Expression(s) of Poverty: The Impact of Measuring Poverty in Ghana in the Context of Development Goals

Abstract

The Sustainable Development Goals provide an ambitious agenda; not only for poverty reduction, but also for its measurement. Nevertheless, existing literature does not address the impact of measuring poverty as part of Development Goals. This article aims to address that knowledge gap by examining the impact of consumption-based poverty measurement in Ghana. This study shows that poverty data is hardly used for poverty reduction policymaking in order to reach the Sustainable Development Goals. Instead, stakeholders mostly use poverty data to demonstrate accountability in order to affirm their legitimacy and acquire sufficient funding for their projects. Based on these results, the article introduces a much-needed conceptual framework for studying the impact of poverty indicators in the context of the Sustainable Development Goals.

Keywords: Sustainable Development Goals, poverty indicators, poverty reduction, measurement impact, Ghana

Introduction

With the adoption of the Sustainable Development Goals (SDGs), the international community set an ambitious agenda; not just for development, but also for its measurement. With as much as 17 goals, 169 targets and 230 indicators, the SDGs seemingly not only aim to leave nobody behind, but also to leave little development unmeasured. Data on those living in deprivation is deemed to be crucial for effective evidence-based policymaking in order to lift people out of poverty (IAEG-SDGs, 2016). In this context, a lack of data in itself is increasingly regarded as a form of deprivation that should be ended (Serajuddin *et al*, 2015). Therefore the United Nations Secretary-General's Independent Expert Advisory Group (2014: 2) has called for a 'data revolution' involving more and better data on all relevant dimensions of development. This desire for more data is firmly rooted in the belief that better data will lead to better decisions and increased accountability, and is therefore crucial to achieving the SDGs and eradicating extreme poverty (ibid.).

Nonetheless, little research has been done on the impact of the local adaptation of these statistical demands on a country level, which could reach much further than is often recognized. Although statistics are often regarded as representations of reality, they are rarely acknowledged for the social, economic and political realities that statistics have become (Jerven, 2013). Viewed from this perspective, the measurement of poverty not only reflects, but also comes to define development by determining what counts as poverty and progress as part of Development Goals. In addition, little is known about the assumed impact of poverty data on policies that contribute to reaching the goal of eradicating poverty. These knowledge and governance effects of the use of statistics are often neglected in existing research, despite their potential effects on poverty itself. This process by which statistics arrange elements to characterize objects, and thereby ultimately potentially affect the object measured itself, has been called 'expression' by Didier (2008). This concept is helpful to examine the country-specific impact of poverty measurement on the way poverty is understood and governed, which ultimately impacts poverty itself.

This article focuses on the case of a country with an interesting poverty reduction history – Ghana – to illustrate how poverty is expressed through statistics. Ghana is known for its impressive poverty reduction progress during the Millennium Development Goals (MDGs) era (McKay *et al*, 2016). At the same time, its more recent growth has not been pro-poor (Ghana Statistical Service, 2017: xi), and the rate poverty reduction has slowed down considerably (Cooke *et al*, 2016). It therefore provides an useful case study in order to examine the expression of poverty through consumption-based indicators in relation to the understanding and governance of poverty. This research thereby uses the concept of expression to include both knowledge and governance effects of poverty measurement, as well as their relation to poverty itself. Importantly, it explicitly does so in relation to the Development Goals, and to its relation with progress on the goal to eradicate (extreme) poverty more specifically. It

thereby positions the case study of Ghana within the international discourse on the implementation of the SDG data demands.

This article first presents an overview of existing literature on the impact of poverty measurement. The methodology and data are described in the subsequent section. The consecutive sections provide insight in the results of this research in relation to the case study of Ghana. Based on these results, the article contributes to the debate of assessing impact in two main ways. First, it provides an empirical assessment of the expression of poverty through indicators in Ghana. Second, based on this results, the article introduces a comprehensive framework for the study of the impact of poverty measurement beyond this specific case study.

Approaching the Impact of Poverty Statistics

Although the terminology of the 'data revolution' suggests the possible relevance of many qualitative and quantitative sorts of data, the term is mainly used by the UNs IEAG-SDGs to refer to statistics (2014). This is in itself an important sign of the growing prevalence of statistics in international development. In this field, statistics have become important instruments to measure performance, assess development progress and inform and evaluate policymaking (Fioramonti, 2014; Ward, 2004). For these purposes, development is measured according to a wide range of indicators, which can be defined as "statistical measures that are used to consolidate complex data into a simple number or rank that is meaningful to policymakers and the public" (Merry, 2011: 86).

In the context of the Development Goals, such indicators are used to track progress on the different targets over time. Poverty indicators therefore have had a prominent role as part of the Millennium Development Goals (MDGs) as well as the SDGs, where the eradication of extreme poverty features as the first goal (IAEG-SDGs, 2016). Although the MDGs and SDGs as a whole represent a multidimensional approach to poverty, in line with its multidimensional nature, the first goals define poverty primarily through its economic dimension. In this context, the main indicator used to assess poverty reduction is the poverty headcount ratio based on the international poverty line (ibid.: 15). This headcount ratio has been measured as the proportion of population living on less than $1.25 per day, making it a measure of absolute poverty. By taking into account country-specific levels of purchasing power (PPP), inter-country comparison is enabled, which is regarded as one of the main strengths of the indicator (Freistein, 2016). Criticism focuses mostly on technical issues – the calculation of purchase power parity, the extrapolation from limited data as raised by Pogge and Reddy (2010) – while the act of measuring poverty itself is generally not disputed (Freistein, 2016). Nevertheless, current measurement and understandings of poverty offers limited insight in the persistence of poverty over time, according to Hickey and Bracking (2005: 851). They convincingly argue that the deeply political nature of poverty is not adequately addressed by using 'narrow' and objective measures such as the poverty headcount ratio. From this perspective, recently added measures such as headcount ratios based on national poverty lines, represent improvement as part of the SDGs in comparison to the MDGs.

Whereas the MDGs also included a separate indicator to assess the depth of poverty (the poverty gap), this indicator has not been included as a SDG indicator. Instead, the SDGs focus more on data disaggregation of the population living below the poverty line, by for instance sex, age and geographical location.

