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# CONCEPTUAL FRAMEWORK FOR THE STATISTICAL MEASUREMENT OF ILLCIT FINANCIAL FLOWS

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CONCEPTUAL FRAMEWORK FOR THE STATISTICAL MEASUREMENT  
OF ILLICIT FINANCIAL FLOWS

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## 1. EXECUTIVE SUMMARY

The 2030 Agenda for Sustainable Development<sup>1</sup> identifies the reduction of illicit financial flows (IFFs) as a priority area to build peaceful societies around the world. Combatting IFFs is a crucial component of global efforts to promote peace, justice and strong institutions, as reflected in target 16.4 of the Sustainable Development Goals: “By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime”.

In July 2017, the United Nations General Assembly adopted the indicator framework for the monitoring of progress towards the Sustainable Development Goals.<sup>2</sup> Indicator 16.4.1, “Total value of inward and outward illicit financial flows”, was selected as the indicator to measure progress towards target 16.4. At the time, there was no universal agreement on what should be included within the scope of IFFs or how the component parts could be measured.

As different understandings of IFFs can be found and many of these flows are deliberately hidden, measuring them is an extremely difficult task. Reflecting this complexity, the indicator has two custodians: UNODC, leading the work on crime-related IFFs, and UNCTAD, leading the development of methods to measure IFFs related to taxes and trade. This document reflects the results of international work on the statistical definition of IFFs and concepts to enable their measurement.

The custodian agencies joined forces to develop common statistical definitions and methods for the measurement of different types of IFFs in one indicator. From 2017 to 2018, UNODC and UNCTAD held expert consultations and, on their recommendation, established a statistical Task Force to develop methodologies for the measurement of IFFs. Arising from this work, a conceptual framework, statistical definitions, typology and methodologies have been prepared.

This approach identifies main types of IFFs to be measured and lays out a framework based on existing statistical definitions, classifications and methodologies, in line with the System of National Accounts (SNA)<sup>3</sup> and the balance of payments.<sup>4</sup> A disaggregated and bottom-up measurement approach is proposed in line with these frameworks and following international efforts to measure non-observed or illegal economic activities.

Illicit financial flows refer to activities considered as criminal offences, but also some behaviours related to tax and commercial practices. The *International Classification of Crime for Statistical Purposes* (ICCS)<sup>5</sup> provides definitions of illegal activities generating IFFs. The proposed framework identifies four main types of activities that can generate IFFs: 1) tax and commercial activities; 2) illegal markets; 3) corruption; and 4) exploitation-type activities and financing of crime and terrorism. For each of these types, IFFs can generally emerge at two different stages:

- Illicit income generation, which includes the set of cross-border transactions that are either performed in the context of the production of illicit goods and services or generate illicit income for an actor during a non-productive illicit activity.

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<sup>1</sup> A/RES/70/1.

<sup>2</sup> A/RES/71/313.

<sup>3</sup> United Nations, European Commission, International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD) and World Bank, *System of National Accounts 2008* (United Nations publication, Sales No. E.08.XVII.29).

<sup>4</sup> IMF, *Balance of Payments and International Investment Position Manual*, Sixth edition (Washington, D.C., 2009).

<sup>5</sup> UNODC, *International Classification of Crime for Statistical Purposes* (Vienna, 2015).

- Illicit income management, which refers to cross-border transactions that use illicit income to invest in financial and non-financial assets or to consume goods and services.

Illicit financial flows are multi-dimensional, comprising several different kinds of activities, including flows originating from illicit activities, illicit transactions to transfer funds that have a licit origin, and flows stemming from licit activity being used in an illicit way. Not all IFFs stem from illegal activity. For example, the indicator includes aggressive tax avoidance as an illicit financial flow, as it can be considered detrimental to sustainable development in many countries, even though such activities are generally not illegal.

In October 2019, the 10th session of the Inter-agency and Expert Group on Sustainable Development Goals Indicators (IAEG-SDGs), held in Addis Ababa, reviewed the methodological proposal and reclassified the indicator from Tier III to Tier II,<sup>6</sup> meaning that the indicator is conceptually clear and has set out internationally established standards, although data are not yet regularly produced by countries.

This document further details the conceptual framework for measuring IFFs. The framework and specific measurement methodologies are tested in ongoing and new pilot activities. The methods in relation to selected illegal markets have been tested in Latin America as well as at the subregional level for selected activities (wildlife goods and drug trafficking). Preliminary findings show the feasibility of the developed measurement approaches.

## 2. INTRODUCTION TO ILLICIT FINANCIAL FLOWS

Every year organized crime and trade in illegal goods (such as drug trafficking or trafficking in firearms) and illegal or illicit tax and commercial practices generate billions of dollars in illicit flows. Proceeds of crime may be channelled abroad, often to safe havens. They may also be laundered and reinvested in legal markets. Large-scale organized crime (and its related illegal economies) weakens state institutions by fuelling corruption and violence, and undermines the rule of law. It discourages public and private investment and deprives the licit economy of resources that are needed for sustainable development across all its dimensions. IFFs stemming from illegal activities such as crime and corruption erode the functioning of criminal justice systems, reduce state revenues, erode the tax base and weaken state institutions.

Other illicit financial flows originating in the legal economy may also divert resources for development, erode the tax base, hamper structural transformation and sustainable economic growth.

The ability to achieve the Sustainable Development Goals remains fragile when undermined by IFFs. Indeed, the 2030 Agenda for Sustainable Development underscores the need for an increased mobilization of financial resources dedicated to sustainable development, including through the improved capacity for revenue collection, and for more resources dedicated to investment. IFFs undermine this effort. The Addis Ababa Action Agenda on financing for development<sup>7</sup> also calls for a redoubling of efforts to substantially reduce IFFs, with a view to eventually eliminating them.

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<sup>6</sup> United Nations Statistics Division (UNSD), Tier Classification for Global SDG Indicators (2020).

<sup>7</sup> A/CONF.227/20. United Nations, *Report of the Third International Conference on Financing for Development*, Addis Ababa 13–16 July 2015 (New York, 2015), para. 23–24.

Progress towards target 16.4 of the 2030 Agenda, which aims to “significantly reduce illicit financial flows” is to be measured by Sustainable Development Goal indicator 16.4.1: “Total value of inward and outward illicit financial flows (in current United States dollars)”. This indicator is focused on cross-country flows to assess the size of illicit financial flows entering or leaving a country.

In 2017, when the United Nations General Assembly adopted the Sustainable Development Goals indicator framework, UNCTAD and UNODC, the two co-custodians of indicator 16.4.1, started methodological work and broad consultations on the development of statistical definitions and methods to measure IFFs.

### 3. STATISTICAL CHALLENGES

Lack of consistent statistics on IFFs causes uncertainty about the size of and trends in illicit flows, how and where they originate and their impact on development. IFFs can markedly differ across countries and regions, and the lack of a common framework makes their measurement impossible.

#### Conceptual challenges

A review of the literature reveals that there are different understandings of what IFFs constitute and how they can be measured, ranging from estimates of money laundering schemes that rely on the banking system to disguise the illicit origin of funds, to macroeconomic measures that compare mirror trade statistics between countries. The absence of a common understanding hampers policy action to combat IFFs in the national context and to agree on common policy goals at the international level.

For instance, some quantitative studies equate IFFs with trade misinvoicing only, while trade-based money laundering is not the only method to move money illicitly and the proposed statistical measures suffer from simplifying assumptions on data sources and methods.

