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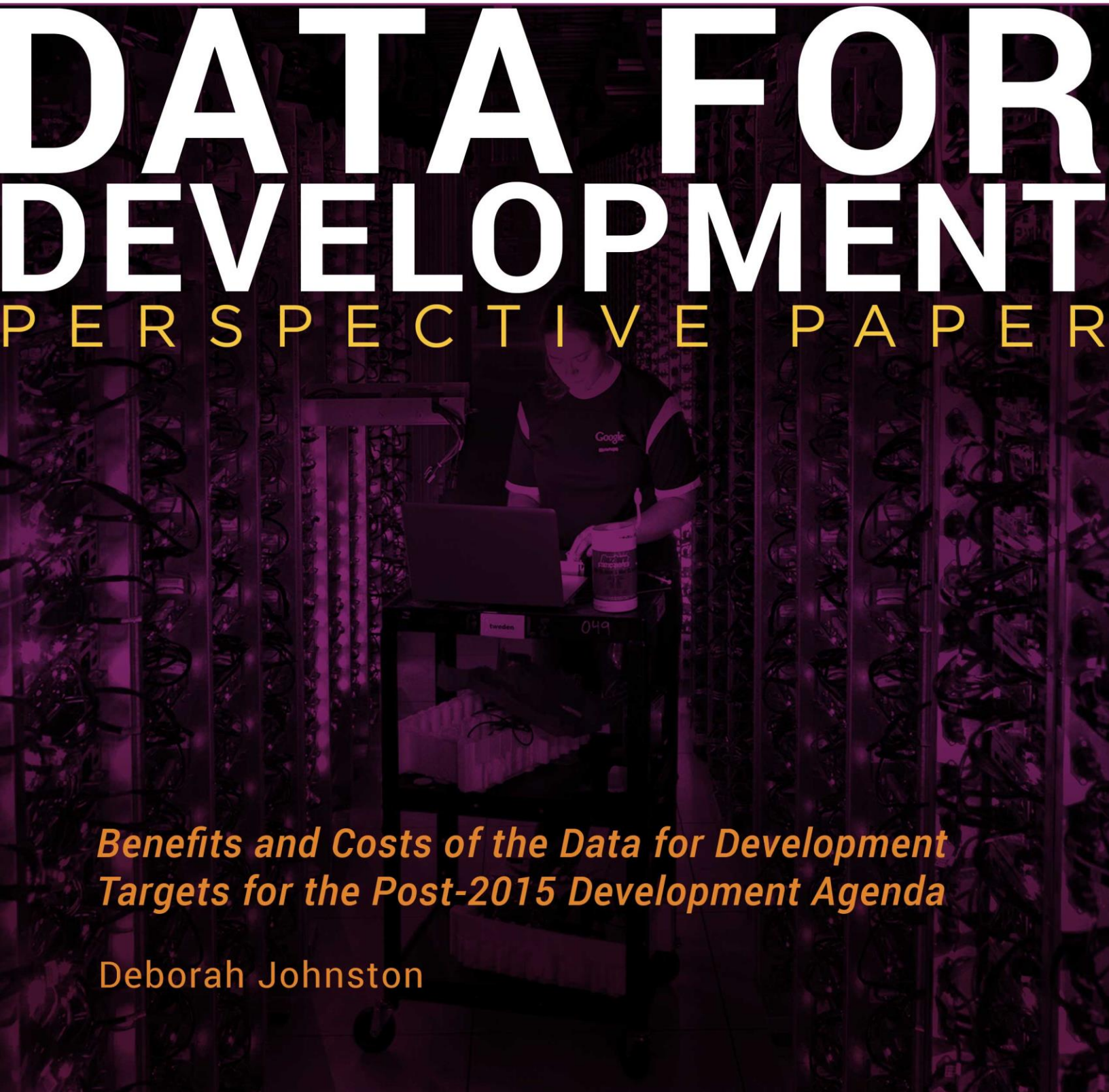
PERSPECTIVE PAPER



