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# MINING REMITTANCE DATA: PRACTICAL CONSIDERATIONS ON SURVEY DESIGN AND ADMINISTRATION

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# MINING REMITTANCE DATA: PRACTICAL CONSIDERATIONS ON SURVEY DESIGN AND ADMINISTRATION

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# MINING REMITTANCE DATA: PRACTICAL CONSIDERATIONS ON SURVEY DESIGN AND ADMINISTRATION

## INTRODUCTION

This briefing offers practical guidelines and observations about survey data collection on remittances and how this data informs thinking on migration and development policy making. Obtaining accurate data on the volume of migrant remittances flows is notoriously difficult, as many remittances transfers still occur informally and even when funds are transferred through official channels—such as bank accounts, the internet, paid cards or phones—the mechanisms for measuring these flows are weak. However, the volume of remittances transfers and awareness of the importance of remittances to poverty reduction have grown over the last decade and donors and organizations specializing in migration-related issues have increasingly supported efforts to improve remittances-related information.

An accurate understanding of the size of remittances flows is the first step in understanding their impact, but donors and policymakers are equally interested in obtaining information on the ways in which these funds are transferred and used by recipients. Mechanisms for sending have important implications for the cost to senders; for the degree to which both senders and recipients are integrated into formal financial systems; and for the opportunities offered by new technologies to lower costs and leap-frog traditional challenges associated with accessing brick and mortar banks and microfinance institutions. Information on the ways in which remittances are used by different recipient communities further enables policy makers to support the development of financial products and other mechanisms through which to support poverty alleviation.

Remittances surveys are critical to obtaining information in all of these areas. Working directly with remittances recipients and senders enables policy makers to better understand the variety of factors impacting how much is sent, how funds are sent, and how they are used. This information is then used to develop policy recommendations to expand and facilitate the transfer and use of these funds towards further investment opportunities and savings activities that could yield considerable benefits to the financial sector and remittance recipients.

This paper provides an overview of remittances survey methods and considerations to provide guidance for donor agencies and policy makers interested in supporting or evaluating remittances related surveys. It is divided into five sections covering the following issues:

1. Objectives of donor agencies
2. The context for remittances surveys
3. Remittances survey designs

4. Evaluating policy options and overcoming challenges
5. Conclusions

## **1. OBJECTIVES OF DONOR AGENCIES:**

Remittances are at the intersection between migration and development because of their sheer volume, effect on household income, and contribution to financial asset building improve people's quality of life. On an aggregate level the impact of remittances has a demonstrated effect on reducing poverty, increasing growth and strengthening financial systems. Under certain conditions, when the productive base of the local economy is unable to absorb these foreign inflows, macroeconomic imbalances such as currency and land appreciation can result. However, overall these flows exhibit a greater potential to enhance the quality of life of society at large, as well as for migrants and their families in particular. Capitalizing on this potential is contingent on the development of effective policy solutions to existing challenges.

This reality speaks directly to the goals of development agencies such as USAID, as well as the scope of operations of individual missions. In this arena USAID is focused on providing foreign assistance to alleviate poverty, particularly in rural areas; contribute to increased financial access by supporting the development of asset building instruments and institutions; and devising income generation strategies linked to the global economy, such as export capacity, agricultural modernization and public-private partnerships among others. Moreover, those countries where U.S. foreign aid operations are active also tend to be those where migration and remittance rates are higher. Overlapping trends in remittances flows and foreign assistance flows further support prioritization of research and funding in this area and data collection is a first order source of development intelligence: USAID relies on surveys, primary data, and expert advice to design appropriate strategies. Survey data in particular serves as an important input to inform operational thinking on development and remittances.

## **2. THE CONTEXT FOR REMITTANCES SURVEYS**

Remittances surveys require a clear statement of objectives and a clear conception of the population, or survey universe, that will be studied in order to determine how in-depth the survey will need to be and what types of questions it will include. A clear conception of the audience for the final information will also assist in determining the categories of information that will need to be obtained. Surveys must balance the need for in-depth information about the specific topic with a survey that can be accurately administered and is not overly burdensome for respondents.

Remittances surveys typically focus on several key issues: the determinants of remittances sending; the impact of remittances on poverty; the ways in which migrant households use remittances; methods of sending; and the differences between how domestic and international remittances impact poverty and development. These issues are addressed through questions in the categories of: basic demographic information and patterns of sending; competitive market conditions; and extended questions on use of transfers, financial integration, transnational issues, and living conditions of senders and/or receivers.<sup>1</sup>

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<sup>1</sup> Richard H. Adams, Jr. *Using Household Surveys to Study Remittance Flows in Developing Countries*. International Technical Meeting on Measuring Remittances January 24-25, 2005 Washington, DC. Development Research Group (DECRG), World Bank.

Demographic information is essential for understanding remittances trends and priorities along specific corridors or regions. Groups and sub-groups have different characteristics of sending that provide information on how gender and age; countries of origin and migration; length of time sending; income and educational levels of senders and receivers; etc influence the amounts sent, mechanisms of sending, and use of funds.<sup>2</sup>

Questions on markets build an understanding of the competitive environment for remittances transfers in a specific corridor. These questions focus on the mechanism used to transfer funds and the costs in terms of both money (% of transfer charged) and time (to obtain and pick up the transfer). More extensive questionnaires provide nuanced understandings of remittance senders and receivers. Questions related to finances include use of formal and informal savings or loan products, financial obligations, and methods of meeting those obligations (and what role remittances play in doing so).