By definition, IFFs only include illicit flows. However, statistical studies carried out to date show that it is empirically challenging to separate some practices, such as evasion (illegal) and borderline practices, including aggressive tax avoidance (generally legal, but often considered illicit in the academic literature). It is not always straightforward to determine the point at which lawful tax planning becomes aggressive or harmful. It may only be possible to measure a range as the border between lawful and aggressive tax planning may be methodology specific.

#### Ensuring validity and soundness of estimation methods

IFFs are deliberately hidden and, as they take many forms and use varying channels, their measurement is challenging both conceptually and in practice. The challenges of measuring IFFs differ across countries. Consequently, the practices for and approaches to measuring the illegal, non-observed or informal economic activities that may generate IFFs differ. Therefore, space for country-specific solutions and the flexible application of methods in line with a common framework is necessary.

At the same time, statistics need to be based on definitions that can be applied across countries and across time to enable comparability. For instance, according to the ICCS, crime statistics should be based on a globally agreed classification where crimes should be defined on the basis of actions and behaviours regardless of how they are defined by national legislation. From a practical perspective, statistics cannot be based directly and exclusively on legal considerations since legal frameworks are not consistent across jurisdictions; they can be extremely complex to interpret and are often reactive

(e.g. there may be significant time lags before new types of activities are declared illegal), leading to differential treatment across countries and time.

Transactions of an illicit nature can take place in several guises and at various stages of economic activity. For example, funds can be used for cross-border imports of illicit goods and then for their further sale to another country. The activities that generate IFFs need to be analysed carefully and placed in a framework that can identify the various components giving rise to illicit activities. IFFs need to be classified using a discrete, exhaustive and mutually exclusive statistical classification aligned with existing statistical frameworks and principles.<sup>8</sup>

Many illicit activities are intertwined, such as bribery related to drug trafficking or trade mispricing. To avoid duplication, separate accounting for income generation and income management is needed that is consistent with the SNA and other statistical frameworks. The measurement should also be based, for example, on an exclusive statistical classification that, as far as possible, separates corruption from other illicit activities.

## Availability and limitations of data

National statistical systems already have some of the data needed for the measurement of IFFs, but these data are scattered across a range of authorities and statistical domains and often lack a unifying framework. However, existing national accounts and balance of payment statistics, produced by national statistical offices and central banks, including estimates of illegal economic activities<sup>9</sup> and the non-observed economy,<sup>10</sup> provide a good starting point for the measurement of IFFs.

Other relevant data may be held by the police and ministries of justice, financial intelligence units and other government agencies that collect information on seizures and criminal offences. In addition, tax authorities typically collect relevant data for assessing tax gaps and exchange country-by-country reporting data on multinational enterprise groups, although these data are often collected for purposes other than statistical analysis (e.g. risk assessment). Statistics on international trade in goods and services can provide useful information on commercial IFFs. However, while data on merchandise trade collected by customs cover all commodities, with only small gaps in terms of goods not going through customs, often countries do not have a single or harmonized data source to capture trade in services.<sup>11</sup> Unfortunately, trade in services is very challenging to measure in general. As they seem to have the potential to be a large carrier of IFFs, special efforts will be required to measure and analyse such flows. Nonetheless, due attention is needed to interpret information from trade statistics, especially when using methods such as mirror statistics: several components should be taken into

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<sup>8</sup> UNSD, *Best Practice Guidelines for Developing International Statistical Classifications* (New York, 2013).

<sup>9</sup> According to the 2008 SNA, there may be no clear borderline between the non-observed economy and illegal production. By definition, illegal production comprises: (1) the production of goods or services whose sale, distribution or possession is forbidden by law; (2) production activities that are usually legal but become illegal when carried out by unauthorized producers, e.g. unlicensed medical practitioners (SNA 6.30); (3) production that does not comply with certain safety, health or other standards could be defined as illegal (SNA 6.35); and (4) the scope of illegal production in individual countries depends upon the laws in place, e.g. prostitution. Transactions on unofficial markets must also be included in the accounts, whether such markets are actually legal or illegal.

<sup>10</sup> According to OECD, *Measuring the Non-observed Economy: a Handbook* (2002): "The groups of activities most likely to be non-observed are those that are underground, illegal, informal sector, or undertaken by households for their own final use. Activities may also be missed because of deficiencies in the basic statistical data collection programme."

<sup>11</sup> Some countries, however, have introduced advanced systems for the reporting and monitoring of services trade. For instance, since October 2012 Brazil requires Brazilian legal entities and individuals to report on all services taken or rendered abroad as import or export of services to the Integrated System of Foreign Service Trade (SISCOSERV). It includes information on services, intangibles and other transactions that may generate changes in net worth in Brazil.

account when assessing discrepancies between data produced by origin and destination countries, the existence of IFFs being only one of them.

According to an IMF survey conducted in 2018 on the measurement of the informal economy,<sup>12</sup> over 60 per cent of national statistical offices collect relevant data on illegal, underground and informal activities using surveys, administrative sources, mirror statistics, international studies and expert assessment. While informal activities are largely domestic, many of them can generate cross-border flows. There is also systematic data collection on crime related IFFs; UNODC compiles statistics on drugs as reported directly by countries, including detailed data on demand, supply, prices, drug characteristics, seizure data, etc. It is likely, however, that some countries will need to identify additional sources of information to measure IFFs consistently.

Compiling statistics on IFFs requires access to many data sources held by different authorities. Typically, central banks, tax authorities and national statistical offices have a strong mandate to collect and access such data. National statistical offices usually act as the coordinator of the national statistical system and, as the focal point for coordinating the compilation of Sustainable Development Goal indicators, should be in charge of bringing the necessary stakeholders together to measure IFFs.

## 4. MAIN STEPS TAKEN TO DEVELOP THE MEASUREMENT OF ILLICIT FINANCIAL FLOWS

UNCTAD and UNODC have undertaken a series of coordinated actions and consultations to develop the statistical measurement of IFFs. The initial steps involved analytical studies<sup>13</sup> and a review of the measurement methods applied by researchers and organizations across countries and internationally.

From 2017 to 2018, UNODC<sup>14</sup> and UNCTAD<sup>15</sup> held expert consultations to take stock of current research, knowledge and experience regarding different types of IFFs. The expert consultations included contributions from national statistical offices, financial intelligence units, tax authorities, academia, non-governmental organizations, international organizations and other IFF experts. In addition, UNCTAD and UNODC collected expert advice and insights at various fora.<sup>16</sup> The meetings highlighted the need to agree on statistical concepts and definitions and recommended further engagement with national statistical authorities.

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<sup>12</sup> IMF, *Preliminary Report of the Task Force on Informal Economy* (Washington, D.C., 2018).

<sup>13</sup> The background research includes the work of custodian agencies UNODC and UNCTAD and consultant inputs by, among others, Alex Cobham, Petr Janský, Kathy Nicolaou-Manias, Mushtaq Khan and Antonio Andreoni.

<sup>14</sup> Expert consultation on the SDG indicator on illicit financial flows (IFF), Vienna, 12–14 December 2017.

<sup>15</sup> Expert meeting on statistical methodologies for measuring illicit financial flows, Geneva, 20–22 June 2018.

