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Towards frequent and accurate poverty data

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Abstract

It is increasingly acknowledged that data availability plays a crucial role in the fight against poverty. Poverty data has increased in both quantity and frequency over the past 30 years, but still lags behind the data available on most other economic phenomena. Yet there are vibrant experiences that are often overlooked:

➢ Data for monetary & multidimensional poverty dramatically increased since 1980.
➢ Sixty countries already produce <u>annual updates</u> to key statistics.
➢ Some have <u>continuous household surveys</u> with cost-cutting synergies.
➢ International agencies have probed <u>short surveys</u> for comparable data.
➢ Certain regions have agreed on <u>harmonised variable definitions</u> across countries.
➢ <u>New technologies</u> can drastically reduce lags between data collection and analysis.

The post-2015 agenda identified the need for regularly updated data to monitor the Sustainable Development Goals (SDGs). This paper points out existing experiences that shed light on how to break the cycle of outdated poverty data and strengthen statistical systems. Such experiences show that it is possible to generate and analyse frequent and accurate poverty data that energizes and enables poverty eradication.

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Introduction

Data on poverty are severely limited – both in terms of frequency and coverage. Its limitation with regards to frequency is especially striking when compared to the **data availability concerning other economic phenomena**. GNI data is published annually, while labour force surveys and external debt statistics are available on a quarterly basis. Stock market data is made public every day, and with the invention of high frequency trading, it has become available for investors at the fraction of a second. Dissatisfied with this situation, the post-2015 agenda identified the need for regularly updated data to monitor the Sustainable Development Goals (SDGs). This paper reviews experiences that illustrate how an initiative towards frequent, accurate poverty data might proceed.

In using the term poverty in this paper, we signify both **monetary and multidimensional poverty**. For example, the $1.25/day poverty measure reflects income poverty and is currently published for 115

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countries using data from 2000to2012. The global Multidimensional Poverty Index[2] complements it with data on multidimensional poverty and is currently published for 112 countries. In an open letter[3] to the High Level Panel advising the United Nations on the content of a post-2015 development agenda, more than 120 Southern non-governmental organisations stated their number one concern was that "poverty is multidimensional and should not be narrowly defined and measured only as a matter of income." The July 2014 final Open Working Group outcome document includes a poverty-related goal that addresses $1.25/day poverty and also proposes an indicator to reflect "poverty in its many dimensions." The data requirements to monitor progress in poverty in several dimensions are the focal issue of concern in this paper.

In spite of the explosion of economic data availability, many reviews of data on various dimensions of poverty have brought to light data limitations. In terms of **frequency**, poverty data continues to lag behind most economic information, as it is collected only every three to ten years – and is often published a full year or two after data collection has finished. In terms of **coverage**, poverty data still misses information on important dimensions of poverty such as violence, empowerment, or informal work – as well as key indicators such as quality of services. The density of proposed SDG indicators reflects the current lack. Finally, most poverty indicators are analysed in a dashboard style, ignoring how multiple **interconnected** deprivations lock people into their predicament and providing scant information for joined-up, cross-cutting, or coordinated policy responses.

This situation does not meet the **demands of policy**. Managing initiatives that reduce poverty requires timely data to plan, monitor, evaluate, and re-design policies. **Management** requires recent data that are cleaned and analysed promptly, as well as analyses that provide information in the form required for policy coordination and response.

Despite the limitations of currently available data, we also have **more poverty data for developing countries now** than in any previous period in history. For example, this paper identifies 140 developing countries with monetary poverty data and 130 countries with multi-topic household survey data. Further, the **content of that data has expanded** significantly, and more variables have become available from single

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[2] The global MPI (http://www.ophi.org.uk/multidimensional-poverty-index/mpi-2014/) has been estimated and analysed by OPHI, a research centre in the University of Oxford, and published by the UNDP's *Human Development Reports* since 2010. After 2015, the global MPI could be improved (with better indicators and a second specification for less poor environments) using better data to reflect a subset of core SDGs.

[3] http://www.globalpolicy.org/home/252-the-millenium-development-goals/52392-csos-appeal-to-high-level-panel.html

surveys, showing the joint distribution of disadvantages. The expansion of data has been catalysed in part by the data needs of the MDGs. It is hoped that the SDGs will unleash a greater **willingness to increase the content and frequency of poverty data** and do so universally across countries.

The aim to increase the periodicity and timeliness of household surveys is longstanding. Attempts at innovations have had mixed results, yet these experiences – both negative and positive – are illuminating. This paper traces recent developments in certain household surveys, showing their tremendous rise since the 1980s, yet observing that the gaps in poverty data remain a key constraint in the fight against poverty. It then describes **national annual surveys**, including some which are both nationally produced and create comparable indicators. It also discusses shortened surveys (KIS, Interim DHS, and CWIQ) promoted by international agencies and then moves on to examples of how **time-saving survey technologies** can support data collection and decrease its cost. Finally, it outlines **a concrete proposal**: a brief survey which could be used to systematically collect more frequent and consistent poverty data – and which already has been discussed and revised by a network of 30 governments. Taken together these examples shed some light on the question of whether a step change in the **generation** of poverty data and its **effective use** to eradicate poverty might come to pass – and, if so, what avenues might be pursued. The brief closes by proposing a survey instrument for discussion that could be considered as generating a set of 'core poverty indicators' related to the SDGs.

The appendices to this paper are significant (and downloaded separately as they run to over 100 pages). They list the named household surveys for unidimensional and multidimensional poverty measurement, the questions used in the global Multidimensional Poverty Index, and the proposed Multidimensional Poverty Peer Network questionnaire, revised most recently in September 2014, as a concrete starting point for discussion about core indicators for annual updating.

I. Existing Poverty Data: Level and Trends

Poverty data for developing countries has made huge leaps in the last 30 years.[4] We have **more data now** than in any previous period in history. Further, the **content of that data has expanded** significantly, with the patterns of its expansion fuelled by widened national priorities and capabilities and also by

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[4] Some use the word poverty to refer to monetary disadvantage and the word 'deprivation' to cover other disadvantages such as malnutrition, low education, ramshackle housing, and so on. We follow the terms used in recent post-2015 agenda documents, which refer to multidimensional poverty – or poverty in all its dimensions.

international interest in topics including the MDGs. Surveys are just one source of poverty data. Many countries have data for key MDG indicators from three separate sources: census data (every ten years); survey data (both national survey data and international, i.e., from DHS, MICS, CWIQ and LSMS), and administrative data. There is also active exploration of the potential of 'big data' to improve sampling frames and to provide relevant indicators, such as electricity and road access.[5]

Here we focus on the dramatic rise in poverty-related household surveys in developing countries since 1980. The good news of this rise is certainly to be celebrated.

