

# 'What does not get measured, does not get done'

## The methods and limitations of measuring illicit financial flows

Estimates of the size of illicit financial flows have been questioned because data used to measure the phenomenon is fraught with problems. However, such estimates are necessary to inform policy making on this issue. Improving the quality of data gathering in poor countries and asking questions beyond statistics can improve the understanding of and response to illicit flows.



In addressing illicit financial flows and their impact on developing countries, the maxim of 'measuring to get things done' has acquired new significance. If estimates are correct, money is haemorrhaging out of poor countries: between USD 850 billion and 1.06 trillion left developing countries through illicit channels in 2006 (Kar and Cartwright-Smith 2008). This figure dwarfed official aid flows in the same period (the 22 member countries of OECD Development Assistance Committee provided USD 103.9 billion in aid in 2006). For those involved in development, decades of under-achieving efforts might have illicit outflows as one underlying reason.

However, estimates of a global volume of illicit financial flows should be carefully analysed. First, by their very nature illicit outflows are conducted under the official radar. Therefore they are either poorly recorded or altogether missed by official statistics. Second, the available measurement methods differ conceptually and capture different aspects of the problem. Some focus on measuring the proceeds of the illegal economy, while others shed light on tax revenues lost through manipulation of invoices for import and export transactions. Finally, the variety of mechanisms available for laundering money is extensive – for example, one can buy a wide range of movable or immovable assets from jewellery to real estate, stash ill-acquired money in secrecy jurisdictions, etc. – which compounds the difficulty in keeping track of the total funds flowing.

Despite these limitations, the need for measurement is clear. Policy makers rely on this data to gauge the seriousness

of the problem. This, in turn, determines the level of effort directed at the problem and informs policy making. Finally, for development programming, there is a need for a baseline against which progress of initiatives to address the problem can be measured. Nonetheless, to be useful, any estimates should be thoroughly understood. This Brief summarises in non-technical language some of the models economists use to estimate illicit financial flows and clarifies the different aspects of the problem as covered by each model. It also addresses some of the limitations of these models and argues for integrating other forms of analysis into understanding and measuring illicit financial flows.

### The most commonly used models

In the early 1980s, the International Monetary Fund (IMF) and the World Bank (WB) started measuring what they termed capital flight.<sup>1</sup> Surveys, case studies, interviews, statistics and composite measurements have all been used to estimate the outflow of illicit and licit capital from developing countries. A simplified and non-technical summary of the most common models follows.

#### 1. Models based on Balance of Payments<sup>3</sup> data

##### *The World Bank Residual Model*

To assess the amount of illicit flows, this model subtracts the total of funds actually used by a country from the total of funds entering that country. The inflow of funds is defined as any increase in foreign debt plus incoming foreign direct investment (FDI). Funds used are those necessary to finance the deficit in the current account<sup>3</sup> (one of the components of the Balance of Payments (BOP)) and to add to the country's official reserves. If there are more funds coming in than funds being used, the resulting shortfall is considered to be illicit flows (Kar and Cartwright-Smith 2008, NOU 2009).

$$\text{Illicit flows}_{\text{World Bank Residual}} = (\text{increase in foreign debt} + \text{increase in FDI}) - (\text{financing of the current account deficit} + \text{additions to the country's reserves})$$

##### *The Hot Money Model*

This model considers as illicit flows all errors in a country's external accounts as reflected in its balance of payments.

The BOP records all monetary transactions conducted across countries. It follows the bookkeeping principle of double entry and should, in theory, net zero, since all funds received by a country (credit) should be offset by funds going out or being used to pay debts. However, in practice, the BOP usually shows unexplained 'leftovers'. In order to achieve a zero balance, these discrepancies are captured in a line item called 'Net Errors and Omissions' (NEO). In the Hot Money model these errors are considered to be illicit flows (Kar and Cartwright-Smith 2008, NOU 2009).<sup>4</sup>

$$\text{Illicit flows}_{\text{Hot Money}} = \text{all funds coming in (credit)} - \text{all funds going out (debt)}$$

At first glance, it might appear that the WB Residual and the Hot Money models would draw their results from the same data and therefore generate results with similar levels of reliability. But there is a difference in how the two models process their numbers, which might result in the WB Residual model offering more robust estimates. As mentioned earlier, the Hot Money model considers the unexplained 'leftovers' in the BOP to be illicit flows. The line item for these errors in the BOP is a 'catch-all' category, which means that this category includes accidental errors that are not illicit funds.