**TABLE 1: CATEGORIES OF REMITTANCES SURVEY QUESTIONS**

<p><b>Demographics/Characteristics</b></p> <ul style="list-style-type: none"> <li>• Age/gender/education</li> <li>• Occupation/income</li> <li>• Location</li> <li>• Country of origin/migration</li> <li>• Length of time receiving/sending remittances</li> <li>• Value of remittances (size, frequency)</li> <li>• Use of funds (education, health, business, etc.)</li> <li>• Assets (ownership of house, car, equipment/appliances)</li> <li>• Access to services</li> <li>• Type of remittance: pecuniary, physical, social; national, international</li> </ul> <p><b>Markets</b></p> <ul style="list-style-type: none"> <li>• Transfer methods (banks, MFIs, MTOs, informal, etc.)</li> <li>• Cost (% of remittance charged for transfer)</li> <li>• Cost (time to obtain transfer)</li> </ul> <p><b>Finances</b></p> <ul style="list-style-type: none"> <li>• Ownership of bank account (formal)</li> <li>• Other method of saving, investing, borrowing (informal)</li> <li>• Financial obligations</li> <li>• Methods for meeting obligations</li> </ul>	<p><b>Transnational issues</b></p> <ul style="list-style-type: none"> <li>• Frequency of trips “home”</li> <li>• Identification with country of origin</li> <li>• Home Town Association involvement</li> </ul> <p><b>Alternative payments</b></p> <ul style="list-style-type: none"> <li>• Use of cards, internet and mobile phones/mobile banking</li> <li>• Willingness to try new methods</li> </ul> <p><b>Gender</b></p> <ul style="list-style-type: none"> <li>• Family structure</li> <li>• Family care</li> </ul> <p><b>Living conditions</b></p> <ul style="list-style-type: none"> <li>• Type of dwelling (materials, size)</li> <li>• Consumption of essentials</li> <li>• Consumption of non-essentials</li> </ul> <p><b>Other</b></p> <ul style="list-style-type: none"> <li>• Method of transfer</li> <li>• Reasons for using transfer method</li> <li>• End user prices</li> </ul>
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<sup>2</sup> Gauging the specific use of remittances transfers is challenging because funds are typically fungible and may be incorporated into household spending as any other type of income. While data on this is weak, there are reasons why remittances may be viewed differently and this information is of use to policymakers. For example, through use of stored value cards and other technologies, senders can increasingly stipulate how funds will be used. Further, recipients may allocate these funds for specific activities, such as education or investment, in a different way than they do their income from employment. ([http://www.wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2007/07/06/000016406\\_20070706153903/Rendered/PDF/wps4272.pdf](http://www.wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2007/07/06/000016406_20070706153903/Rendered/PDF/wps4272.pdf))

Finally, specialized questionnaires include additional information on transnational issues, alternative payments, detailed gender issues, and living conditions. Transnational issues measure the degree to which a migrant stays involved, financially or otherwise, with their home town or country. There is a wide body of literature on theories of migration and remittances suggesting that determinants of migration range from the individuals' effort to maximize income to the households' strategy to minimize income risk. Along this spectrum remittances may be sent as a form of insurance or to improve chances of receiving an inheritance; to be invested in the home country; to pay back loans received for the initial migration; simply to maintain linkages with the home country; as a reflection of the intention to return to the home country; or out of pure altruism.

Questions on alternative payments seek to understand where and why new technologies are being used and what opportunities there might be to expand their use into new markets. Gender and living conditions seek to understand how remittances may be altering relationships and impacting poverty and development concerns.

Furthermore, understanding the degree or lack of access to finance—and how remittances may support improvements in this area—is of great importance for poverty reduction efforts. Donors and agencies can support the development of specialized products and strategies to improve financial security for remittances recipients based on an improved understanding of their behavior and needs.

### 3. REMITTANCES SURVEY DESIGNS

This paper highlights four types of remittances survey designs that researchers can choose from in devising the most suitable strategy to obtain remittances information. These surveys are categorized by the unit of analysis: the household and the individual. These approaches differ in terms of the kinds of information that can be obtained, the resources necessary to implement them, and in some cases, in terms of philosophical approach. The household surveys are extended household and head of household (or non-extended household), both of which are used to obtain information about remittances flows at the macro level and are among the most resource intensive methods. Targeted individual surveys are street-based (market) and point of presence or group surveys, which are used to obtain information directly from known remittance senders and recipients. Table 2 summarizes some of the key characteristics that differentiate these surveys:

**TABLE 2: KEY CHARACTERISTICS OF FOUR SURVEY METHODS**

Survey type	Extended head of household	Non-extended/ head of household	Market/ street based	Point of presence
Cost	High	High	Low	Low
Time	High	High	Low	Low
Logistical complexity	High	High	Medium	Low
Complexity of remittance data	Low	Low	High	High
<b>Unit of analysis</b>				
Household	X			
Head of household		X		
Individual	X	X	X	X

### 3.A. HOUSEHOLD SURVEYS

The Luxembourg Group on Remittances<sup>3</sup> views household surveys as the most effective mechanism for obtaining data on remittances. Household surveys use a random and representative sample population to gather a wide range of socio-economic data including household characteristics, income, expenditure, and employment and questions on migration and remittances may be included. There are generally two types of household surveys that can be used to gather information on remittances: i) extended household surveys, that gather data on everyone in the household; and ii) head of household surveys, that only gather data on one member of the household.

