

The Political Economy of Official Statistics Implications for the Data Revolution in Sub-Saharan Africa

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Key messages

The 'Data Revolution' aims to step up reform efforts for improving the capacity of statistical organisations and systems using recent technological solutions like 'big data', while continuing to advocate for more and better data in developing countries.

But the 'Data Revolution' rhetoric has largely ignored political economy factors, such as historical factors, formal and informal institutional setups, and actor incentives. These influence how and why national statistical systems operate. Technological solutions may help but are not sufficient.

For it to make a difference, work towards a 'Data Revolution' must explicitly acknowledge the real political economy challenges on the ground and aim to work within these constraints to improving data, and/or aim to alter the current incentives for producing and using good official statistics.

This may allow genuine windows of opportunity to be identified. While non-governmental actors may effectively use 'big data' to by-pass existing political bottlenecks to statistical reform, the case for how this might help official statistics has yet to be made.

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1. Introduction and rationale

The **lack or low quality of comparable official statistics¹ specifically in Sub-Saharan Africa, as a result of the poor capacity of national statistical systems** is a pervasive problem². High-level multilateral fora, such as the Second International Roundtable on Managing for Development Results in Morocco in 2004 and the High-Level Forum on Aid Effectiveness in Busan, 2011 have given the issue attention, resulting in numerous on-going international initiatives to address it. Renewed efforts have also got underway, chiefly by international organisations, to advocate for ‘more and better statistics’ as well as more consistent usage of statistics in national policy-making³.

There is a **reasonable understanding of the scale and the technical nature of the problem of poor statistics in Africa**. Discussions and actions to address the shortfall in statistical capacity and output have identified clear issues and bottlenecks, specifically in the production of statistics: irregular data collection, lack of financial and human resources and lack of technical skills (most critically in national statistical offices) are often cited as the reason for poor (i.e. incomplete, low-quality) statistics⁴. These issues are commonly seen as part of a vicious cycle: if incomplete or low-quality official statistics do not serve to meet the needs of policymakers, they in turn will have allocated less funding or resources towards the national statistical system, in turn lowering the demand and worsening the statistics produced⁵.

Recent calls for a ‘**data revolution**’ following the publication of the UN High Level Panel’s report on the post-2015 global development agenda⁶ have generated further interest in the subject, widening it beyond a specialist, technical audience⁷. As the document from the High Level Panel states, “too often, development efforts are hampered by a lack of the most basic data about the social and economic circumstances in which people live. This requires a commitment to changing the way that we collect and share data”⁸

The data revolution aspires to i) integrate statistics into public and private sector decision making; and ii) build trust between society and state through transparency and accountability.⁹ This is to be achieved by improving the timeliness, and quality of data, filling data gaps, for example on governance and institutions, improving transparency, availability and accessibility, and harnessing diverse sources of knowledge through technology, often referred to as ‘big data’, that is now routinely collected from financial and telephone transactions, for example. The aim of the data revolution is to step up action by broadening and deepening the many reform efforts for improving the capacity of statistical organisations and systems as well as adopting technological solutions, while continuing to advocate for more and better data in developing countries¹⁰.

A key practical proposal has been for countries and stakeholders to sign “data compacts”. A data compact is envisaged to “help mobilise and help focus domestic and donor funding for progress on statistical priorities”. These would allow governments and donors to express intent to fund and progress on “the critical building blocks of a national statistics system over multiple years”, with indicators for progress and a

¹ Defined as the gathering of statistics at national level that are produced and/or published by government agencies, public bodies or international organisations.

² Devarajan, 2011, and Alvarez et al 2011

³ Key actors are PARIS21, the World Bank, the IMF and the United Nations. See UNECA, 2008 as well as Round, 2012 for an overview of the initiatives in Africa.

⁴ Eele, 1989; PARIS21, 2005.

⁵ Scott, 2005.

⁶ UN, 2013

⁷ See for instance the blog series on the data revolution on post2015.org: <http://post2015.org/category/data-revolution-2/>

⁸ UN, 2013.

⁹ UN, 2013

¹⁰ As can be noted from various events and meetings organised following the publication of the UN High Level Panel’s report among others by the UN, PARIS21, the World Bank and the Centre for Global Development.

framework to encourage innovative funding and engagement processes.¹¹ The underlying proposition of this proposal and the data revolution is that better and more comprehensive data and statistics post-2015 will not only lead to a better knowledge of developmental issues and problems in African countries, but to more effective policy. Improved policy, in turn, will demonstrate the need for developing country governments to invest more and more consistently in developing the capacity of their national statistical systems.

However, and as this paper argues, the data revolution discourse currently underplays the political economic factors that influence how national statistical systems operate and why. The objectives of the main users of official statistics – national policy- and decision-makers – strongly affect the production and usage of these statistics in African countries. Long-run factors, formal and informal institutional dynamics, the incentives of political elites¹² and interactions between statistics organisations, government ministries and the staff working within them ultimately determine the supply, demand and use of official statistics at the national level. At the level of official statistics, a statistics revolution can only genuinely occur if it can either *overcome* some of the existing political economy constraints to improving data, or *alter the incentives* currently in place for producing and using good official statistics.