<sup>16</sup> These included, but were not limited to: the UNCTAD Session on Multinational Profit Shifting and Illicit Financial Flows, at the World Statistics Congress in Kuala Lumpur (August 2019); the UNODC Side Event on Measuring Illicit Financial Flows from Crime, held in Vienna (April and May 2019); the United Nations Economic Commission for Africa (UNECA) Inception Meeting: Preventing Trade Mis-invoicing in Selected African Countries, held in Addis Ababa (April 2019); the Economic and Social Commission for Western Asia (ESCWA) International Conference on Financing Sustainable Development – Curbing Illicit Financial Flows, held in Beirut (November 2018); the UNODC Technical Meeting on the Measurement of Illicit Financial Flows, held in Mexico City (November 2018); and the Financial Transparency Coalition (FTC)/Independent Commission for the Reform of International Corporate Taxation (ICRICT) Pan-Continental Dialogue and Forum on Illicit Financial Flows, held in Nairobi (November 2018).

To this end, UNCTAD and UNODC established a statistical Task Force<sup>17</sup> on the measurement of IFFs in January 2019 to define statistical concepts, assess data availability, develop statistical methods and review country-level activities. The Task Force’s work is based on analytical studies that provided a thorough overview of the aspects to be addressed in developing a method for Sustainable Development Goal indicator 16.4.1. Consultations with national and international organizations have been critical to generating broad consensus on the statistical concepts and definitions. The Task Force started with a review of previous research and outcomes of expert consultations in order to build on previous work on IFFs and related statistical activities.<sup>18</sup>

Following the review of current methods, the Task Force held several conference calls and one face-to-face meeting in Geneva on 16–17 July 2019, leading to a common understanding and a way forward on the statistical scope and definitions for measuring Sustainable Development Goal indicator 16.4.1. Based on this work, the custodian agencies presented in October 2019 a reclassification request to the 10<sup>th</sup> session of the IAEG-SDGs. The IAEG-SDGs endorsed the direction taken and reclassified indicator 16.4.1 from Tier III to Tier II,<sup>19</sup> meaning that the indicator is conceptually clear and based on internationally established standards, although data are not yet available from countries.

After the reclassification, the work to develop methods and guidance for the measurement of the indicator continues. Methodologies are currently being pilot tested as part of United Nations Development Account (UNDA) projects in coordination with UNECA and the Economic Commission for Latin America and the Caribbean (ECLAC). With a regional focus on Africa and Latin America and the Caribbean, these projects develop countries’ capacity to compile and disseminate statistics on IFFs. The activities have provided important insights into the feasibility of measurement and current capacity gaps. In 2020, another UNDA project will be launched in the Asia and the Pacific region in cooperation with Economic and Social Commission for Asia and the Pacific (ESCAP).

## 5. STATISTICAL DEFINITION OF ILLICIT FINANCIAL FLOWS

The statistical definition of IFFs is as follows: “Financial flows that are illicit in origin, transfer or use, that reflect an exchange of value and that cross country borders.”

Thus, IFFs have the following features:

- **Illicit in origin, transfer or use.** A flow of value is considered illicit if it is illicitly generated (e.g. originates from criminal activities or tax evasion), illicitly transferred (e.g. violating currency controls) or illicitly used (e.g. for financing terrorism). The flow can be legally generated, transferred or used, but it must be illicit in at least one of these aspects. Some flows that are not strictly illegal may fall within the statistical definition of IFFs; for example, cross-border tax avoidance, which erodes the tax base of a country where that income was generated.
- **Exchange of value,** comprising more than purely financial transfers. Exchange of value includes exchange of goods and services, and financial and non-financial assets. For instance, illicit cross-border bartering, meaning the illicit exchange of goods and services for other

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<sup>17</sup> The Task Force is composed of statistical experts from Brazil, Finland, Ireland, Italy, Peru, South Africa and the United Kingdom of Great Britain and Northern Ireland representing national statistical offices, central banks, customs or tax authorities. The Task Force also includes experts from international organizations with recognised expertise in this field. Eurostat, IMF, OECD, UNECA and UNSD are represented, in addition to UNCTAD and UNODC.

<sup>18</sup> This includes work carried out previously by Eurostat, Global Financial Integrity, IMF, OECD, UNECA, UNSD, World Bank, UNCTAD and UNODC, as well as the findings of many academic studies.

<sup>19</sup> UNSD, Tier Classification for Global SDG Indicators.

goods and services, is a common practice in illegal markets and is considered as an illicit financial flow.

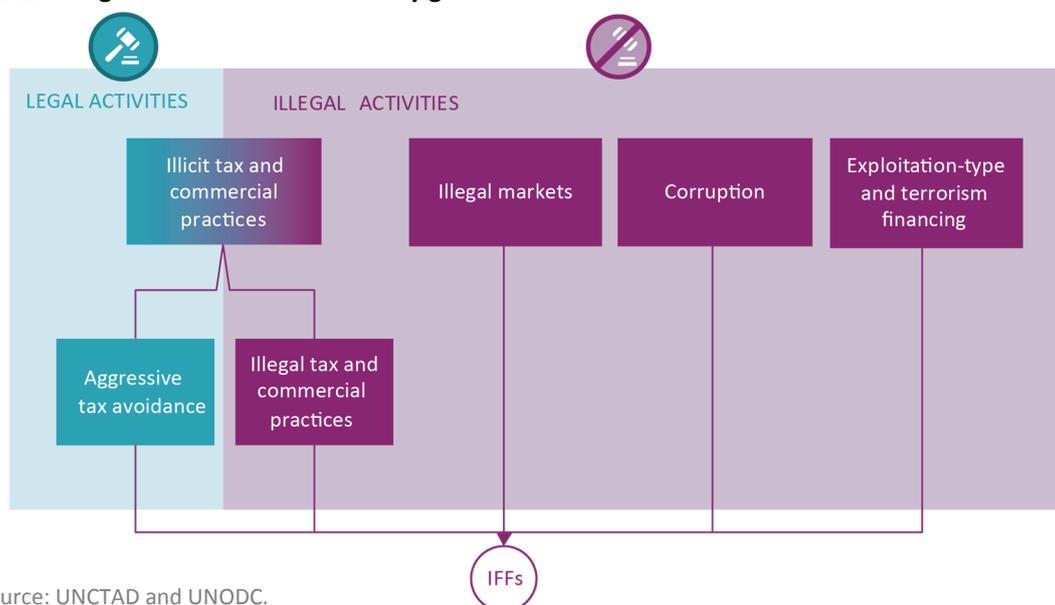
- IFFs measure a **flow of value over a given time** – as opposed to a stock measure, which would be the accumulation of value.
- **Flows that cross a border.**<sup>20</sup> This includes assets that cross borders and assets where the ownership changes from a resident of a country to a non-resident, even if the assets remain in the same jurisdiction.

Sustainable Development Goal indicator 16.4.1 calls for the measurement of the “total value” of IFFs. While useful as an indication of the overall size of the problem, this could limit applicability for policy guidance. A more granular measurement and a finer typology would help to identify and separate, as necessary, the main sources and channels of IFFs and also provide guidance for national and international interventions targeting them. Such a typology would also enable disaggregation of IFFs that are currently legal from those that are not.

IFFs originating from illegal economic activities can be laundered so that subsequent transactions appear legal. While flows of capital of illegal origin should be considered as IFFs when crossing a border, since the origin is in illicit activities, it is challenging to determine the illicit origin of certain financial flows as the distance from the illicit origin increases. IFFs can also originate from legal economic activities but become illicit when financial flows are managed or transferred illicitly; for instance, to evade taxes or used to finance illegal activities.

IFFs can be classified from many angles: sources, channels, impacts, actors involved and motives. A useful typology should prioritize a perspective that enables effective policy action and thus a link to the activities from which the IFFs arise. Figure 1, therefore, looks at the underlying activities that may generate IFFs rather than at IFFs themselves.