All these poverty reduction figures are based on household consumption survey data. In order to measure the reduction of poverty, several data points are needed to track progress over time. The IMF recommends to update poverty statistics at least every 3 to 5 year interval (Serajuddin et al., 2015). Although the availability of such data has significantly expanded over the last 15 years, still substantial data gaps persist. In Sub-Saharan Africa, 70% of the countries lack adequate data on poverty; for as much as 20 countries it is even impossible to estimate poverty reduction (ibid.). Because household surveys are very resource intensive, the availability, periodicity and quality of poverty data tends to be weaker for poorer countries (Jerven, 2013). Even data that is available data is often plagued by validity and reliability problems to some degree.

Although the SDGs mainly emphasize the importance of measurement in relation to monitoring and evidence-based policy, literature on the so-called 'politics of numbers' (Alonso and Starr, 1983) shows that the impact of measurement reaches much further. Indicators have become important lenses through which we see and understand society (ibid: 3). In line with this observation, Mügge (2015) argues that indicators can be viewed as powerful ideas that define what counts. Such definitions in the form of indicators often become widely accepted. This kind of institutionalization (for instance as part of the SDGs) makes the indicators more powerful, also in terms of their political impact. Nonetheless, existing literature does not offer a coherent framework for the study of this kind of impact of development indicators. Still, Merry (2011) provides a useful distinction between relevant knowledge and governance effects, which have guided the creation of such a framework as part of this study.

The knowledge effects of the use of indicators include the construction of what is often regarded as a discourse about truth (Camargo, 2009). Numbers seem to present an objective reality – for instance, that of poverty reduction. However, at the same time, indicators themselves contain (sometimes contested) assumptions and conventions about this reality, creating a paradoxical duality as part of which measurement is expected to reflect reality as much as it is shaped by ideas about it (Camargo, 2009; Fioramonti, 2014). The construction of an indicator requires the selection and quantification of the single or multiple most important features of a phenomenon; a process which is influenced by social, economic, cultural and political factors and assumptions that are not readily recognizable in the indicator itself (Jerven, 2013: 11). In this context, the conceptualization of poverty as living on less than $1.25 per day became very powerful as an easy to comprehend, money-metric indicator (Freistein, 2016). The resulting technical conceptual categories (in this case: extreme poor and non-poor) thereby seemingly become universally applicable, irrespective of cultural or historical contexts; a process that Porter (cited by Broome and Quirk, 2015b: 828) calls reification. Hickey (2008) adds that the measurement of poverty in individual terms leads it to be viewed as an apolitical

phenomenon, even though he argues that poverty and its reduction are deeply political. The measurement of poverty thus not only reflects, but also influences the way poverty is understood, with important governance implications.

First of all, the use of indicators makes the unit that is measured – in this case the poor – legible by the one who is measuring (Espeland and Stevens, 2009). This is often the state, thereby rendering its (poor) population governable. On an international level, it also makes a country as a whole legible by international organizations in ways that enable comparison with other countries (Freistein, 2013), for instance through the SDGs. It thereby enables (self)regulation of behaviour in the form of poverty reduction policy. This is an example of how poverty indicators have become important sources and instruments of power: the use of poverty indicators is linked to authority and the mandate to act to reduce poverty (Clegg, 2010). According to Freistein (2015), statistics have become a means to claim expertise and establish authority within a certain field, and to reaffirm the legitimacy for acting within it. This not only applies to international organizations (IOs) and national governments, but also to NGOs and private actors, which (increasingly) make use of statistics. According to Freistein (2013: 373), poverty statistics thereby not only affect power relations, but also the possible responses to poverty reduction resulting from it. Preferably, the intended effects of any policy should be understandable and measurable in line with the definition of the object of this policy in the form of indicators – in this case, the poverty headcount ratio. The effects of the indicator used thereby affect the policies and methods of implementation that impact the phenomenon measured, as measured through the same statistics.

Concluding, statistics can have important effects on the phenomena they describe; which is reason to question if these numbers could be seen as 'performative' of development. In line with Sommerfeldt, Caine and Molzahn's description of performativity (2014), this would imply that poverty could be seen as being 'performed' through its repetitive iteration through numbers. Although this can indeed impact how people and institutions behave, Didier (2008) convincingly argues that this does not mean that indicators construct phenomena completely from scratch, as the term performativity might suggest. Nevertheless, indicators both describe and potentially have an (indirect) effect on what they describe in doing so. For these reasons, Didier (2008: 307) has named this phenomenon 'expression', which indicates the process whereby statistics express (relational) arrangements of elements as characteristic of a certain object. This term is particularly useful to emphasize the (indirect) effects of statistics on the objects they describe, whilst also acknowledging these objects themselves are not created out of thin air through their statistical expression. Still, Didier argues that statistics do have the power to transform the object described by it, ultimately resulting in a circular effect.

In line with this reasoning, poverty can be seen as being expressed through statistics. Based on the previously described theories, it can be argued that the expression of phenomena such as poverty through statistics may have important knowledge and governance effects, which might ultimately impact that wat is measured – poverty – itself. However, this process – and its knowledge and governance effects – are often neglected in existing literature and empirical research, despite its high

relevance as part of a framework that seeks to transform development through goalsetting. This goalsetting aspect of the Development Goals can namely be seen as an example of what is described by Broome and Quirk (2015) as 'global benchmarking'. This involves 'the development of comparative metrics of performance', as part of which complex phenomena are translated into (seemingly neutral) numerical values, of which poverty measurement is regarded as an important example (ibid.). Benchmarking is regarded as a specifically transnational practice. In the case of the SDGs, the quality of the development outcomes of individual nation states is assessed based on the framework that was agreed upon by the international community represented as in the UN. In this context, the use of poverty indicators gives rise to knowledge and governance effects that follow specifically from its use in a goalsetting framework.