There are two major reasons why an organization would choose to gather data on remittances using household surveys. To begin with, a government, a Money Transfer Operator (MTO) or development agency might be interested in estimating global remittance flows to a country. While formal remittance flows (i.e. money being sent through a remittance company or bank) can be tracked using Central Bank data, it is recognized that some percentage, and often times a large percentage, of remittances go through informal channels (i.e. by mail, by courier, or by the remitter traveling home). As a result, a properly conducted household survey that probes participants on how they receive their remittances can help an institution understand remittance informality, and this data can be combined with formal remittance data to more accurately estimate country-to-country flows. Such data can be used by different types of public and private organizations to better understand market demand, potential investment opportunities, or relevant policy options.<sup>4</sup>

A second important reason why a development organization or government agency might gather remittance information using household data would be to analyze correlations and potential causality links between remittances and other socio-economic indicators, such as poverty status. By adding questions about remittances to such a household survey, researchers can analyze the potential effects of remittances on a household. A regression analysis where socio-economic indicators are independent variables and various remittance responses are dependent variables would allow for such an analysis. Do families receiving remittances have more children in school? Do families with children in the US versus UAE tend to send more money home and therefore tend to live in better housing conditions? Do families that receive remittances have a higher income and are they more food secure than those with family members working domestically? Questions such as these are important development issues for NGOs, donors and government ministries to understand, at both the national and local level, and statistically relevant results can only be obtained if proper household surveys are conducted.

The 2005 UN publication, *Household Sample Surveys in Developing and Transition Countries* provides a thorough guide to the methodology and implementation of household surveys. As this document describes, most household surveys use multistage stratified area probability sample designs, often based on national census data, in order to develop a sample frame at low cost.<sup>5</sup> This process consists of: 1)

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<sup>3</sup> The Luxembourg Group on Remittances was formed in June 2006. The first meeting was held on the premises of the European Commission in Luxembourg and 27 experts from 14 countries and 5 international organizations attended. The goal of the group is to improve the recording of statistics on cross-border remittances through the development of a compilation guide.

<sup>4</sup> See the following paper for more detailed global remittance flow methodologies: Manuel Orozco. "Estimating Global Remittances Flows: A Methodology." 2007. Commissioned by International Fund for Agricultural Development. <http://www.ifad.org/events/remittances/maps/methodology.pdf>

<sup>5</sup> "Household Sample Surveys in Developing and Transition Countries." Department of Economic and Social Affairs Statistics Division. United Nations. Series F No. 96. New York 2005. [http://unstats.un.org/unsd/hhsurveys/pdf/Household\\_surveys.pdf](http://unstats.un.org/unsd/hhsurveys/pdf/Household_surveys.pdf)

defining the strata—urban versus rural, specific districts, etc.; 2) selecting clusters such as villages or blocks; 3) selecting households *randomly and representatively* within those clusters. While census data are frequently used to establish the sample for a survey, household surveys can also be used to replace a census for general coverage when a government is attempting to gather broad macroeconomic data and willing to extrapolate from a relatively small sample set. As a result, the choice of which type of household survey to choose often depends on the amount of data available at a country's bureau of statistics and the level of resources available for training and conducting the survey.

The most widely referenced international household surveys are those implemented by the World Bank's Living Standards Measurement Study (LSMS). While this study started in 1980, efforts continue to refine household surveys on a variety of policy-relevant indicators and to continuously improve the type and quality of data collected.<sup>6</sup> Currently migration is only at an experimental stage of inclusion in the LSMS. This research aims to improve household surveys of migration in general, establishing protocols for the definition of the household, improving methodologies to track remittances that are received in-kind, and integrating a variety of sources of information to improve overall tracking of remittances flows.<sup>7</sup>

The socio-economic metrics used in household surveys usually include: education, literacy, health care, housing, food security, vulnerabilities and expenditure (as a proxy for poverty level). The survey questions gauge both qualitative and quantitative indicators. For example, education and literacy can be measured by the number of years of school completed by a member of the household. Health care can be measured in a number of ways including: a) whether any household members have been sick and/or lost days of work due to illness in the last 30 days, b) whether the family sought medical attention and where, c) whether recent mothers received prenatal care during their last pregnancy, and d) whether the family has access to health insurance, etc. Housing questions analyze the specific materials used for the client's floor, roof, and walls and may be compared to other poverty indicators throughout the survey. Questions about a family's assets – i.e. livestock, transportation, electronics, furniture, etc. – can also be used as a comparative poverty indicator. Questions regarding food security often use a more qualitative approach – including self-assessment – to determine whether the household had access to sufficient quantities of food. Finally, the Daily Per Capita Expenditure (DPCE) model analyzes a family's weekly, monthly, or yearly expenditures on common categories of household costs (i.e. food, schooling, transport, health, etc.) in order to calculate daily expenditure to be used as a proxy for a family's level of poverty.

