Household surveys are key to monitoring a post-2015 agreement, but attention is needed to include populations living outside traditional households.

These surveys typically exclude some populations, who can be difficult to identify and interview, and may be relatively powerless.

Including all populations is important – all people have a right to be counted and excluded groups may be particularly important.

Recommendations include expanding or supplementing household surveys, improving administrative data, and using new technology – which also has other positive spill-overs.
1 Introduction

The 2013 call of the High Level Panel on Post-2015 for a ‘data revolution’, echoed in the 2014 report of the Independent Expert Advisory Group (IEAG), has given renewed impetus to data collection efforts to ensure that ‘no one is left behind’. Household surveys are the workhorse of millennium development goal (MDG) data reporting efforts and this is likely to remain the case under a new post-2015 agreement. However, because these instruments focus on the household as the unit of data collection, they generally exclude people living in other settings – be it on the streets, in refugee camps, in residential care homes or in correctional facilities – and those who are highly mobile. Our analysis of living standards and of well-being, therefore, reflects these exclusions.

This briefing considers who is excluded and why, the potential costs of such exclusion for monitoring and policy, and ways it could be redressed. For illustrative purposes we focus particularly on groups of individuals in institutions – namely old age homes and correctional facilities – and people who are homeless, as these categories have universal relevance.

2 Who is excluded?

National statistics offices often collect data through household surveys; however, their population coverage is incomplete. Individuals who do not live in households – institutionalized populations, as well as homeless, geographically mobile, and displaced individuals are not always represented in national-level data. Some of these groups are covered in the censuses of developed countries, but not in the census reports of many – or most – developing countries. Overall, it is estimated that worldwide, some 300 to 350 million people may be missing from survey sampling frames, either by design (at least 45%), i.e., omitted altogether, or in practice, because they are likely to be undercounted. Reliable numbers on homelessness are difficult to come by, but one estimate suggested at least 100 million in 2003; some 20 million people may be in hospitals or care homes at a given time; while the prison population is judged to be about 10 million.

3 Why are people excluded?

Practical and political difficulties impede the inclusion of non-household groups in surveys. Censuses, in principle, should cover all people although there are omissions in practice, but this is ‘not possible for household surveys’ and exclusions are particularly salient in developing countries where omitted groups are likely to be larger. The first technical constraint is survey sampling – most surveys in social science are based on cluster sampling, where households constitute the primary sampling units and those outside households are excluded de facto. Transient groups such as homeless (and displaced) populations pose a particular challenge for statistically representative sampling. Moreover, “the episodic and transient nature” of homelessness makes it difficult to research, or to obtain accurate estimates of its prevalence. Displaced people are not counted in annual censuses because they are not considered part of any nation’s population, and are therefore excluded from survey sampling frames. In more specific cases, such as the elderly residing in institutions, additional complications include physical and/or mental issues that may prevent participation in a survey.

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5 Deaton, The Analysis of Household Surveys.


7 Roy Carr-Hill, “Missing Millions and Development Progress,” World Development 46 (2013), p. 30-44. These global estimates exclude the homeless, those in fragile or disjointed households nor those in areas where there are security risks.

Because non-household groups constitute a small proportion of the total population, at least in richer countries – in the UK, an estimated 2% of the population, and in the US only 3%, – they are unlikely to register highly on political agendas. An illustrative case concerns the institutionalized elderly. Across several European countries where the elderly typically constitute an important share of the demographic structure, the institutionalized elderly account for between 1% and 7% of the population aged 65 and above (Figure 1). Although data are selective and outdated, in developing regions such as Latin America, these figures appear to be even smaller – possibly for cultural reasons (i.e., it may not be socially acceptable to place the elderly in institutions), as well as demographic factors, as some of these countries have predominantly young populations.

Estimates of the size of transient populations are much more opaque. While in the United States, an estimated 0.5% of the total population were estimated to be homeless in 2008, figures are likely to be significantly higher in developing and underdeveloped countries where poverty is much more extensive, though this may be offset by a stronger reliance on family ties. Nevertheless, providing accurate estimates on the extent of homelessness in developing countries is complex. Because the most comprehensive studies on homelessness have been carried out in developed countries – mainly the US, Canada and the UK – the definitions and typologies that have been created are generally not adequate for understanding the phenomenon in developing countries. For example, while in some industrialized countries, lack of adequate housing may be included in the definition of homelessness, this is not the case in developing countries, where squatter housing and informal settlements are much more common. If anything, in the case of developing countries, it is necessary to ‘delink’ the concepts of homelessness and inadequate housing to obtain a better understanding of the former.