In this context of the SDGs, statistics are believed to enlarge transparency and accountability (IAEG-SDGs, 2014). It is believed that the public availability of data will help to hold governments accountable for their contribution towards reaching the goals (ibid.). However, the impact of the use of poverty statistics in the context of goalsetting reaches much further. Through the use of poverty indicators, global expectations about development and progress become normalized (Freistein, 2016: 373), making different countries comparable based on a certain understanding of poverty as articulated through development goals. Although this has been regarded as one of the main strengths of the MDGs, it is also the foundation on which they have been criticized for their effects. According to Vandemoortele (2011), the quantitative targets of the MDGs have furthered a one-dimensional understanding of development – a knowledge effect – which has promoted one-size-fits all approaches to development – the governance effect. According to Fioramonti (2014), this could misguide development policy (and the support for it) on the long term, contrary to the intended effect of Development Goals. Still, its measurability also explains part of the success of the MDGs, since the coupling of goals with numbers contributed to the salience and urgency of poverty reduction (Freistein, 2016). Ironically, the reinforcement of the supremacy of numbers through development goals (as described by Fioramonti, 2014) could be regarded as a main strength and weakness of Development Goals.

Despite the relevance of the impact of poverty measurement in the light of Development Goals, little empirical research has been done on this topic. By using the concept of expression (as introduced by Didier (2008), this article therefore explores the governance and knowledge effects of poverty statistics, which ultimately affect poverty itself. The SDGs prove relevant to this expression in providing a unique framework for goals and evaluation, which also bring about ambitious data demands. Meeting these demands often proves to be challenging for developing countries such as Ghana, which experience limitations in terms of statistical capacity and data availability. By taking into account these factors, this research not only provides new insight in the expression of poverty in Ghana, but also offers a much-needed framework for the study of the impact of poverty indicators more in general.

Methodology

Methods

In order to study the expression of poverty in Ghana, a mixed methods research strategy has been used. In doing so, this research has drawn inspiration from what Merry (2011:85) calls 'an ethnography of indicators', which involves

> examining the history of the creation of an indicator and its underlying theory, observing expert group meetings and international discussions where the terms of the indicator are debated and defined, interviewing expert statisticians and other experts about the meaning and the process of producing indicators, observing data collection processes, and examining the ways indicators affect decision-making and public perceptions. (2011: 85)

Merry (2011: 85) furthermore adds that critical dimensions include analysing the sources of information used and 'the forms of cooperation and resistance by countries and NGOs in the contest over who counts and what information counts', thereby providing useful methodological guidelines for deconstructing the impact of indicators.

Doing so required a mixed methods strategy, combining qualitative and quantitative methods. During a fieldwork period of 11 weeks in Ghana, key stakeholders were interviewed to gain insight in the role of poverty statistics in their thinking and daily work. In line with the key stakeholders identified by the IAEG-SDGs (2014), research participants include a selection of national statisticians, staff members working for IOs, government officials, relevant donors and staff members of civil society organizations and NGOs that produce and use poverty data. These semi-structured interviews (N=17) have been complemented by participatory observation during multiple multi-stakeholder meetings during which the measurement of the SDGs was discussed. Although most relevant meetings and interviews took place in Accra, a field trip to Ho in the Volta region has been undertaken to include perspectives from a different region in this research. In addition, document analysis of relevant policy documents and statistical reports has provided a thorough understanding of the specific country context in which the expression of poverty has been observed. These qualitative methods have been complemented by the descriptive analysis of poverty statistics reported by the Ghana Statistical Service.[1] This way, the impact of poverty indicators has been studied in close relation to the indicators themselves, resulting in a comprehensive understanding of the expression of poverty in Ghana.

Research context

Based on its history of solid economic growth, Ghana is often seen as an 'African growth success story' (McKay *et al*, 2016). Since 1985, GDP growth has been positive every single year leading Ghana to join the category of (lower-)middle income countries (ibid.: 69). Interestingly, this recategorization followed on the update of Ghana's system of national accounts to the 1993 standards in 2010, which caused GDP estimates to increase by as much as 62%. This led Devarajan (2013: S9) to use Ghana as

the illustration of what he calls the 'African statistical tragedy', as part of which African countries are seen to produce untrustworthy statistics. Despite the controversy following this revision, Jerven and Duncan (2012) show that it was actually carefully prepared and executed, in line with international standards. Nevertheless, it illustrates the impact of statistics and the importance of examining those within their local context, especially when using them to interpret the rest of the history of Ghana's development.

In the first 25 years after Ghana's independence 1957 (after British colonization ended), Ghana witnessed several economic shocks, leading the government to seek assistance from the IMF and the World Bank. In addition, the government started to introduce initiatives to focus on poverty reduction, along with the implementation of structural adjustment measures (McKay *et al*, 2016). This ultimately resulted in the development of Growth and Poverty Reduction Strategy Papers (GPRS) from 2001 onwards, after Ghana's application to the Highly Indebted Poor Income Countries Initiative (ibid.: 72). After the evaluation of the GPRS I, new poverty reduction programmes were introduced under GPRS II in 2006. This included the Livelihood Empowerment Against Poverty (LEAP) programme, a large unconditional cash transfer programme that has grown since (Debrah, 2013). After GPRS II ended, it was replaced by the Ghana Shared Growth Development Agenda, which has been renewed in 2014. Although these programmes seem to have benefitted the poor, poverty remains prevalent (Cooke, Hague and McKay (2016: 1), as can be illustrated through statistical poverty data.

Such data is collected by the Ghana Statistical Service (GSS), which serves as an autonomous body in charge of the production, analysis and dissemination of statistics in Ghana. Their most important source for poverty data is the Ghana Living Standards Survey (GLSS), of which the four latest rounds (1991-1992, 2005-2006, 2012-2013, 2016-2017) provide useful data. However, the results of these surveys are not directly comparable, because of a recalculation of the poverty line in 2013 based on the Consumer Price Index and changed weights as part of the poverty line basket (Cooke *et al*, 2016: 5). National poverty lines were set to 1.314 GHS (roughly 675 US dollar based on 2013 exchange rates) per adult per year; a second poverty line of 792,05 GHS (approximately 406 US dollar) per adult per year was used to measure extreme poverty (ibid.).

Based on these different measures, the GSS has published several studies on the specific topic of poverty (2007, 2018), which show patterns of consistent poverty reduction. Recent research by Cooke *et al* (2016: 1) shows that poverty more than halved between 1992 and 2013, based on Ghana's national poverty line. This means that Ghana successfully met the first MDG on reducing poverty ahead of time. However, the general rate of poverty reduction slowed down substantially over this period. Importantly, Cooke *et al* (2016: 1) also show that population growth causes the amount of people living in poverty to decline more slowly (10 percent since 2006) than the proportion of people living in poverty (25 percent in the same period).