This report therefore departs from the perspective that the demand-side factors and drivers behind poor statistics are inherently political. While current capacity constraints and financial support may be a part of the challenge, references to ‘capacity constraints’ and the lack of ‘political will’ are often shorthand for deeper issues relating to institutions and incentives. Research findings and insights from three decades of public management reforms can strengthen or deepen the understanding of these incentive structures and political contexts. They suggest a different logic of how users’ objectives for official statistics affect their production and usage.

This report endeavours to answer the following question: what are the political economy drivers and constraints of the production and usage of official statistics in Sub-Saharan African countries? A better understanding of these drivers and constraints is essential to realistically inform the potential scope and likely design of a global partnership for better data and statistics, able to address the root causes of the poor official statistics in Africa.

Political economy tools and approaches can be helpful in analysing particular contexts and identifying drivers or obstacles. **This report draws on insights from a review and analysis of the literature on official statistics in developing countries and public management reforms according to five groups of political economy factors:**

- Structural factors;
- Formal and informal institutions;
- Actors (political elites, state bureaucrats);
- Technical and governance factors;
- External factors and global drivers.

These factors serve to frame political economy features that affect the *objectives, production and usage* of official statistics – three factors which will recur for each of the lenses. Insights from this can also help inform and improve the design and effectiveness of projects and programmes for improving statistical capacity in African countries within the broader setting of public sector reforms.

¹¹ Glassman, 2014.

¹² Elites are defined as individuals that command high amounts of political, military, financial and/or economic power and as such drive the process of priority-setting and decision-making which, among others, gives shape to what official statistics are demanded in nation states.

The remainder of this report is organised as follows. The context of the statistical capacity problem in Africa, including its scale and efforts taken to address it, are introduced in section 2, as well as how a political economy perspective can offer a fresh look at the issue. Section 3 introduces and applies the analytical framework of five political economy factors to the production and use of official statistics in the African context. Section 4 concludes by highlighting the implications of this analysis for a data revolution and a global partnership for better data.

2. Official statistics in Africa from a political economy perspective

Official statistics, the focus of this study, are a specific subset of statistics broadly defined as the national statistics that are produced and/or published by government agencies, public bodies or international organisations¹³. They conventionally include economic statistics (national accounts, balance of payments, government financials) and social and demographic statistics (population, health, education and labour market figures), and have been produced for a number of purposes. While no internationally agreed definition of official statistics exists, efforts have been made to develop common standards of characteristics of official statistics (such as the UN Economic and Social Council's adopted Fundamental Principles of Official Statistics¹⁴).

Measured against such standards, there is consensus that official statistics produced in Sub-Saharan Africa are today of lower quality than in other developing countries. African national statistical systems currently have (and have had for some time) lower capacity than those in other parts of the world. This section discusses how a better understanding of political economy factors can contribute to finding solutions to address this issue.

2.1. Previous and on-going efforts to strengthen statistics in Africa

Despite post-independence improvements in the quality and availability of demographic and economic statistics in Africa, the 1980s and 90s saw a marked decline in Africa's statistical infrastructure. This is particularly so when compared with the progress made in other regions and developing countries. Lehohla (2008) notes that during these decades "statistics did not appear to be useful or contribute significantly in the arena of decision making. They became supply driven goods without a corresponding eager market demanding to make use of such products and services. For instance, in the case of Kenya, the Census of the decade of the 90's became a subject of political ridicule whilst the results of the Census from Nigeria were not accepted until eight years later."¹⁵

From the 1990s onwards, more concerted initiatives were developed to improve statistical capacity in Africa and to advocate for more and better statistics and statistics usage. These are summarised in Table 1, including, where available, progress made and results of evaluations of these initiatives.

Table 1. Timeline of Initiatives to improve statistical capacity in Africa from 1990 onwards.

Initiative	Objectives and Priorities	Progress / Evaluation
1990: Addis Ababa Plan of Action for Statistical Development in Africa (AAPA) in the 1990s	<ul style="list-style-type: none"> To achieve national self-sufficiency in statistical production; to improve the reliability and relevance of data produced in African countries; to undertake production of data required for formulating, monitoring and evaluating programmes designed to restructure and transform African economies; to improve the timeliness in the production 	<p>A 2001 evaluation noted that the AAPA had not been effectively followed up or publicised, popularised and owned by stakeholders within countries and lacked government commitment. It also noted that:</p> <ul style="list-style-type: none"> Policy and decision-makers had not recognised the strategic importance of statistics and NSOs were largely marginalised in national policy formulation;

¹³ Aside from these official statistics, a large number of other statistics are produced, including by actors such as private sector enterprises and civil society organisations. These can in some cases be produced and published to challenge official statistics, or in an attempt to fill a gap in the production of official statistics. Whereas the nature of unofficial statistics production is beyond the scope of this report, it will be noted in instances where this affects the political economy of the production and usage of official statistics.