While such a review could include many survey forms, including labour force surveys or those fielded in OECD countries, we focus here on the rise of household surveys in developing countries that can be used to analyse monetary poverty or that address at least three dimensions related to multidimensional poverty. We focus on two equivalent year periods: 1980–2010 in the case of monetary poverty data and 1983–2013 for multidimensional poverty data.

A. Household Surveys for Monetary Poverty in Developing Countries 1980–2010

As Figure 1 indicates, the absolute number of **income surveys** as well as the absolute number of **countries with income surveys** dramatically increased from the early 1980s until 2010.[6] By the procedures followed in the study, we have surveys on income or consumption and expenditure for 141 countries. This does not mean we have comparable data for those countries – for example there are $1.25/day data for 115 countries using data from 2000 to 2012. Also, the surveys generate income and consumption poverty figures, and they are often tailored to national specifications. Still, what we see is a marked rise in data availability.

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[5] For further discussion of administrative data, public opinion surveys, and big data as resources for poverty data, please see Alkire and Samman (2014).

[6] See Appendix 2. This analysis covers income surveys through 2010 in order to have a similar period as that of multi-topic household surveys. A later draft of this note will update the data to the present.

Figure 1.

Monetary Surveys
Total Number and Countries Covered
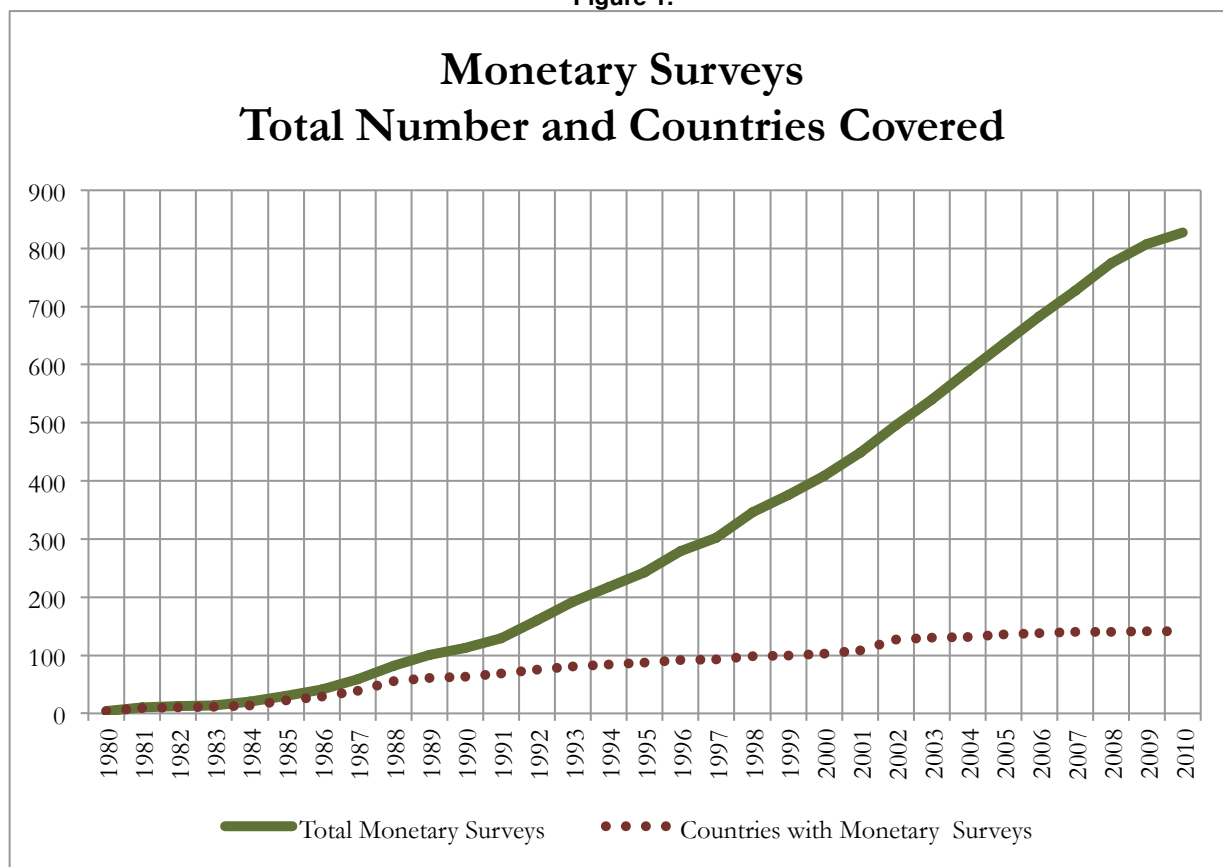
The precise number of available household surveys that are exclusively or partially concerned with household income or consumption and expenditure is **hard to determine**, since there is no exhaustive clearinghouse of information. Existing surveys include poverty data that is collected at different moments in time, on disparate administrative levels, and using divergent data gathering methods. We have therefore restricted the analysis of income-based household surveys to the study of **PovcalNet**, the World Bank's regional survey aggregation website.

For the purposes of this research brief, we have only used the surveys that included the **labels**: 'expenditure', 'income/income and basic amenities', 'income inequality', 'budget/budgetary', 'household', 'consumption', 'labour force', 'panel surveys', 'integrated', 'poverty', 'priority survey', 'welfare'. We excluded all ambiguously or unmarked surveys as well as all surveys that included the labels: 'agriculture', 'census',

'consumer finance', 'CWIQ', 'MICS', 'LSMS',[7] 'family life', 'health', 'energy', 'living conditions', 'living standards', 'panel', 'manpower', 'housing', 'priority', 'social', 'informal sector', 'internally displaced persons', housing, 'service delivery', 'social indicators/social development/socio-economic', 'living conditions', or 'service delivery'. During the period 1980–2010, **748 monetary surveys**[8] are listed.

Figure 2 shows the number of "new" surveys fielded each year and the number of "new" countries gaining surveys each year. These marginal increases were greatest during the late 1980s and the mid-1990s, respectively.