In this context, Annim *et al* (2012) rightfully stress that observations about poverty and in Ghana are dependent on the measures used to assess development. When the full income distribution is

taken into account (and not just the proportion under the poverty line) numbers reveal that inequality has risen (ibid.). The Southern regions show significantly more progress when compared with the North (McKay *et al*, 2016: 81). Poverty is particularly widespread among farmers. (McKay *et al*, 2016). Consequently, poverty remains a typically rural phenomenon. Importantly, research shows that these different forms of inequality have reduced levels of poverty reduction (ibid.: 1).

Concluding, although Ghana has experienced significant economic growth and poverty reduction, this growth has not been pro-poor. In addition, these observations about poverty reduction in Ghana are shaped by indicator choices and the chosen unit of analysis, reaffirming the relevance of further examining the impact of the expression of poverty through indicators in Ghana.

Results

Understanding Poverty Reduction

The expression of poverty through indicators in Ghana has been examined by taking into account both knowledge and governance effects, as well as their effects on poverty itself. In order to do so, it is first required to understand the trends shown by the poverty statistics produced by the Ghana Statistical Service.

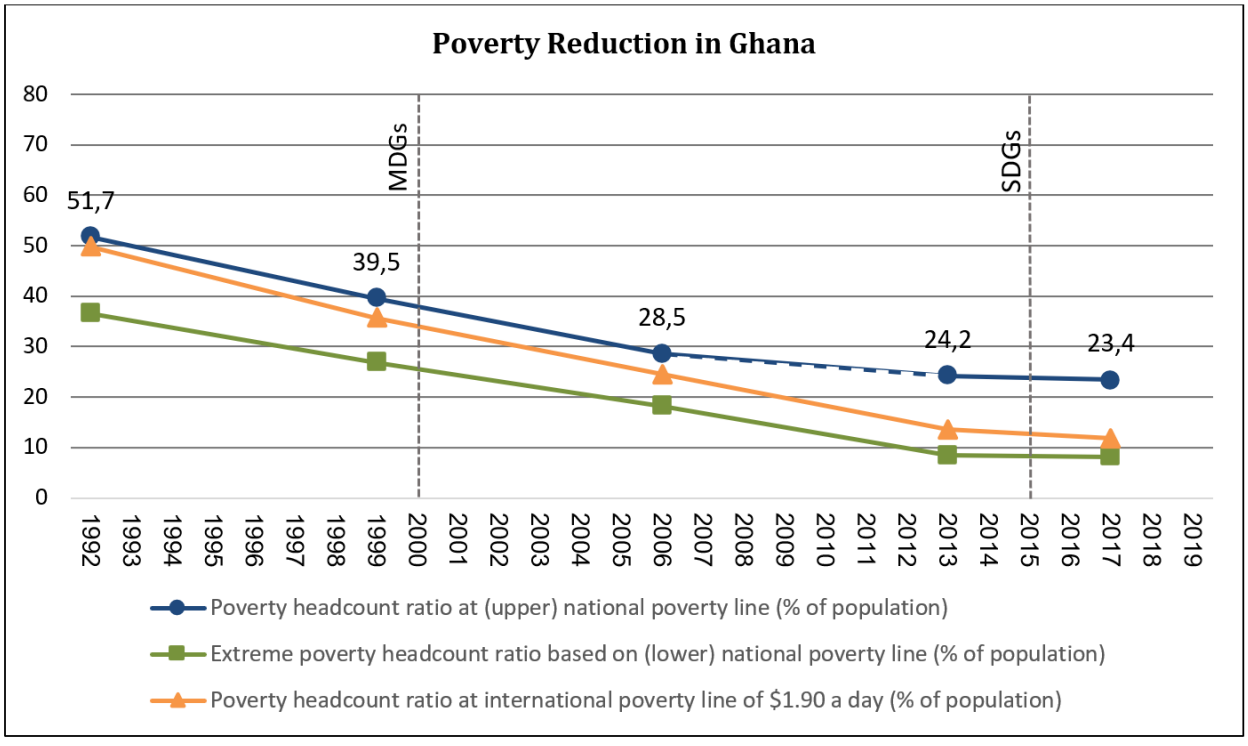


Figure 1: Poverty Reduction in Ghana according to SDG indicators[2]

Figure 1 shows Ghana's poverty reduction progress in line with the first two targets of the SDGs. Whereas target 1.1 focuses on eradicating extreme poverty according to the international poverty line, meeting target 1.2 requires doing so in line with national definitions of poverty as well. In line with international standards, this results in two national poverty lines: one that only takes into account

nutrition needs only, supplemented by an upper poverty line which also takes into account some basic non-food needs. The data related to these targets confirms the high rate of poverty reduction between 1992 and 2013, which caused Ghana to meet the first MDG of halving poverty ahead of time. However, it also illustrates the significant slowdown of poverty reduction progress since 2012, which has continued ever since the SDGs have been adopted.

Based on these statistics, its knowledge effects have been examined through interviews with a wide variety of key stakeholders. Two related types of knowledge effects can be identified; first, the impact on defining poverty and second, the impact of these statistics on evaluating poverty reduction. With regards to the definition of poverty, stakeholders generally explicitly define it as a multidimensional concept. Perhaps ironically, most stakeholders still mainly refer to the poverty headcount ratio to make sense of its development over time, as illustrated by the following quote from a statistical director from the Ghana Statistical Service:

> Poverty is multifaceted. So we look at all the different types of poverty. So I would not want to stick out and say: poverty is this, because they are different dimensions of it. (…) Currently as someone from the national statistical office, we are measuring it… Consumption poverty is the one that we are measuring. (personal communication, February 7, 2019)

Nonetheless, this definition of when somebody lives in poverty does not seem to align with participants' expectations of living a life free of poverty. According to one participant, this assumes the possibility to 'live a dignified life' (personal communication, March 1, 2019), whereas other participants generally stress having access to education, sanitation, health services and food. Together, this requires a standard of living higher than the consumption level that the poverty line is based on. Nonetheless, very few stakeholders explicitly dispute the height of the poverty line. This illustrates the power of the way poverty is measured in demarcating who counts as poor. Interestingly, this measure seems to be far more generally accepted than the assumptions behind the indicator, which determine *when* somebody counts as poor. Only grassroots participants clearly vocalized a mismatch between the height of the line and the amount of money that people need per day to meet their basic needs during a focus group on SDG 1. Their access to alternative, more qualitative sources of data on poverty caused them to be more pessimistic about poverty reduction progress and less trustworthy of official poverty statistics.