¹⁴ UNSD 2013

¹⁵ See Lehohla, 2008 and Jerven 2013 for detailed descriptions.

Scope: continental	<ul style="list-style-type: none"> and dissemination of statistical information; to increase awareness of the importance of statistical information among users; to strengthen and sustain statistical training programmes at various levels and institutions; to promote contact and dialogue among African statisticians; to encourage improvement in the organizational set-up of the national statistical offices (NSOs) and assure their autonomy; to improve coordination of all statistical development programmes at both national and international levels. 	<ul style="list-style-type: none"> A number of countries had produced national statistical development plans but these were generally not sufficiently flexible to address new challenges and did not tackle institutional/organisational issues, or attract increased resources for statistical capacity building; Although donor programmes played a key role in keeping important statistical activities running in a number of countries, they focused mainly on immediate data needs rather than longer term statistical development and not all donor assistance had been well coordinated between donors.
1996/7: IMF Special and General Data Dissemination Systems (SDDS and GDDS) Scope: international	<p>A statistical capacity building framework comprising descriptive information about existing or shortly forthcoming data series (metadata) and plans for improvement to enhance existing key statistical series or develop new series.</p> <ul style="list-style-type: none"> Encourage member countries to improve data quality; Provide a framework for evaluating needs for data improvement and setting priorities in this respect; and Guide member countries in the dissemination to the public of comprehensive, timely, accessible, and reliable economic, financial, and socio-demographic statistics. SDDS is also expected to contribute to the improved functioning of financial markets. 	<p>Several donor-funded technical assistance projects were implemented between 1998 and 2008 to roll out GDDS and SDDS. Evaluations note that while concrete improvements are made in the methodology, output, quality, and dissemination of official statistics, doubt were raised as to their sustainability as few commitments for long-term funding for statistical reform were secured.</p> <p>The Eighth Review of the Fund's Data Standards Initiatives notes that 40 African countries are members of the GDDS and 1 of the SDDS by 2012. Metadata produced is posted on the IMF's Dissemination Standards Bulletin Board (DSBB).</p>
1999: Partnership in Statistics for Development in the 21st Century (PARIS21) Scope: national + international	<p>PARIS21 provides a forum and network to promote, influence and facilitate statistical capacity development and the better use of statistics by:</p> <ul style="list-style-type: none"> coordinating efforts between data users, producers, policy-makers and providers of development co-operation; advocating for improved use and production of high-quality and timely statistics assisting countries in designing, implementing and monitoring their National Strategies for the Development of Statistics (NSDS) providing knowledge through data archiving and documentation. 	<p>The 2009 evaluation of PARIS21 notes that progress was made towards rolling out the NSDS approach, in the capacity to produce, analyse and use statistics in countries (according to the World Bank's Statistical Capacity Indicators) and on the national data available on the MDGs. As of 2013, 37 of the 41 IDA-countries in Africa are designing or implementing an NSDS.</p>
2002: International Comparison Programme (ICP) for Africa Scope: international + continental	<p>The African Development Bank assumes responsibility of the World Bank's ICP for the Africa region (previously undertaken by Eurostat), aiming at generating PPP estimates to facilitate cross-country price level comparison and economic aggregates in real terms. This exercise is used to develop capacity by providing support at national and regional level for:</p> <ul style="list-style-type: none"> core ICD activities; developing a regional reference framework for statistical development; assisting the development of NSDS; research on PPP-based poverty measurement an initiative on MDG monitoring and statistical literacy; implementing the UN System of National Accounts (SNA); improving price statistics; training country professionals and students through training centres and universities. 	<p>Two data collection rounds were undertaken, in 2005 and 2011, an interim comparison of Household Consumption Expenditure in 2009, leading to comparative output, consumption, income and price level data for 50 African countries.</p> <p>ICP data from these exercises is mainly used by stakeholders outside the region.</p>

