



Advancing the data revolution in Africa: A dialogue between demographers and data practitioners

The UN 2030 Development Agenda and the Data Revolution

In September 2015, the United Nations General Assembly agreed upon 17 Sustainable Development Goals (SDGs) to guide national development efforts and to drive international cooperation through 2030. These goals are in turn subdivided into 169 targets, which will be assessed by between 100-200 measurable indicators. Discussions are currently underway under the aegis of the UN Inter-Agency Expert Group on the final list of the indicators and their monitoring processes; the outcomes of these deliberations will be presented at the 47th UN Statistical Commission in March 2016.

Several of the proposed SDG indicators are demographic in nature, relying fully on population and demographic metrics (e.g., child mortality rates and met need for family planning) or on population statistics in the denominator of the indicator (e.g., the proportion of the population living in extreme poverty and school enrolment rates). These indicators aim to provide broad, disaggregated information on subnational population groups in a timely manner, so as to allow for the design of effective policies and interventions, and for monitoring progress towards the SDGs.

The UN 2030 development agenda is highly ambitious and will require a “data revolution” to succeed. Compared to the more limited Millennium Development Goal agenda (with 8 goals, 21 targets and 60 indicators), monitoring progress towards the SDGs will require a massive scaling up of data activities: data collection, expanding the types of data available and linking them together (censuses, surveys, satellite and other remote sensing data, cellphone records, CRVS and other administrative data...), substantially improving the quality of data, along with the usual activities of data editing, analysis and dissemination. In addition, designing effective policies and interventions requires data on *processes and behaviors* that affect the outcomes measured by the SDG indicators – information that often stretches far beyond the indicators themselves. (An example of this is the monitoring of maternal mortality. While understanding trends in this measure are important, the explanation of why differentials in maternal mortality persist among sub-populations is probably more important in designing and implementing effective interventions to bring out further declines in this metric.)

Beyond meeting the needs of the 2030 UN Development Agenda, rapid advances in new types of data (e.g. Big Data) and in new technologies to better reach people and process information are progressively changing the data environment. These developments should act to increase the range and availability of data to governments, NGOs and civil society in upcoming years.

Importance of sub-Saharan Africa

While the SDGs are designed to be of pertinence to countries across the globe, they are especially relevant to sub-Saharan Africa (SSA), where extreme poverty is relatively common, and the related health, nutrition, hygiene and urbanisation challenges are acute. In addition, population growth patterns in the region make efforts to improve human welfare and protect the environment both hugely important and particularly difficult.

Sub-Saharan Africa continues to experience very rapid population growth. According to the most recent UN population projections,¹ the population of SSA will grow by 45% over 2015-30, from slightly more than 960,000 to nearly 1.4 billion. During this same period, the population of the rest of the world will grow by just 11%. Roughly 78% of world population growth through the end of the century is projected to occur in SSA. Even assuming fairly rapid fertility declines, by 2100 the SSA population is projected to attain 3.95 billion, an increase of nearly 3 billion over 2015 – growth that is roughly 1.4 times the size of the combined populations of Europe, North America and South America today.

This growth is caused by continued generally high levels of fertility relative to falling mortality, and to population growth momentum due to the young age structure. Sub-populations with relatively little schooling or living in rural areas tend to have higher fertility, and a much of future population growth in sub-Saharan Africa will be composed of their offspring. The behaviors and outcomes of these typically disadvantaged groups are relatively difficult measure, and devising ways to improve their wellbeing will be crucially important and an enormous challenge. The success of the UN 2030 development agenda will depend in good part on very significant progress in human welfare and environmental protection in the SSA region, starting with massive improvements in the evidence base for designing and implementing effective policy and interventions. This progress, moreover, must occur prior to major changes in the population age structure – changes in the dependency ratio that are thought to underlie much of the demographic dividend.²

¹ United Nations Population Division (UNPD, 2015). *World Population Prospects: The 2015 Revision*, medium variant data acquired via website; see also Leridon, Henri (2015). “Afrique subsaharienne: une transition démographique explosive”, *Futuribles* n°407, July-August 2015.

² UNPD (2015) shows the total dependency ratio in SSA, defined as the number of dependents <15 and >65 divided by 100 people of prime working ages 15-64, falling from 86 to 74 over the 2015-2030 period, and attaining 55 for the 2075-2100 period. In contrast, this ratio was estimated at 37 in both China and Korea in 2015 – countries that experienced sharp fertility declines over the past 40 years that transformed their age structures.

National capacity concerns

The capacity for timely and accurate data collection and analysis varies enormously across SSA. It is improbable that even the best endowed countries will be able to provide the full set of data for measuring the SDG indicators in the near future. In poorer countries, where NSOs tend to be less well funded, less autonomous and constrained by professional staff that are both smaller and less-well trained in critical areas including demographic analysis, the task of scaling up data activities will prove to be especially daunting.

The dual challenge of the Data Revolution that simultaneously reasserts the primacy of the National Statistical System in the SDG framework while supporting the idea that data should be more open, transparent, accessible, and capable of holding national and local authorities to account, is particularly apparent in sub-Saharan Africa. Not only are new demands going to be placed on the National Statistical Systems to provide new data and indicators, those systems are also likely to be subjected to demands for greater openness and transparency.