Even when participants are not sure about the exact measure or height of the poverty line that is used to assess poverty, most of the time their image of poverty is still shaped by it. A CSO worker explained: 'When I read the MDG reports, on Ghana's performance. I realized we did so well, in terms of meeting the halving extreme poverty' (personal communication, February 4, 2019). Due to the discursive strength of MDG1 in framing poverty reduction success, most people are familiar with the significant reduction of poverty, but much less with its recent slowdown. Perhaps surprisingly, it is the Ghana Statistical Office that seems to emphasize this slowdown the most, both in interviews and as part of their publications and communication. A statistician explains:

> [In 2017] overall poverty was 23.4%. And that was just 1.8% drop from 2012-2013, the GLSS report. That means that between that period, we have not done to well. I have imagined we'd see some 2, 3, 4% decline. So what does this mean?
> (personal communication, February 7, 2019)

The Ghana Statistical Services further nuances poverty reduction success by emphasizing the effects of population growth, which has caused the amount of people living in poverty to increase by as much as 400.000 between 2012/2013 and 2016/2017 (GSS, 2018: 10). Since the poverty headcount ratio does not provide insight in this absolute increase, most stakeholders only think about poverty in terms of its reduction. This can be further explained by another knowledge effect of this specific way of measuring poverty: the headcount ratio presents the net outcome of the percentage of people moving out of poverty, and people falling into it. Since the net outcome has been positive in the past, most stakeholders - whose understanding of poverty is heavily shaped by the headcount ratio - do not show awareness about the issue of previously non-poor people falling into poverty. Nonetheless, document analysis shows that lots of people who escaped poverty based on the measurements used, still remain vulnerable as their consumption levels often remain slightly above the level of the poverty line (Molini and Paci, 2015: 9). Whereas figure 1 suggests some kind of linear poverty reduction progress where more and more people move out of poverty, albeit in an increasingly slower rate, this data obscures the simultaneous reality of people falling into poverty.

Data disaggregation can provide more insight into who is left behind in the poverty reduction trend illustrated in figure 1. The first SDG target of eradication poverty explicitly requires the disaggregation of poverty data by dimensions such sex, age and geographical location. Although data disaggregation is statistically demanding, the Ghana Statistical Service has been making increased efforts to report poverty statistics disaggregated to these different dimensions. An important limitation is that the Ghana Living Standards Survey in itself does not provide insight in poverty on district levels. For that reason, the Ghana Statistical Service has been combining GLSS and census data to provide more insight into geographical inequalities. The resulting data draws attention to inequalities within regions, rather than the more well-known inequalities between regions. In the Volta region, which was visited during fieldwork, differences between neighbouring districts amount up to much as a 70% percentage point difference in the headcount ratio (GSS, 2015: 21). Knowledge about who is left behind is thus slowly increasing, but still not readily available enough to strongly shape stakeholders' perception of poverty according to relevant district level data.

Governing Poverty Reduction

In close connection to the previously described knowledge effects, the governance effects of poverty measurement have been examined. In theory, its use for evidence-based policymaking seems to be one of the main ways poverty statistics can make a governance impact and contribute to reaching the

SDGs. Still, poverty statistics are not used as much for this purpose in Ghana, which can be explained in three ways.

First, policymakers and data producers work tend to work separately. As a consequence, the data needs of policymakers are not sufficiently considered in the data production and analysis process. Another related explanation for the limited use of poverty data is the mismatch between the primary levels at which policymaking takes place and the levels on which data is provided. Whereas the districts have an important role in policymaking in Ghana's decentralized democratic system, most poverty data (as part of the GLSS) expresses poverty on higher geographical levels. As a consequence, the data does not meet the demands of local policymakers, and has limited governance impact.

One final why poverty statistics are not often used for policymaking, is because 'poverty is an outcome', as a research participant working for an international NGO stated (personal communication, February 26, 2019). Poverty statistics thus present the result of underlying causes of poverty, which need to be addressed for successful poverty alleviation. For this reason, data concerning these underlying causes seems to be more useful for the purpose of policymaking. In comparison, poverty statistics themselves fulfil more of a signalling function: when poverty numbers go up, it is an indication that action needs to be taken to address its causes. In this sense, the data can be more of a 'call to action', as described by one of the research participants (personal communication, February 11, 2019). Due to the limited knowledge effects of the data illustrating the recent slowdown in poverty reduction, its current signalling function seems limited on the national level. Nonetheless, this signalling function can be more useful for the targeting of policies on regional and local levels. The GSS (2015: 40) explains:

> Poverty maps have become more useful in the context of social safety-net programs. They are best suited to guide spatial targeting, for instance, identifying areas associated with high poverty rates. They are useful to rank geographical areas for phased roll-out program.

Data not only helps to determine which areas should be targeted, but also helps to make the targeting more cost-effective in doing so. Although poverty statistics are not used that much in informing policies, the data is valuable in guiding their execution. Still, this requires the availability of current disaggregated poverty data, which currently remains a challenge.

For these reasons, the biggest governance impact of poverty data is made not through its use for policymaking, but through its role in monitoring, evaluation and asserting accountability. Both the government as well as CSOs gather and use poverty data to assess the impact of their programmes. Being able to showcase the results of a policy intervention serves as proof of accountability. Accountability is usually asserted vis-à-vis the source of funding of the stakeholder using the data. For (international) CSOs, this is often their international donors, as a CSO employee explained:

> Our data first and foremost, pictures the impact we are making as a programme, because we are accountable to the donors. We need to demonstrate to the donor that for each dollar you gave out, this is what came out of it. (personal communication, February 26, 2019)

The importance of showing results seems to provide an incentive for favouring programmes that demonstrate clear, measurable outcomes. Now that the international funding landscape is also increasingly aligned to the SDGs, its associated indicators provide a useful means for doing so. Interestingly, this even seems to seems to affect the production of statistics itself; due to funding constraints, the production of statistics has become a means to attract additional funding. As a statistical director explained: 'there are many programmes that are even looking at helping the local government system to use the available statistical data at that level to generate more resources' (personal communication, February 7, 2019).