Figure 2.
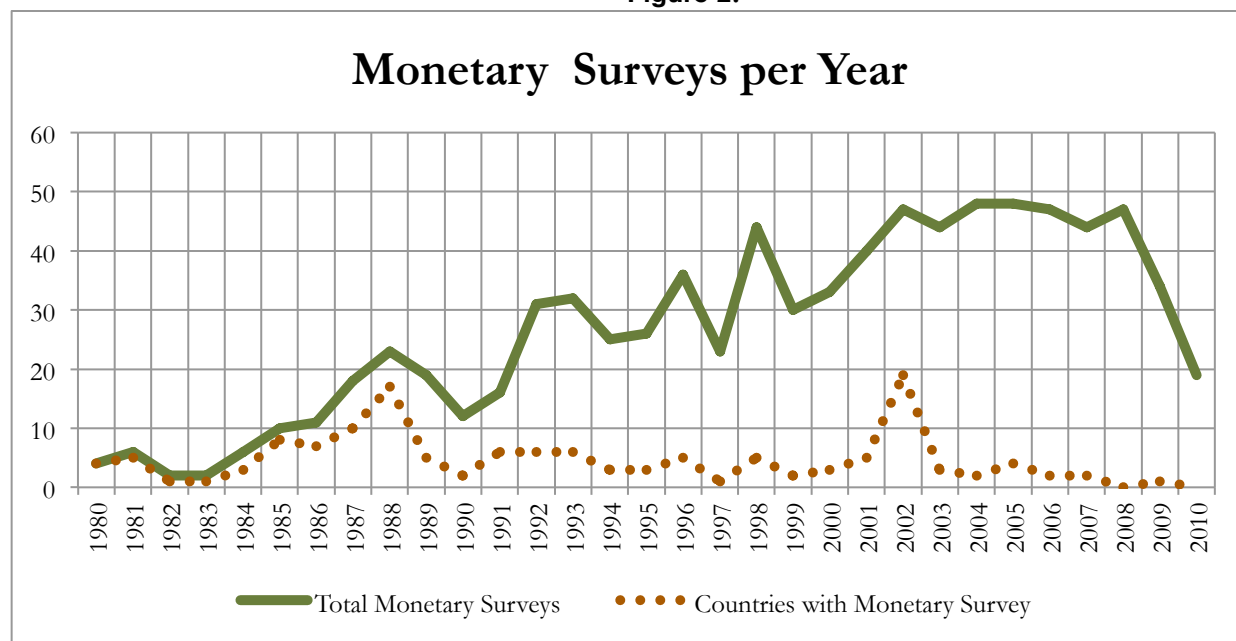
B. Multi-topic Household Surveys for Multidimensional Poverty 1983–2013

Many surveys were fielded that collected MDG-related or deprivation-related information pertaining to services but not necessarily on monetary poverty. Just as poverty surveys included income or consumption and used various definitions, so too the surveys collected here do not include the same indicators or definitions. Figure 3 shows that the number of multidimensional household poverty surveys has increased
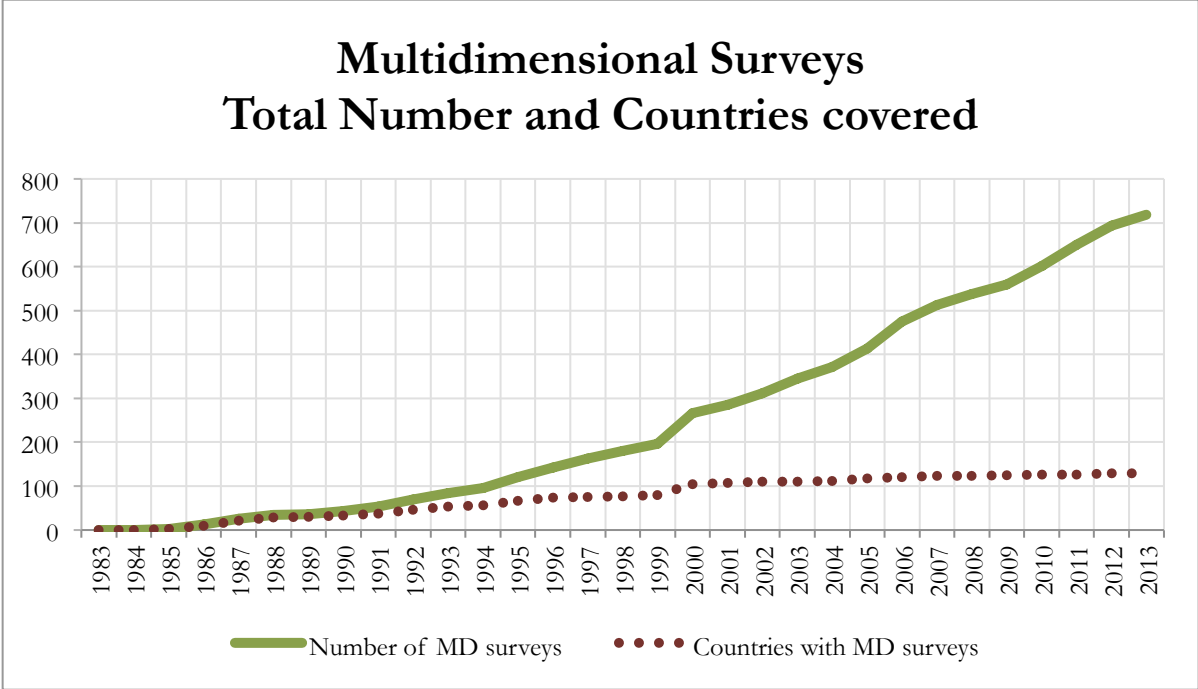
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[7] LSMS surveys do indeed also measure monetary poverty and could be categorized in either place; to avoid non-overlapping categories, we cover them in the next sections. As Appendix 1, Table 1 shows, until 2010 there were 102 LSMS covering 36 countries, but, as they are rarely the only survey in a country, they do not affect totals much.

[8] See Appendix 2, Table 1.

drastically since 1985 and now covers 129 countries.[9] As we see from Figure 4, major increases of both multidimensional surveys and the countries with multidimensional surveys occurred during mid-1995, 2000, 2005, and 2010 corresponding with the rollout of successive phases of the MICS surveys.[10] A total of **679** surveys are listed here.

Figure 3.