An important study by CARDO (2003) provides some estimates of the number of homeless people in developing countries using country-specific definitions. These figures vary from approximately 32,000 homeless individuals in Bangladesh for the year 1999, which constituted 0.02% of the population. However, the extent of homelessness in ten developing countries: Peru, Bolivia, South Africa, Zimbabwe, Ghana, Egypt, India, Bangladesh, Indonesia and China, is likely to be significantly higher than these estimates. For example, in Bangladesh, the homeless are defined as “floating population,” or people who are floating in public spaces without a roof over their head. The Bangladesh Bureau of Statistics (BBS) suggests an official definition of homelessness, which it was found that 1.6 million individuals used shelters or transitional housing programs. See APA, Helping People without Homes. According to the 2000 US Census. See National Research Council, Once, Only Once, and in the Right Place: Residence rules in the decennial census (Washington, DC: The National Academies Press, 2006). For example, while in developing countries, lack of adequate housing may be included in the definition of homelessness, this is not the case in developing countries, where squatter housing and informal settlements are much more common. If anything, in the case of developing countries, it is necessary to ‘delink’ the concepts of homelessness and inadequate housing to obtain a better understanding of the former. An important study by CARDO (2003) provides some estimates of the number of homeless people in developing countries using country-specific definitions. These figures vary from approximately 32,000 homeless individuals in Bangladesh for the year 1999, which constituted 0.02% of the population.

Exclusion in household surveys 3
of the population, to 8.1 million in 1996 in the case of Egypt, representing 12.4% of that country’s population. The large differences in the numbers and shares of population considered to be homeless partly reflects differing definitions on what constitutes homelessness, and are also likely to be influenced by the ‘service statistics paradox’, meaning that countries acknowledging the problem and providing services for this population group are more likely to have higher and more accurate figures. Conversely, governments may have an incentive to conceal true figures, on the basis that recognizing the problem highlights a failure to provide adequately for their citizens.

Finally, governments may seek deliberately to exclude certain marginalized groups from censuses (and thus surveys) for political ends – recent examples include in Myanmar, Afghanistan and India – a problem that can

28 Based on the number of homeless individuals, estimated at 32,078 in 1999 by the Bangladesh Bureau of Statistics, divided by total population for Bangladesh for that same year, which was 129,966,823. Figure based on the “Health Nutrition and Population Statistics,” World Bank Data.

29 According to the Census of Egypt, individuals are considered homeless based on the quality of their housing. People living in marginal and unsuitable homes, including residents of shacks, kiosks, staircases, rooftops, public institutions and cemeteries are regarded as homeless.

30 Based on the number of homeless individuals, estimated at 8.1 million in 1996 by the Census of Egypt, divided by total population for the country for that same year, which was 65,097,777. Figure based on the “Health Nutrition and Population Statistics,” World Bank Data.

31 CARDO Project, The Nature and Extent of Homelessness

be amplified where census enumerators are government officials or police.33

4 Impacts of exclusion

Being excluded from household surveys is important intrinsically – all people have a fundamental right to be counted. The exclusion of groups is important too because they are arguably among the most vulnerable members of society,34 in Carr-Hill’s words, the ‘poorest of the poor’.35 For example, in the US homeless people are more likely to be in poor physical health,36 while in Belgium, institutionalized pensioners were more likely to receive a means tested benefit and pensions were likely to be lower, compared with the non-institutionalized elderly.37

The exclusion of certain groups therefore means that poverty rates and numbers, as well as other measures of deprivation, are relying on an incomplete sampling frame38 leading to biased survey results.39 It follows that we have an incomplete picture of factors associated with various types of deprivation, complicating policy design and targeting.