<p>2004: Marrakesh Action Plan on Statistics (MAPS)</p> <p>Scope: international</p>	<p>MAPS seeks to promote greater cooperation and partnership among different bodies in support of countries' own efforts to strengthen their statistical services. It prioritises action in six areas at national and international level:</p> <p>National needs:</p> <ol style="list-style-type: none"> 1. Mainstream strategic planning of statistics, incorporating target for NSDSs 2. Prepare for the 2010 population census round 3. Increase investment in statistics <p>International responsibilities:</p> <ol style="list-style-type: none"> 4. Set up an International Household Survey Network (IHSN) 5. Improve MDG monitoring 6. Improve international accountability in statistics 	<p>A 2008 independent evaluation noted that eight partnership programmes were developed between international organisations, funded with World Bank grants. These were found to be well managed and contributing to the quality of decisions by governments and others about broader development policies and programs.</p> <p>Yet there has been limited progress on implementing NSDS, donor support still needs to be better coordinated and various gaps in poverty, gender and agricultural statistics are still outstanding.</p> <p>IHSN established, many African countries improved and publish metadata to facilitate information sharing and appropriate interpretation of statistics by both data users and producers.</p>
<p>2006: Reference Regional Strategic Framework (RRSF) for Statistical Capacity-Building in Africa</p> <p>Scope: continental</p>	<p>With the overall objective of strengthening national statistical systems, the RRSF prioritises actions to support three themes:</p> <ol style="list-style-type: none"> 1. Meeting users needs; 2. Improving the management of statistical systems; 3. Ensuring the sustainability and irreversibility of statistical development. 	<p>The African Statistical Development Index (ASCI) is developed as part of the monitoring and evaluation of efforts under the RRSF, first baseline was developed in 2012.</p> <p>UNECA, AfDB and the AUC since jointly gather and report official statistics from African countries in the African Statistical Yearbook.</p>
<p>2009: AU African Charter on Statistics</p> <p>Scope: continental</p>	<p>Policy framework for statistical development in the African continent, setting out guiding principles;</p> <ul style="list-style-type: none"> • Professional independence • Quality • Mandate for data collection and resources • Dissemination • Protection of individual data, information resources and respondents • Coordination and cooperation. <p>..as well as cooperation arrangements for further efforts to reinforce the national, regional and continental statistical policies and systems in Africa and undertake to institute appropriate measures, especially legislative, regulatory and administrative to ensure that their laws and regulations.</p>	<p>The Charter has only entered into force in 2014 after 16 AU Member States signed and ratified it. A 2012 self-assessment by 25 African countries notes several specific sub-principles where progress is lagging:</p> <ul style="list-style-type: none"> • The degree of responsibility which African statistics have in determining the collection, processing, analysis and presentation of statistical data; • The timeliness and relevance of published official statistics; • The cost-effectiveness of operations to produce statistics and their usage; as well as the rationalisation of statistical needs • Dialogue with the users of statistics, as well as the correction of significant errors in datasets.
<p>2010: Strategy for the Harmonisation of Statistics in Africa (SHaSA)</p> <p>Scope: continental</p>	<p>Strategy for improving the capacity and integration of the African statistical system based on four pillars:</p> <ol style="list-style-type: none"> 1. To produce quality statistics for Africa (by expanding the statistical information base, transforming statistics for comparability and harmonising standards and methods of production); 2. To coordinate the production of quality statistics for Africa (by strengthening cooperation among institutions, establish effective coordination mechanisms and defining statistical priorities); 3. To build sustainable institutional capacity in the African statistical system (by reforming national statistical systems, building sustainable statistical capacity and 	<p>14 Specialised Technical Groups put in place to coordinate and align efforts of the AfDB, World Bank, UNECA, PARIS21 and AUC at national, regional and international level.</p>

	establishing an effective technological environment; 4. To promote a culture of quality decision-making (by promoting evidence-based decision-making and improving the communication of statistical information).	
2011: Busan Action Plan on Statistics Scope: international	The Action Plan promotes the full integration of statistics in decision making; the promotion of open access to statistics; and increasing resources for statistical systems, by promoting six actions: 1. Strengthen NSDS; 2. Implement standards for data documentation and public access; 3. Develop programs to increase knowledge and skills needed to use statistics effectively; 4. Monitor outcomes of all global summits 5. Ensure financing is robust and funding mechanisms responsive.	As yet not evaluated.

Sources: UNECA, 1990, 2001; Eele and Chinganya, 2005; Lufumpa and Mouyelo-Katoula, 2005; Roberts and Voyadzis, 2009; AUC, 2012.

These efforts are cause for some optimism: they represent sustained attention as well as support and financing provided towards addressing statistical capacity issues in Africa over the past 25 years¹⁶. As noted in numerous evaluations, various initiatives and programmes have successfully addressed specific capacity and data gaps in national statistical systems across Africa¹⁷. Furthermore, international agencies and multilateral fora are increasingly collaborating and coordinating initiatives to overcome these issues together with in-country statistical systems.

The objectives of many of these initiatives are aligned with the logic behind a Data Revolution. Nevertheless, Sub-Saharan Africa not only currently has the lowest average level of statistical capacity, as shown in Figure 1, but the most countries which have experienced a decline in capacity in the past 15 years (11 out of 48 countries covered by the Statistical Capacity Indicator¹⁸).

PARIS21's peer review reports¹⁹ show that while a number of African countries have taken steps towards reforming their national statistical systems, significant outstanding challenges remain. As such, while countries have developed National Strategies for the Development of Statistics (NSDS), problems remain with the legislative frameworks, operationalization of statistical coordination, (human) resource allocation and mobilisation both to national statistical services and to sectoral services, and an overall low appreciation of statistical information for policy- and decision-making.