Meeting the challenges of the Data Revolution in Africa: Panel discussion at the 7APC

The UN 2030 Development Agenda, the effects of the demographic dividend, and the Data Revolution offer the promise of transforming our future for the better. Our job is to attempt to design ways to realize that promise. This session aims to stimulate discussions between demographers and data practitioners especially in regard to how to best implement the data revolution over upcoming years – action plans that include “quick wins”; longer term investments and activities; setting priorities (in terms of national versus international priorities, quality versus quantity of data, priority variables, types of data, levels of disaggregation that are feasible...); avoiding potential bottlenecks, rethinking the role of international collaborations, and devising better approaches to rapidly disseminate information to policy makers, local officials and the civil society in ways they can use. The goal of this meeting is to start to generate ideas on how to tackle these issues.

The session moderator is Thomas LeGrand, vice-president of the IUSSP and professor at the Université de Montréal. In alphabetical order, the panellists are:

- Alex Ezeh, *Director, African Population and Health Research Center*
- Patrick Gerland, *Population affairs officer, United Nations Population Division*
- Stephane HELLERINGER, *Johns Hopkins University*
- Pali Lehohla, *Statistician-General of South Africa*
- Tom Moultrie, *University of Cape Town*
- Rachel Snow, *Chief of UNFPA’s Population and Development Branch*

Format of the meeting

The session is structured as a roundtable dialogue organized in a “Davos format”. After a brief introduction by the moderator, specific questions will be addressed to experts in their areas of expertise. Each respondent will have about 5 minutes to respond, before we move onto the next question. Afterwards, we will have a period of about 30 minutes for comments and questions from the floor, responses by panellists, followed by short last-minute comments by the panellists at the end.

Questions addressed to the panel

Priorities (Pali Lehohla)

- How should NSOs see their challenges and their role in this new framework?
- How do we square the global priorities envisaged by the Data Revolution with country-specific developmental and statistical needs?
- How best do we proceed rapidly to establish effective work plans to improve both the scope and quality of data? And what should be done first?

Institutions (Alex Ezeh)

African institutions are very diverse in terms of their capacities to scale up their activities to meet the needs of the Data revolution.

- What are the critical institutional problems facing NSOs in the region that may limit their ability to provide the SDG indicator data?
- What measures are needed to reinforce the capacity of these institutions, at the level of countries or in concertation with other actors (e.g., through data compacts)? What pitfalls should be avoided?
- Given the diversity in African institutions and contexts, should subsets of African countries with different priorities and capacities try to develop concerted plans (e.g., establish a minimum harmonized set of priority indicators at first)?

Training (Tom Moultrie)

The work of collecting, editing, analyzing, disseminating and finally using data requires institutions with well-trained staff. Numbers of professional database specialists, statisticians and demographers in many NSOs are inadequate, and the number of professional demographers may even be declining in much of the developing world, due to the end of UN support for the regional training centers. In addition, many potential data users (NGOs, civil society...) lack the necessary skills to be able to effectively access and use statistical data when it is available.

- What do you view as being the most pressing areas where renewed training efforts are needed?
- To what extent can short-term training workshops bring up to speed the current staff working in NSOs, versus an expansion of university training programs such as professional MScs?

- Should the emphasis be on training demographers, versus training data specialists in which an important part of the curriculum may concern demographic measures, processes and behaviors?

International community (Rachel Snow)

The international community will need to play an important role in assisting in reinforcing the capacity of countries to achieve the data revolution.

- From the vantage point of international agencies with their mandates and needs, how do you see the major challenges both for providers of data and for international agencies? What should be the role of the international community in facilitating the data revolution?
- At times, research centers located outside of the region may be better able to generate data for some SDG indicators (e.g., using satellite maps for small-area population estimates, or increasing the frequency of DHS or World Bank-funded surveys). How does one deal with the urgent need for more and better data, while ensuring that NSOs are not marginalized in the process?

Data quality and gaps

The data revolution calls for more timely data on a disaggregated scale, so as to ensure that we have sufficient information on marginalized groups, and to link data from diverse sources – censuses, surveys, administrative data, big data and satellite data. At present, there are important gaps in our statistical knowledge base and, not infrequently, existing data are subject to selective undercounts that affect data quality.

Data quality (Stephane Helleringer)

- How should we trade off the importance of efforts to improve data quality versus expanding the types of data available, in a context of limited budgets and capacity?
- Disaggregating data over time and space leads to smaller numbers of observations for measuring indicators and assessing progress. In practice, how should problems of precision and uncertainty in our measures be handled? Should we be aiming for standardized measures or systematically producing uncertainty ranges?

Data gaps (Patrick Gerland)

- For you, what are the critically important missing variables and types of data on human populations that are required to meet the needs of the SDG agenda?
- Which indicators do you view as being especially hard to measure in contexts like SSA in the next decade? Inversely, are there “quick wins” – new data or variables that may prove to be relatively simple to attain in the short term?
- In terms of civil registration and vital statistics, what efforts are most urgently needed to develop and establish effective systems, and how might new technologies assist in this?