There may also be large spill-over effects associated with a focus on excluded groups, even where they are relatively small. For instance, although relatively few people live in correctional facilities (Figure 2), knowing more about these individuals is especially relevant because they are associated with society-wide problems, such as high crime rates and/or societal discrimination. For example, in El Salvador, while the share of the population in correctional institutions accounted for 0.40% of the total population in 2011,40 the country had the second highest homicide rate in the world. In the US, racial and ethnic minorities make up 30% of the population but 60% of the prison population.41 Understanding more about individuals who are imprisoned could help to identify factors associated with crime commission and/or the likelihood of arrest, an especially relevant exercise where crime rates are higher, discrimination against certain groups is prevalent and an understanding of the prison population is limited. Our lack of knowledge of these populations makes adequate policy choices difficult.

5 Redressing exclusion: recommendations

What approaches can be used to include non-household groups in nationally representative data collection? Some proxies can be used to estimate the number of people that are missed by censuses and household surveys, and through various technical fixes, it may be possible to reweight census counts in line with estimated omissions.42 But here we focus on ways of collecting survey data on these groups, both because of the intrinsic value of inclusion, and because of the importance of collecting data directly from excluded groups rather than making inferences about them.

Somewhat different strategies will be needed in the case of groups in institutions (who can be located more readily, 33 Carr-Hill, Missing Millions, except Myanmar case which is described here: http://www.hrw.org/news/2014/09/04/dispatches-what-burmans-census-missed.
35 Carr-Hill, Missing Millions.
37 The results of a study of the elderly population in Belgium, which compares the characteristics of the institutionalized and the non-institutionalized populations, shows that institutionalized pensioners have significantly lower pensions than non-institutionalized pensioners, a difference of 148 euro on average. The study also finds that the percentage of pensioners receiving means-tested benefits is underestimated by 9.5% if only non-institutionalized pensioners are considered (5.3% vs. 5.9%). The underestimation of this risk is even more pronounced in the age group over 85 years old (17.6%). See Pesters, Debels and Verpoorten, “Excluding Institutionalized Elderly,” 757-758.
38 Carr-Hill, Measuring Inequalities.
39 For example, Carr-Hill shows that inequalities in access to piped water, recorded as between 64% in the bottom quintile and 94% in the top, may in fact be between 0% and 67% if missing populations were included in urban Sub-Saharan Africa. See Carr-Hill, Missing Millions.
42 See Carr-Hill, Missing Millions.
and where administrative data will be more salient), and for transient/homeless populations. Overall, three options present themselves, which may be more or less relevant in particular country contexts and depending on the group in question:

**OPTION 1 – include non-household groups in censuses and survey**

One option is for survey bodies to approach institutions – correctional facilities, institutions for the elderly as well as homeless shelters – and seek their cooperation in data gathering for census enumeration and household surveys. In fact, the National Research Council of the United States suggests that in order to achieve total coverage of the population, the Census Bureau should “aggressively pursue partnerships with relevant authorities and streamline processes by which institution staff may be sworn in as census agents for purposes of administering questionnaires”.

This would involve treating household and non-household populations in the same way, distributing questionnaires to be filled out by respondents belonging to non-household groups.

An alternative method to include all the non-household groups would be to implement targeted surveys for excluded groups – though cost may be a factor and results may be difficult to integrate. Figures from these surveys could then be aggregated to data from household surveys, or presented alongside such data.

A notable challenge is to address transient groups, notably homeless and displaced persons. Two methods are in use to account for homeless people: the first consists of *point-in-time counts*, through which people without homes are counted on one specific night.

Individuals without homes who congregate in locations such as shelters, transitional housing programs and specific places of gathering, such as railroad stations and parks, are also considered. One shortcoming of this approach is that it still overlooks some people (namely those living in the homes of others, as well as in cars or in hard to reach

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43 National Research Council, Once, Only Once.
44 Ibid.
45 Carr-Hill, Missing Millions.
46 Joloza, Non-Household Groups.
48 APA, Helping People without Homes.
locations), biasing estimates downward. For example, a point-in-time survey carried out in Indianapolis in 2013 identified 1,599 homeless persons; however, a study from Indiana University and the Coalition for Homelessness Intervention and Prevention found that between 4,800 and 8,000 people were homeless that same year. In addition, point-in-time counts often occur in January in the US, when cold weather might impede identifying homeless populations. Finally, a major limitation is that the main question included in point-in-time surveys – “where did you sleep last night?”, means that anyone who had access to a roof over their head on the night of the count is not considered homeless (this would exclude as homeless the individuals who are sleeping at their relatives’ or friends’ houses temporarily).