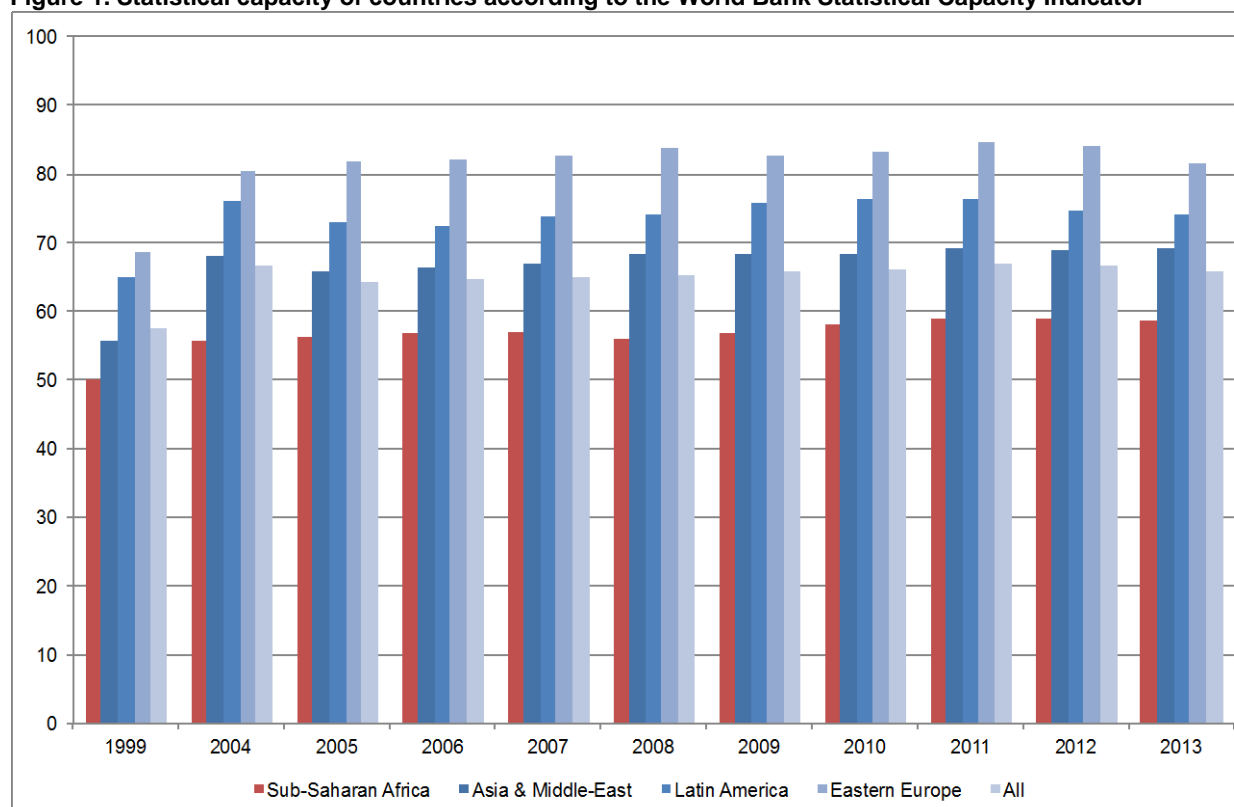
This last point in particular is noted recurrently in evaluations of statistical capacity building programmes and projects. Willoughby (2008) notes that evaluations find that decision-makers are widely unaware of the costs and benefits of various statistical activities and methods necessary to arrive at official statistics. Furthermore, he finds it unclear how management attitudes and practices in African governments have responded to the provision of more and better administrative data. As such, the impact of better data on decision-making remains a tenuous issue.

¹⁶ Kiregyera, 2013.

¹⁷ Willoughby, 2008.

¹⁸ This indicators is not without its weaknesses, as noted by Ngaruko, 2008, yet provides a useful relative assessments of the scale of the issues with statistical capacity in developing countries.

¹⁹ See: <http://www.paris21.org/peer-reviews>

Figure 1. Statistical capacity of countries according to the World Bank Statistical Capacity Indicator

Source: World Bank Bulletin Board on Statistical Capacity

Based on 30 years of analysis, Pollitt highlights the following key factors affecting public sector reform: the importance of politic-administrative culture, the structure of the political system, the volatility of governments, the level of administrative capacity, the complexity of the task, and the strength and the role of other stakeholders, including external actors. As a result, “what is conceptually supposed to be the same technique or model may turn out very differently in different contexts”²⁰

The interest and incentives of decision-makers with respect to using and producing official statistics therefore appears paramount, reflected in the lack of committed resources noted over the past two decades of statistical capacity building in Africa²¹ And yet they have received little attention compared to the technical deficiencies of data gathering and statistics production. National statistical capacity is not purely a function of a country’s level of development. Not only have several European countries widely registered birth, death and taxation statistics in various forms for roughly a century before they reached their current stages of political and economic development, but some developing countries have relatively advanced statistical systems, as reflected in their SCI scores and elsewhere: “a number of low- and middle-income developing countries have successful vital registration systems (Cuba, the Islamic Republic of Iran, Malaysia and Sri Lanka).”²²

Instead, the incentives in place for how official statistics are valued and used by decision-makers, and the institutions in place for developing them, are likely to be key factors. Stakeholders in international development have for the past two decades been experimenting with tools, analyses and approaches – much of it informed by the literature on public sector reform – to gain a better understanding of the interests,

²⁰ Pollitt, 2013.