Multidimensional Surveys
Total Number and Countries covered

Legend: Number of MD surveys · · · Countries with MD surveys

Due to restrictions with regards to information on data coherence, quality, and availability, a comprehensive overview of all existing multidimensional household poverty surveys cannot be provided. For this paper, we reviewed 18 major surveys or clearinghouses of surveys and summarised them in Appendix 3. Furthermore, we have grouped four major multidimensional surveys for quantitative analysis. Each of these surveys fulfils the following three criteria: 1. the survey must **measure at least three aspects of wellbeing**; 2. the survey must be relevant for the comparative study of **developing countries**; and 3. the survey must be **widely used** and **provide high quality data**. Four surveys to which these criteria apply are the Demographic and Health Surveys (DHS), which collect data on population, health, HIV, and nutrition; the Core Welfare Indicator Questionnaire surveys (CWIQ), which collect indicators of household wellbeing and basic

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[9] See Appendix 2, Table 3.
[10] See Appendix 2, Table 4.

community services; the Multiple Indicator Cluster Surveys (MICS) which monitor the situation of women and children, particularly with regards to health and education; and the Living Standards Measurement Study Surveys (LSMS) which measure consumption behaviour, economic wellbeing, and a variety of sectoral aspects such as housing, education, and health.[11]

Figure 4 shows that the marginal increments were greatest in periods when new MICS phases were rolled out. Despite the considerable increase in multidimensional household poverty data, the marginal increments remain high to the present day.

Figure 4.
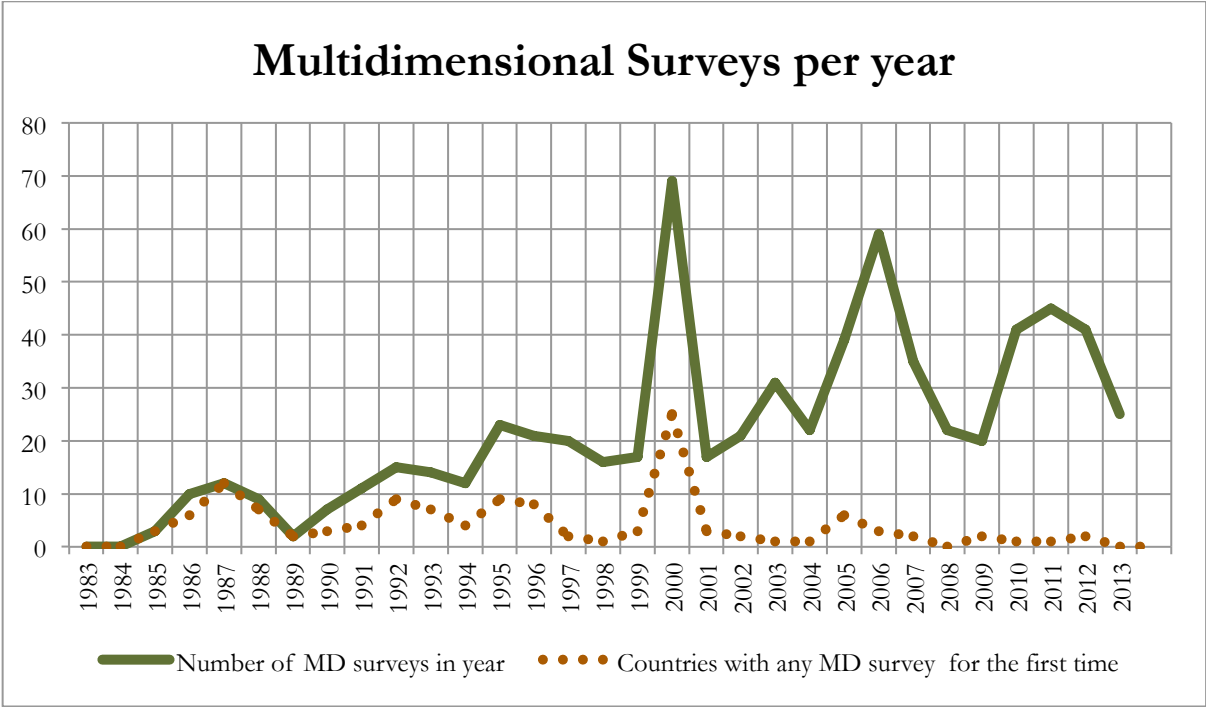
From this brief and incomplete review, we can nonetheless observe that **data availability for both monetary and multidimensional poverty has dramatically increased since 1980.**

The implication of this finding is that change is possible. The strong gains from 1980 and the increase in pace since 2000 both show that household surveys have not at all been static. But has this salutary progress been sufficient? The resounding consensus is that it has not.

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[11] See Appendix 2, Table 2.1, for more detailed information on each of these surveys.

C. Ongoing Limitations: Content, Quality, Frequency, Timeliness, Availability

Existing data on poverty remains limited – particularly in *content,* which overlooks key indicators; *data quality*, which is variable; the *frequency* of surveys; the *timeliness* of data publication and analysis; and the *availability* of that data.

A thorough review of these issues is not presented here, for many have already identified them in depth and the Data Revolution, which the High Level Panel summoned, has caught the imagination of many. This section simply reminds the readers of the points made in a myriad of studies.

In terms of **frequency**, poverty data continues to lag behind most other economic information as it is published only every three to ten years and often released one to two years after fieldwork has closed. In terms of **coverage**, poverty data still misses information on important dimensions of poverty such as violence, empowerment, or informal work. Even information on basic variables like health remains severely limited. Finally, most poverty analysis does not address the **interconnectedness** of deprivations that lock people into poverty. The first key message in *The MDGs at Mid-point* – a 50-country study on accelerating progress that the UNDP released in 2010 – was that successful countries had addressed different deprivations together because of these interconnections. The joint distribution of deprivations – which can be seen using multi-topic surveys – can be, but often has not yet been, analysed to inform joined-up policies.

Many examples have been used to show the scale of the problem. Data on key poverty indicators such as malnutrition or sanitation may be updated approximately every five years. For example India has the highest number of malnourished people and high absolute rates of child stunting in the world – yet it has had no nationally representative data on malnutrition since 2006[12] and administrative data (e.g., growth charts) are not widely available for analysis. MDG assessments of data availability have observed severe gaps in the ability of most countries to report trend data on even a small subset of key MDG indicators. To share just one among many, a mid-point assessment of the MDGs led by an eminent group of economists observed that:

> Many, among the poorest and most vulnerable countries, do not report any data on most MDGs. When it is available, data are often plagued with comparability problems, and MDG indicators often come with considerable time lags. Improving data gathering and its quality in all countries should be a central focus of the second half of the MDG time frame and beyond. Reliable data and indicators are essential, not only to enable the

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[12] From the 2005–2006 National Family Health Survey.

international development community to follow progress on MDGs, but also for individual countries to effectively manage their development strategies.