Benefits and Costs of the Data for Development Targets for the Post-2015 Development Agenda

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POST-2015 CONSENSUS

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Introduction

This perspective paper provides a critical analysis of the Assessment Paper: The cost and benefit of data needed to monitor post-2015 MDG. The assessment paper sets the scene for a rare but vital discussion – that of the cost and benefit of data provision. As the paper shows, data provision was not a key consideration of the original MDG exercise. Not only were indictors 'retro-fitted' to goals and targets, little attempt was initially made to ensure that they could be measured. Indeed, even at the end of the MDG process, much of the development database is missing and of poor quality. The evidence suggests that the problems are worse for the poorest countries, precisely those were accurate data is most needed both for international donors and for the domestic political purposes.

How bad is the existing problem? Three examples can be given here using assessments of: the census data; the GDP data; and the undernutrition data provided for by FAO. Carr-Hill (2014) has suggested that the data on developing countries population suffers from several kinds of uncertainty, the dominant one being the under-counting of mobile, insecure and communally-housed individuals. Using several empirical examples, he casts doubt on the census data, and argues that the problem is particularly acute as those 'missing' are likely to be the poorest and most vulnerable. Carr-Hill's work and that of other academics, such as Sender et al (2005) suggests that our most basic piece of development data suffers serious problems.

Another relevant (yet wholly different) form of data is that on Gross Domestic Product. The remarkable upward revision of GDP in Ghana generated plenty of discussion (Jerven & Duncan 2012), as has the potential for the same kind of revision in Nigeria (Jerven 2012). These revisions were generated by changes in the statistical base for GDP calculations, specifically for data on the structure of the economy (to which updated growth estimates are then applied). The changes were large enough to double the estimate of Ghana's GDP, moving it from a low to middle income country overnight. Worryingly, it has been argued that the problems are widespread, although uneven, with different countries producing data of different robustness and having different statistical capacity (Jerven 2013). The implications of our lack of understanding of GDP are wide-ranging. If we cannot trust GDP data and we are unsure about population data, then much of development data (which uses one or the other as a denominator) are flawed!

A final example may convince the sceptics that there is a serious problem with the existing development database. The calculation of undernutrition is provided by two international agencies: the Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO). The FAO data focuses on food availability, while the WHO data estimates bodily outcomes, which itself is the result of a complex array of factors ranging from food access to accessible health services and decent sanitation. The complex interpretation of the trends from the WHO data meant that FAO data is often preferred by policy makers (a preference that was compounded in the past by the infrequent update of the WHO data). However, it has been shown both by academics and by official evaluators of FAO that the

food availability data is subject to a range of potential errors (see Hawkesworth et al 2010 for a review). The problems arise not only from conceptual shortcomings, but also from several empirical weaknesses. Not least, in 2008 an independent evaluation noted that "the quantity and quality of data coming from national official sources has been on a steady decline since the early 1980s" (CC-IEE 2008). This lack of good quality data is particularly acute for certain middle and low-income countries where there may be no official statistics; FAO currently fills this gap by providing its own modelled or imputed estimates of food production, which are used for over 70% of African countries and for over 50% of countries from Asia and the Pacific (CC-IEE 2008).

While these paragraphs may convince the reader that there are flaws in the data used to assess the MDGs, it is also important to show why this matters for the post-2015 agenda. The first issue is the fact that the post-2015 is likely to have a far greater monitoring burden. Indeed, the Assessment paper convincingly shows that paying for a full set of development data is out of reach. It would swallow up an enormous proportion of aid funds or, as the Paper argues, 'widen the gap between the ambitions and realistic achievements'. The second issue is that, even if it was available, throwing money at the problem will not solve it. The tensions around monitoring the MDGs has shown that the problem of lack of statistical capacity is hard to solve. Anyone who thinks that is just a matter of paying for more data would do well to read the Assessment paper's evidence on the opportunity cost of statistical data. The Partnership in Statistics for Development in the 21st Century (PARIS21) group estimates that there has been an increase in data gathering exercises in African countries as a result of MDG monitoring, if the period since 2000 is compared with the last half of the 1990s (see http://paris21.org/sites/default/files/Post%202015%20MDG_Pres%20pptx%20rev%20Vacnouver%20April%202013.pdf accessed 9th May 2013). However, at the same time, there was been a shift away from surveys that are not geared closely to the MDGs and not funded by donors. For example, many countries now rarely carry out labour force surveys, leading to poor quality data on employment and migration (Johnston, forthcoming). The Assessment paper rightly argues that the areas that have been particularly depleted are macroeconomic, labour and agricultural statistics.

