants per day. To avoid double counting between the days, a conservative estimate of the maximum value for one day has been used as a total number of participants while it is likely that some people participated only on some days making an actual total number larger. The share of women can be calculated for registered participants only, which amounts to 35 per cent on average per day.

*Source*: UNCTAD and UNECA.

## 4.2 Results of pilot testing and refining methodologies

While countries have been moving at different pace in the implementation of pilot studies, reflecting differing national circumstances not only in obtaining a buy-in at the leadership level of engaged national agencies and starting dates, but also differing data availability and statistical capacity, they all reached the phase to produce national action plans for regular measurement of IFFs in the future. The action plan aims to inform and engage the national authorities in tracking IFFs and support any national policy actions in that sense, as well as to inform international organizations and donors of support needed.

From the perspective of methodology pilot testing, overall, the selected methods for trade misinvoicing, i.e., methods #1 and #2, appear to be relatively straightforward to apply, although comprehensive application does require significant detailed inputs and efforts by national, and partner authorities. Provisional estimates were made in several cases by not following through all the proposed steps in the Guidelines (hence caution is required in their manipulation or use), as reported by difficulties experienced with access to granular customs data. Whereas data availability does not seem to have prevented initial application of methods to estimate IFFs from trade misinvoicing, other methods faced significantly more challenges in this domain. Where national data were available from Tax or Customs authorities on trade or MNEs operations (to a certain degree), data confidentiality even among partners within national TWG posed significant challenge in accessing the data for statistical measurement of IFFs. These concerns are vital for ensuring the technical nature of the process of compiling official IFF statistics, in turn generating trust in these and robust evidence base for policy formulation. To that end, subgroups within TWGs have been established to work on specific measurement methods, based on where the data resides, adequately addressing the confidentiality issue.

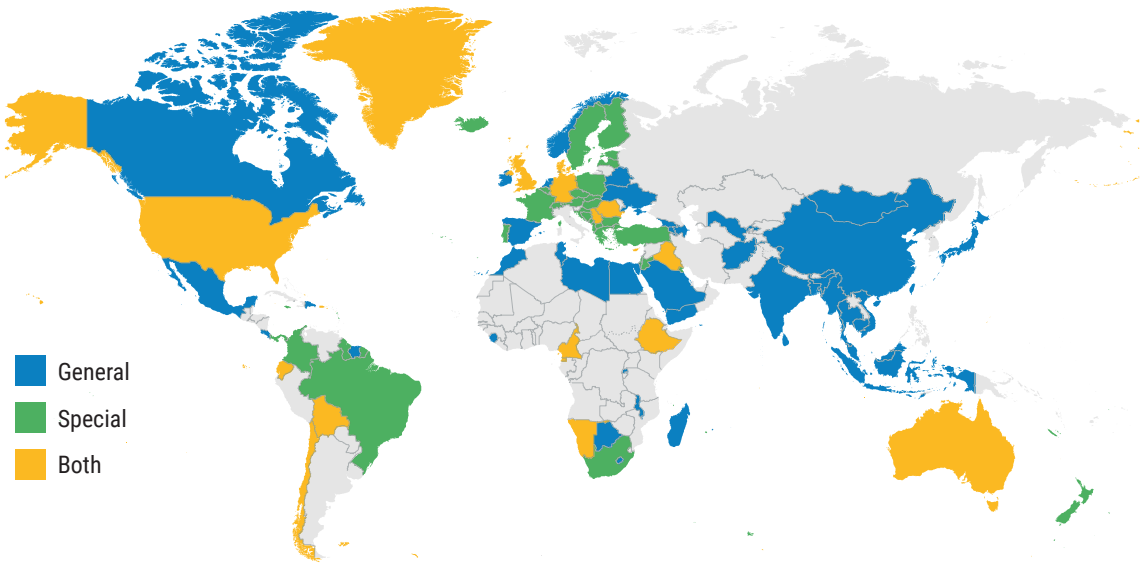
All countries tested at least one of the methodologies and six produced preliminary and provisional estimates of tax and commercial IFFs (see Chapter 4.3). Following sections review, by method, what feedback specific findings and results from applying each of those produced.

### 4.2.1 *Trade misinvoicing by entities*

**Partner Country Method Plus** was applied by TWGs in all 11 pilot countries. The efforts were mainly led by national Customs authorities which is a central agency in trade related IFFs, in terms of provision of both, data and expertise. In most countries, national data on international trade (of reporting country with partner countries) are available at least at certain level of disaggregation with respect to a national commodity classification, which provides further details and granularity beyond the globally used Harmonized Commodity Description and Coding System (HS). Even though national details are more granular than international and hence not used in the bilateral mirror trade statistics directly, they provide substantial inputs by customs experts into understanding trade flows properly to address issues, such as different trade systems used by reporting and partner countries (e.g., addressing the issue of commercial free zones), and proper partner country attribution (e.g., re-exports, country of origin and country of final (known) destination). Such inputs are crucial in proper application of method #1, as by doing so, it addresses the major critique of trade discrepancy methods for measurement of IFFs. Despite national granular data being mostly available, access to these by or within the TWGs was at times difficult (e.g., not obtaining required clearance and use of detailed data). Data confidentiality was a challenge affecting the measurement work. Therefore, in a few cases, sub-committees within TWGs were established to work on the specific measurement methods, based on where the data reside, thus potentially addressing confidentiality issue.