<div align="right">Bourguignon et al. (2008, p.6).</div>

Evidently, while efforts to improve poverty data spurred by the MDGs have increased the content and frequency of poverty data, the **business-as-usual system is inefficient and needs to change**. In an age where we are flooded with data in many domains, it is a travesty that we don't have up-to-date information on key dimensions of poverty, which are essential to designing high-impact policies and celebrating policy success. Attention is drawn to this issue again and again, including in the *2014 MDG Report*:

> Despite considerable advancements in recent years, reliable statistics for monitoring development remain inadequate in many countries. Data gaps, data quality, compliance with methodological standards and non-availability of disaggregated data are among the major challenges to MDG monitoring.
>
> <div align="right">The MDG Report 2014</div>

Despite a visible lack of regular, timely poverty data, in some cases (often highly mentioned ones), huge quantities of funds are invested in some multi-topic household surveys that are then never fully analysed. The possibility of wastage means that surveys must be designed so that their information meets the data requirements of the problems that need to be solved. It also means that data cleaning, publication, analysis, and dissemination need to be considered alongside data collection. Interestingly, this brings to light the key positive role political leadership can have – and in some cases has had – in leading data change.[13] If survey data are indeed vital for effective policy action, then those making a policy commitment to poverty reduction will recognize the moral and political incentives to increase the quality of survey data and its frequency. The issue of data creation and data use must thus be considered together.

II: Experiences in Annual Multi-topic Household Surveys

The previous section addressed the steep rise in the number of countries having at least one data point, as well as those having multiple data points. This section now zooms in to focus on different experiences that move towards annual data collection, reporting, analysis, and policy use.

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[13] Some examples are present on http://www.mppn.org/resources/.

A. National Surveys

Many countries have frequent household survey instruments in place for some core indicators of human poverty.[14] However there does not seem to be a publicly accessible and complete record of these surveys internationally.[15] Yet despite the perception that annual or biennial data are very rare, we have encountered quite a range of such experiences.

A few countries update a wide range of poverty data regularly. For example, Colombia updates *both* income and multidimensional poverty data and statistics annually and Mexico does so every two years. The EU-SILC surveys, described more fully below, provide annual official updates of the EU-2020 poverty and social exclusion indicators – including quasi-joblessness, material deprivation, and being at-risk-of (relative) income poverty – for over 30 countries.

More commonly, annual surveys either primarily collect monetary poverty data or primarily cover some dimensions of poverty but do not include detailed income or consumption and expenditure modules. For example India's National Sample Survey (NSS) provides annual updates of consumption poverty, with a large round for greater disaggregation roughly every five years. Pakistan's Social and Living Standard Measurement Survey (PSLM) fields annual surveys, alternating between two surveys and between district- and province-level disaggregation potentials.

Some countries have moved to higher-than-annual frequency: Indonesia's National Socioeconomic Survey (SUSENAS) collects consumption poverty data every quarter and releases poverty statistics twice per year. Ecuador has a multi-topic survey that provides three nationally representative statistical updates per year and at lower levels of disaggregation annually.

These are but a sample of surveys as, of course, other institutions and researchers also have rich data sources. For example South Africa's NIDS (National Income Dynamics Survey) is not an official national survey but still provides panel data roughly every two years. Box 1 presents an incomplete list of annual surveys that are implemented by national statistics offices. It covers 60 countries and surely excludes some existing experiences.

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[14] In a linked paper with Emma Samman (2014), we list in Appendix 2 a set of "core indicators of human poverty," which would come from household survey data, in health and nutrition, education, living standard, work, and violence.

[15] For example, in World Development Indicators, a total of 42 countries, both developed and developing, published income poverty data for at least five consecutive years between 2002 and 2012 – but in some cases these published figures are extrapolations, and other countries that have annual data are not included.

This list does not exhaust relevant cases, however, even if the period is extended slightly. A number of countries field surveys every two years rather than annually. In addition to Mexico these include Vietnam's Household Living Standard Survey, Nicaragua's Encuesta Nacional de Hogares sobre Medición de Nivel de Vida, Thailand's Household Socio-Economic Survey, and Malaysia's Household Income and Basic Amenities survey, which is fielded twice in five years.

Box 1. 60 Annual Household Surveys[16]

1. Argentina (EPH-C)
2. Armenia (Household's Integrated Living Conditions Survey)
3. Austria (EU-SILC)
4. Belgium (EU-SILC)
5. Bolivia (Encuesta de Hogares)
6. Brazil (Continuous PNAD)
7. Bulgaria (EU-SILC)
8. Cambodia (Cambodian Socio-Economic Survey - CSES)
9. Colombia (Gran Encuesta Integrada de Hogares)
10. Costa Rica (Encuesta Nacional de Hogares – previously Encuesta de Hogares de Propósitos Múltiples)
11. Croatia (EU-SILC)
12. Cyprus (EU-SILC)
13. Czech Republic (EU-SILC)
14. Denmark (EU-SILC)
15. Dominican Rep (Encuesta Nacional de Fuerza de Trabajo)
16. Ecuador (Encuesta de Calidad de Vida)
17. El Salvador (Encuesta de Hogares de Propósitos Múltiples)
18. Estonia (EU-SILC)
19. Finland (EU-SILC)
20. France (EU-SILC)
21. Germany (EU-SILC)
22. Greece (EU-SILC)
23. Honduras (Encuesta Permanente de Hogares de Propósitos Múltiples)
24. Hungary (EU-SILC)
25. Iceland (EU-SILC)
26. India (National Sample Survey)
27. Indonesia (SUSENAS)
28. Ireland (EU-SILC)
29. Italy (EU-SILC)
43. Panama (Encuesta de Hogares - EH)
44. Paraguay (Encuesta Permanente de Hogares - EPH)
45. Peru (Encuesta Nacional de Hogares - ENAHO)
46. Philippines (Annual Poverty Indicators Survey - APIS, alternating with Family Income and Expenditure Survey - FIES)
47. Poland (EU-SILC)
48. Portugal (EU-SILC)
49. Romania (EU-SILC)
50. Slovakia (EU-SILC)
51. Slovenia (EU-SILC)
52. South Africa (General Household Survey - GHS, Labour Force Survey)
53. Spain (EU-SILC)
54. Sweden (EU-SILC)
55. Switzerland (EU-SILC)
56. Turkey (EU-SILC, annual Household Budget Survey - HBS)
57. United Kingdom (EU-SILC)
58. Uruguay (Encuesta Continua de Hogares - ECH)
59. Venezuela (Encuesta de Hogares Por Muestreo - EHM)
60. West Bank and Gaza (Expenditure and Consumption Survey)

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[16] There are a greater number of annual or more-than-annual labour force surveys than are listed.