²¹ Lufumpa and Mouyelo-Katoula, 2005; Willoughby, 2008.

²² AbouZahr and Boerma, 2005.

incentives and institutional structures underlying a particular development challenge, which determine the dynamics, constrain outcomes or offer opportunities²³. Such a political economy analysis can provide useful reflection and entry-points on how to address challenges in politically sensitive areas, and how to maximise the potential benefits of the on-going Data Revolution discussions.

2.2 The political nature of official statistics in brief: objectives, production and usage

The techniques, standards and systems for producing official statistics are closely related to processes of state-building and state power, an important basic indicator of the political nature of official statistics. This section looks at the historical development of official statistics in Europe to understand, in turn, how the *objectives* of users of official statistics have affected their *production* and *usage*, important factors in understanding their production and use today. This provides the basis for the subsequent literature review and analysis structured around five political economy factors and African Official Statistics.

Objectives of official statistics

Statistics have long been employed for the purpose of rationalising and standardising complex realities and phenomena – the population, land mass or economic activity of a country – in order for rulers and monarchs to better administer and organise control over their assets and subjects. As such, official statistics are simplifications that try to capture those parts of reality that interest the ruler (the main source of demand for official statistics) in order for them to understand, influence and alter that reality²⁴.

Official statistics were not solely produced for rulers to improve the living standard of the populace. Historically, they have been used as a means of directing the extraction of resources, through taxation or the direction of the outputs of productive activities, or of increasing state power²⁵. 'Being counted' for ordinary subjects (before they became considered as citizens) meant 'being taxed or conscripted'. Not before the introduction of Sir William Petty's political arithmetic in the mid-17th century did an early empirical governance model emerge in Europe through which the comparative performance of nations (in this case England in comparison to France and the Netherlands) was understood as being due to the policies they adopted, that could be designed and assessed according to deductive reasoning, using systematic measurement of the population and the economy²⁶.

The objective of political arithmetic remained the exercise of state power over assets and subjects, yet "Petty made improvement – of nature and of the nation – the business of the state."²⁷ Official statistics are nowadays commonly demanded for the purpose of policy-making, -monitoring, comparison and research purposes by national and regional governments (including their institutions such as line ministries and central banks) as well as international organisations, but also civil society, the academic community and the private sector²⁸. Less than perfect information on the need for and effects of policy decisions are thought to lead to ineffective policies or reforms, which acts as a tax on the intended outcome of policies²⁹.

²³ Menochal, 2014.

²⁴ Alonso and Starr, 1987; Scott, 1998, Tooze, 2001.

²⁵ Population censuses in Roman times, for instance, were undertaken in order to know which citizens and subjects were eligible for military service and the extent to which they could be taxed.

²⁶ First applied as a way of organising land settlement in Ireland following the Second English Civil War, political arithmetic proposed that policy-making for England also required "an exact accompt...of the whole people by there [sic] number, age, sex, trade, Office, place of habitation, and by all other there [sic] circumstances & qualifications, whereby they improve or impaire the publique wealth." See Alonso and Starr, 1987; Porter, 1986.

²⁷ Buck, 1982 and McCormick, 2007. Landes, 1972 provides a further analysis of the emergence of modern statistical systems in Europe in three phases.

²⁸ OPM, 2009a

²⁹ Rodrik, 1991 and van Wijnbergen, 1985.

The production of official statistics can itself be a means towards social integration, conflict resolution and strengthening the social contract. For instance, population censuses integrating heretofore excluded social groups (particular ethnicities, religions or nationalities) provide a signal to such groups that they are being recognised and considered by the state. The potential for this depends on political bargains made as well as the constellation of social groups, local and national authorities as well private and international actors.

Tendulkar (2009) further notes that increasingly widespread democratisation as well as transport and information technology has increased the need for ‘the social credibility of official statistics’. However, no fixed directional relationship between the collection of official statistics and (forms of) state building and state power can be assumed. Official statistics emerged in both highly planned as well as free market economies and societies, underlining their importance in expanding state governance, particularly for state-sponsored economic development, as well as state intelligence.³⁰

Production of official statistics

Producing official statistics is a complex process, and involves the interests and interplay of a range of actors and factors. Modern national statistical systems include all the actors and organisations in a country that collect, process and disseminate official statistics on behalf of the government. The evolution of national statistical systems in France, Britain and Germany up to the 20th century shows that they are products of and for their social, political and economic environment. These systems and bureaucratic agencies were formally developed from the early 19th century onwards as a result of states moving to increase control over their resources in increasingly complex environments (involving rapid technological advancement and demographic changes, changing the composition and value of resources). At the same time, states faced greater pressure from competing states for military and commercial power, and also responded to pressures from early statistical pioneers and societies, who proposed innovative approaches to state governance based on objective measures of social problems and social unrest (such as Petty’s political arithmetic).³¹

As such, producing official statistics is not the same as releasing a statement of fact. Whereas there are certain attributes through which official statistics are recognised (see Box 1), Jerven (2011) notes that official statistics are produced as “a result of a practical measuring process, subject to decisions and to the implications of scarce resources regarding [the] definition and method of data collection.” The figures, and (changes to) the methods for arriving at them, reflect changes in political priorities and bargains within state administrations, and between states, citizens, academic communities and the private sector³².