On a national level, the Parliament of Ghana also uses statistical data to hold the government accountable when approving the yearly budget. Now that the government budget has become aligned with the SDGs, the indicators associated with the SDG have become more important to assess the progress that has been made in order to hold the government accountable. In doing so, statistics have become more than a means of showcasing accountability; they are also used to assert authority and legitimacy by the government in power. Interestingly, awareness of the use of data for this purpose sometimes has the opposite effect; a CSO staff member argues that 'they [the government] generate data to please their voters. They want to show the general public that they are doing well.' (personal communication, February 4, 2019).

At the same time, these kind of stakeholders who criticize the government often use poverty data to hold them accountable, as explained by the coordinator of the CSO platform:

> Data is really important in our advocacy. Evidence-based advocacy. It is about: what is the problem that you are trying to solve? And that problem, you showcase it with data. Gives you stronger evidence that: yes, there is a problem; this is what we want to do. It makes your argument stronger. (personal communication, March 8, 2019)

This illustrates how the use of data for advocacy purposes not only allows CSOs to hold the government accountable, but also assert their own legitimacy in doing so. The use of statistical data helps them to make a convincing argument.

In conclusion, the use of data for the purpose of evaluation, asserting accountability and legitimacy has become increasingly important in the context of alignment and decreasing funding. Both these governance effects and (the lack of) effects on policymaking can be better understood by taking into account their relation with the previously described knowledge effects. In the first place, most of the governance effects depend on the knowledge effects of the poverty data used. The statistics provide a certain image of poverty, based on which different forms of action (such as policy interventions) can be taken, as explained by a statistical director:

> You cannot help the poor for instance, if you don't know who they are. And where they are. And if you do not disaggregate information, it will not tell you who and why the people who need to be targeted for interventions are. And so for that reason, we cannot achieve leave no one behind, if we do not collect information on the different population subgroups.

(personal communication, February 7, 2019)

The type of data and its level of disaggregation thereby come to inform its governance effects. The other way around, governance also affects the knowledge effects of data. The alignment of the SDGs and national policy frameworks strongly contributes to the importance of SDG indicators, and the efforts by the Ghana Statistical Service to meet these international standards for poverty measurement. On a national level, it thereby impacts the knowledge being produced, which in turn informs much of the governance effects described.

Altogether, the impact of these processes on poverty itself may seem limited, due to the limited contribution of poverty data to policymaking. Nonetheless, the expression of poverty through indicators strongly shapes perceptions of poverty in Ghana, both in terms of its definition as well as the evaluation of progress in the light of Development Goals. In addition, poverty data affects poverty itself through its impact on those stakeholders active in the field of poverty reduction, who shape the expression of poverty through their work. The use of poverty data not only provides these stakeholders with the legitimacy it needs to act convincingly in the field of poverty reduction, but it has also become a necessary means to acquire the funding to do so. This impact has been strengthened by the adoption of the SDGs, and the increasing alignment of both national and international funding with SDG indicators. This illustrates the specific role of Development Goals in shaping the expression of poverty in Ghana.

Studying the indicator-based expression of poverty

The previously described results not only provide insight in the indicator-based expression of poverty in Ghana, but also illustrate more general dynamics and factors relevant to the study of this topic. Although the relevance of studying the impact of indicators is increasingly recognized (Camargo, 2009; Mügge, 2015), existing literature does not offer a comprehensive framework for its study. Merry's description of an ethnography of indicators (2011) provides useful guidelines that informed this study of the knowledge and governance effects of indicators, but it does not link their impact to the concept measured itself. For this reason, this research built on the concept of expression offered by Didier (2008) to take into account how the measurement of poverty ultimately impacts poverty reduction itself. Moreover, the outcomes of this research draw attention to additional factors that have been neglected in existing research on this topic. This includes specific attention for the degree of alignment with the SDGs and its data demands. In addition, this research highlights the previously neglected relevance of funding mechanisms in shaping the knowledge and governance effects of development indicators. Altogether, this provides the foundation for the introduction of the following research-based framework for the study of expression of development through indicators.