### **3.A.i. Extended Household Survey**

The *extended* household survey is characterized by an emphasis on extensively interviewing every member of the household within the chosen sample set, or choosing one member of the household to answer questions about all members. Socio-economic data on schooling, health, age, occupation, literacy, etc. as well as data on the value of remittances each member of the household receives must be gathered for all family members. In general, the extended household survey allows for more in depth understanding of a household's livelihood activities. If each household member is interviewed then there is the possibility that more accurate data on expenditure and remittances is gathered. Also, by having a

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<sup>6</sup> "LSMS IV Activities." Living Standards Measurement Study. World Bank. <http://go.worldbank.org/V9D8WACS10>

<sup>7</sup> "LSMS IV: Research for Improving Survey Data." LSMS Team, Poverty Group, DECRG, World Bank. January 2006. [http://siteresources.worldbank.org/INTLSMS/Resources/3358986-1199367264546/Research\\_for\\_Improving\\_Survey\\_Data.pdf](http://siteresources.worldbank.org/INTLSMS/Resources/3358986-1199367264546/Research_for_Improving_Survey_Data.pdf)

more comprehensive data set on parents, children and other family members in a household, statisticians can more thoroughly correlate remittance information with other socio-economic indicators. However, extended household surveys are often time consuming and expensive to conduct. Therefore, if remittances questions are added on to an already long survey, there is certainly the possibility that specific questions on location of remitter, amount and frequency of remittances, and satisfaction of formal remittances services, will not be gathered in any detail.

### **3.A.ii. Head of household surveys**

A second representative sample survey is the non-extended, or head of household survey. The LSMS defines the head of household as someone who lives in the household and is acknowledged as the head on the basis of age (older), gender (generally, but not necessarily, male), economic status (main provider), or some other reason. The term is defined differently in different cultures and languages, but generally refers to a figure in the household that other household members view as the head, hence it is a self-declared status, not one decided upon by the research team.

A head of household survey can either be conducted with the head of the household themselves or with any other member of the household who can provide sufficient information on this person. Since household surveys are often conducted during daytime hours and during the work week, the head of the household is often not home and therefore another member must answer these questions. If a research team wants to ensure that socio-economic and remittances information is gathered directly from the head of the household then more resources must be allocated to allow a surveyor to come back to a household (either in the evenings or weekends, perhaps) to speak with this person.

There are several rationales for conducting this kind of survey. To begin with, a research team can expect that it will cost less and take less time to finish because there will be fewer questions than an extended household survey. In addition, it is generally accepted that the head of the household has an understanding of the family's financial affairs, including remittance flows, and can provide the most accurate data.

### **3.A.iii. Learning from past household surveys**

While the LSMS, described above, is the largest and longest standing household survey initiative, a number of other international organizations working to improve the efficiency and effectiveness of remittances transfers regularly conduct household surveys as well. Recent examples include the International Organization on Migration (IOM) migration and remittances studies; the International Labor Organization (ILO) modules for Labor Force Surveys<sup>8</sup>; and a module on remittances under development by the Inter-American Development Bank (IDB) for inclusion in household surveys throughout Latin America and the Caribbean. These examples can help development organizations understand the different types of information gathered in a household remittance survey, and help practitioners understand how remittance data can be used to inform policy and programming decisions.

The 2007 ADB-led *Household Survey on Remittances and Poverty, Regional Technical Assistance on remittances and Poverty in Central Asia and South Caucasus*<sup>9</sup> surveyed households in Armenia, Azerbaijan, Kyrgyzstan, and Tajikistan. The survey covered information on household migrants, non

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<sup>8</sup> International Labor Organization, Labor Force Surveys. <http://www.ilo.org/dyn/lfsurvey/lfsurvey.home>

<sup>9</sup> *A Study on International Migrants' Remittances In Central Asia*. Asian Development Bank. November 2007. [www.adb.org/Documents/TARs/REG/40038-REG-TAR.pdf](http://www.adb.org/Documents/TARs/REG/40038-REG-TAR.pdf)

household migrants, transfers, income livestock, crops, expenditure, savings, housing, assets, borrowing, business, health, education, access to health and financial services, and propensity to migrate. The study described the main formal and informal channels of remittance flows and compared costs of remittance transfers through different channels. This information was used to help financial institutions expand intermediation of remittance transfers, develop and market new remittance-related products, and securitize future income from intermediation of remittance transfers. In addition, the household study, coupled with thorough research of the financial sector, helped governments in the region formulate and reform existing policies that could lower the cost of remittance flows and improve the environment for more formal financial sector engagement in remittance transmission and provision of innovative remittance-related financial products and services.

The 2007 USAID supported household survey, *Remittances, Poverty Reduction and the Informalisation of Household Wellbeing in Zimbabwe Marginality and Vulnerability: Social Protection at the Margins*<sup>10</sup> uses the Oxford University Global Poverty Research Group's methodology consisting of 52 quantitative and qualitative questions, which generate descriptive statistics on receipt, impact and use of remittances by households, life events narratives on migrant journeys, measurements of informality and livelihood profiles. The study indicated that a wide network of international migrant remitters are helping their families cope with the economic crisis in Zimbabwe by sending monetary and in-kind transfers to over 50 % of urban households. The research combines quantitative measurement of scale and scope with demographic and qualitative narrative to build a holistic picture of the typography of receiving and non-receiving households. Interrelated variables help to explain why some households do and others do not receive income and goods from people who are away, and the economic and social extent of their subsequent benefit from them.