B. Continuous National Household Sample Surveys

A challenge of data collection is that not all indicators require annual updates. Certain indicators change slowly and so require updating only every three to five years. Some indicators require a long and detailed questionnaire or a different sample design to focus on a particular subgroup – but if such data are available occasionally, estimates can be computed based on variables available in shorter interim surveys (as the World Bank's Survey of Welfare via Instant Frequent Tracking, explained below, is attempting for income poverty). There are also varying needs for disaggregated data. For these reasons, if management capabilities are sufficiently strong, the ideal institutional arrangement for high-frequency data is the 'continuous' national household sample survey, which may have a core module of high-frequency indicators and rotating modules according to the specific indicator needs. They may also schedule regular but distinct surveys (labour force, for example).

Indonesia, Ecuador, and others countries, including Brazil,[17] have what can be called 'continuous household surveys' in that the survey teams are in the field more or less continuously with different surveys and modules. When management capacity is adequate, data quality and availability increases in a way that is cost-saving and coordinated. Different surveys are drawn from a master sample, can normally be aggregated for more in-depth disaggregation, and may have a panel element. In addition to these continuous national household surveys there is also a 'continuous DHS' – which has been implemented in Peru and in Senegal.

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[17] Brazil's PNAD has become a continuous national household sample survey:
http://www.ibge.gov.br/english/estatistica/indicadores/trabalhoerendimento/pnad_continua/.

While annual updates of poverty figures are not yet the norm, these examples demonstrate their feasibility. In addition, evidence from the recent financial crisis suggests that these high-frequency surveys were "a good means of gauging the expenditure impacts of shocks and even some of the specific coping mechanisms involved" (Headey and Ecker 2013, p. 332). However the national surveys mentioned above are not comparable to one another. Furthermore, they focus primarily on consumption/expenditure or income data, and omit most of the other core indicators of human poverty. We turn now to various initiatives to generate internationally comparable and annual data on these other aspects of poverty.

C. Internationally Comparable Short Surveys

The Demographic and Health Surveys and Multiple Indicator Cluster Surveys have increased in prominence due to their quality and comparability, their free public availability, as well as the match between these surveys and key MDG indicators. Yet because the DHS and MICS are fielded every three to five years, and their cleaning and standardization requires some time, they are not appropriate for annual reporting.

This fact has been overtly recognised and acknowledged by these institutions, which have explored various responses. Their responses are relevant to present discussions. For example, due to the length of the DHS, the DHS office set up the **Key Indicator Survey (KIS)**[18] whose purpose was to monitor key health and population indicators at a lower level of disaggregation, e.g., districts. KIS questionnaires are "designed to be short and relatively simple, but also to be able to produce indicators comparable to those from a nationally representative …DHS." KIS topics cover family planning, maternal health, child health, HIV/AIDS, and infectious diseases. Their design and content are highly relevant to certain proposed SDG indicators – but they were never fielded. The reason they were never fielded is the current dearth of data means that a survey is a rare enough event that when it occurs, many things are to be measured. Thus the lack of adoption of KIS could indicate a hunger for data, which is positive – but also the uptake of shorter surveys could expand if data collection were more regular overall. The KIS questionnaire and design thus remain a potential resource for this conversation to re-engage.

The 20 indicators of KIS:

1. Total fertility rate
2. Contraceptive prevalence rate
3. Birth spacing
8. Institutional deliveries
9. Childhood immunization coverage
15. Drinking water treatment
16. Higher risk sex
17. Condom use at higher risk sex

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[18] The KIS website (http://dhsprogram.com/What-We-Do/Survey-Types/KIS.cfm) contains the survey modules.

4. Births to young mothers	10. ORT use	18. Youth sexual behavior
5. High parity births	11. Sanitary practices	19. Household availability of
6. Skilled delivery assistance	12. Vitamin A supplementation	insecticide-treated nets
7. Antenatal care	13. Underweight prevalence	20. Use of insecticide-treated nets
	14. Exclusive breastfeeding	

DHS also set up **Interim DHS**, which "focus on the collection of information on key performance monitoring indicators." Designed to be nationally representative using smaller sample sizes than most DHS, Interim DHS are shorter and conducted between DHS rounds. The Interim DHS surveys have only been fielded in Egypt, Guatemala, Jordan, and Rwanda, but, again, did not have an enthusiastic take-up. However, like KIS, the survey and sample design issues are available and can enrich present discussions.

The **Core Welfare Indicators Questionnaire (CWIQ)** was developed at the World Bank in late 1990s to collect data on the access, usage, and quality of services more frequently than LSMS.[19] The core module took roughly 40 minutes, including anthropometry. Each household cost $54 in the pilot test reducing to $30 in the full survey. Mechanisms to foster data quality included enumerator training and rapid feedback from the questionnaires, which were machine-read – reducing data entry time and improving accuracy. Timeliness of data and reporting was also stressed, with results being available six to eight weeks from the end of the fieldwork. Although designed as a stand-alone survey, in many cases, the CWIQ came to be fielded together with a household budget survey or other module, thus losing its quickness but gaining complementary data. As in the case of KIS, the temporary expansion of CWIQ is not necessarily a negative finding, given the current infrequency of data collection.

These examples – KIS, I-DHS, and CWIQ – draw attention to the need to understand fully the 'demand' for and 'inhibitions' to shortened surveys before embarking too far down this road. However, they also offer a set of resources on potential questionnaire design and content for consideration in light of the SDGs.

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[19] The basic website is
http://web.worldbank.org/wbsite/external/countries/africaext/extpubrep/extstatinafr/0,,contentMDK:21104598~menuPK:3091968~pagePK:64168445~piPK:64168309~theSitePK:824043,00.html; See also
http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/African.Statistical.Journal_Vol3_2.Articles_8.ExperiencesApplicationCoreWelfareIndicatorQuestionnaireCWIQ.pdf

D. Regional Annual Surveys with Harmonised Indicator Definitions

The examples above did not address the difficult question of the comparability of survey data across countries. The trade-off between greater national accuracy and comparability over time (with previous surveys) and greater international comparability are well known. What may not be so well known are the positive examples of annual or biennial surveys that are fielded by national survey offices (NSOs) and do include a core of comparable questions.

