Remittances: How reliable are the data?

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Introduction

Migrant remittances are commonly understood as private monetary or in-kind, cross-border and internal transfers that "migrants"[2] send, individually or collectively, to people with whom they maintain close links (IOM, 2013:405). In this paper, we refer exclusively to formally recorded cross-border financial remittances.

Usually depicted as a tool for financing "development",[3] these types of financial transfer (especially to developing countries) have received utmost attention in the migration and development discourse, policy and practice since estimates on the volume of remittances have become widely available.

In parallel, the international community has devoted great attention to evidence-based policymaking, which has resulted in the examination of existing data, data collection methodologies and data sources, including those related to remittances. As such, not only the impact of remittances on development but also the existing techniques to measure remittances and to estimate remittance transfer costs are under greater scrutiny.

In this paper, we briefly discuss issues related to estimations of aggregate volumes of remittances, bilateral remittances and remittance transfer costs.

We suggest that the methodologies commonly used to estimate remittances and remittance transfer costs necessarily introduce a number of biases or suffer from limitations that confirm how problematic it is to generate accurate "evidence" on remittances.

Estimating aggregate volumes of remittances

Remittances, as defined by the International Monetary Fund (IMF), represent "household income from foreign economies arising mainly from the temporary or permanent movement of people to those economies" (IMF, 2009a:272). Notwithstanding the functionality of this definition, measuring techniques conventionally used to estimate remittances can hardly ensure a perfect match between such definition and the data collected by central banks, money transfer operators or through other sources of data on such financial flows.

Estimations of the total remittances received by any single country generally rely on survey-based estimates or on data from the national balance of payments.

Survey-based estimates are especially widespread in Latin America, and are largely reliant on the methodology proposed by Orozco (2006). The latter uses United States census data and random nationwide migrant surveys to estimate the percentage of migrants that remit money, and data from money transfer companies to determine the "mode, median and average amount sent" (Orozco, 2006:24; in Bakker, 2015:36). The data are combined in a formula that allows calculating the "total volume of remittances by multiplying (1) the total number of migrants, (2) the percentage of migrants that remit and (3) the average amount remitted" (ibid.).[4]

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2 Space limitations preclude a detailed discussion about the definition of "migrant". Suffice it to note that there is no universally agreed definition and that international migration statistics are collected from different sources (censuses, population registers, surveys, administrative data) that rely on different definitions (which may vary according to place of birth, nationality, citizenship, length or purpose of stay, and other parameters) and sampling techniques.

3 For example, by the European Commission, in discussions about the post-2015 development agenda or G8 and G20 discussions on development financing.

4 This methodology is not applied globally, as it is difficult to operationalize it in every country given that migration patterns are complex and remittances indeed originate from different sources. For a discussion on the methodology and the Latin American context, see: M. Bakker, "Discursive representations and policy mobility: How migrant remittances became a 'development tool'", *Global Networks*, 15(1):21–42.

Bakker (2015), however, points out some limitations; for instance, the difficulties of updating regularly the survey data, and thus the use of a static coefficient of per capita remittances sent by migrants; and the fact that using the increase in migrant stocks as a parameter to adjust remittance estimates introduces a bias, as this will necessarily imply also an increase in remittances.

Data based on the balance of payments framework are the most widely used. Those datasets allow, among others, to estimate aggregate volumes, as well as bilateral remittances following the model developed by Ratha and Shaw (2007; see below).

According to the sixth edition of the IMF *Balance of Payments and International Investment Position Manual (BPM6)*, two standard components are used to calculate remittances: compensation of employees and personal transfers. These are completed by supplementary items, which are not always recorded in the balance of payments (and are not discussed here): capital transfers, capital transfers between households, social benefits, current transfers to NPISH[5] and capital transfers to NPISH.[6]

Before discussing the standard components, it is worth mentioning that the balance of payments framework relies on a distinction of residents from nonresidents of a reporting economy. Regarding residence, the IMF specifies:

> According to *BPM6*, "[t]he residence of households is determined according to the centre of predominant economic interest of its members". The general guideline for applying this principle is "being present for one year or more in a territory or intending to do so is sufficient to qualify" as being a resident of that economy. Short trips to other countries – for recreation or work – do not lead to a change of residence, but going abroad with the intention of staying one year or longer does (IMF, 2009b:18).

Therefore, it is clear that remittance statistics based on the balance of payments framework are not based on migratory status but on resident status of both the employer and the employee. This is a crucial point as, statistically, migrants who are residents cannot be distinguished from non-migrant residents.

Concerning standard components, **compensation of employees** represents the "remuneration in return for the labor input to the production process contributed by an individual in an employer–employee relationship with the enterprise" (IMF, 2009b:19). When related to remittances, compensation of employees "refers to the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident *and of residents employed by nonresident entities*"[7] (IMF, 2009a:272). The latter implies that, under compensation of employees, the total wages of border, seasonal and other short-term workers, and also the salaries of resident staff of nonresident employers such as embassies, consulates and international organizations as well as other nonresident companies, are recorded as remittances. The latter may constitute a significant part of the compensation of employees in some economies and may therefore introduce a bias into what is actually recorded as remittances, and what is frequently interpreted as migrant remittances.