**Figure 1: Categories of activities that may generate illicit financial flows**



Source: UNCTAD and UNODC.

<sup>20</sup> The proposed bottom-up measurement approach described below considers domestic illicit financial flows as part of the illegal economy as well. These flows would not fall under the definition of IFFs for SDG 16.4.1, but are of high relevance to the understanding of organized cross-border illicit flows.

According to this typology, four main categories of IFFs are distinguished.

- **Illicit tax and commercial IFFs.** These include illicit practices by legal entities, as well as arrangements and individuals with the objective of concealing revenues and reducing tax burden through evading controls and regulations. This category can be divided into two components:
  - **Illegal tax and commercial IFFs.** These include illegal practices such as tariff, duty and revenue offences, tax evasion, competition offences and market manipulation amongst others, as included in the ICCS. Most of these activities are non-observed, hidden or part of the “shadow economy”,<sup>21</sup> the underground economy<sup>22</sup> or the informal<sup>23</sup> economy that may generate IFFs.
  - **IFFs from aggressive tax avoidance.** Illicit flows can also be generated from legal economic activities through aggressive tax avoidance (for more detail, see box below). This can take place through the manipulation of transfer pricing, strategic location of debt and intellectual property, tax treaty shopping and the use of hybrid instruments and entities. These flows need to be carefully considered, as they generally arise from legal business transactions and only the illicit part of the cross-border flows belongs within the scope of IFFs.
- **IFFs from illegal markets.** These include trade in illicit goods and services when the corresponding financial flows cross borders. The focus is on criminal activities where income is generated through the exchange (trade) of illegal goods or services. Such processes often involve a degree of criminal organization aimed at creating profit. They include any type of trafficking in goods, such as drugs and firearms, or services, such as smuggling of migrants. IFFs emerge from transnational trade in illicit goods and services, as well as from cross-border flows from managing the illicit income from such activities.
- **IFFs from corruption.** The ICCS, on the basis of the United Nations Convention against Corruption,<sup>24</sup> identifies a broad range of criminal acts to be considered as corruption. These include bribery, embezzlement, abuse of functions, trading in influence, illicit enrichment and other acts. IFFs related to corruption take place when the economic returns from these acts, directly or indirectly, generate cross-border flows and when financial assets are transferred across borders to commit these crimes.
- **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

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<sup>21</sup> According to IMF, *Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?* (2018): “The shadow economy includes all economic activities which are hidden from official authorities for monetary, regulatory, and institutional reasons.”

<sup>22</sup> In the SNA, “underground production consists of activities that are productive in an economic sense and quite legal (provided certain standards or regulations are complied with), but which are deliberately concealed from public authorities for the following reasons: a) to avoid the payment of income, value added or other taxes; b) to avoid payment of social security contributions; c) to avoid meeting certain legal standards such as minimum wages, maximum hours, safety or health standards, etc; or d) to avoid complying with certain administrative procedures, such as completing statistical questionnaires or other administrative forms”.

<sup>23</sup> The IMF, *Final Report of the Task Force on Informal Economy* (2019) uses the following working definition of informal economy: “[T]he informal economy comprises (i) the production of goods and market services of households; and (ii) the activities of corporations (illegal; underground) that may not be covered in the regular data collection framework for compiling macroeconomic statistics. This scope of the informal economy considers not only the domestic activities, but also the cross-border transactions of resident units [...]”. Available at [www.imf.org/external/pubs/ft/bop/2019/pdf/19-03.pdf](http://www.imf.org/external/pubs/ft/bop/2019/pdf/19-03.pdf) (accessed 2 March 2020).

<sup>24</sup> A/RES/58/4.

resources between two actors.<sup>25</sup> Examples include slavery and exploitation, extortion, trafficking in persons and kidnapping. In all such cases, the focus is on the financial benefit that an individual (or a group) gains by exploiting somebody else and/or depriving somebody of some of his/her assets. 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.

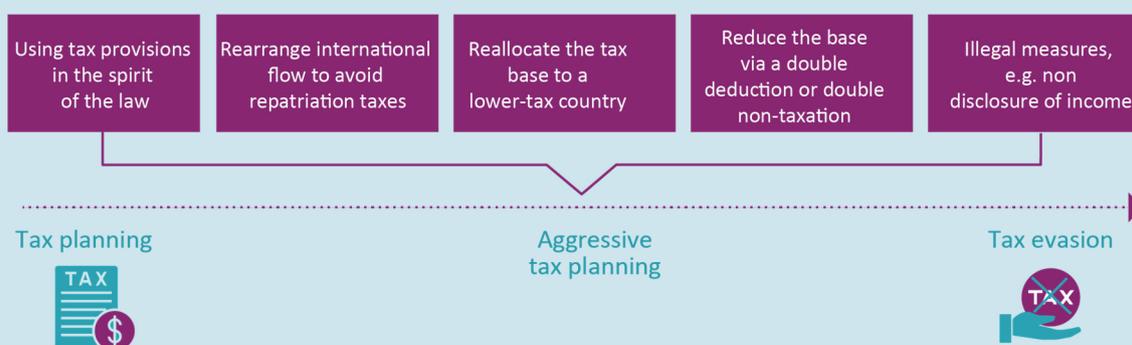
## TAX AVOIDANCE AND ILLICIT FINANCIAL FLOWS

A specific conceptual challenge is to specify what kinds of activities should be designated to be illicit or licit. This issue is particularly challenging in the area of tax avoidance. It is noteworthy that target 16.4 of the Sustainable Development Goals refers to “illicit” rather than “illegal” financial flows. Tax avoidance, including by multinational enterprise groups, although usually legal, can drain resources and be considered illicit.

The inclusion of tax avoidance in the definition of IFFs creates some challenges, as it blurs the line between legal and illegal activities. For example, while aggressive tax avoidance can be considered detrimental to sustainable development, tax avoidance generally involves activities that are not illegal. For the purposes of Sustainable Development Goal indicator 16.4.1, aggressive tax avoidance is included as an illicit financial flow, while noting that such activities are generally legal.

Noting that the boundary between legal and illegal tax practices may be unclear, the Institute for Advanced Studies<sup>9</sup> describes a continuum of activities from legal tax planning to illegal tax evasion (see figure). 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”.

### Boundaries of aggressive tax planning



Source: Institute for Advanced Studies (2017).

Activities considered as aggressive tax avoidance are considered in detail in the *Action Plan on Base Erosion and Profit Shifting*<sup>b</sup> and can include base erosion and profit shifting (BEPS) through interest payments, strategic location of intangible assets, abuse of tax treaties, artificial avoidance of permanent establishment and transfer pricing manipulation.

<sup>25</sup> In the SNA framework, these activities are considered as non-productive as there is no mutual agreement between involved actors.

Important progress has been made in this area by the Inclusive Framework on BEPS, which brings together over 135 jurisdictions to work on an equal footing to tackle tax avoidance. The BEPS package, released in October 2015 by OECD and G20 countries, delivers solutions for Governments to close the gaps in existing international rules that allow corporate profits to be artificially shifted to low or no tax jurisdictions where companies have little or no economic activity. Work to address outstanding BEPS issues by the Inclusive Framework is ongoing.<sup>c</sup>

Progress has also been made by the Inclusive Framework on BEPS<sup>d</sup> in improving the availability of data to support the measurement of tax avoidance by multinational enterprise groups, including through the forthcoming public release of aggregated and anonymized country-by-country report statistics, which can be drawn upon for the purposes of indicator 16.4.1.