TWG also experienced more serious data problems when incorporating international trade partners' data. These were mostly sources from international sources, such as the UN Comtrade, which offers a very comprehensive data source. Yet, at times the available data do not suffice to provide all required specific inputs; e.g., addressing the issue of the use of trade system by countries, the 2016 survey data by UN Comtrade (UNSD, 2022) provides only limited input: only 101 countries provided responses and only 66 use either general or both, general and special trade systems – see Figure 13. It is easily observed that most African countries, important for many others as their trading partners in this exercise, do not have this information reported, rendering the application of the method significantly more challenging. Moreover, data and statistics exchange within and across countries is mostly non-existent, something that may have alleviated most of the concerns in applying the method; rather, it further disrupts many processes of identifying and measuring IFFs in African pilot countries.

**Figure 13 Trade systems used by countries**




The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

*Source*: Authors' deliberations based on responses from UN Comtrade survey in 2016.

As such, some of the results of estimations of IFFs using method #1 proved to be highly provisional, in several instances they remained at descriptive levels only – meaning that could indicate some areas (commodities, flows, and/or partners) with more difficulties in bilateral trade statistics and hence preliminary identify trade-misinvoicing risks. As a result, method #1 is seen more as a risk indication method, whereas, in the absence of detailed application, not a reliable measurement method. Moreover, it was a common understanding that methods #1 and #2 should be used as complementary methods, where method #2 would serve as a measurement for specific identified commodity by method #1. This is aligned also with tier classification of methods (see Table 3).

From a more technical perspective, addressing the issue of valuation proved to be a challenge. This considers that exports and import are differently valued, the former usually only on FOB whereas the latter usually only on Cost, CIF valuations. The CIF/FOB margin therefore needs to be accounted for. While certain research apply an average value across the commodities and partners, such as 6 per cent CIF/FOB margin (e.g., (Global Financial Integrity, 2019)), it is better to apply country-specific ratios (e.g., (Hammer et al., 2013)) or even commodity-specific ratios, (e.g., (Gaullier et al., 2008)). Specifically for African trade, (Schuster and Davis, 2020) produce estimates of CIF/FOB ratios by commodity groups as presented in Figure 14. Applying these and/or using international data sources, such as the OECD International Transport and Insurance Costs of Merchandise Trade or UNCTAD Transport Cost Database would be required to ensure more reliable estimates produced by the method.

Because in several instances, trade data referring to physical quantities proved to be of poor quality, either missing or confirmed by customs experts containing significant errors, the use of trade statistics is advised to pertain mostly to values. This, however, questions the reachability of applying the reliability weighting procedure as envisaged by method #1 in the Guidelines (UNCTAD, 2021: 50): "to mitigate risk of unproportionally privileging large trade gaps, which have higher potential of not indicating mispricing." The weights are to be applied to records of flows from reporter's side using the weights:

$$w = 1 - \frac{|q_{IM,c,r,p,t} - q_{EX,c,r,p,t}|}{\max(q_{IM,c,r,p,t}, q_{EX,c,r,p,t})} \qquad \text{Equation (12)}$$

None of the pilot countries were able to apply the weighting procedure and it is advised for UNCTAD to reconsider its inclusion in the refined methodological guidelines.

**Price Filter Method Plus** was applied in seven pilot countries with four having produced estimates and were able to share results internally. While the method is straightforward to apply on national transaction-level trade data, these are sometimes incomplete, especially considering the quantities of transacted goods, making the calculation of unit price (from values) not achievable – and as such, not suitable for the method to be applied. Moreover, national data are usually available at a more disaggregated level than international trade data and this should be exploited to the fullest. Specifically, not only most granular commodity codes should be used to address heterogeneity of products within each, but they need to be supplemented by product descriptions from transactions (invoices), which requires both access to confidential data in a statistically safe environment, and expertise of customs officials to distinguish heterogeneous products within the same commodity code.

This directly relates to the decisions to apply a specific price filter, i.e., both central price and a range of variation around it, or upper- and lower-bound prices requires strong customs expertise inputs. In absence of information on international reference market for specific commodities, national customs experts are required to study existing national transactions and unit prices therein to produce a reliable and reasonable price filter for each specific (and homogeneous) commodity to which the method is applied. This brings in significant influence from outside the statistical domain, but these inputs are crucial for reliability of the estimates of mispricing. Any and all methodological decisions made need to be dully reported in metadata accompanying the estimates.

Deliberations are to be made on ways the variations in price filters are to be applied, especially in using statistical price filters. Specifically, the use of inter-quartile range to determine the price filter, or simply a central price with a variation of standard deviation(s), needs to consider whether a common price filter could or should be applied to a specific section of the studied time period, say a week or a month, or to entire, usually a year or

several-years period. Again, there is no one-solution-fits-all and careful inspection of the series, international markets (observing major shocks which could render price filters inaccurate) and national circumstances (implementing certain regulations to affect the internationally traded-goods prices) are to bring customs experts and statisticians to work in tight collaboration within (sub-committees of) TWGs.