The WB Residual model, on the other hand, collects raw data from each country and then purposefully calculates (as opposed to simply taking the 'leftovers') the discrepancy between the sources and the uses of funds to identify illicit flows. Each country also reports directly to the IMF and the World Bank on the different items used to construct the model. So there is a higher likelihood that this model generates more reliable results. However, as will be discussed later, the data itself might suffer from weaknesses (for example, poor statistics gathering procedures in developing countries).

## 2. Models based on trade data

Import and export transactions can also be conduits for illicitly sending money abroad, through manipulation of invoices.

**Transfer pricing** is a common and legal procedure between related parties that happens when multinationals transfer goods between subsidiaries. However, to be legal, the prices in these transactions need to be consistent with OECD guidelines following the "arm's length" principle, which stipulates that the price charged in transactions between two subsidiaries must be the same as in instances where the two firms are unrelated. When this principle is not respected, transfer pricing is abused and becomes known as "transfer mispricing" or "abusive transfer pricing". Abusive transfer pricing is frequently used by companies trying to evade taxes. For example, one subsidiary producing goods in a high tax country can avoid paying taxes by selling its products at a loss to a subsidiary in a low tax country. The subsidiary in the high tax country thus has far less taxable revenue, while the subsidiary in

the low tax country sells the products to final customers and yields a profit. The drawback of this model is that it is very difficult to prove that prices were manipulated to exploit a lower tax jurisdiction. Furthermore, it is extremely cumbersome to pore over every transaction document to determine whether the price is within the OECD guidelines.

**Trade misinvoicing** also uses international trade transactions to siphon money abroad, but unlike abusive transfer pricing, it involves transactions between unrelated parties. Businesses or individuals can collude with an unrelated party abroad to shift money between countries by falsifying prices in a customs invoice. For example, a buyer and a seller might collude in a scheme in which the buyer only pays the standard market price for some imported goods, but is billed for the goods at a higher price. The seller then deposits the difference in a bank account in a secrecy jurisdiction on behalf of the buyer. In the context of developing countries, practices like this not only exploit the weak capacity – or corruption – of customs and tax authorities, but they cheat the country of needed tax revenues.

Both models measure the amount of illicit flows by contrasting what a country claims it imported from (or exported to) the rest of the world with what the rest of the world states it exported to (or imported from) that given country. Such statistics are compiled by the IMF in a database called Direction of Trade Statistics (DOTS).

### Can international aid be implicated?

A simple example can illustrate how development aid can be part of illicit flows as measured by the WB Residual and the Hot Money models. Financial aid to a poor country appears in the country's BOP, for example, as aid transfers into the national budget. If a country receives such funds and uses them to pursue development goals, international aid would not likely fuel illicit flows. But in instances where such funds are captured by elites and taken abroad for personal enrichment, aid contributes to illicit flows, and the burden is shouldered by the population through reduced funds for public services. More borrowing will also be necessary to finance projects that should have been conducted with the funds that left the country (Nidkumana and Boyce, 2008).

In the case of models that rely on trade data to generate estimates of illicit outflows, at a first glance official development assistance is not directly implicated. However, an example suggests that aid can enable such flows even as measured through the transfer mispricing or trade misinvoicing model. Consider that some international donors have private sector financing operations that offer subsidised loans to enterprises in developing countries perceived to be too risky for regular international investors but judged relevant for their potential to generate jobs and contribute to development. Although most enterprises receiving such support will be honest small businesses that serve development purposes, if one of these happens to be a facade, set up to be a conduit for transferring money abroad illegally, aid can facilitate illegal shifting of money outside of the country.