Any data gathering and statistics production exercise undertaken on behalf of public authorities affects and depends on the strength of the social contract: it requires considerable trust and cooperation from the population. Whereas Western rulers and national authorities relied heavily on local authorities and representatives perceived as more legitimate by the population (such as civil and religious leaders) to facilitate data collection early in the 19th century³³, states built on this by instituting permanent, bureaucratic agencies. This served not only to safeguard the trust of citizens in official statistics, but also to enhance the statistical capacity available to the state to reflect newly adopted state roles.

State reforms, including autonomisation of statistical offices, were undertaken frequently post-independence in developing countries. This was carried out first to assert greater national ownership of the

³⁰ Alonso and Starr, 1987

³¹ Ibid.

³² Herring, 2008.

³³ Landes, 1986; Alonso and Starr, 1987.

national statistical system and subsequently to suit legal reforms with the underlying motive of asserting greater independence from political influence in order to increase the credibility of statistical offices (as well as other institutions) following controversy³⁴. This has however not resulted in more and better production and usage of official statistics.

Box 1. Recognising official statistics

Although no formalised definition of official statistics exists, they are intended to have a number of attributes of their production in the statistical community:

- **Standardisation:** official statistics are produced based on accepted statistical quality standards and criteria. The (presence of) metadata specifying the methodology, definitions and standards used to produce these statistics offers an indication of its quality;
- **Process and source:** statistics should be produced according to a formal process, under the coordination of a duly competent body (usually the National Statistical Office) that is consistent, congruent, transparent and visible, while also being confidential;
- **Usage potential:** statistics should be of relevance for discussion and decision-making processes serving the national economy and/or society, and as such be useful for a broad number of potential users and usages;
- **Governance framework:** the legal framework underpinning the production of official statistics should afford sufficient professional independence for their production, as well as a clear role for these statistics in national decision-making processes.

Based on UNECE 2014 as well as elements of UNECA, 2008, UNSD 2013, ESSC 2011 and US Census Bureau 2013.

As such, the objectives of the state in gathering official statistics (the main demand) will influence the design and capacity of the national statistical system – the latter are designed to meet this purpose through the application of formal statistical theory and standards³⁵.

Usage of official statistics

Currently held views on effective state governance and policy-making clearly see a number of uses for official statistics, as listed in Box 2. Official statistics are increasingly considered as ideally being a public good, freely accessible to all interested actors (as well as inexhaustible) for a net (economic or welfare) gain³⁶. It follows that a larger supply of such a good increases the net gain of those using it, part of the underlying principles of the data revolution discourse, discussed above.

This translates into the proposition that gaps in the production of official statistics must be addressed in partnership through development assistance and other forms of multilateral cooperation, allowing for more and better usage of official statistics in policy-making. At the same time, methodologies to help determine whether or not to invest in official statistics, such as the ‘value of information’ concept³⁷, assume that states seek to have full information for every decision made or action taken.

³⁴ Jerven, 2011. For an overview of reforms in national statistical offices and systems, see https://unstats.un.org/unsd/dnss/kf/history_country_docs.aspx

³⁵ Ibid.

³⁶ Round, 2014

³⁷ Based on the probabilities and payoffs of expected outcomes, the value of information methodology can be used to model whether collecting information is worth the cost. If any option for collecting information costs less than the hypothetical value of having full information, then it should be explored. See Repo, 1989.

Box 2. Usage of official statistics in order of priority (for national results management)

1. To facilitate the design and adoption of government policy measures responsive to the evolving needs of the country and its economy;
2. To enable programme and policy objectives to be expressed in the form of explicit, time-bound output (and sometimes) outcome targets that can significantly improve the performance of public services (as, e.g. in performance-based budgeting);
3. To allocate resources geographically;
4. To improve the flow of information to citizens throughout the country and hence enable them to make sounder business and family decisions;
5. To stimulate and feed democratic debate on issues of public policy and enable the government in office to give account to the electorate for its initiatives and performance;
6. To help meet the information needs of potential foreign investors and visitors to the country (including press and other intermediary agencies service them);
7. To fulfil accountability and fiduciary responsibilities to foreign governments and international institutions for any assistance they have provided;
8. To provide accurate reports to bodies which have been charged by the international community with the task of keeping track of world performance on many economic, environmental, social and other issues.