**Figure 14 Summary of cost, insurance, freight (CIF) by commodity group; extra- and intra-African trade**

| | Extracontinental | | | | Intra-African | | | |
|---|---|---|---|---|---|---|---|---|
| Commodity group | Mean CIF (%) | Standard deviation | Number of observations matched | Total number of observations | Mean CIF (%) | Standard deviation | Number of observations matched | Total number of observations |
| Gold | 2.4 | 0.020 | 1421 | 2254 | 3.0 | 0.020 | 44 | 192 |
| Platinum | 2.6 | 0.016 | 348 | 572 | 2.3 | 0.021 | 87 | 155 |
| Diamonds | 2.4 | 0.019 | 1351 | 2803 | 2.8 | 0.023 | 145 | 328 |
| Copper | 5.2 | 0.021 | 8899 | 14351 | 5.7 | 0.026 | 4639 | 6403 |
| Iron group | 8.6 | 0.029 | 11155 | 18023 | 8.9 | 0.030 | 8352 | 10818 |
| Aluminium | 6.0 | 0.026 | 9756 | 14991 | 6.7 | 0.027 | 6711 | 8720 |
| Petroleum | 6.5 | 0.028 | 7084 | 13073 | 8.2 | 0.030 | 5416 | 7084 |
| Manganese | 10.7 | 0.043 | 1798 | 2805 | 10.8 | 0.034 | 428 | 660 |
| Silver | 3.6 | 0.021 | 448 | 810 | 4.1 | 0.024 | 181 | 255 |
| Precious metal ores | 6.1 | 0.025 | 283 | 720 | 6.3 | 0.024 | 139 | 224 |
| Uranium | 6.2 | 0.024 | 947 | 1536 | 7.3 | 0.027 | 416 | 642 |
| Cobalt | 3.5 | 0.016 | 1313 | 1986 | 3.0 | 0.023 | 298 | 449 |
| Titanium | 7.2 | 0.035 | 1275 | 1950 | 6.9 | 0.029 | 699 | 934 |
| Chromium | 10.9 | 0.051 | 1207 | 1827 | 9.1 | 0.046 | 448 | 555 |
| Molybdenum | 3.1 | 0.019 | 182 | 277 | 3.1 | 0.022 | 128 | 213 |
| Rare-earth metals | 5.4 | 0.030 | 454 | 962 | 6.0 | 0.029 | 759 | 1017 |
| Conflict minerals | 5.7 | 0.041 | 1231 | 2141 | 5.8 | 0.034 | 1014 | 1913 |
| **Total** | **6.4** | **0.035** | **56354** | **88285** | **7.0** | **0.034** | **37855** | **48513** |

*Source*: Schuster and Davis (2020).

As mentioned in previous section, the application of method #2 is seen as a complementarity to method #1, whereby resource-intensive application of the Price Filter Method Plus should focus on selected commodities alone. By doing so, existing and limited resources are put to a more effective use and producing more relevant estimates of IFFs in a country. Custodian and partner agencies are further exploring means of designing and constructing a module for customs management systems (such as the UNCTAD ASYCUDA, used by over 100 countries globally) to support measurement efforts and eventually real-time observation of mispricing occurrences in a country.

### *4.2.2 Aggressive tax avoidance or profit shifting of multinational enterprise groups*

**Global distribution of MNEs' profits and corporate taxes** is a method that was originally planned to be implemented in three pilot countries, but due to data limitations, only two of these countries have attempted its application. In one, descriptive results were obtained, meaning no final measure of amount of resulting IFFs has been provided. In the other, the method produces statistically insignificant results in its first step (see

equation 5) and therefore produced no final results. Nevertheless, important insights into the methodology and its application in various national settings have been obtained.

First, business registers and detailed enterprise statistics are scarcely available for MNEs' units operating in countries; moreover, linking various national registers and statistical databases is hindered in several cases due to poor statistical and technical infrastructure. However, where these were in place, Tax authority seems to be the lead entity in possession of relevant data. In both cases, they were drawn from transfer pricing disclosure form (or related) database. Significant challenge seems to be digitalization of (historical) records, making them suitable for the application in the method.

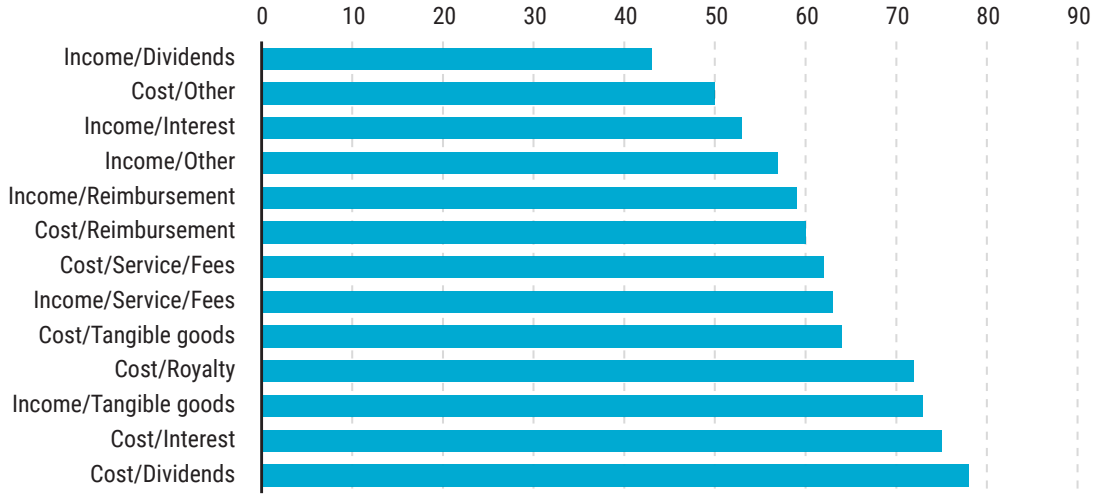
Additionally, many of the pilot countries, and once can argue many of the developing countries, too, suffer from lack of data on units of MNEs in different countries/jurisdictions. Data and statistics exchange is crucial in addressing IFFs in general, as these flows cross borders and verification or cross-checking national with partner-country data and statistics is key to understanding where IFFs (potentially) occur. And such exchange to obtain the full picture of MNEs operations across countries is even more so critical in applying methods on aggressive tax avoidance by MNEs. Not only data exchange, but also data access requires safe statistical environments to ensure confidentiality is safeguarded and trust in official statistics retained.