A study of *Migrant remittances and microenterprises in El Salvador*<sup>11</sup> used data from the 1999 Salvadoran *Multipurpose Household Survey*, conducted by the Salvadoran Statistical Institute (DIGESTYC) with funds from USAID, to consider the relationship between migrant earnings and small businesses. It provides detailed information on more than 16,000 households about education, employment and health, as well as remittances and microenterprises. Simple statistical analysis showed that only 1 in 5 working Salvadorans without remittances is self-employed, while more than 1 in 4 remittance-receiving Salvadorans works as a micro-entrepreneur. Regression analysis was then used to investigate the relationship between remittances and microenterprises while controlling for other variables that influence microenterprise ownership and investment. By using probit and OLS econometric models to estimate the probability of self-employment and the level of microenterprise investment, the paper provides evidence that migrant remittances reduce liquidity constraints on business owners, and both male and female entrepreneurs in migrant households tend to have capitals stocks more than twice as large as entrepreneurs in non-migrant households.

A 2006 World Bank research policy paper, *Remittances and Poverty in Ghana*<sup>12</sup>, uses a large, nationally representative household survey to analyze the impact of internal remittances (from Ghana) and

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<sup>10</sup> Bracking, Sarah and Sachikonye, Lloyd. *Remittances, Poverty Reduction and the Informalisation of Household Wellbeing in Zimbabwe Marginality and Vulnerability: Social Protection at the Margins*. Living on the Margins Conference. March 2007. <http://www.plaas.org.za/events/conference/2007%20LOM/papers/bracking>

<sup>11</sup> Huneycutt, Brett. *Migrant remittances and microenterprises in El Salvador*. January 2003. Boston College. [fmwww.bc.edu/EC/newsarchive/Huneycutt.pdf](http://www.bc.edu/EC/newsarchive/Huneycutt.pdf)

<sup>12</sup> Adams, Richard. *Remittances and Poverty in Ghana*. Development Research Group (DECRG). World Bank Policy Research Working Paper 3838. February 2006.



international remittances (from African and other countries) on poverty in Ghana to show that remittances reduce the level, depth, and severity of poverty in Ghana. The household survey showed that the size of the poverty reduction depends on how poverty is being measured. The author finds that poverty is reduced more when international, as opposed to internal, remittances are included in household income, and when poverty is measured by the more sensitive poverty measures—poverty gap and squared poverty gap<sup>13</sup> Such findings can encourage development organizations, government agencies and remittance companies to work together to improve efficiency and affordability for formal remittance avenues for families with members living outside the country.

### **3.A.iv. Considerations with Household surveys**

Household surveys are the most effective means of obtaining information about national and regional trends in remittances sending, and are therefore the only reliable choice for donor or government agencies interested in obtaining or updating statistically significant data on the size and direction of remittances flows. However, household surveys are both complex and resource intensive and both extended household surveys and head of household surveys have a number of issues that need to be addressed during the survey design. Depending on the analytical and policy needs, the choice of adopting a survey will be informed by the specific considerations of those issues:

#### *Defining the unit of analysis*

The very definition of a household may be challenging to obtain—particularly for longitudinal surveys—as living arrangements are not constant across countries, communities, or time.<sup>14</sup> Individuals may enter leave a household on a temporary or permanent basis or the individuals that benefit from remittances transfers may not be located under the same roof but may conceive of themselves as a household unit. In extended household surveys in particular it may therefore be challenging to obtain information from all members. Head of household surveys, meanwhile, may suffer from a lack of information if the head of the household is unaware of the financial circumstances, and remittances received, by all members. Essentially, there could be quality-efficiency compromises that must be made when choosing whether to engage in an extended household or head of household survey. The survey analyst is ultimately responsible for defining the parameters of the household according to the most appropriate form for the specific circumstances. A consistent and transparent approach needs to be determined at the outset and communicated to the survey team.

#### *Representative sample and sampling errors*

Where countries do not have a recent or complete census, it may be extremely challenging to obtain a representative sample with known probabilities of selection for either type of household survey. Out of date census data will cause errors in the sample frame, such as when households no longer exist where the last census suggested. Furthermore, census data will not account for undocumented workers who are also sending money home through formal or informal channels. This may lead to sampling errors and the survey will not be applicable to the population at large.

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<sup>13</sup> The poverty gap index is defined by the World Bank as the mean shortfall from the poverty line (counting the non poor as having zero shortfall), expressed as a percentage of the poverty line. As the name suggests, the squared poverty gap index uses the squares of the poverty gaps, which has the effect of weighting the largest poverty gap more heavily and capturing information on distribution changes within the poor.

<sup>14</sup> Lay, Jann. "Household Survey Data Basics." Kiel Institute for the World Economy. [https://www.gtapecon.purdue.edu/events/Conferences/2006/documents/HHSurveyBasics\\_GTAP\\_POSTCW06.pdf](https://www.gtapecon.purdue.edu/events/Conferences/2006/documents/HHSurveyBasics_GTAP_POSTCW06.pdf)

Designing and maintaining a representative sample allows the results of the survey to be generalized and ensures the least amount of bias when extrapolating findings on households. Because the basis of much statistical analysis is grounded on the context of a normal distribution, ensuring that random and representative households are chosen will ensure better quality data. Resources must therefore be properly allocated for proper training of researchers in survey methodology and transportation costs must allow more rural, harder to reach and *inconvenient* households to be sampled. A development organization conducting such a survey must therefore always compromise between cost, quality, time, efforts and data set robustness. Due to financial and time constraints, however, survey researchers sometimes engage in *convenience sampling* which allows them to gather information on households that are convenient to reach in a particular area, or simply choose a neighbour's household if no one is at home at the initial location when the survey is conducted.