The other option for counting the homeless is known as period prevalence, and involves collecting data from institutions or organizations in charge of providing homeless-related services (such as soup kitchens and shelters) throughout the course of a year – but the data collected across these organizations are inconsistent and such surveys usually do not include all relevant organizations, or indeed individuals not connected to an organization.

Despite their shortcomings, these methods have been used widely to estimate the number of homeless in the context of developed countries, and there is some evidence of similar methods being applied in developing countries, as in Bangladesh, in 1991, where census enumerators sought to measure the so-called ‘floating population’. However, because of the intensity of resources required, purposive counting of homeless populations is relatively rare in developing countries.

**OPTION 2 – use administrative data to supplement surveys**

Because it would still be difficult to guarantee coverage of all excluded populations, it is advisable to complement and survey data with administrative data – particularly for institutional populations such as the elderly and those in correctional facilities. Because such data are collected as part of administrative processes rather than deliberately, there are concerns over their coverage, timeliness, validity and reliability. Administrative agencies must measure variables that are relevant to their duties, which may differ from those that are most adequate for statistical purposes due to weaknesses such as inconsistencies with standard statistical concepts and classifications, poor systems and processes, and inaccuracy. The converse is that developing administrative systems can also contribute to institution strengthening and service delivery.
Moreover, promising experiments are underway to link survey and administrative data.\footnote{Ibid.}

**OPTION 3: Use new technology to identify transient groups**

Multiple projects, across the US in particular, aim to use new technologies to identify homeless populations. These tend to be small scale, as yet, so we provide some illustrative examples. Some are cheaper and more efficient ways of conducting point-in-time counts, while another demonstrates the potential of new technology to enable groups to contribute to their own enumeration and give feedback on services received:

  Additional information, such as the number of homeless people at the location and whether there are children, pregnant women or ill persons, can also be recorded and shared with other agencies.\footnote{Ibid.}

- *We Count* in Seattle is a platform that includes a phone and web application to document homelessness and outreach efforts. The phone application generates reports that are automatically tagged with GPS and show icons based on the documented “living situation” of the individual (i.e., car, bench, doorstep, etc.).\footnote{“We Count,” Hack to End Homelessness, accessed July 29, 2014, http://www.hacktoendhomelessness.com/presentations/we-count.pdf.}

- In Santa Clara County, California, a new phone-based tool allows homeless individuals to contribute information to the data system through their own stories and validate the reports that are being produced. The site itself will capture and interpret data, including the feedback of the homeless on the services they have received and their view on the extent to which those services have been helpful. The programme will explore ways of bringing smartphones to homeless communities and aim to create a platform accessible through any office or library.\footnote{Julia Burkhead, “Advocacy App Empowers Homeless to End Homelessness,” Knight Foundation, March 18, 2013, accessed July 29, 2014, http://opengov.newschallenge.org/open/open-government/submission/advocacy-app-empowers-homeless-to-end-homelessness/.}

**6 Conclusions**

Some of the poorest and most vulnerable groups are currently excluded from household surveys, and often, from censuses – a trenchant problem because we lack critical information to tackle poverty reduction and inequality, and because excluded groups lack information that they could potentially use to bring about improvements in their lives. Our focus is on people that are homeless (a broad and ill-defined category, particularly in a cross-national context), and those who live in certain institutions – namely older people and those who are imprisoned – who can be found in all societies. The reasons for their exclusion are both practical, to do with difficulties in sampling and access, but also political – governments may have interests in excluding some people, and some people may want to avoid being counted.

Non-household groups can be accessed, as we have suggested – but this must be done deliberately. A range of methods exist, including expanding or supplementing household surveys, improving administrative data and using new technologies. The choice that is most appropriate will depend on the specific circumstances in each case. Implications are also conceptual and analytical – a shift from an exclusively household-based focus to explore more fully other institutions and interactions that shape people’s experiences. But the first hurdle to be overcome is capturing the data that are needed. This needs to be factored into consideration of how to improve data and monitor new post-2015 development goals, particularly with a view to ‘leaving no one behind’ – and considering the resources that will be needed for this.