## 3. Other models

### *The Composite Model*

Many researchers consider that measuring illicit financial flows more effectively requires combining models that measure their two main conduits: funds that flow through the banking system and funds that flow through manipulated invoices in import/export operations. Global Financial Integrity (GFI), an NGO that works on the topic, uses a combination of the WB Residual and Trade Misinvoicing models (Kar and Cartwright-Smith 2008).

There is no overlap in combining the two models because they capture data for different avenues of illicit flows. The WB Residual model looks for illicit flows within a

country's BOP, while the Misinvoicing model captures illicit flows between countries. The WB Residual model, for example, considers the difference between the source and use of official funds, so a difference suggests that money has been misappropriated by someone with access to the government's coffers. Trade Misinvoicing captures the amounts of money lost through mispricing the value of goods on trade invoices, such as a company trying to avoid taxes. As these are distinct opportunities for siphoning money away from developing countries, added together they can provide a more complete picture of the total amount leaving a country illicitly. This is the strength of GFI's method.

### The Walker Model

A direct measuring approach was developed by John Walker, in 1994, who prepared an estimate of the extent of money laundering in and through Australia. His model tries to incorporate proceeds from criminal activity by examining the problem in two stages. First, his model estimated the total amount of proceeds of crime (money that requires laundering) in a given country, and second, it examined the flows of such monies between any two countries.

Initially, Walker calculated the proceeds of crime (taking data from official estimates of, for example, kilos of cocaine sold, number of illegal weapons sold, etc.) and multiplied this by the market price of such goods. This calculation provided the total amount of money available for laundering. However, Walker was aware that not all proceeds of crime are laundered, so – based on interviews and survey data – he estimated the percentage that would likely be laundered. This gave him the actual amount of money available for laundering in each country. At the second stage, Walker analysed the flows of such monies, where he considered:

- The distance between any two countries. If countries share a border, the higher the likelihood of illicit flows between them.
- The attractiveness of a country to dirty money. To assess the attractiveness of a country to a money launderer, Walker considered the country's GDP (the richer the country, the more trade and, according to Walker, the more attractive to money launderers), the existence of bank secrecy, a government's tolerance of the problem, whether the country is a part of SWIFT,<sup>5</sup> the risk of conflict and, finally, the degree of corruption (launderers prefer stable and less corrupt countries).

This analysis would need to be carried out for all countries in the world for a global estimate. With those results in hand, Walker would then calculate the total amount of illicit flows into any given country.<sup>6</sup>

### Surveys and proxy measures

In his attempt to measure illicit financial flows, Raymond Baker (2005) came up with a figure of USD 500 to 800 billion by conducting hundreds of interviews across the world with heads of companies, government officials and experts. In addition to surveys, other proxy measures (such as observing fluctuations in the price and ownership of real estate and records of currency exchange transactions) could also provide an estimate of the size of the problem (Goredema 2005 and Unger 2007). The NGO Global Witness, for example, tracked ownership of real es-

tate in its investigation of corrupt proceeds laundered by the Equatorial Guinea's Obiang family (Palmer 2009).

## The limitations of these models

Of course, all the models outlined above have limitations. Some are shared among all, such as all the models' reliance on official statistics. Poor countries that fail to compile or to report their statistics accurately likely contribute to underestimations of illicit flows. GFI tried to overcome these issues by subjecting its country estimates to certain thresholds (for example, outflows with characteristics that would suggest illicit flows need to be consistent for at least three out of five years to be considered genuine cases) and has come up with what they consider to be a very conservative estimative of illicit flows from developing countries.

Second, with the exception of the Walker model, most models that rely on official statistics do not take into account flows resulting from illicit activities, such as contraband, smuggling, black market activity, etc, since profits from such activities are not captured in national accounts. Even though Walker tried to consider it, his model still faces the problem related to accuracy of statistics on estimates of proceeds of crime collected by countries. Trying to collect such data is difficult due to the secret nature of such activities. Also, proceeds of crime data rely on reported crime, which only is a small fraction of total criminal activity in most countries. Finally, Walker's model cannot be verified against any other calculation of total amount of illicit flows, as such outflows are not measured by any other official source. The assumptions of the model are also based on Walker's own experience and, apparently, trial and error (Unger 2007). This leads to some debate on rigorousness and the reliability of results.