### *Cost and time*

Extended household surveys may require multiple visits to locations to obtain information from each member of a household, with considerably higher expense in terms of cost and time. The resource intensity for respondents is significantly higher as well, as each member of a household may be required to spend several hours completing a survey—and on a regular basis if surveys are conducted every few years. Therefore, choosing one member of the household to answer socio-economic questions about all members of the household is more convenient. In addition, head of household surveys in contrast require only that the head of household or one family who can sufficiently answer questions about the head of the household be present.

Household and migrant surveys can be extremely expensive. The LSMS survey cost, for example, ranges from US\$400,000 to US\$1.5 million, depending on the country and the year. Costs vary based on the capacity of the country's statistics department, the state of existing statistical infrastructure, the goals of the survey, and the difficulty of movement within the country. Costs are substantially lower in cases where the implementing agency already has good infrastructure and experienced staff.<sup>15</sup>

The largest component of costs is for salaries. Almost three quarters of this cost is for field staff, including interviewers, supervisors, data entry operators, and drivers. The second largest cost component is for materials and equipment. This covers computers and vehicles (either purchase or rental), and maintenance, as well as other office equipment. This is the component that varies the most widely based on existing infrastructure in the government statistics department or implementing agency. Also, costs may increase based on requirements of funding organizations, for example, if vehicle purchases are prohibited and renting is required. Technical assistance is the third major component of costs. Again, this will vary substantially depending on the existing skills and experience in the implementing agency. Typically, the types of skills most needed from technical assistance are sampling, questionnaire design, data entry customization, fieldwork organization and analytic techniques.

### *General considerations*

Extended household surveys are generally more focused on issues of poverty, are more sociologically focused, and tend to result in lower estimations of remittances flows when statistically representative samples are extrapolated to the population at large. This may have important implications for policy

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<sup>15</sup> "Household Sample Surveys in Developing and Transition Countries." Department of Economic and Social Affairs Statistics Division. United Nations. Series F No. 96. New York 2005. [http://unstats.un.org/unsd/hhsurveys/pdf/Household\\_surveys.pdf](http://unstats.un.org/unsd/hhsurveys/pdf/Household_surveys.pdf)

interventions if remittances are seen as less economically important in a given location. More importantly the questions do not always meet the range of issues of interest between remittances and policy leveraging, such as financial and asset building, transnationalism or degree of linkages abroad. As a result, surveys specializing in remittance-related data may be required.

### **3.B. TARGETED INDIVIDUAL SURVEYS**

Unlike household surveys, the targeted individual survey method significantly narrows the scope of the survey population so that there is a higher probability that those in the sample will be able to provide relevant data to the study. It uses the individual as the unit of analysis, rather than the household, and requires significantly less planning to access survey respondents, who are identified either through a clustering and intercept approach, as described in the street based survey described below, or at the point of use or other common location—either sending or picking up remittances or through another remittance-specific location.

Targeted individual surveys may cover similar kinds of information as household surveys, such as demographics of remittances senders or receivers and trends in timing and amount sent. However, the targeted nature of these surveys—and their specific orientation towards a population involved with remittances—enables researchers to obtain more in depth information on preferences in sending mechanisms, use of funds, perceptions of financial institutions and degree of financial literacy, and level of interest or use of alternative payment mechanisms.

#### **3.B.i. Market based or Street-Based Survey**

Targeted street-based (or market) surveys use cluster and intercept sampling to identify probable locations where remittances senders and receivers can be found and surveyed. The cluster method uses "natural" groupings that are evident in a statistical population. In essence, the population is divided into groups, which may consist of neighborhoods or zip codes that can be identified using available census information. Then a sample of the groups is selected, and required information is collected from the elements within each selected group.

Intercept sampling complements cluster sampling by randomly choosing participants within a cluster to be part of the survey. Within the context of remittances survey research, targeted street-based surveys locate the section of a country, city or neighborhood where migrants (or migrants of a specific nationality that is the subject of the research) reside, so that there is a higher probability of finding subjects who send or receive remittances when sampling individuals on the street. Finally, with proper migrant population data (such as census data), extrapolations of can be made of a particular migrant group or socio-economic group in the receiving country based on targeted street-based surveys.

The 2007 USAID remittances study, *Remittances, Competition and Fair Financial Access Opportunities in Nigeria*<sup>16</sup> used a targeted street-based model to obtain information about Nigerian remittances senders in the United States. This research made the most use of limited resources by concentrating the sender survey in urban areas and using cluster and intercept sampling techniques. Therefore, the results obtained represented the patterns and activities of urban and semi-urban populations only. To identify the sending population, the researchers used the U.S. Census data from the Public-Use Microdata Samples (PUMS)

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<sup>16</sup> Manuel Orozco and Bryanna Millis. *Remittances, Competition and Fair Financial Access Opportunities in Nigeria Microreport # 86*. USAID, 2007. mR86RemittancesCompetitionandFairFinancialAccessinNigeria.pdf

2000, the most recent year for which these data are available. The PUMS reported 165,468 adult Nigerian-born immigrants living in the United States, of which 11.41 percent, or 18,889 individuals, were living in primarily urban areas of New York State. The chosen sample size of 300 subjects represented 1.58 percent of the New York State population. An intercept technique was used to sample subjects in areas near remittance-sending locations identified by experts as popular with Nigerians.