The development database is central to all our conversations, debates and international commitments on development. The growing evidence suggests that ability to generate development evidence is light-years away from our present needs. Amazingly we seem to be repeating history in the post-2015 exercise by neglecting to consider the adequacy of our indicator data. This Assessment paper is a ground-breaking attempt to delineate the issue, map the extent of the problem and make recommendations. Here, the cost-benefit estimates and methodology are subject to critical scrutiny. Overall it is argued that the Assessment paper provides an innovative, convincing argument that the post-2015 debate must pay more attention to the 'kind of development we are able to monitor', rather than a discussion about what we should target. The persuasive estimates of the financial and opportunity cost of data have the power to shock – uncovering the naivety that exists about the potential to monitor an ambitious list of development indicators. Essentially the paper is a wake-up call to the development community.

General Requirements of "Post 2015 Consensus Research Brief

This is a cutting-edge and important paper that provides an essential grounding to the overall Copenhagen Consensus project. While the Copenhagen Consensus has brought together experts to set out which targets might do the most social good, this Assessment Paper asks which indicators are cost-effective to measure by considering three issues (the appropriateness of indicators, the incentives that they set up and their opportunity cost).

The paper makes several important contributions, the most important of which is its careful enumeration of costs of monitoring the MDG indicators. The estimated cost of the MDG round (at $27bn) is of such dimensions that it is clear that a post-2015 agenda (with its expanded list of targets and indicators) would be unaffordable to monitor. This is the marginal cost of surveys used to collect the MDG indicators and does not include the costs of maintaining statistical capacity nor of the cost of administrative data collection.

In addition, the case is convincingly made not only of the financial cost of such monitoring, but the opportunity cost in terms of the competing demands placed on survey capacity in low and middle income countries. The evidence of the impact of the MDGs is worrying – data demands of the MDG seem to have chased out other necessary survey exercises. Another strength is to remind us of the behavioural effect of particular indicators (i.e. in the way that they may skew activities to the completion of a specific indicator and thus away from other non-quantified goals). The paper sets this 'skewing' effect out well, providing reference to evidence that both health and education targets have distorted administrative data. This quantification is extremely powerful in showing the need for prioritisation of targets and indicators – and so is highly complementary to the Copenhagen Consensus exercise.

Important Targets Being Discussed within the Post-2015 Debate Not Sufficiently Dealt With

It has been estimated that in the post-2015 world, an additional 25 or so indicators that may be added to the MDG list. What will be needed to monitor those? The limitations of the paper are unavoidable. There is not yet clarity about the definitive list of new targets and indicators. This of course prevents a precise costing of the post-2015 menu. It also prevents a full prioritisation of survey expenditure. In the face of a severely inadequate budget, one approach would be to rank the most essential surveys. While the Assessment Paper cannot complete this ranking as the final list of indicators is not known, it has usefully set out the likely minimum data requirements:

- A population census every 10 years
- A Demographic and Health Survey (DHS) every 5 years
- A Living Standards Measurement Survey (LSMS) every 5 years
- A Core Welfare Indictor Questionnaire (CWIQ) annually

It should also be remembered that the Assessment Paper aims at uncovering the marginal cost of the surveys needed to measure the Post-2015 agenda. We have already said that

that excludes the costs of statistical capacity and of administrative data collection. However, it should also be pointed out the estimate necessarily excludes the cost of data analysis and utilisation – a key activity if data is going to support accountability. Only when data is made accessible (or as the Paper says 'digestible') in the form of reports, briefings and even soundbites, will it be something debated by politicians and the public. This may need additional capacity building and additional cost.