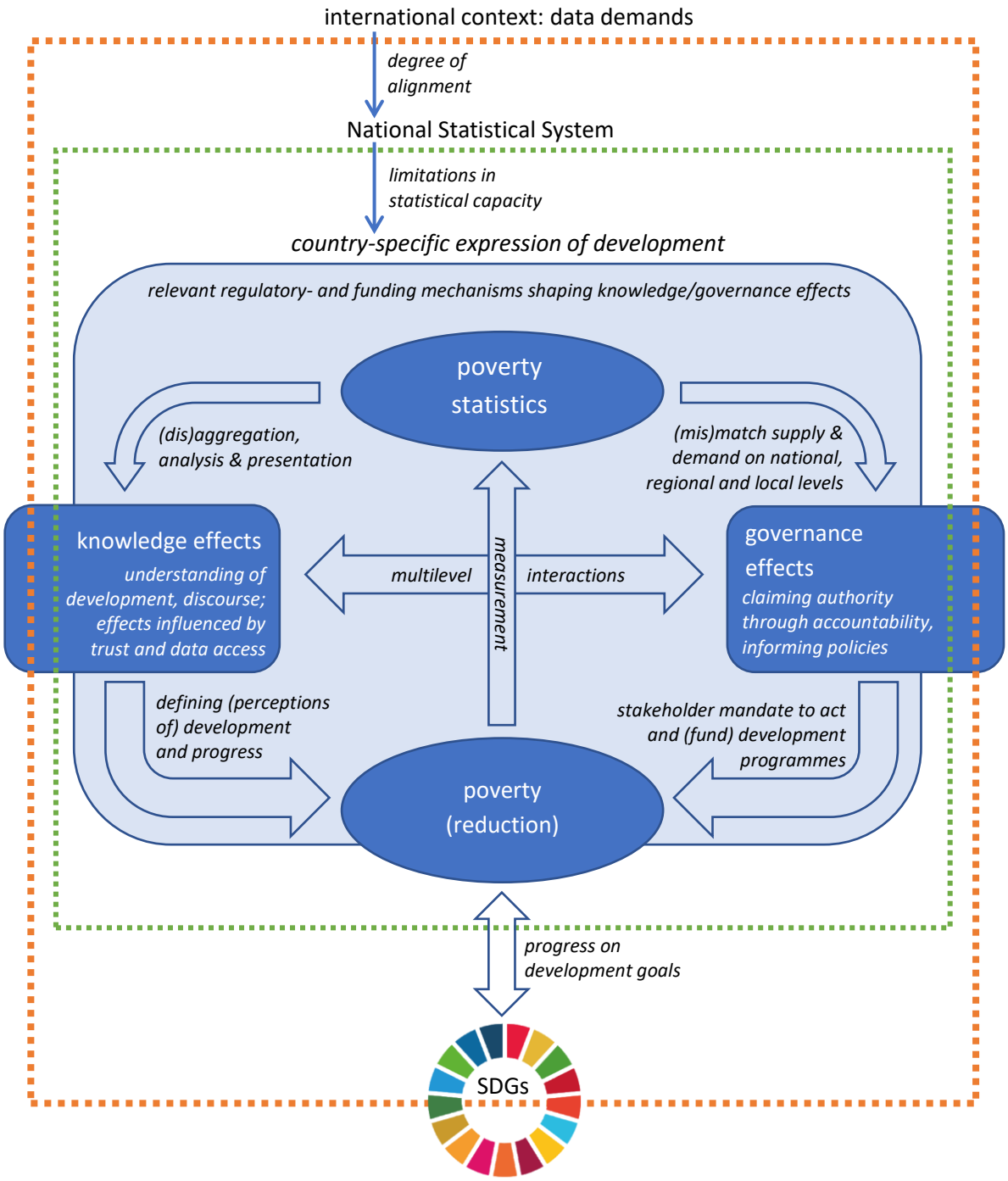


Figure 2: Framework for the Study of the Expression of Poverty through Indicators

As figure 2 shows, the expression of poverty through indicators involves knowledge and governance effects, which ultimately affect poverty itself. With regards to the study of knowledge effects, the framework stresses the relevance of the degree of data disaggregation in shaping understandings of poverty and progress. The governance side of the framework specifically draws attention to the (mis)match between data supply and governance demands on different levels, which proved highly relevant as part of this study. The framework furthermore emphasizes the analysis of the use of data for accountability and as a mandate to act by different stakeholders. Importantly, it explicitly takes

into account the related importance of attracting funding and the requirement of suitable poverty data in order to do so. In addition, it highlights the interaction of knowledge and governance effects that were found to be relevant on multiple levels (international, national, regional and local). As appears from the framework, the combined knowledge and governance effects ultimately affect development itself through its indicator-based expression.

Just like this research, the framework specifically positions any national case study within the international context and the related data standards and demands. Most importantly, this framework uniquely incorporates the study of the impact of Development Goals on the expression of development in doing so. The Development Goals are not only relevant through their data demands, but also affect the interpretation of poverty and progress in relation to relevant targets. Of course, this happens in a different national context in each country. For this reason, the framework takes into account country-specific factors, such as its statistical capacity as well as any relevant regulatory frameworks (which for instance determine the position of a national statistical authority) that shape knowledge and governance effects.

Altogether, figure 2 offers a much-needed comprehensive framework for the study of the impact of poverty indicators, thereby providing a meaningful contribution to existing literature and a growing body of research within this field.

Conclusion

This study explored the expression of poverty through statistics in Ghana, in the context of the Development Goals. In doing so, it provided insight in the knowledge and governance effects of poverty statistics, as well as their impact on poverty itself.

Despite the general acknowledgement that poverty is multidimensional, people base their views on the development of poverty over time primarily on consumption-based indicators, and the headcount ratio based on the national poverty line more in particular. Nevertheless, the height of the poverty line is set too low to correspond with participants' notions about what it means to live a life free of (extreme) poverty. Yet, this is hardly ever explicitly problematized, thereby illustrating the power of this poverty indicator in demarcating who counts as poor. Due to the discursive strength of MDG1 in framing poverty reduction success in Ghana, most people are familiar with the significant reduction of poverty, but much less with its recent slowdown.

Next to these knowledge effects, also the governance effects of consumption-based poverty indicators have been explored. Data is often thought to make an impact through informed decision-making and evidence-based policymaking. Nevertheless, this study showed that data is used more often for monitoring and asserting accountability, which has become increasingly important to acquire sufficient funding for poverty reduction efforts. The limited effects of poverty data on policymaking, are directly related to the statistical challenges in measuring poverty. A clear mismatch between primary levels of data supply and policymaking demands exists; whereas a lot of relevant decisions are made

on the district level, most poverty data is reported on higher geographical levels in Ghana. As a consequence, knowledge and awareness about local poverty levels is limited, and poverty data is hardly used on the district level.

The final component of the concept of expression concerns the impact of these knowledge and governance effects on poverty itself. In general, it can be concluded that the contribution of poverty data to the reduction of poverty in Ghana seems limited. This can be explained by the stickiness of old knowledge effects stressing poverty reduction success, as a consequence of which there seems to be little political urgency to take specific measures to respond to the significant slowdown of poverty reduction. Instead, the impact of poverty data is largest through its importance for stakeholders active in the field of poverty reduction. Poverty data is used to assert authority and legitimacy, and to acquire funding for poverty reduction efforts. This impact has been strengthened by the adoption of the SDGs, and the increasing alignment of both national and international funding with SDG indicators.

So far, many of the 'data for SDGs' ambitions – such as leaving no one behind – seem mostly focused to increasing knowledge about who is left behind, rather than using this data to promote poverty reduction. Although data on SDG1 is now made available online, availability alone is not enough for inclusion. Investments in data literacy and capacity building are needed to empower people to use this data in their work. Most importantly, leaving no one behind is not just about including people in monitors, but including them in the progress that is monitored through governance decisions. The SDGs are about investing in people, and not just in data on them. Although the Development Goals have increased the emphasis on the poverty data needed to monitor progress, the MDGs and SDGs have not done so in a way that contributes to *the use* of data to realize the eradication of poverty in Ghana. Ultimately, data should not become a goal in itself, but a means towards achieving the goal of eradicating poverty. Increased cooperation between data producers and users could improve the relevance of the produced knowledge, and thereby increase its governance uses as part of the expression of poverty in Ghana.