The survey covered demographic factors such as age, gender, relationship to sender or receiver, education and income levels, priorities for savings, and—in the case of U.S.-based senders—citizenship. A second category of information gathered information on patterns and preferences of transfers through an examination of the amount remitted, frequency of sending, and mechanisms used. Interest in using alternative payment mechanisms—such as mobile, card-based, and internet transfers—was established through a series of questions on individuals’ familiarity with these and related technologies. Finally, respondents were asked about their use of financial products and services and their engagement in the formal financial system.

### **3.B.ii. Point of presence surveys**

Point-of-presence surveys target individuals at the location where they are either sending or receiving remittances—a MoneyGram, Western Union, or other Money Transfer Organization outlet— or through individual or focus-group settings in convenient locations where migrants work and where families of remitters gather. While the results of these surveys again cannot be extrapolated to provide broad national trends, such as annual cross-border flows, this design allows for cost-effective targeted research with respondents who are known to use remittances services.

Money transfer companies, banks and other financial institutions use this method to get a better sense of their consumer base. For example, Financiera El Comercio conducted a survey of 600 migrants in New York City and Madrid at selected agent locations where Paraguayan immigrants go to remit via Western Union. Their survey instrument focused on a range of questions dealing with existing and forthcoming financial products the bank was promoting to migrants, such as debit cards.

The USAID remittances study in Nigeria<sup>17</sup> used this method to supplement a larger recipient household survey conducted in the urban areas of Lagos, Benin City, Ibadan, and Owerri. The first phase of the recipient survey included a total of 365 remittance-receiving households chosen at random from three clusters. The clusters were based on the stratification of dwelling density, corresponding to four social classes: A) low-density, exclusive neighborhoods with higher income; B) exclusive neighborhoods with higher income, but slightly higher density than A; C1) medium-density apartments and duplexes; and C2) apartments in medium-density areas and higher-income buildings in higher-density areas. The two remaining clusters not included in this survey are D) lower-class neighborhoods in a high-density area, and E) very high density areas with a population living at or below subsistence level. These final two clusters were not included in the sample, with the result that this survey reflected the behavior of higher-income recipients rather than recipients as a whole. The secondary survey targeting recipients at the point of pick-up was implemented to confirm some surprising results from the household survey.

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<sup>17</sup> Ibid.

A 2005 Asian Development Bank research project, *Enhancing the Efficiency of Overseas Filipino Workers' Remittances*<sup>18</sup> reviewed the flows of remittances by Overseas Filipino Workers (OFW) to identify the constraints in the policy, regulatory, and institutional frameworks that impact flows. The group survey methodology used has many similarities to the point of use survey. In this case focus groups were held with known remittances senders or recipients. The study conducted focus group discussions with over 1,000 OFWs in the Philippines when workers had returned home for Christmas holidays and 300 targeted households that were all beneficiaries of remittances. The survey interviewed migrants from all regions of the country, allowing for some form of representative responses. In addition, by gathering data when OFWs were home, it allowed for the study to gather comparative remittances information from 15 regions, including countries in the Middle East, North America, Asia, and Europe.

### **3.B.iii. Learning from past targeted individual surveys**

There is no body of literature on targeted individual surveys, as the drive to improve national level information on remittances—which require household surveys—has dominated this field of inquiry. However, from the information gathered through the surveys in Nigeria and the Philippines described above, it is clear that these surveys may fill an important gap in obtaining detailed remittance-specific information that is not always possible in larger representative surveys. The flexibility and lower cost of these surveys also makes them convenient tools to obtain information quickly based on programmatic needs.

### **3.B.iv. Considerations with targeted individual surveys**

Fundamentally, individual surveys of the kind described in this paper are not used to obtain statistically significant data on the size of remittances flows. As a result, targeted individual surveys are not useful for Central Banks that need to provide remittances data for Balance of Payments or other assessments. However, in terms of obtaining information about trends and the behavior and preferences of known remittances senders and receivers, these surveys are far more targeted and efficient than broader household surveys. Some Central Banks in fact use Consular offices or money transfer locations in the host country as sites to identify certain migrant patterns, and validate some additional information collected through other surveys, such as national household surveys. This is the method used in El Salvador and Armenia. As a result, governments may choose a household approach to get a macro understanding of remittances trends, while MTOs and development organizations may be more inclined to use targeted surveys to improve the provision of products and services for targeted customers, or to identify specific issues that need to be addressed in terms of access to financial and technological products.

#### *Cost and time*

While targeted individual surveys are not as resource intensive as household surveys, the cost structure is similar over all. Salaries of field staff represent the largest cost followed by materials and equipment and then technical assistance.

The primary differences include a somewhat lower cost (and time) to design the project although identifying the sample is still necessary in both types, and the street based survey in particular follows a

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<sup>18</sup> Asian Development Bank (ADB). *Enhancing the Efficiency Of Overseas Filipino Workers' Remittances Technical Assistance Report*. 2005. <http://www.adb.org/Documents/TARs/PHI/tar-phi-4185.asp>

similar process to the household survey sample design. This type of survey may also require a specific type of training to ensure that quality results are obtained in a challenging environment—passers by may have a low level of commitment to the project and be reluctant to participate unless they have a strong understanding of the value of the information being gathered. Transportation costs may be significant for these kinds of surveys as well, particularly if researchers hope to cover rural and urban locations across the country.

#### *General considerations*

Point of presence surveys and focus groups are extremely efficient, in that all respondents and potential respondents are confirmed remittance senders or recipients and are interviewed in one place. Furthermore, the data gathered through both kinds of targeted individual surveys will directly inform program design or direction, will be remittance-specific, and may be easily disaggregated by location.