Important Issues of the Challenge not Sufficiently Dealt With

The estimate of $27bn for full MDG data acquisition is powerful and convincing. The author makes clear that this was not actually spent – and so much of the MDG data are 'projections, estimates and guesstimates'. The author also notes that when data exercise did take place they were often of dubious quality. And this is a key area of challenge: it is not enough that a typical data gathering exercise takes place. For example, many people can be left out of the data gathering exercise or the data generated can be subject to bias or error. Thus, the availability of funding for a survey exercise does not guarantee good quality data. The challenge may also be a result of methodological problems (due to survey implementation), conceptual problems (due to shortcomings in definitions) or political problems (resulting from the sensitivity of the data).

Indeed, data are products of multiple layers of meaning. While disciplinary approaches may set up particular conceptual limits, the understanding of both researchers and research subjects will interact to produce the final data. The potential for misunderstanding, ideology and bias are rife. Rizzo & Wuyts (forthcoming) clearly show how a combination of bias at the level of the discipline, poorly worded questions, limited statistical analysis and loaded local meanings have led to severely flawed labour force data in Tanzania. Conceptual and empirical shortcomings are at the heart of the problems identified by Cramer et al (2014). With indicators as diverse as household size or employment status are understood in overly reductionist ways in a survey, the resulting data is likely to distort actual patterns. The complex interlinkages and shifting activities of poor individuals are certainly going to be misunderstood. This points to a challenge for academics as well as statisticians. How to produce approaches that allow abstract theoretical concepts to be applied in concrete complex situations? More than this, these concepts must be operationalised so that reliable questions can be asked and answered.

While human and financial resources might set the possibility frontier for the production of statistics, there are other issues of quality to be considered. The political economy of data is crucial. Not only do governments have incentives to misreport data in certain situations, but government can also be fooled, as well, when they consume the data of line ministries or local departments. The political meaning and sensitivity of data is always at issue (Jerven 2013b).

This issue of quality however needs tighter definition. It is hard to assess unless we know what the development targets and indicators are. Once the Post-2015 list is formally agreed, this can be more properly assessed both at the level of a particular indicator and the survey from which it comes. At this stage, Appendix B (which now gives an extremely

useful and novel overview of each of the major international survey types) could be expanded to consider quality issues.

Methodology and Cost-Benefit Estimates

The methodology of the Assessment Paper is innovative and important. I am not aware of any other exercise that have attempted to cost the MDG agenda, nor, of course, the Post-2015 agenda.

The paper clearly sets out the assumptions made, with detail contained in Appendices B and C. Again, it is made clear what is not included in the estimates, with the author making it clear that this is a lower-bound estimate.

The methodology provides three important contributions:

- An important issue shown in the methodology is the extent to which monitoring the MDG (and future Post-2015) agenda depends not administrative data but on survey data. The majority of the existing MDG list requires specialist survey exercises.
- There is extremely limited information on the cost of these survey exercises. This paper provides an argument for far greater transparency in the costs of surveys.
- Appendix B therefore provides an invaluable range of evidence on the costs of data collection that has not been brought together before.

With limited information on the actual costs of surveys, the paper presents a heroic task of developing likely cost ranges based on population sizes (small, medium and large countries). As the author points out, there are in practice likely to be conservative estimates as they are based on the costs of surveys that have been carried out in stable situations with adequate infrastructure. Survey costs will be far higher in conflict prone countries or those with a limited history of data collection. With more information on existing costs, it would be possible to have more nuanced estimates of survey costs for countries for which there is no public data.