Personal transfers "consist of all current transfers in cash or in kind made or received by resident households to or from nonresident households. Personal transfers thus include all current transfers between resident and nonresident individuals" (IMF, 2009a:273). In other words, remittances sent by resident migrants are recorded together with any other personal transfers between residents and nonresidents.

In conclusion, by adding compensation of employees and personal transfers, the balance of payments records remittances as defined by the IMF (see definition on p. 42), together with other transfers between residents and nonresidents. The bulk of such transfers may represent high amounts in some economies, for instance, where international organizations, embassies, consular networks or nonresident companies are well established and

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5   Nonprofit institutions serving households.

6   For more details, see: International Monetary Fund (IMF), *Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6)* (Washington, D.C., IMF, 2009), pp. 274 and 275.

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7   Italics added by the authors. It is worth mentioning that students, medical patients, ship crew, diplomats, military personnel and civil servants employed abroad in government enclaves, regardless of the length of stay in a host economy, are considered residents of the originating economy (IMF, *Balance of Payments and International Investment Position Manual, Sixth Edition (BPM6)* (Washington, D.C., IMF, 2009)).

employ large numbers of resident staff. It is therefore extremely difficult to ascertain the extent to which these data can reveal actual migrant remittances, considering also that the balance of payments can only account for formally recorded transfers.

Estimating bilateral remittances

Bilateral remittances are remittance flows between two countries. Estimating bilateral remittances is seemingly more problematic than estimating the total volume of remittances received by a single country. The World Bank modestly admits that: "credible national data on bilateral remittances are not available", as "funds channeled through international banks may be attributed to a country other than the actual source country" (Ratha and Shaw, 2007:43). For this reason, Ratha and Shaw (2007) proposed a methodology to calculate bilateral remittances, using three allocation rules: "(i) weights based on migrant stocks abroad; (ii) weights based on migrant incomes, proxied by migrant stocks multiplied by per capita income in the destination countries; and (iii) weights that take into account migrants' incomes abroad as well as source-country incomes" (ibid.).

This method applies a formula to calculate the remittances sent by a single migrant from one country to another. The average remittance sent by a migrant from country i in destination country j (r_{ij}) is modeled as a function of the per capita income of the migrant country of origin and the host country or country of destination. The result of this calculation multiplied by the migrant stock in the host country j provides the total remittances received by country i from country j. The sum of remittances sent from all destination countries to country i provides the total remittances in country i, that is R_i (where R_i is the total amount of remittance inflows to country i, as reported in the balance of payments[8]; see World Bank, *Migration and Development Brief* 23, p. 27[9]).

The method that probably provides "the fullest, though arguably the least, accurate set of data"[10] on remittances is the Bilateral Remittance Matrix, developed and maintained by the World Bank. Indeed, a few observations regarding the selection of parameters to calculate bilateral remittances deserve to be mentioned:

a. The calculation of the average remittance sent by a migrant in a destination country (r_{ij}) is based on migrant stocks. However, as noted by several authors (including Parsons et al., 2005), there is no consistent and universally agreed definition of "migrant" and, even when migrant stocks estimates are available, these only take into account migrants who hold a regular status.

b. The difficulties associated with data deriving from the balance of payments (R_i) are discussed in the preceding section.

c. The gross national income (GNI) per capita is an important parameter in the calculation. However, the formula assumes that every migrant sends at least the equivalent of the GNI per capita in his or her country of origin (even when it may be higher than the GNI per capita in the country of destination). This choice is justified by the assumption that "migration occurs in the expectation of earning a higher level of income for the dependent household than what the migrant would earn in her home country" (Ratha and Shaw, 2007:45). This further implies that migrants are assumed to earn at least the equivalent of the GNI per capita of the country of origin, which may not always hold true (not to mention that the GNI is an average that does not reveal internal inequalities in income distribution).

Efforts to improve remittance data are laudable, and data suppliers have admitted the numerous inadequacies of remittance estimates. However, this raises a question regarding what we can actually

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8 A parameter β, comprised between 0 and 1, allows Ri to correspond to the total remittances as identified in the balance of payments framework.