Thirdly, even though both applications of the method were based on samples only, estimation of regression opened up significant methodological concerns. One of these is the presence of negative profits, i.e., reported losses rather than profits. The model specification proposed in method #3 excludes cases where no profits (i.e., losses or value zero) are reported, even though from contextual point of view, these observations are of great importance to studying and analysing MNEs aggressive tax avoidance. Similarly, negative taxes, i.e., in effect support or subsidies in the form of tax relief, have been observed and also need to be properly addressed. Deliberations are being made by UNCTAD and experts on rescaling the values of these variables to consider the entire range, or adjust econometric approach to account for truncation of values, or ensure these cases are studied separately and in close collaboration with tax and MNEs experts in a country.

Moreover, different scenarios in model specification are being tested to fit the overall concept of the method to the national circumstances, e.g., linear or quadratic model specification, also addressing variations and options of treatment of negative profits and/or taxes as mentioned above. The work is ongoing by UNCTAD to provide further refinements of the method.

Furthermore, as mentioned, only sample data have been used, which could contribute to the results of the first step to produce statistically insignificant tax semi-elasticities. It is worth noting, that both applications of the method used different observation units: while one followed the approach by Reynolds and Wier (2016) and relied on MNEs units in the country and selecting their parent unit in other, less-taxed jurisdictions (resulting in 94 units observed in a specific year, within an overall 2017-2020 period covered), the other applied the method on transaction-level (rather than firm-level) microdata (having overall 63 units (companies) observed with overall 526 transaction-level observations), which adds complexity but also provides means for further enhancement of the method. In the latter application, 13 channels have been inspected (and in Figure 15 cross-referenced to vulnerability scores assigned during the exploratory and contextual analysis in the pilot testing phase). In either way, expanding the coverage, i.e., increasing sample size and studying additional years may increase robustness of estimation process (although alone not necessarily increasing the applicability of the method in light of above points).

Figure 15 Channels of suspected profit shifting by MNEs against vulnerability score in a pilot study in selected African country




*Source*: UNCTAD and ECA.

**MNE vs comparable non-MNE profit shifting** was applied in one pilot country, whereas data unavailability and/or time limitations of the project duration prevented others to address this method at this stage. Apart from data availability issues mentioned already in method #3 (scarcely available data on MNEs, limited infrastructure to link various data sources within the national statistical system, and also at international level), one specific methodological challenge has been encountered while applying the method in a pilot country. Namely, the method #4 requires comparison of MNEs to domestic units and in this particular case, the focus was on mining sector in a country, where it is entirely run by MNEs – meaning no domestic control group could be established. In deliberations with national TWG, national consultant, UNCTAD and method expert, it was advised to address this by enabling comparison to the average of the entire economy instead. Such a solution does not prove to be critical, as comparison is only conducted in the first, identification phase of the method, whereas subsequent phase and steps measure the IFFs independently.

The specific testing of the method pooled three databases to construct the dataset for the method, namely

- one from the NSO with financial statements of MNEs at the level of a company;
- the other from Tax authority from price transfer database at the level of transaction; and
- a tax declaration of MNEs at company level database with Tax authority.

Out of over 17,000 units, more than 200 (about 1.2 per cent) were identified as MNEs. There were some additional inherent problems of the MNEs studied, namely that many of these did not perceive to be engaged in international trade. In the final allocation of MNEs to suspect of profit shifting, only about a half of MNEs were identified as such. The model further faces issues with nonconvergence and hence results were only discussed at a descriptive level and without actual estimation of the IFFs. Work within TWG is ongoing.

### *4.2.3 Transfer of wealth to evade taxes by individuals*

**Flows of undeclared offshore assets indicator** as the first of the methods to address tax evasion by individuals and related IFFs, has not been directly applied in any of the pilot countries. Even though the concept bears straightforwardness, data availability does not follow suit, rendering method hard to apply in (current) practice. This stems in many parts from the fact that in many countries, there is no wealth tax imposed (rather, income taxes) which could require mandatory declaration of assets (held abroad). Members of the Task Force on IFF measurement provisionally tested the method in the case of Finland and explored data sources of

international reporting using Bank of International Settlements (BIS) locational banking statistics and consider also OECD CRS for national reporting. Results revealed inconsistency in sources as per concepts of the method, specifically that value of assets reported in CRS (to present nationally (under)reported assets held abroad) were about ten times higher than BIS statistics (to presumably report international side of the nationally owned assets abroad). This alone renders the method not applicable, while noting that data sources need to be further inspected in detail to see which assets (types and ownership) should be included in the estimation. There were also other issues with data sources, such as the unexpected and unexplained high values in BIS statistics for specific time period; and questions have been raised on validity of assumptions and proxies used for capturing capital gains (i.e., the method assumes stock-market prices to lead the capital gains via MSCI, whereas based on CRS data (as per deliberations within the Task Force), capital gains represented half of the gains and interest income merely a percent – making this a strong assumption in the method), as well as potential influence to be considered with respect to exchange rates fluctuations.