The Paper was not able to assess the costs of the Multiple Indicator Cluster survey (the MICs) as no information was made public despite repeated requests. As a result, the $27bn imputed cost of the MDG exercise does not include a MIC. Appendix B usefully sets out the use to which MIC results are put – as well as key health data, the MIC also collects information on education, water access and sanitation. Many of these variables overlap with other surveys (most notably the DHS). However, it would be useful to have a better idea of the implications. While the $27bn is an imputed (rather than actual cost), what would it mean in real life if we could not fund MICS? How essential are they to the development debate?

As such the methodology presented is the best rule-of-thumb possible with the extremely limited information presented on survey costs – and with the limited information on the range of indicators in a post-2015 world. The benchmarks for country size are useful but of course in practice, a range of other indicators is likely to interact to determine overall cost.

Conclusion

The Assessment Paper has constructed a ground-breaking argument that raises to public attention a dangerous gap in the development debate. It convincingly shows that we risk repeating the mistakes of the past, in ignoring the requirements of data collection in the post-MDG world. While adequate funding would swallow up a huge proportion of international aid budget, without it we would once again be in a realm of estimates and guesstimates. How can we take serious international commitments to a better life for all if we know that there is no substantial foundation to the measurement of those commitments?

By providing a cost estimate of each of the crucial surveys and of the overall MDG exercise, the paper also kick-starts a discussion about prioritisation. It begs us to ask the question 'which of our key development indicators can be feasibly and cost-effectively monitored'?

References

Carr-Hill, Roy, (2014) "Measuring development progress in Africa: the denominator problem", Canadian Journal of Development Studies.

CC-IEE. (2008) Report of the Independent External Evaluation of the Food and Agriculture Organization of the United Nations (FAO). Rome, Italy: Food and Agriculture Organization

Cramer, Christopher, Deborah Johnston, Bernd Mueller, Carlos Oya and John Sender, (2014) 'How To Do (and How Not To Do) Fieldwork on Fair Trade and Rural Poverty', Canadian Journal of Development Research 35(1).

Hawkesworth, Sophie, Alan D. Dangour, Deborah Johnston, Karen Lock, Nigel Poole, Jonathan Rushton, Ricardo Uauy and Jeff Waage (2010) 'Feeding the World Healthily: the Challenge of Measuring the effects of Agriculture on Health.' Philosophical Transactions of the Royal Society B: Biological Sciences, 365 (1554). pp. 3083-3097.

Jerven, Morten (2012) "Briefing: For richer, for poorer: GDP Revisions and Africa's Statistical Tragedy", African Affairs.

Jerven, Morten (2013) Poor Numbers: How We Are Misled by African Development Statistics and What to Do about It. Cornell University Press.

Jerven, Morten (2013b). The political economy of agricultural statistics and input subsidies: Evidence from India, Nigeria and Malawi. Journal of Agrarian Change.

Jerven, Morten and Magnus Ebo Duncan, (2012) "Revising GDP estimates in Sub-Saharan Africa: Lessons from Ghana." African Statistical Journal, 15, pp 12-24.

Johnston, Deborah (forthcoming) "Disguised employment? Labour market surveys, migration and rural employment in Southern Africa" in C. Oya and N. Pontara (eds) Rural Wage Employment in Developing Countries: Theory, Evidence and Policy. Routledge ISS Studies in Rural Livelihoods.

Rizzo, Matteo and Marc Wuyts (forthcoming) "The invisibility of wage employment in statistics on the informal economy in Africa: Causes and consequences", Journal of Development Studies.

Sender J., C. Cramer and C. Oya, (2005) 'Unequal Prospects: Disparities in the Quantity and Quality of Labour Supply in sub-Saharan Africa' Social Protection Discussion Paper n. 0525, World Bank.

This paper was written by Deborah Johnston, Reader in Development Economics at School of Oriental and African Studies, University of London. The project brings together more than 50 top economists, NGOs, international agencies and businesses to identify the goals with the greatest benefit-to-cost ratio for the next set of UN development goals.

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