<sup>a</sup> European Commission, *Aggressive Tax Planning Indicators – Final Report* (Luxembourg, Publications Office of the European Union, 2017).

<sup>b</sup> OECD, *Action Plan on Base Erosion and Profit Shifting* (2013).

<sup>c</sup> OECD (2020), *Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy – January 2020*.

<sup>d</sup> OECD, *Measuring and Monitoring BEPS, Action 11 – 2015 Final Report*, OECD/G20 Base Erosion and Profit Shifting Project (OECD Publishing, Paris, 2015).

In the SNA, each transaction that satisfies the principle of “mutual agreement” between parties is to be included within the production boundary, i.e. as a productive activity, whether or not it is legal. While only productive activities generate value added, non-productive activities can also transfer value from one actor to another.<sup>26</sup> Illegal markets and exploitation-type activities clearly include, respectively, productive and non-productive activities. Corruption, on the other hand, comprises different activities, which may or may not involve mutual agreement. Some of these activities, for example, bribery or trading in influence, are characterised by mutual agreement and, therefore, are considered productive, while others, such as embezzlement, misappropriation or other diversion of economic resources, are non-productive.

Given the complexity of differing national laws and practices, and with the measurement of IFFs being a statistical exercise rather than an audit or judicial one, it is not possible to define the scope of activities for measurement directly in terms of their legality. The indicator is, therefore, constructed based on a typology of behaviours, events and activities generating IFFs. This approach is in line with the ICCS and crime statistics in general. The ICCS details and defines activities, many of which may generate IFFs, such as exploitation-type activities and terrorism, trafficking and corruption, as well as many activities related to tax and commercial malpractices. Table 1 provides examples of such activities and how to link the main categories of IFFs to activities that generate them.<sup>27</sup>

<sup>26</sup> Many illegal actions are crimes against persons or property that cannot be considered as transactions under “mutual agreement”, e.g. theft. These are not recorded in the SNA, unless thefts, or acts of violence (including war), involve significant redistribution, or destruction, of assets. These would then be treated as other flows or transfers (i.e. changes in the value of assets and liabilities), not as transactions.

<sup>27</sup> It is important to note that not all IFFs would map onto this framework, as IFFs related to tax avoidance may not be covered in the ICCS.

**Table 1: Examples of activities generating illicit financial flows, by ICCS category**

CATEGORIES OF IFFS	EXAMPLES OF ACTIVITIES BY ICCS CATEGORY
<b>Tax and commercial practices</b>	08041 Tariff, taxation, duty and revenue offences 08042 Corporate offences including competition and import/export offences; acts against trade regulations 08045 Market manipulation or insider trading, price fixing
<b>Exploitation-type activities and terrorism financing (parts of sections 02, 04, 09)</b>	020221 Kidnapping 0203 Slavery and exploitation 0204 Trafficking in persons 0302 Sexual exploitation 02051 Extortion 0401 Robbery 0501 Burglary 0502 Theft 09062 Financing of terrorism
<b>Illegal markets</b>	ICCS includes a long list of activities, including for example drug trafficking (060132), firearm trafficking (090121), illegal mining (10043), smuggling of migrants (08051), smuggling of goods (08044), wildlife trafficking (100312)
<b>Corruption (section 0703)</b>	07031 Bribery 07032 Embezzlement 07033 Abuse of functions 07034 Trading in influence 07035 Illicit enrichment 07039 Other acts of corruption

Source: UNODC, 2015.

Note: This list is only intended to provide some examples and is not exhaustive.

The ICCS describes the actions and behaviours relating to each category and provides examples of the types of activities concerned. The above-listed activities are also sources of IFFs. It would be useful to link the categories of IFFs and their source activities to their transmission channels. This requires further consideration since similar financial flows may apply to a variety of channels. Data availability and the selection of statistical methods are likely to depend on the type of activity generating IFFs and the channels used.

Moreover, while ICCS considers illicit activities, such as acts against public revenue provisions and acts involving behaviour that is regulated or prohibited on moral or ethical grounds (0804), it focuses on actions and behaviours that are attributable to different types of crime. A classification should also be developed to cover all IFFs related to tax and commercial activities.

## STATISTICAL CONFORMITY AND POLICY RELEVANCE: THE PECULIAR CASE OF TRAFFICKING IN PERSONS

The four categories of activities generating IFFs have been designed to be in line with statistical standards but should not be seen as a static aggregation for policy purposes. The two categories of IFFs from tax and commercial activities and corruption are clearly linked to well-established and distinct policy areas, but the other two – illegal markets and exploitation-type activities – are less so. The category related to exploitation, for example, includes activities that embrace a wide range of issues linked to different policy responses from organized crime to conventional crime and terrorism. Also, the distinction between activities related to illegal markets and exploitation, while statistically clear, does not correspond to clearly separated analytical frameworks. Trafficking in persons, for instance, is included in the category of exploitation-type activities, but from an analytical and policy point of view, it is often considered as part of illegal markets since it is perpetrated for its economic profitability and is often analysed in the context of other illegal markets related to organized crime, such as drug trafficking and trafficking in firearms; in the IFF measurement framework, these are part of illegal markets. IFFs from trafficking in persons can still be analysed under the most appropriate policy and analytical framework depending on specific or national circumstances.

The statistical distinction between illegal markets and exploitation-type activities is based on mutual agreement. In the illegal markets, income is generated through the exchange of goods (or services) in mutual agreement between two or more parties, as in the case of drugs or firearms trafficking. By contrast, in exploitation-type activities, perpetrators make profit out of the exploitation of other persons. For example, in trafficking in persons, forced labour or slavery, financial benefits are achieved by one person (or group) through the exploitation of one or more individuals without mutual agreement.

Trafficking in persons is a complex crime and may not involve an economic transaction between the trafficker and the victim, as any statistically defined economic transaction must be based on mutual agreement. Other transactions may take place between the victim and the trafficker (for example, at the moment of recruitment) or between traffickers during the complex process of recruitment, transfer or harbouring of victims, but it appears that the exploitation of victims is ultimately the core activity whereby traffickers (individuals or organized criminal groups) derive their main illegal proceeds. In a similar way, this also applies to crimes such as sexual exploitation or forced labour. Various IFFs can be generated in the complex process of trafficking in persons and they should in principle be categorized as “exploitation-type activities”, although they can also be assessed from different analytical perspectives.

## 6. STATISTICAL APPROACH FOR MEASURING ILLICIT FINANCIAL FLOWS

Existing proposals to measure IFFs can be grouped into two main approaches:

1. **Top-down methods** attempt to measure IFFs by interpreting or modelling inconsistencies in different types of aggregated data, such as currency demand, international trade and the capital account of the balance of payments.<sup>28</sup> Methods such as mirror statistics can be used as a source of information on some tax and trade-related IFFs that are generated as part of licit economic activities but are transferred in an illicit way.
2. **Bottom-up approaches** attempt to measure IFFs by analysing the functioning of relevant illicit activities, identifying the set of flows that can be identified as IFFs and producing estimates for each.<sup>29</sup> Overall estimates are obtained by aggregating from a lower to a higher level; for example, by IFF type or source.

Consistent with the statistical framework presented here, where different types of IFFs are defined in relation to the activity generating them, a bottom-up and direct measurement approach is proposed.

An important distinction is made between two different stages at which IFFs can be generated, which reflect two different finalities:<sup>30</sup>

- **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<sup>31</sup> that directly generate illicit income for an actor during a non-productive illicit activity.
- **IFFs linked to income management**, as the set of cross-border transactions finalized 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.