To inspect tax evasion by assessing tax compliance and IFFs in South Africa, the National Treasury of South Africa jointly with OECD conducted the research analysing taxpayer data from income tax return, Voluntary Disclosure Programmes (VDP), and data exchanged under the CRS (OECD, 2022). The work was conducted on granular microdata and provided insights into data availability and constructing a model, which is still heavily based on making assumptions (e.g., 60-80 per cent of non-compliance on offshore assets, assumptions on the duration of outflows and average rate of returns). The results (preliminary estimates in Chapter 4.3) represent an important achievement in studying the IFFs related to tax evasion from methodological point of view, and supports efforts by UNCTAD to refine methodology to measure tax evasion by individuals, contemplating the approach as complementary to method #5, and inspect alternative approaches, such as gravity models where and as appropriate.

**Flows of offshore financial wealth by country** method has not been applied in African countries and no feedback can be observed here – apart from specific and strong data requirements that rendered this method not applicable in countries after initial data availability review. Recent work in and with Asian countries (Maga and Marshall, Forthcoming) may reveal further inputs to guide refinement of the method for future work on measuring IFFs from this flow.

## 4.3 Preliminary estimates of tax and commercial illicit financial flows

Estimates from pilot testing the methods to measure tax and commercial IFFs by countries in Africa remain at this stage both highly provisional and confidential. Nevertheless, these estimates, not deemed as official reporting on SDG indicator 16.4.1, have been to a certain degree provided by the national TWGs from several pilot countries with the intent to share experience, receive feedback, guide further work on the measurement and ultimately enhance statistical measurement of IFFs. Any reference to exact numbers should therefore be made with this disclaimer and understood merely as an exercise of applying methodological procedures to available data.

In that spirit, the following table reveals pilot testing efforts by African countries. It is noteworthy that methods to estimate IFFs from trade misinvoicing (methods #1 and #2) are perceived as easier to apply yet producing more reliable (numerical) estimates is proven hard to achieve. This is true in almost half of the countries applying method #1, whereas to a somewhat lesser degree in method #2. Consistent with observations made in the previous chapter on the use of method #1 as a (preliminary) risk analysis tool, it should also be observed that method #2 has specifically been applied to a very limited number of commodities identified previously (with method #1 or otherwise) as most (or more) prone to IFFs. Hence, any direct comparison of estimates at this stage is highly advised against as it would produce wrong impressions and conclusions.

## Table 5 Producing estimates from attempt to apply the methods in African pilot countries

| Method | Number of countries applied it | Estimates produced – descriptive | Estimates produced – numeric |
|---|---|---|---|
| #1: Partner Country Method Plus | 11 | 5 | 6 |
| #2: Price Filter Method Plus | 7 | 2 | 4 |
| #3: Global distribution of MNEs' profits and corporate taxes | 2 | 1 | 0 |
| #4: MNE vs comparable non-MNE profit shifting | 1 | 1 | 0 |
| #5: Flows of undeclared offshore assets indicator* | 1 | 0 | 1 |
| #6: Flows of offshore financial wealth by country | 0 | 0 | 0 |

* Used alternative/complementary method.

*Source*: Authors' deliberations on UNCTAD, UNECA and national TWGs material from pilot testing.

Furthermore, nationally produced preliminary estimates at this early stage of compiling IFF statistics consider national circumstances by focusing the efforts on commodities or activities most prone to generate IFFs in a country. Therefore, their coverage or scope would differ among countries, rendering their potential international comparison a flawed effort. Additionally, depending on data availability, data coverage varies sometimes significantly across countries, where in some cases more recent years have been covered in the estimation process, e.g., 2017 or 2020, while in others it was either an earlier period, sometimes even a cumulative of 10 or even more years, e.g., 2010-2021 for a specific case of reported preliminary estimates.

On the other hand, producing a longer time series at national level does offer internal and intertemporal comparison opportunities for national analysis and discussion on policy formulation.

Nevertheless, some pilot countries have shared preliminary and aggregated estimates of certain tax and commercial IFFs in a report by UNCTAD and UNECA on the project (UNCTAD and United Nations Economic Commission for Africa, 2023). Numbers from the report (see Figure 16) clearly point to a significant variation in their values, itself a result also of discrepancy in coverage, both of commodities/activities and time period, and methodology applied.

In a similar fashion, estimates from a parallel project with UNODC and UNESCAP in Asian countries produces estimates of tax and commercial IFFs that will require specific attention and caution in their use and comparison (UNODC et al., 2023).