So far, the field of international development studies has mostly approached statistics as means to assess impact, rather than impactful phenomena in themselves. This case study has illustrated this impact by examining the expression of poverty through statistics, including the important knowledge and governance effects of poverty measurement. The results confirm the relevance of such an approach, which provided the foundation for the introduction for a framework for the study of the indicator-based expression of poverty in the context of Development Goals. It thereby offers a meaningful contribution to existing literature, and hopefully contributes to the continued growth of the body of research on development indicators more specifically.

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Notes

[1] This research draws on data provided by the Ghana Statistical Service through their National SDG Reporting Platform, which can be accessed via sustainabledevelopment-ghana.github.io

[2] This figure is based on five waves of the Ghana Living Standards Survey (1991-1992, 2005-2006, 2012-2013, 2016-2017), as collected and reported by the Ghana Statistical Service. Due to changes in the composition of the national poverty line, 2012/2013 and 2016/2017 values are not *directly* comparable; poverty changed a little less during that period than suggested by this figure.

References

Alonso, W. and Starr, P. (1983) Introduction. In: W. Alonso and P. Starr (eds.) *The Politics of Numbers*. Washington, D.C.: Russell Sage Foundation, pp. 1-6.

Annim, S., Mariwah, S. and Sebu, J. (2012) Spatial inequality and household poverty in Ghana. *Economic Systems*, 36: 487-505.

Broome, A. and Quirk, J (2015) The politics of numbers: the normative agendas of global Benchmarking. *Review of International Studies* 41(5): 813-818.

Camargo, A. de P. R. (2009) The sociology of statistics: the possibilities of a new field of investigation. *História, Ciências, Saúde-Manguinhos* 16(4): 903-925.

Clegg, L. (2010) Our Dream is a World Full of Poverty Indicators: The US, the World Bank, and the Power of Numbers. *New Political Economy* 15(4): 473-492.

Cooke, E. Hague, S., and McKay, A. (2016) The Ghana Poverty and Inequality Report. Using the 6th Ghana Living Standards Survey. UNICEF.

Debrah, E. (2013) Alleviating Poverty in Ghana: The Case of Livelihood Empowerment against Poverty (LEAP). *Africa Today*, 59(4): 40-67.

Didier, E. (2008) Do Statistics 'Perform' the Economy? In: D. MacKenzie, F. Muniesa and L. Siu (eds.) Do Economists Make Markets? On the Performativity of Economics. Princeton: Princeton University Press, pp. 276-310.

Espeland, W. N., and Stevens, M. L. (2009) A Sociology of Quantification. *European Journal of Sociology* 49(3): 401–37.

Fioramonti, L. (2014) *How Numbers rule the World: The use and abuse of statistics in global politics*. London: Zed Books.

Freistein, K. (2016) Effects of Indicator Use: A Comparison of Poverty Measuring Instruments at the World Bank. *Journal of Comparative Policy Analysis: Research and Practice* 18(4): 366-381.

Ghana Statistical Service (2018) *Poverty Trends in Ghana 2005-2017*. Ghana Living Standards Survey Round 7 (GLSS7).

Ghana Statistical Service (2014) *Ghana Living Standards Survey Round 6 (GLSS6): Poverty Profile of Ghana, 2005 to 2013*. Accra: Ministry of Finance and Economic Planning.

Ghana Statistical Service (2015) *Ghana Poverty Mapping Report.*

Ghana Statistical Service (2007) *Pattern and Trends of Poverty in Ghana 1991-2006.* Accra: Ministry of Finance and Economic Planning.

Hickey, S. and Bracking, S. (2005) Exploring the Politics of Chronic Poverty: from representation to a Politics of Justice? *World Development* 33(6): 851-865.

IAEG-SDGs (2016) *Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators*. UN Doc. E/CN.3/2016/2/Rev.1. New York: United Nations.

IAEG-SDGs. (2014) *A World that Counts: Mobilizing the Data Revolution for Sustainable Development.* New York: United Nations.

Jerven, M. (2013) *Poor Numbers: How we are misled by African Development Statistics and what to do about it.* New York: Cornell University Press.

Jerven, M. and Duncan, M. E. (2012) Revising GDP Estimates in Africa: Lessons from Ghana. *The African Statistical Journal 15:* 13-22.

McKay, A., Pirttilä, J., and Tarp, F. (2016) Ghana: Poverty Reduction over Thirty Years. In: C. Arndt, A. McKay and F. Tarp (eds.) *Growth and Poverty in Sub-Saharan Africa*. Oxford: Oxford University Press, pp. 69-88.

Merry, S. E. (2011) Measuring the World: Indicators, Human Rights, and Global Governance: with CA comment by John M. Conley. *Current Anthropology* 52(S3): 83-95.

Molini, V. and Paci, P. (2015) *Poverty Reduction in Ghana: Progress and Challenges*. Washington: World Bank Group.

Mügge, D. (2015) Studying Macroeconomic Indicators as Powerful Ideas. *Journal of European Public Policy* 23(3): 410-427.

Pogge, T. and Reddy, G.S. (2010) How Not to Count the Poor. In: S. Anand, P. Segal, J.E. Stiglitz (eds) *Debates on the Measurement of Global Poverty*. Oxford: Oxford University Press, pp. 42-85.

Serajuddin, U., Uematsu, H., Wieser, C., Yoshida, N., and Dabalen, A.L. (2015) Data deprivation: another deprivation to end. World Bank Policy Research Working Paper no. WPS 7252.

Sommerfeldt, S., Caine, V. and Molzahn, A. (2014) Considering Performativity as Methodology and Phenomena. *Forum: Qualitative Social Research* 15(2).

Vandemoortele, J. (2011) The MDG story: Intention denied. *Development and Change* 42(1): 1-21.

Ward, M. (2004) *Quantifying the World*. Bloomington: Indiana University Press.