A noteworthy and rich example for the SDG discussions are the Mejoramiento de las Encuestas de Hogares y la Medición de Condiciones de Vida (MECOVI) surveys in Latin America, which have developed harmonised data on 24 Latin American and Caribbean countries for the analysis of poverty and inequality. In many, but not all, countries, new surveys are fielded annually.[20] Launched in 1996 and ongoing to this day, MECOVI sought to increase the capacity of the national statistical systems, whilst providing timely and comparable data on key economic, social, and living standards indicators. In partnership with the World Bank IBRD and the Comisión Económica para América Latina (CEPAL), a University of La Plata research centre called CEDLAS provides support in harmonisation and comparative analysis, including preparation of the Socio-Economic Database for Latin America and the Caribbean (SEDLAC). This database also (like OPHI's database on the MPI, but focused on this region) provides data and also includes maps with subnational details of key indicators. This programme is longstanding and thoroughly evaluated, thus providing a rich resource for present conversations.

Another relevant example to scrutinise is that of the European Union Statistics on Income and Living Conditions (EU-SILC). EU-SILC publishes **annual** timely and comparable cross-sectional and longitudinal multidimensional microdata on income poverty, social exclusion, and living conditions – now for over 30 countries.[21] Anchored in the European Statistical System, the EU-SILC project started in 2003 and is ongoing. It may be of interest for the SDG monitoring options because EU-SILC data have been used since 2010 to monitor poverty and social exclusion in the EU towards a target: "A headline poverty target on

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[20] Details by country are available on: http://sedlac.econo.unlp.edu.ar/eng/statistics-detalle.php?idE=28

[21] EU-SILC data for 31 countries was available annually for seven consecutive years between 2006 and 2012. These are Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

reducing by 20 million in 2020 the number of people under poverty and social exclusion has been defined based on the EU-SILC instrument."[22]

The EU-SILC is replete with interesting lessons. For example many surveys are only representative at the national level, but some sample sizes are much larger. Certain questions (e.g., levels of education, self-reported health status) may still be difficult to compare across countries – an issue that future surveys may address (Alkire, Apablaza, and Jung 2014). Also, the use of registry data alongside survey data has been explored in the EU-SILC project, and studies have shown both the potential and significant difficulties of registry data for poverty monitoring.

One key feature of the EU-SILC process, which could be of tremendous relevance to the SDGs, was the **open method of coordination**. This method balanced national priorities with progressive harmonisation of data and targets.

> The open method of coordination, which is designed to help member states progressively to develop their own policies, involves fixing guidelines for the Union, establishing quantitative and qualitative indicators to be applied in each member state and periodic monitoring.
>
> (Atkinson *et al.* 2002, 1–5).

It may be that for the SDGs, some degree of harmonisation across indicators could be advanced in a similar process, at least for some regional or other country groupings. In any case, given the challenges arising from the MDGs' more top-down measurement agenda, familiarity with alternative processes of data harmonisation could be useful.

E. New Technologies: Supporting Data and Transparency

The initiatives reviewed thus far build on tried and tested survey methodologies. In some cases, newer technologies are in use, but by no means in all. But new technology has made it possible to extend the reach and speed up the availability of the data, creating a veritable 'revolution' indeed. Longer treatments of these technologies with additional examples are collected in a very useful Paris21 Review paper *Knowing in Time* (Prydz 2014). Here we focus mainly upon the use of new technologies to facilitate data entry, uploading, analysis, and visualization. However it should be noted that some important changes to the consent form

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[22] http://epp.eurostat.ec.europa.eu/portal/page/portal/microdata/eu_silc

and survey – for example retaining the cell phone numbers of respondents for a given set of months – could facilitate monitoring in case of a shock or disaster by re-contacting respondents with a mini-panel questionnaire to ascertain changes in status.

The other bottleneck that these new initiatives are addressing is survey length. In particular, a standard consumption/expenditure module provides a wealth of information on topics, including consumption patterns, dietary diversity, the percentage of income spent on various items, and inequality and distributional issues. However interim annual income and expenditure surveys may be used primarily to determine whether or not an individual is income poor. Therefore, shorter modules and other methods to obtain this poverty status – leaving time and space in surveys to address other core indicators of the SDGs – are under investigation.

In terms of **promptness and availability,** survey programmes have made some important advances, particularly given the more widespread use of Computer-Assisted Personal Interviewing (CAPI) and cloud-based technology. CAPI, developed by the World Bank, has a number of features that bolster efficiency and accuracy. The immediate transfer of data to central offices permits their immediate analysis. Moreover, such technology is linked with fewer coding errors (as the programme can query errors), enables last-minute updates or corrections to questionnaires, permits dynamic questionnaires (e.g., that enable experiments or asking particular questions based on previous responses), lets respondents answer sensitive questions directly without being witnessed, and enables more efficient enumerator management.[23]

A signally relevant and rich potential instrument that is also under development at the World Bank is called the Survey of Welfare via Instant Frequent Tracking (SWIFT). Using a projection method (Lanjouw et al.), SWIFT imputes poverty and inequality indicators using models that are calibrated using a country's previous LSMS or Household Budget Survey (HBS) and implemented using core non-monetary indicators. SWIFT has also proposed including directly the indicators required for a post-2015 MPI (multidimensional poverty index) and questions on subjective wellbeing (OECD) and consumer sentiment (Eurostat). SWIFT is also taking advantage of CAPI and cloud-based technology to enable the efficient and timely collection, transfer, analysis, and release of data.

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[23] http://bit.ly/18zFbCM.

Other cutting-edge and serious experiments are being undertaken using mobile phones as the medium for a series of questions on different aspects of wellbeing (Croke et al. 2012).[24] Driven by the same needs as those that motivate the move towards annualized household survey data collection, these forays into 'high-frequency' survey data are quite certain to strengthen if not transform SDG data collection considerably over the coming decade.

Other data collection methods using new technologies explore how to involve the 'respondents' more actively in both the data collection and its analysis, so that they – as well as other institutions – can be lead agents of poverty reduction. For example, **Paraguay's Poverty Spotlight** features similar technologies – having devised a 20-minute visual survey methodology that enables people who are poor to create innovative maps showing the dimensions in which they are poor by using stoplight colours (red, yellow, green), photographs, using electronic tablets with simple software.