Third, no model measures the totality of illicit flows. The total coming out of a country illicitly should include everything: corruption money, criminal money and tax evasion. Fourth, a general limitation to all models is how to treat interest on the assets held abroad (Eggerstedt et al 1993).

Finally, the mispricing method has the added difficulty of tackling the global nature of industrial production. It is common that parts of products come from different countries. Therefore, accurately establishing the origin of goods is not as straightforward as it might seem, making it more difficult to define where taxes should be paid.

## Suggestions for an expanded analysis

Understanding the scope of information provided by the existing measurement mechanisms, as well as their limitations, should be the first priority of anyone using these figures. Once the shortcomings are clear, the need for more extensive and more reliable measurement also becomes evident. Policy makers who rely on such data would particularly benefit from:

- **Improved data collection systems**  
A contribution to improve quality of statistical information in developing countries is within the scope of international development cooperation activities. More reliable data would greatly contribute to the application of the methods mentioned above, thus resulting in more accurate illicit flows figures. If developing countries were able to provide more

consistent data on, for example, international trade, measurement methods that rely on these would enable developing countries authorities to more accurately track tax evasion. The same would apply to other data sets (such as crime statistics) collected by police and other authorities. Models are simply the framework and depend entirely on the quality of the data inputs.

- **Country knowledge vs. global figures**

Rich and poor countries both suffer from illicit financial flows. Problematic for rich countries, such outflows have devastating consequences for the poor ones: they contribute to persistent poverty and entrenched unaccountable governance practices. Therefore, exclusive reliance on mechanical measuring tools that provide global figures but do not give a sound description of conditions in a particular country works against informed policy making in the countries that need it most. Knowledge of illicit flows processes at country level would also more clearly link these flows to their impact on poverty reduction efforts in a particular country.

- **Statistics vs. broader questions**

Baker (2005) regrets the dependency on statistics and the tendency to “allow the availability of data to shape the questions, rather than having questions determine the pursuit of data.” As the models described above indicate, assessing the size of the problem, its relevance, and the amount of effort required to deal with it, has been driven by the current availability of statistical data. The issue has not been addressed by many disciplines beyond economics. Political scientists, for example, could contribute with an understanding of the drivers behind illicit flows or actors stalling (or moving forward) progress on this issue. Other fields of knowledge could enlarge the pool of questions and possible answers, adding value to the dry numbers that current models offer.

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## Notes

1. The term capital flight does not necessarily mean illegal transactions (Eggerstedt 1993). To mark clearly the distinction between legal flows from illegal ones, some researchers prefer the more precise term illicit financial flows.
2. According to the IMF, the BOP is a summary of the economic transactions between the residents of a country and nonresidents during a specific period, usually a year. The BOP includes transactions in goods, services, income, transfers and financial assets and liabilities. Generally, the BOP is divided in two: i) the current account and ii) the capital account.
3. As indicated above, the current account is one of the two components of the balance of payments. The other is the capital account. Current account is the sum of exports minus imports of goods and services, payments of income (such as interest and dividends), and transfers (such as foreign aid). The current account reflects a nation's net income. The capital account reflects national ownership of assets (for example, measures payments of capital goods such as machines, licenses, etc).
4. There are two methods of estimating illicit flows within the Hot Money model: one adds short-term capital transactions to the errors and the other does not. However, short-term capital transactions are not illegal, so they should not be included when estimating illicit flows (though they contribute to estimates of legal capital flight). Neither includes long-term investment, which is a type of transaction assumed not to enable illicit outflows.
5. SWIFT is the Society for Worldwide Interbank Financial Telecommunication. (<http://www.swift.com/>)
6. Unger (2007) modified the model in line with international trade theory to minimise some of the limitations of Walker's original empirical approach. The final model was baptised the Walker Gravity Model.