Following this, IFFs can occur when criminal acts generate illicit income. When illicit goods and services are sold, a flow of value goes from the buyer to the seller. Likewise, extortion generates income for the extorter. Inward or outward IFFs occur during income generation when the operation in question is performed across a border (e.g. when a shipment of illicit drugs is sold from a resident of one country to a resident of a different country).

IFFs can also take place by illicit income management, which refers to the use of illicit income for investment or consumption, or the illicit management of income generated in legal economic activity, for example, to reduce the tax base. If spent abroad, the operation is an outward illicit financial flow.

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<sup>28</sup> Top-down approaches can be clustered based on the type of the informative set where inconsistencies are investigated. The Currency Demand Approach (Schneider, F., 2011; Schneider, F. and Williams, C., 2013; Ardizzi et al., 2016) is based on the comparison between the actual demand for currency and the amount of money that should be demanded based on observable economic indicators. The Hot Money Method and Residual Approach use discrepancies in financial accounts to estimate the amount of flows connected with the non-observed economy. Discrepancies in mirror trade statistics may provide a measure of illicit flows connected with international trade (Gara et al., 2016). Gravity models (Walker, 1995; Unger et al., 2006) focus on attractiveness to determine the extent to which financial flows between countries can be supposed to be illicit.

<sup>29</sup> The measurement approach presented here is consistent with Eurostat (2018).

<sup>30</sup> This typology is coherent with the SNA: income generation refers to operations relating to the SNA production account, and generation and distribution of the SNA income account, while income management refers to operations in the SNA capital and use of income accounts.

<sup>31</sup> An operation is defined as an exchange between parties, independent of a possible agreement among them.

If the income stems from illicit activity taking place outside a jurisdiction but is spent or invested in the domestic jurisdiction, then an inward illicit financial flow is generated.

In sum, IFFs can be attributed to four different types of flows: inflows and outflows from illicit income generation and inflows and outflows from illicit income management. This approach considers the multi-dimensional nature of IFFs, comprising several different kinds of activities, including flows originating from illicit activities, illicit transactions to transfer funds that have a licit origin, and flows stemming from licit activity being used in an illicit way. It identifies main types of IFFs to be measured and lays out a framework based on existing statistical definitions, classifications and methodologies, in line with the SNA and balance of payments. The following sections describe the relevance of these flows with respect to the four typologies of IFFs.

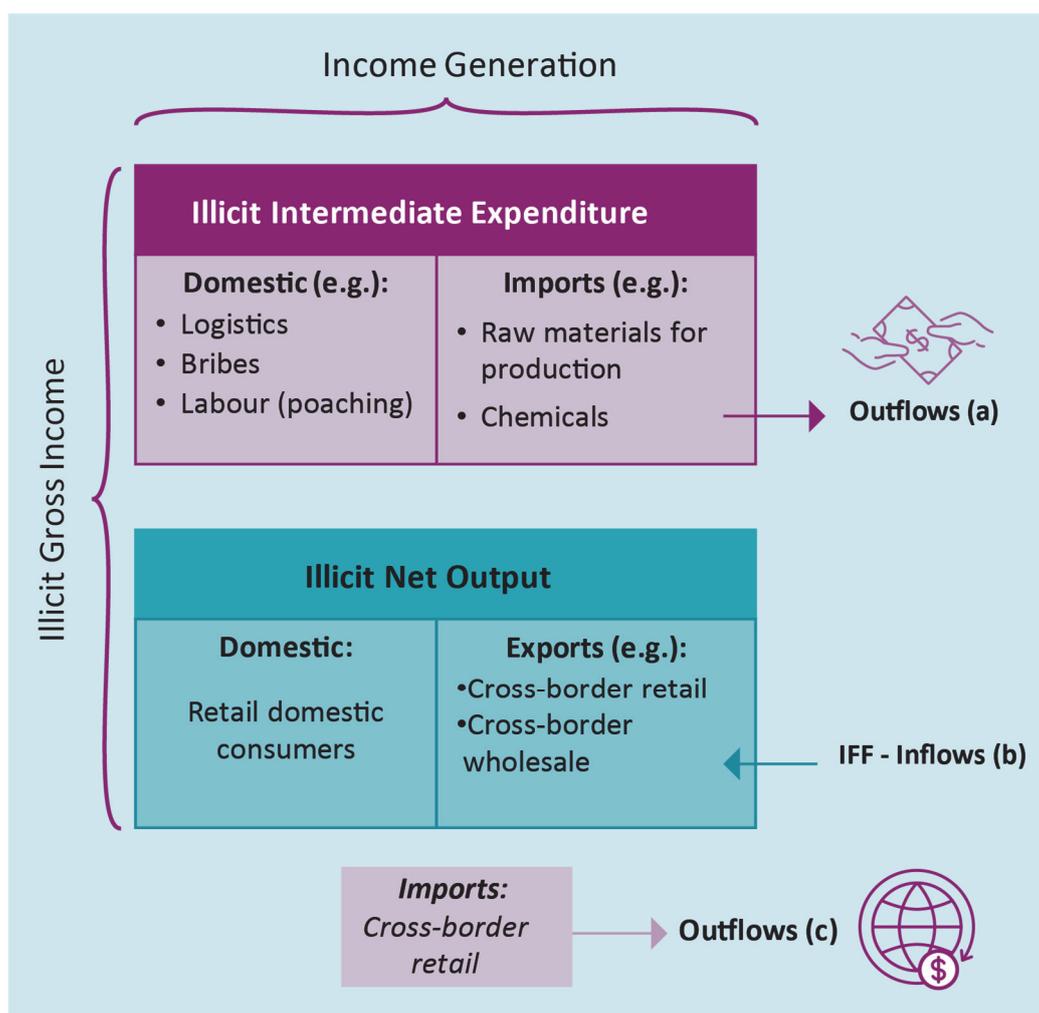
## Illicit financial flows related to income generation

IFFs from income generation mainly relate to goods and services provided in illegal markets as transactions that are aimed at carrying out unlawful productive processes for making profits. Like every productive process, income generation can be represented by three main aggregates: gross output, intermediate expenditure (or intermediate costs) and value added (which also represents the net income for the actors).

- **(Illicit) gross income/(illicit) gross output** refers to the value of the illicit goods or services produced in a given period. The value is determined as quantity-times-price (where the price is, for example, the retail price in the domestic market, or the export price if goods are exported).
- **(Illicit) intermediate expenditure** refers to the value of (licit and illicit) inputs acquired to produce illicit goods and services over a given period. The value of inputs is determined as quantity-per-price (where the price is, for example, the domestic price if the goods are bought from a resident, or the import price if the goods are bought from a non-resident).
- **(Illicit) value added/(illicit) net income** is the economic result of the productive process. It is determined as gross output-minus-intermediate expenditure. It also represents the net income (income after accounting for costs) earned by all actors carrying out the illicit activity.

Inward IFFs occur when illicit goods and services are exported abroad. These products can be either for final consumption (e.g. an online dealer sells synthetic drugs directly to a consumer in another country) or they are (licit or illicit) intermediate inputs to illicit productive processes in a foreign country (e.g. morphine is exported to another country to produce heroin, or transportation services bought by a non-resident trafficker to ship cocaine). Outward IFFs occur when intermediate inputs are imported against payments from abroad (e.g. drugs imported for further domestic sale) or when final illicit goods and services are imported.