As seen from Table 5 and explained in the previous Chapter 4.2, methods on aggressive tax avoidance by MNEs did not produce reliable and quantifiable estimates of related IFFs., Likewise, methods addressing tax evasion by individuals (methods #5 and #6) were not attempted in pilot testing and hence produced no estimates. However, as mentioned above, one pilot country did apply an alternative or complimentary method to address tax compliance and its relation to tax evasion-related IFFs, supported by OECD (OECD, 2022). According to the report, in the last decade, between US$ 3.5 and 5 billion have left South Africa annually. While significant, this value is much lower than other estimates, including the one from Figure 16 on IFFs from trade misinvoicing. Which may be anticipated in this case, as the types of flows are different (e.g., F1 compared to F2 using the notions from Figure 3) and thus the comparison may not be fully meaningful. This emphasises the need of caution when comparing different estimates, as scope and/or coverage may vary. Moreover, this prompts the issue of reasonable comparison of different IFF estimates as reported for the SDG indicator 16.4.1 to be properly addressed, once reporting on the indicator commences.

## Figure 16 Results of 2021-2022 pilot testing of methods in Africa

**Burkina Faso**

Type of IFFs: trade misinvoicing

Methods: PCM+

Period: 2011-2020

Total IFFs: inward and outward US$ 6.8 billion

Additional information: presence of trade misinvoicing in different sectors, such as beverages, petroleum and ore

**Ghana**

Type of IFFs: trade misinvoicing

Methods: PCM+ and PFM+

Period: 2000-2012

Total IFFs: inward and outward US$ 8.4 billion

Additional information: trade with United Stated of America and the European Union

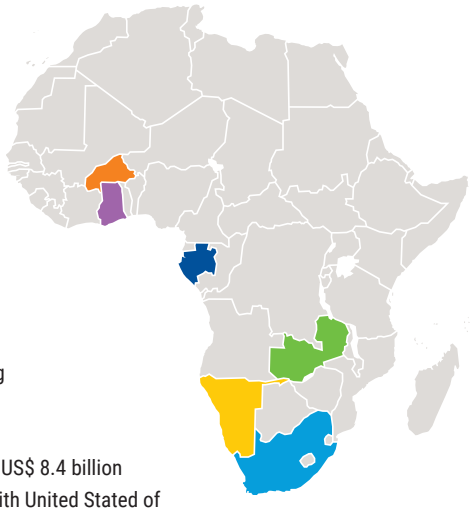
**Gabon**

Type of IFFs: trade misinvoicing

Methods: PCM+ and PFM+

Period: 2010-2021

Total IFFs: inward and outward US$ 65 billion



**Namibia**

Type of IFFs: trade misinvoicing

Methods: PFM+

Period: 2018-2020

Total IFFs: inward IFFs US$ 19.6 billion, outward IFFs US$ 4.7 billion

**Zambia**

Type of IFFs: trade misinvoicing

Methods: PCM+

Period: 2012-2020

Total IFFs: inward and outward US$ 44.9 billion

Additional information: preliminary findings based on seven major trading partners

**South Africa**

Type of IFFs: trade misinvoicing

Methods: PCM+

Period: 2017

Total IFFs: inward IFFs US$ 21.9 billion, outward IFFs US$ 40.4 billion

Additional information: prevalence in precious metals and stones, and electrical machinery and equipment

*Note*: This map shows the results of 2021-2022 pilot testing, with countries using different methods and covering different types of IFFs, commodities and activities. Therefore, direct comparison between countries' preliminary estimates is not possible. Moreover, these preliminary estimates still need to be finetuned by national TWGs in pioneering countries.

*Source*: UNCTAD and United Nations Economic Commission for Africa (2023).

Currently, no data on SDG indicator 16.4.1 on tax and commercial IFFs are reported in the SDG Global Database. To facilitate future reporting and ensure meaningful comparison of reported data on SDG indicator 16.4.1, custodian agencies work with IAEG-SDGs to provide a data structure for reporting consistent with the indicator's metadata and identified reporting features to feed analysis and policy requirements. Therefore, the SDG indicator 16.4.1 should be reported at the high level as, separately, inward and outward IFFs, and then broken down by four types of IFFs as per Conceptual Framework (see Chapter 2.1). Furthermore, depending on data availability, each of these should be further disaggregated to reflect specific subtype, as presented in Table 6. This will allow for appropriate comparison of various estimates produced by national authorities and hence proper use of official statistics on IFFs. Additional information on further disaggregation, where available (e.g., on specific economic activity or commodities included, or countries of origin/destination) should be provided in data-series or data-point footnotes as appropriate. First official (preliminary) estimates of tax and commercial IFFs to be reported to the SDG Global Database are anticipated towards the end of 2023.

## Table 6 SDMX codes and descriptions for disaggregated reporting on SDG indicator 16.4.1

| SDMX Code | Description |
|---|---|
| IFF_TXC | Tax and commercial IFFs |
| IFF_TXC_TMI | Trade misinvoicing |
| IFF_TXC_TEV | Tax evasion |
| IFF_TXC_ATA | Aggressive tax avoidance |
| | |
| IFF_ILM | Illegal markets |
| IFF_ILM_DRG | Drug trafficking |
| IFF_ILM_SOM | Smuggling of migrants |
| IFF_ILM_WLD | Wildlife trafficking |
| IFF_ILM_FIR | Firearms trafficking |
| IFF_ILM_IMN | Illegal mining |
| IFF_ILM_OTHR | Other |
| | |
| IFF_COR | Corruption |
| IFF_COR_BRB | Bribery |
| IFF_COR_TIN | Trading in influence |
| IFF_COR_OTHR | Other |
| | |
| IFF_ETF | Exploitation-type and terrorism financing |
| IFF_ETF_TIP | Trafficking in persons |
| IFF_ETF_EXT | Extortion |
| IFF_ETF_THE | Theft |
| IFF_ETF_FRA | Fraud |
| IFF_ETF_OTHR | Other |

*Source*: UNCTAD, UNODC; IAEG-SDGs.