## **4. EVALUATING POLICY OPTIONS AND SURVEY GUIDELINES**

### **4.A. EVALUATING POLICY OPTIONS**

The information obtained through remittances surveys is critical for understanding the economic importance of remittances at the national level, as well as the poverty impacts of remittances among economically or socially vulnerable groups. For this reason consideration should be given to designing these surveys to provide information at a disaggregated level so that analysis by sub-national location can support the design of donor-funded programs. There are few existing examples of local-level surveys, which may analyze behavior within transnational corridors—or city-to-city remittances—or issues regarding nostalgic trade.

The results of remittances surveys also have policy implications for governments and agencies supporting an enabling environment for low cost efficient flows. Increases in formal flows can be supported by policies governing the competitive environment, improved integration of remittances senders and recipients in the financial system, and new technologies that facilitate transfers. There are additional implications for related private sector actors such as banks, MTOs, and technology service providers.

#### **4.A.i. Competitive enabling environment**

The enabling environment for remittances may include a wide range of issues, from those that impact the economy as a whole—such as missing or poor enforcement of laws and regulations governing competition—to issues that are specific to remittances such as exclusivity agreements between large MTOs and financial institutions. Furthermore, a supportive environment for remittances may be missing at the national government level in many countries, either because leaders are not aware of the economic impacts (particularly if transfers are largely informal) or they do not have the information or tools necessary to assess and catalyze the impact of remittances in the economy at large. Remittances surveys can provide improved information on the size and impact of flows.

#### **4.A.ii. Financial institutions**

Financial institutions in many countries remain insufficiently aware of the potential of remittances for integrating new customers into the formal banking system—with benefits to both. The development of new products specific to the needs of remittances senders and recipients—many of whom have no other interaction with banks or MFIs—can draw longer term customers who can both develop financial

histories and benefit even more from the remittances they are able to save or invest. Remittances surveys can assist in identifying the products that these potential customers are interested in, which can drive these initiatives forward, and can reveal the level of financial literacy of potential customers.

#### **4.A.iii. Telecommunications and use of technology**

Technologies such as mobile banking and card based services are playing larger and larger roles in the flow of remittances. Individuals and communities who do not have regular access to traditional MFIs or landlines are increasingly able to receive funds and manage finances using mobile phones, or to purchase goods and services using pre-paid or refillable payment cards. Remittances surveys assist both public and private sector actors to understand how willing target populations may be to change their current mode of sending, or what products and services are appropriate in specific locations.

### **4.B. SURVEY GUIDELINES**

There are challenges in both the operational and substantive, contextual, or theoretical aspects of survey data collection. At the most basic level it is essential that high standards of statistical rigor are adhered to throughout the design and implementation of the survey and the analysis of the resulting data. Extensive general guidance on surveys is available from many sources—including *Best Practices for Survey and Public Opinion Research*<sup>19</sup>—and these materials should be reviewed prior to assessing the qualifications of survey implementers in each location. There are, however, a number of issues more specifically related to collecting data on remittances that are included here:

First, the survey must be designed in the context of broader research informing a theoretical, methodological and empirical set of assumptions. This will improve the analytical context and the structure of the survey questionnaire and data collection. Theories on the microeconomic determinants of remitting that study whether self-interested or altruistic behavior informs a person's decision to remit are points of departure to the analysis of household rationalities on migration and spending.

Second, it is important that the staff collecting the data receive significant training on remittances. If, as is often the case, surveyors are insensitive to the context of migration and remittances, the questions will be presented without the proper context that a transnational family, or any household being surveyed, will need to make sense of the purpose of the survey. The IOM office in Guatemala has set up a team of analysts, trainers and surveyors to study the subject and field test the conditions by reviewing questionnaires against the possible responses or rejections the population could receive. In Central Asia where most migration is male, survey teams include mostly women to relate to the cultural contexts among female headed households.

Third, data that is collected should always be validated against other important sources, such as actual data from money transfers, other survey results, qualitative personal interviews, or alternative methodological approaches to measure and estimate trends and patterns of remitting. This latter point is significant because it guarantees a greater sense of certainty about the accuracy of the data. For example, data from surveys often reflects remittances figures that are lower than the actual transfer performed by a money transfer operator. This difference stems from lack of financial literacy, poor record keeping or ability to recall, or to the desire of survey respondents to maintain privacy about financial issues.

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<sup>19</sup> American Association for Public Opinion Research. Available from: <http://www.aapor.org/bestpractices>.

## 5. CONCLUSIONS

Household and individual surveys are essential to the development of accurate estimates on remittances flows, as they can supplement official sources and provide information on both formal and informal flows. However, the need for data surrounding remittances and migrant issues is much broader than simply understanding amounts. Remittances survey results may form the basis for changes in policy that support poverty reduction and may provide guidance for the development of a wide range of economic development programs.

The two broad categories of remittances surveys, household surveys and targeted individual surveys, are distinguished by their units of analysis, the degree of statistical sophistication in their design, the time and cost required to implement them, their primary audience, and the ways in which their results can be used. Researchers and others planning these surveys must balance the level of detail required with the time and cost of survey administration. The inclusion of questions related to remittances on large national household surveys will result in high level information on remittances patterns, but smaller targeted surveys using the other methods described here—with either the household or individual as the unit of analysis--will further enable institutions to gain deep insights in to the ways in which remittances impact the lives of migrants and recipients back home.



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