In a similar fashion, this type of IFFs occur when a foreign business entity bribes a public official to facilitate the granting of a procurement contract or the permission to extract natural resources. The unlawful service provided by the corrupt public official can be seen as a productive activity – i.e. the result of a mutual agreement – that generates an IFF from the country where the business entity is located to the country of the public official.

**Figure 2: Illicit financial flows in income generation (illegal markets, example based on drug trafficking)**

Source: UNODC.

*Note: Outflows (a) correspond to the import of illicit goods and services that are used for generating illicit final products. Inflows (b) correspond to the export of final goods and services. Outflows (c) correspond to the import of illicit final goods and services that have been produced in a different country (e.g. self-imported ivory or illicit drugs ordered on-line).*

IFFs from income generation can also be generated by non-productive activities, such as exploitation-type activities, and they equal the aggregated value of all funds and goods that move between resident and non-resident entities (for example, when cross-border extortion is committed).<sup>32</sup> Intermediate costs for non-productive activities are considered as “operational costs” (in the SNA, they are implicitly accounted for as final consumption).

The direction of the flow depends on the residence of the actors: if the sender (e.g. victim of an exploitation-type activity) is resident and the recipient (e.g. extorter) is non-resident, then non-productive activities generate outward IFFs; whereas if the sender is non-resident and the recipient is resident, inward IFFs emerge.

<sup>32</sup> When illicit income from “domestic” exploitation-type activities (e.g. extortion or kidnapping between resident entities) is transferred above, it refers to the income management phase.

## Illicit financial flows from income management

IFFs can result from the use (management) of illicit income generated by any of the four types of activity listed in table 1. Such illicit income generates IFFs when it is transferred abroad for investment or consumption.

Outward IFFs emerge when resident illicit funds are used to buy goods and services from abroad (other than those that have been accounted for as intermediate costs) or to acquire foreign financial or non-financial assets. Symmetrically, inward IFFs are generated if non-resident illicit funds (e.g. generated by drug trafficking in another country) are used in the country of interest. These flows are difficult to measure and are not easy to link to a specific illicit activity.

The size of income management related to outward IFFs is related to the domestically generated (licit or illicit) net income. The size of income management related to inward IFFs depends on other factors, such as the attractiveness of the country for money laundering, the inter-country difference in tax rates and rules and regulations, the likelihood of nationals living abroad sending home illicitly generated income, and the internal structure of multinational and other firms with a global presence. IFFs from income management can also refer to income generated from licit (or illicit) economic activities that is illicitly transferred abroad.

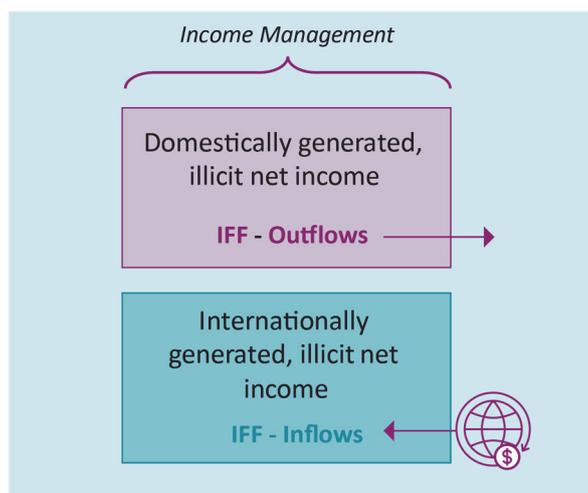
BEPS activities can be related to tax and trade IFFs as part of income management. These BEPS activities can take a variety of forms,<sup>33</sup> which can include strategic location of debt and intangible assets, manipulation of transfer pricing, artificial avoidance of permanent establishment and other strategies. Estimates of BEPS range between US\$100 billion and over US\$600 billion.<sup>34</sup>

IFFs can also occur when funds are shifted out of a jurisdiction for the purposes of evading (not avoiding) tax. This includes illegally concealing income or assets from tax authorities. Corporate structures with no real economic activity can be used as part of tax-evasion strategies and for the concealment of corrupt funds by public officials, as well as for other criminal activities such as money laundering. For instance, corporate structures can provide a vehicle to transfer and conceal trade profits in lower-tax jurisdictions and reduce tax liabilities, or to conceal the beneficial owner or the ultimate investor in order to avoid paying taxes on investment income. Moreover, chains of such corporate structures with misreporting or non-reporting of beneficial owners, also called “anonymous ownership vehicles”, aim to benefit from routes with tax advantages, thus potentially generating IFFs.

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<sup>33</sup> Beer, S., Mooij, R. and Liu, L., “International corporate tax avoidance: a review of the channels, effect sizes, and blind spots”, *Journal of Economic Surveys*, vol. 34, No. 3 (July 2020) pp. 660–688.

<sup>34</sup> Bradbury, D., Hanappi, T. and Moore, A., “Estimating the fiscal effects of base erosion and profit shifting: data availability and analytical issues”, *Transnational Corporations*, vol. 25, No. 2 (September 2018).

**Figure 3: Illicit financial flows in income management**

Source: UNODC.

## 7. CONCLUSION

This document has set out the statistical definition and scope of IFFs for the purposes of measuring Sustainable Development Goal indicator 16.4.1. These important first steps have been endorsed by the IAEG-SDGs. The next steps will be to develop and test a range of statistical methodologies consistent with the definitions above and SNA and balance of payment statistics. Countries already collect data on a number of illegal activities and other statistics that can contribute to the measurement of Sustainable Development Goal indicator 16.4.1. Some aspects of IFFs are more readily measurable; for instance, IFFs originating in trade of illegal goods and services (e.g. illicit drugs markets, smuggling of migrants and prohibited wildlife products), where national and international data on supply, demand, trade flows and prices are collected in a systematic manner.

The framework presented in this document has proved useful for assessing IFFs from trade in illegal commodities, as demonstrated by tests in pilot countries. The distinction between income generation and income management allows the use of statistics and estimates on illegal markets, such as supply, demand, price and seizure data, to approximate IFFs. A different set of information needs to be used to analyse how income is used. This means that IFFs can be assessed to varying degrees of comprehensiveness, depending on data availability.

Some elements of IFFs are challenging to estimate, including bribery, abuse of functions, illicit enrichment and illicit tax practices. Data on these activities remain scattered. Further work is needed, starting with those elements for which data are available and taking into account adjustments needed to avoid double-counting. Furthermore, in practice it may be necessary to estimate separately some of the IFFs with the highest uncertainties, such as those from tax and commercial activities.

The next steps involve the development and testing of a range of statistical methodologies consistent with the related definitions. While countries already collect relevant data, it will be important to strengthen their capacity to improve data collection and the compilation of statistics on IFFs. UNCTAD and UNODC, with partner organizations, will support countries in improving their statistical capacity to understand and estimate IFFs. A series of pilot studies are being conducted and will help refine the conceptual framework and develop methodological guidance on measuring IFFs.

The statistical Task Force will continue its work to support countries in national data collection and compilation with a view to developing a practical compilation guide for the measurement of IFFs based on this conceptual framework. This will include a classification of activities generating IFFs, linked to the types and channels of IFFs, with recommended methods for measuring them. Further work will also be aimed at developing a more nuanced measurement of IFFs to support policy action. In the future, it could be worth exploring the measurement of IFFs as satellite accounts within the broader framework of national accounts.