## 4.4 Lessons learned and conclusions drawn from pilot testing

Preliminary results of pilot testing activities confirm the feasibility of the task, yet challenges in coordinating access and use of data, the collaboration between several entities, and the estimation exercise concerning methodologies and their application remain. Early feedback shows that support by national consultants, training provided by international organizations and integration of national institutions into the TWG, are crucial for compiling statistics on IFFs.

Some countries expressed that the piloting timelines were very limited, coupled with competing demands which impacted on the production, approval/validation and publication of the results.

The measurement work needs to be formalised and endorsed at the political level, with officials making this part of their day-to-day activities. Incorporation into the daily activities renders this work sustainable. Nevertheless, the outcome from countries estimations is a milestone and an initial important step towards further efforts to validate, refine and publish results and report toward the 2030 Development agenda.

Nonetheless, the following can be observed based on the work and preliminary results from the eleven pilot countries:

1. Most countries seem to have identified extractive industries (e.g., mining of gold, diamonds, or copper; fishery; oil industry) as the activities most prone to tax and commercial IFFs, both trade misinvoicing and MNEs profit shifting. Compilation by economic sectors, activities or commodities may be a relevant disaggregation step forward, which is envisaged also in the SDG indicator 16.4.1 metadata. Properly noting relevant limitations in the scope of estimates is key to ensuring relevance and reliability of official statistics on IFFs.
2. Moreover, in several countries specific economic and market conditions also limit the application of certain methods, e.g., specific prominent sectors (e.g., mining) being fully dominated by MNEs, whereby no domestic units could be identified to use a control group.
3. Although extractive industries seem to be mainly targeted and hardest hit by IFF outflows, other areas of tax and commercial IFFs have also been identified (e.g., other machinery). Highest values reported amount of IFFs up to more than 60% of total trade, in some cases even up to nearly a fifth of national gross domestic product (GDP) , although the estimates are still in a very preliminary phase and require further verification.
4. This has also been outlined by pilot countries to ensure iterations in estimation processes and make small refinements to the measurement of IFFs (within the guidelines), creating learning Communities of Practice that contribute to the adaption of the methodological guidelines.
5. Sharing of information between authorities within countries (inter-country) is critical and was flagged as an important lesson. Equally, sharing information among countries (extra-country) is critical to understand the risks, trade data disparities which are important to inform institutional interventions for curbing IFFs. This includes sharing information with pilot countries through a Community of Practice at the bi-lateral, regional and global level.
6. A Community of Practice on IFFs was recommended among pilot countries as a platform for countries to be able to learn from each other, share information and best practices on curtailing IFFs regarding particular sectors and countries, or on data issues and the various methods, etc. Also, a few countries developed Sub-Committees to address the various measurement methods or focus on particular sectors, statistical or economic matters. Sub-Committees represent a useful lesson that can be used to focus on specific measurement methods, addressing data confidentiality issues, or specific projects or content etc.
7. Moreover, resources need to be allocated to ensure that these TWGs on the measurement are made permanent. There is a need for continued capacity strengthening and support through the technical expertise from UNECA, UNCTAD and UNODC (and other partners). This affects the sustainability of the work going forward.

# 5

# FURTHER WORK ON MEASUREMENT OF 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 statistical capacity to measure IFFs and testing the feasibility of measurement. Experience gained during the country pilots show the way forward on tackling the measurement of IFFs.

There is a need for continued capacity strengthening and support through the technical expertise from custodian agencies UNCTAD and UNODC, and partners including United Nations Regional Commissions and their experts. In its latest resolution adopted in December 2022, the United Nations General Assembly (United Nations, 2022b) "Invites all institutions involved in measuring and reporting on illicit financial flows to use the statistical concepts and methods to estimate illicit financial flows, and encourages all Member States to report on Sustainable Development Goal indicator 16.4.1, using the methodology adopted by the Statistical Commission, and calls upon the United Nations system entities, international organizations and donors to work in coordination with the custodian agencies to train national statistical offices and other entities in charge of reporting on illicit financial flows on these agreed methods".

The need for continued support by custodian agencies and partners is fully user-driven, as revealed in numerous official requests by countries to support national efforts to statistically measure IFFs: nine countries from Africa, Asia and Latin America have requested UNCTAD, UNODC and United Nations Regional Commissions for technical cooperation since June 2022.

Further technical support is required in terms of training for the responsible authorities to strengthen their capacities, in order to measure and monitor IFFs, and training a panel of national experts on different methods of assessing IFFs to ensure sustainable production of annual monitoring reports for SDG indicator 16.4.1. Financial support to enhance infrastructure, e.g., acquire computerized hardware and software equipment to improve the performance of data systems, and continued capacity strengthening for long-term assistance in statistical training of national experts is also needed. Further steps need to strengthen focus on technical and financial support in dissemination of official statistics on IFFs, securing access to and sharing of sensitive statistical data in safe statistical environments to safeguard confidentiality and retaining trust in official statistics, sensitization and awareness raising at high-level government forums and other stakeholders.