A final note concerns the **promptness and availability** of the SDG indicators' publication and construction. Often there is a great silence after data collection has closed before the data are released – a gap the CAPI-cloud technology could shrink. Yet there is a second delay before the release of official statistics based on those data. Again, some pioneering examples are worth considering. **Mexico**'s lead institution on poverty measurement and monitoring, CONEVAL, obtains the data from ENIGH (Encuesta Nacional de Ingresos y Gastos de los Hogares). By their own presentations, they claim to prepare the official multidimensional poverty statistics (which include income poverty), nationally and by state, two weeks after receiving the cleaned data.[25] Not only that, but without great delay the programmes used for calculating poverty are made publically available in Stata, SPSS and R languages, together with a technical note, on the CONEVAL website.[26] Thus academics and technicians can run the programme on the microdata set (which is also publicly available) to understand, verify the national poverty estimations, and to study and further analyse them.

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[24] See also their briefing note on http://siteresources.worldbank.org/EXTPREMNET/Resources/EP102.pdf.

[25] Presentation by CONEVAL, Salamanca, 2013; confirmed by personal conversation with Gonzalo Hernandez Licona, President of CONEVAL.

[26] http://www.coneval.gob.mx/Medicion/Paginas/Medici%C3%B3n/Programas-de-Calculo.aspx

III. A Concrete Proposal: A 'Core' Survey Instrument

These examples serve to suggest that a short, powerful survey focused on a reduced sample and key indicators could enable collecting data on core indicators of human poverty efficiently and frequently. To ensure both comparability and national specificity, a brief, multi-topic survey could include indicators on the key poverty-related goals identified by the post-2015 development discussions and allow space for nationally chosen questions. The survey could be conducted using different institutional arrangements to match different contexts, with different statistical aspirations, capacities, and ownership profiles. It could therefore provide a rigorous way of obtaining disaggregated data on core issues, particularly those that are subject to frequent change, and could potentially incorporate rotating modules that focus on particular topics.

This new survey instrument must be short, powerful and selective so it can be conducted frequently – i.e., every year. Its core internationally comparable questionnaire should take no more than 45–60 minutes to complete per household. The sample surveyed should be representative of the key regions or social groups, and should provide household-level and gendered data. A country might decide to append additional questions that reflect national priorities and the cultural, climactic, and institutional context, as well as participatory inputs on poverty priorities and characteristics.

A core questionnaire should not cover all post-2015 targets. Some indicators may require specialised surveys; some may not require updating as frequently; some may be sourced from community, administrative, or census data; and some complex indicators may take too long to collect. Focus is essential. As the Italian proverb puts it, "Often she who does too much, does too little." Yet such a survey could yield poverty data that provide profound insights into the profile of disadvantages poor people experience and the impact of poverty reduction programmes, bolstering the design, targeting, and monitoring of future policy interventions. It is not the only tool required for a data revolution, but without such a tool, it is hard to envisage lasting change.

The sample design and survey modules proposed by the Multidimensional Poverty Peer Network (MPPN 2014) provide one concrete option of such a survey instrument. Developed and revised based on the leading survey instruments, and with input from 30 governments and international institutions, the survey takes seriously the resources and time constraints and endeavours to produce a survey that is light in time, yet powerful in content. The survey design permits gendered data and the short instrument should facilitate the collection of data that can be disaggregated at different levels. The proposed survey instrument contains

variables which can be used to generate over 30 indicators, which fall into 12 of the SDG goals in the current framework. This could naturally be modified to reflect the final core indicators of human poverty in the SDGs and other agreements that emerge during the process.

Conclusion

The move to annual reporting of the SDGs is a serious proposition, replete with challenges. There are likely to be shortfalls from the ideal. Yet observing that 60 countries already update data annually, we believe annual updating of a small core set of appropriate poverty-related indicators is feasible for many countries and that two- to three-year updates of core indicators are feasible for nearly all countries. A definitive move towards annual reporting of good quality data with timely data publication and analysis would greatly increase the relevance of measures of poverty to 'managers' and policy makers, and these in turn would spark a virtuous cycle.

Because of serious and legitimate concerns regarding the realism of increasing data frequency whilst guarding or also increasing data quality, this paper has reviewed a set of national and international experiences. We observed that many countries, rather un-noticed, already have annual surveys of some type – and named 60 of them. Most but not all of these are upper middle and high income countries. We observed that the 'gold standard' appears to be continuous household surveys, which offers the flexibility to update indicators when warranted, decreases issues of seasonality (by fielding over 12 months), and may be more cost effective.

We also observed the challenges faced by international survey initiatives and the resources already developed for rapid surveys. The hesitant uptake of short surveys points to a sharp hunger for data – which we view to be a real but transitory issue that could subside if data frequency rose. We also reviewed positive examples of nationally implemented yet harmonized indicators – such as MECOVI and EU-SILC – that address the need for country ownership and comparability. A great deal can be learned from both initiatives, including the political process of harmonization, the governance roles of international and national bodies, the financing mechanisms, the ongoing role of technical support and a central and standardized data repository, and the challenges of quality, sample size, use of registry data, and panel components.

Moving beyond these to consider the timeliness of data and of non-income indicators, we presented the emerging SWIFT initiative and mobile phone high-frequency surveys in the World Bank. Aware of the need

to communicate poverty results so that they energise and motivate local communities as well as policy makers, we shared the Paraguayan Stoplight Survey. Finally, in the interests of encouraging transparency of analysis, we shared Mexico's leading example of posting the Stata/SPSS/R files used to compute both its income and multidimensional poverty index online, as well as generating official national poverty figures two weeks after data release.

Building upon these examples, we also drew attention to the MPPN survey, a serious but flexible proposal put forward by 25 developing countries and institutions that are members of the Network, which covers around 30 of the proposed SDG indicators falling into 12 of the proposed SDG Goals. This or an improved version of such a survey could catalyse data collection required for many of the core indicators of human poverty.

This paper skips over many additional vital topics upon which others have written, such as the sequencing of countries moving towards annual surveys and the important issue of how an increase in data frequency and accuracy can be used to strengthen national statistical systems. Despite these gaps we hope that the existing conversations, which must address these and other difficult questions, will be facilitated by the information shared here.

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