## References

- Afghanistan and UNODC, Afghanistan, Ministry of Counter Narcotics, Afghanistan Opium Survey reports 2002–2018. Available at <https://www.unodc.org/unodc/en/crop-monitoring/index.html> (accessed 11 April 2020).
- Ardizzi G., De Franceschis, P., and Giammatteo, M., *Cash Payment Anomalies and Money Laundering: An Econometric Analysis of Italian Municipalities*, Quaderni dell'antiriciclaggio (Banca d'Italia), January 2016). Available at [https://uif.bancaditalia.it/publicazioni/quaderni/2016/quaderni-5-2016/QAR\\_Analisi\\_e\\_Studi\\_n\\_5\\_INTERNET.pdf](https://uif.bancaditalia.it/publicazioni/quaderni/2016/quaderni-5-2016/QAR_Analisi_e_Studi_n_5_INTERNET.pdf).
- Beer, S., Mooij, R. and Liu, L., "International corporate tax avoidance: a review of the channels, effect sizes, and blind spots", *Journal of Economic Surveys*, vol. 34, No. 3 (July 2020) pp. 660–688.
- Bradbury, D., Hanappi, T. and Moore, A., "Estimating the fiscal effects of base erosion and profit shifting: data availability and analytical issues", *Transnational Corporations*, vol. 25, No. 2 (September 2018). Available at <https://doi.org/10.18356/e1d7a8b4-en>.
- European Commission, *Aggressive Tax Planning Indicators – Final Report* (Luxembourg, Publications Office of the European Union, 2017). Available at [https://ec.europa.eu/taxation\\_customs/sites/taxation/files/taxation\\_papers\\_71\\_atp\\_.pdf](https://ec.europa.eu/taxation_customs/sites/taxation/files/taxation_papers_71_atp_.pdf) (accessed 5 August 2020).
- Eurostat, *Handbook on the Compilation of Statistics on Illegal Economic Activities in National Accounts and Balance of Payments* (Luxembourg, Publications Office of the European Union, 2018). Available at <https://ec.europa.eu/eurostat/documents/3859598/8714610/KS-05-17-202-EN-N.pdf/eaf638df-17dc-47a1-9ab7-fe68476100ec> (accessed 14 April 2020).
- Gara, M., Giammatteo, M. and Tosti, E., *Magic mirror in my hand...How Trade Mirror Statistics Can Help Us Detect Illegal Financial Flows*, Quaderni dell'antiriciclaggio (Banca d'Italia, 2016). Available at: [https://uif.bancaditalia.it/publicazioni/quaderni/2018/quaderni-10-2018/Quaderno-n.10\\_Magic\\_mirror\\_in\\_my\\_hand.pdf?language\\_id=1](https://uif.bancaditalia.it/publicazioni/quaderni/2018/quaderni-10-2018/Quaderno-n.10_Magic_mirror_in_my_hand.pdf?language_id=1).
- IMF, *Balance of Payments and International Investment Position Manual*, Sixth edition (Washington, D.C., 2009).
- IMF, *Preliminary Report of the Task Force on Informal Economy* (Washington, D.C., 2018). Available at <https://www.imf.org/external/pubs/ft/bop/2018/pdf/18-10.pdf> (accessed 10 February 2020).
- IMF, *Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?* (2018). Available at <https://www.imf.org/en/Publications/WP/Issues/2018/01/25/Shadow-Economies-Around-the-World-What-Did-We-Learn-Over-the-Last-20-Years-45583> (accessed 6 August 2020).
- OECD, *Measuring the Non-observed Economy: a Handbook* (2002). Available at <https://www.oecd.org/sdd/na/measuringthenon-observeconomy-ahandbook.htm> (accessed 9 June 2020).
- OECD, *Action Plan on Base Erosion and Profit Shifting* (2013). Available at <https://www.oecd.org/ctp/BEPSActionPlan.pdf> (accessed 9 June 2020).
- OECD, *Measuring and Monitoring BEPS, Action 11 – 2015 Final Report*, OECD/G20 Base Erosion and Profit Shifting Project (OECD Publishing, Paris, 2015).
- OECD, Glossary of Statistical Terms. Available at: <https://stats.oecd.org/glossary/detail.asp?ID=350> (accessed 9 June 2020).
- OECD (2020), *Statement by the OECD/G20 Inclusive Framework on BEPS on the Two-pillar Approach to Address the Tax Challenges Arising from the Digitalisation of the Economy – January 2020*, OECD/G20 Inclusive Framework on BEPS, OECD, Paris. Available at <https://www.oecd.org/tax/beps/statement-by-the-oecd-g20-inclusive-framework-on-beps-january-2020.pdf> (accessed 9 June 2020).
- Schneider, F. (ed.), *Handbook on the Shadow Economy* (Cheltenham, Edward Elgar Publishing, 2011).
- Schneider, F. and Williams, C., *The Shadow Economy* (London, Institute of Economic Affairs, 2013). Available at SSRN: <https://ssrn.com/abstract=2286334>.
- UNCTAD, Expert meeting on statistical methodologies for measuring illicit financial flows, Geneva, 20–22 June 2018. Available at <https://unctad.org/en/Pages/MeetingDetails.aspx?meetingid=1864> (accessed 9 June 2020).
- Unger, B., Siegel, M., Ferwerda, J., de Kruijf, W., Bu-suioic, M., Wokke, K. and Rawlings, G., *The Amounts and Effects of Money Laundering* (The Hague, Ministry of Finance, 2006). Available at <http://www.ftm.nl/wp-content/uploads/2014/02/witwassen-in-nederland-onder-zoek-naar-criminele-geldstromen.pdf>.
- United Nations, European Commission, IMF), OECD and World Bank, *System of National Accounts 2008* (United Nations publication, Sales No. E.08.XVII.29).
- A/RES/70/1. United Nations, Transforming our world: the 2030 Agenda for Sustainable Development, Resolution adopted by the General Assembly on 25 September 2015.
- A/CONF.227/20. United Nations, *Report of the Third International Conference on Financing for Development*, Addis Ababa 13–16 July 2015 (New York, 2015).
- United Nations (2017), Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development. A/RES/71/313 (accessed 11 March 2020).
- A/RES/58/4. UNODC (2004), United Nations Convention Against Corruption, Resolution adopted by the General Assembly on 31 October 2003.
- UNODC, *International Classification of Crime for Statistical Purposes* (Vienna, 2015).
- Expert consultation on the SDG indicator on illicit financial flows (IFF), Vienna, 12–14 December. Available at <https://unctad.org/en/pages/MeetingDetails.aspx?meetingid=1879> (accessed 9 June 2020).
- UNSD, *Best Practice Guidelines for Developing International Statistical Classifications* (New York, 2013). Expert Group on International Statistical Classifications. Available at: [https://unstats.un.org/unsd/classifications/bestpractices/Best\\_practice\\_Nov\\_2013.pdf](https://unstats.un.org/unsd/classifications/bestpractices/Best_practice_Nov_2013.pdf) (accessed 5 August 2020).
- UNSD, Tier Classification for Global SDG Indicators (2020). Available at <https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification/> (accessed 15 May 2020).
- Walker, J. *Estimates of the Extent of Money Laundering in and through Australia*, paper prepared for the Australian Transaction Reports and Analysis Centre, (September 1995). Available at [https://ccv-secondant.nl/fileadmin/w/secondant\\_nl/platform/artikelen\\_2018/Austrac\\_1995\\_Estimates\\_report.pdf](https://ccv-secondant.nl/fileadmin/w/secondant_nl/platform/artikelen_2018/Austrac_1995_Estimates_report.pdf).



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