The measurement work itself needs to be formalized and endorsed at the political level, incorporating the work into daily activities of government officials and experts, rendering this work sustainable. Moreover, resources need to be allocated to ensure that TWGs' work on measurement is made permanent. Iterations and constant improvement in measuring IFFs are crucial for enhancing robustness of methods, data sources and results.

Measuring IFFs is not merely a task with the purpose of producing IFF estimates and reporting to the SDG indicators monitoring framework. Rather, measurement of IFFs is the first step in identifying threats and risks from IFFs, and serves as evidence base for further policy formulation. This work needs to continue and expand, with further steps covering also conducting a country risk profile on the IFFs, which will inform the policy processes to curb IFFs. Such work envisages partnering with other stakeholders in the policy analysis and formulation domains, nationally, regionally and internationally.

The early pilots developed tools and approaches and tested first methods to measure IFFs. Efforts in Africa are being replicated in selected Asian countries and coupled with already existing experience from Latin American countries, significant feedback is being collected by custodian agencies on SDG indicator 16.4.1 concepts and measurement. As a result, refined tools and methods can be made available for all interested countries to use globally. In order to raise awareness, UNCTAD has published its annual SDG Pulse (UNCTAD, 2022a) reviewing the work completed up to now on the statistical measurement of IFFs and its pilot testing, as well as launched its first UNCTAD In Action (UNCTAD, 2022b) piece on IFFs. The latter shows measurable results of the implementation of projects on the measurement of IFFs, expanding beyond the project in Africa.

In addition, a global United Nations Development Account capacity enhancing project is currently starting, relying on methodological support, guidance and training by UNCTAD and UNODC. It is carried out in coordination by UNECA with all UN Regional Commissions. The project will enhance statistical capacities of eight developing countries across regions to measure and curb IFFs, enhance investigative and analytical capacities and improve domestic resource mobilisation to strengthen socio-economic resilience to pursue the 2030 Agenda.

UNCTAD and UNODC invite all interested countries to test the measurement of IFFs that affect their economies the most. The statistical Task Force will continue its work in refining methodologies (including considering alternative and complementary methods) and to support countries in the pilot testing of the measurement of IFFs with a view to developing a global Statistical Framework for the Measurement of Illicit Financial Flows with practical and methodological guidance in line with the Conceptual Framework. This will combine recommended methods to measure different types of IFFs in SDG indicator 16.4.1., including detailed and technical step-by-step guidance on applying methods; recommendations on producing range-type estimates (lower- and upper-bound estimates) rather than merely point-estimates to account for uncertainties in data sources and methodologies; and reference reporting procedures and framework to meet requirements for global SDG reporting, but also reflect national-specific scope of compiled IFF statistics.

Further work will also aim at developing nuanced measurement of IFFs to support aggregating estimates of different types of IFFs into one SDG indicator, e.g., to adjust for double counting, yet provide sufficient breakdown to support analysis and policy action. In the future, the measurement of IFFs as a satellite account taking into consideration national accounts concepts and definitions could be worth exploring.

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, by improving their coverage and exhaustiveness. In this regard, any conceptual and methodological developments, e.g., a classification of activities generating IFFs and aggregation techniques for various IFF-type estimates into a singled indicator, need to be linked to the SNA and BoP concepts. Standardized concepts and full alignment with other relevant concepts will increase IFF statistics applicability and add value in pursuing sustainable development for all.

Therefore, estimating IFFs will also help improve policy agenda and actions towards reducing economic inequalities and reinforcing fundamental human rights for all. IFFs are perpetually endangering human rights such as the right to social protection, to an adequate standard of living and to the highest attainable standards of physical and mental well-being; the right to education and the enjoyment of benefits of cultural freedom and scientific progress; to right to equality before the law; the right to work in just and favourable conditions; and to freedom of opinion and expression, to name a few.

Extreme poverty is creating a marginalized population who has no access to basic human rights. When wealth is illicitly transferred abroad, it directly impacts countries' growth and job creation (Shubert, 2015). National expenditures in social services, health care, as well as education are threatened. African countries, for example, with high IFFs are deemed to spend on average 25% less on health and 58% less on education (UNCTAD, 2020).

Tax evasion, tax avoidance and all other mechanisms depriving tax revenues of countries are violating fundamental human rights, and more specifically, women's rights. The COVID-19 pandemic has been exacerbating the living conditions of women around the world reinforcing the inequalities of their unpaid care and domestic work. National governments, mostly in the global south, lacking these revenues, exacerbated by the presence of IFFs, are deprived of investing in public services tackling gender inequalities and poverty (ActionAid International, 2022).

Concerted actions and effort, both at national and international levels are crucial in stepping up the efficiency of various workstreams on IFFs worldwide. Creating a platform uniting developed and developing countries to enable sharing of knowledge, expertise, lessons learned and experience from the measurement processes in their respective environments may significantly raise the awareness and

enhance reporting towards SDG Indicator 16.4.1. Communicating, sharing and collaborating among stakeholders will reinforce the value of impressive results national authorities have achieved with the support of UNCTAD and UNODC with partners – and scale these up to global coverage and reporting on SDG indicator 16.4.1 on IFFs.

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