9 Available from http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1288990760745/MigrationandDevelopmentBrief23.pdf

10 This expression, borrowed by Ratha and Shaw (*South–South Migration and Remittances*, World Bank Working Paper No. 102, (Washington, D.C., World Bank, 2007)), from Parsons et al. ("Quantifying the international bilateral movements of migrants", Working Paper T13 (Brighton, Development Research Centre on Migration, Globalisation and Poverty, University of Sussex, 2005)), was used to qualify the bilateral migration matrix hosted by the World Bank. In this paragraph, the authors borrow this phrase to apply such qualification to the Bilateral Remittance Matrix.

know about migrant remittances, and remittances at large, given the debatable nature of the parameters commonly used to craft remittance statistics. What is more, it is indeed difficult to understand what is actually measured as remittances and, therefore, what the resulting trends actually reveal when remittance estimates are compared over the years. While this may not be problematic per se, for policymaking purposes it may be problematic to rely on data that may be useful to understand the evolution of certain parameters used to estimate remittances, but that do not really account for migrant remittances as broadly understood in the migration and development policy domain.

Estimating remittance transfer costs

Information collected on remittance transfer costs during the last decade has shed light on the high costs incurred by migrants around the world when sending remittances, and has contributed to bringing this issue to the forefront of the international development scene. Nevertheless, the data currently available are not accurate and complete enough, neither to assess the true cost of remittances nor to understand what drives cost fluctuations or monitor this rapidly evolving market.

Concerning cost estimation methodologies, at present, the most complete data set on remittance transfer costs available is developed and maintained by the World Bank (see Remittance Prices Worldwide[11]). Updated four times a year since 2008, this data set provides information about the costs of sending money on 227 corridors worldwide.

The data from the Remittance Prices Worldwide group at the World Bank are collected solely through mystery shopping. Through this methodology, researchers – presenting themselves as customers – collect the pricing information manually from the money transfer service providers, either by making an actual transaction or by asking the cost of a transaction in person, over the phone or through a Web interface. Cost information is collected for each corridor and for two different sending amounts (the equivalent of USD 200 and USD 500), from a range of money transfer operators and banks. Using this methodology,

the World Bank collects around 20,000 data points[12] each year, which are then used to calculate the global average cost of remittances – that is, the average of the average cost per corridor, weighted by the size of each corridor (based on the Bilateral Remittance Matrix discussed in the previous section).

While the information on remittance transfer costs collected by the World Bank constitutes the most accurate global data set currently available, a number of limitations inherent to the data collection methodology and the way indicators are constructed deserve to be discussed.

First, because mystery shopping is a resource-intensive data collection methodology, the scope of the data set must be targeted. This limits the number of corridors that can be monitored, the number of data points collected on each corridor and the frequency of data updating.

Second, in markets where costs fluctuate significantly over time and where costs vary substantially depending on the amount transferred, data collection regarding the costs of sending two amounts (USD 200 and USD 500) every three months can only provide an approximation to real costs. As a matter of fact, operators will often have more than 10 different pricing tiers between USD 10 and USD 5,000, with different fees for each tier and usually different exchange rates. As a result, the data currently collected are a snapshot that fails to describe the bigger picture.

Finally, the Remittance Prices Worldwide group of the World Bank publishes a quarterly report to monitor the evaluation of remittance transfer costs, using the average cost per corridor as main indicator. The main limitation of the corridors' averages is that they are not weighted by the number of migrants using each money transfer service provider for which data are collected. This means that in some cases, banks offering unfavourable exchange rates (at least for the amounts for which data are collected) but used by a few migrants will skew the average upwards. Likewise, if a new money transfer operator offering low transfer costs enters a market, the average will drop even though only a small proportion of migrants use this new service.

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11 Available from https://remittanceprices.worldbank.org/en

12 A data-point refers to the costs information of one particular service for one particular amount.

How then to obtain better data on remittance transfer costs? First, we must admit that obtaining better data on remittance costs is extremely challenging. In order to accurately monitor the remittances market, we probably need to collect a hundred times more data points than what we collect today. Automated or crowd-sourced data collection systems are likely to enable the development of a more complete database. Whenever possible, integration with money transfer service providers through API[13] or Web scrapers[14] should be developed to receive their prices in real time. For offline agent-based money transfer service providers, proper incentives have to be developed to encourage clients to report the costs in a central database.

Once a more accurate global data set on money transfer costs is available, various indicators can be developed to monitor the evolution of the money transfer service offer. In order to assess the actual costs incurred by migrants, the development of more complex models will be necessary, including detailed information about migrants' transfer habits (average amount, frequency, type of money transfer used, etc.), to calculate a weighted average cost of remittances for each corridor.

Conclusion

Seemingly, at present, it is extremely difficult to generate accurate data on the aggregate volume of remittances, on bilateral remittances and on remittance transfer costs. For policymaking purposes, it may be worth exploring ways to improve our understanding of remittance transfer costs by facilitating new partnerships that allow for the development of more complex methodologies and datasets. Better estimations of remittance costs are not only likely to influence the transparency of remittance prices, but also to address current priorities relating to reducing remittance transfer costs. ■

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13 API is the abbreviation of application program interface. It is a set of routines and protocols that allow two Web applications to interact and share information.

14 A Web scraper is a computer software technique to extract information from websites.