Reproduced from OPM, 2009

Yet evaluations, find that in many developing countries, little effort is made to include data and statistics in national decision-making.³⁸ This is measured by the lack of involvement of statisticians in policy dialogues as well as data analysis and availability: “Serious questions arose about the contrasting mind-sets of policy-makers and producers of statistics and the adequacy of dialogue between them.”³⁹

Furthermore, as Starr notes, despite the fact that there are “many uses or functions of official statistics [...], use never proves effect.”⁴⁰ Whereas it may be desirable for official statistics to be considered as public goods essential for the functioning of state and society, they can generally not fully be counted as such. Not only are official statistics not always freely and publicly accessible, particularly those in African countries⁴¹, the possible objectives of elites for the production and usage of official statistics may not lead to a net national gain.

At best, therefore, official statistics may be public goods by design or as club goods – specifically chosen to be produced, publicly available and used by national and international actors to derive specific benefits⁴². In this case, we cannot consider ‘design’ (production) of official statistics to be purely technical. The assertion that “the nature of statistics in state administration is that of providing evidence as the basis for decision making”⁴³ needs to be complemented with the understanding that whether or not official statistics are demanded and subsequently produced, used and/or published in the public domain is fundamentally a political decision by elites or by those producing the data⁴⁴.

³⁸ EC, 2007; Willoughby, 2008; OPM 2009a

³⁹ PARIS21, 2008

⁴⁰ Alonso and Starr, 1987

⁴¹ Indeed, they can sometimes only be acquired through request or even after payment – for African country examples see Jerven 2013, Woolfrey 2013 and CGD & APHRC 2014.

⁴² Kaul et al, 2003, Round, 2012

⁴³ Leholha, 2008, p.3

⁴⁴ Scott, 2005.

A rigid public-choice perspective implies that good statistics will only be produced in cases where political elites in states expect to benefit from their usage. Further, the frequency, coverage and overall quality of specific official statistics is thought to reflect the extent to which the object of measurement is a priority. Certainly, the transition of official statistics as a tool to enhance control over resources to one that supports policy-making for public benefit in European countries supports this.

Why political economy analysis?

From the above, the case for taking a more political approach to understanding statistical capacity seems clear. Indeed, the 2008 evaluation of the Marrakech Action Plan Statistics⁴⁵ recommended that the “most effective way to build greater political commitment to statistical development in support of countries’ overall development is to achieve more cases of full or partial success and to document them appropriately, tracing the linkages from better information to better decisions to more successful development.”

This section however offers the perspective that the quality and availability of data is unlikely to be the watershed for improved statistical capacity in African countries. Instead, a better understanding of the factors that drive and constrain the production and usage of official statistics at the national level – particularly the objectives of the state – is needed. This will allow stakeholders to ask the right questions in designing both technical and policy reforms to improve statistical capacity in ways that are not only context-relevant but aligned to the incentives of those involved. With these insights, a Data Revolution could be more realistic in ambitions, but also adapted to existing incentives structures, or adapted to alter incentive structures to achieve its overall aims.

The next section provides an overview of the available literature on how political economy factors explain the drivers and choices behind official statistics production and usage.

⁴⁵ Willoughby and Crook, 2008.

3. Official statistics and 5 political economy factors

In order to cut through complexities and better understand which actors and factors influence the objectives, production and usage of official statistics in African countries, this section looks through five broad political economy lenses. This approach builds on existing donor tools and political economy studies⁴⁶. It helps to structure existing information by analysing the interactions between context specific structural factors, political incentives, institutional settings and external drivers. As a result, it contributes to a better understanding of the incentives and motivations of political elites, state bureaucrats and other key actors in engaging with the production and usage of official statistics.

3.1. Structural factors

This section looks at how foundational factors or structural features of a particular country context – such as history, geography or sources of income – influence the objectives for and the context in which official statistics are produced and used. The objectives for producing official statistics have been shaped by two major factors: Africa’s colonial heritage, and the natural resources these countries possess. This has affected not only the current objectives, but production and usage of official statistics in these countries.

Colonial heritage

As Section 2 highlights, historical developments affecting the nature of state formation, governance and public administration are likely to be relevant to official statistics produced today due to path dependency. In African countries, few historical influences are felt as markedly as those administrations imposed during colonial rule. French and British colonial administrations, for instance, had particular *objectives* for producing and using official statistics on their protectorates. Their colonial objectives reflected contemporary political currents in those countries, and capacities for producing official statistics differed across individual countries, and evolved much in step. Part of the current challenge in improving statistics capacity can be related to this history.

Official statistics were predominantly valued by colonial administrations as tools for extracting revenues through taxation, whether to impose hegemony or integrate African countries into the monetary economy by turning them into fiscally viable states⁴⁷. Whereas at first, “While statistics collection took place at the level of single colonies, there was no systematic attempt to draw a big picture of the economic conditions and prospects of the Empire”⁴⁸, Serra (2013) notes that the Great Depression and Second World War increased the importance of official statistics for colonial administrations. Both events increased perceptions of African countries as viable economic units with potentially significant contributions to the income of colonisers, therefore meriting closer observation and management.

Both French and British administrations became more concerned with state-led economic development and public service delivery –requiring more extensive statistical knowledge than previously available. New norms for economic data gathering and reporting (such as standards for national income accounting) and the foundation of international institutions such as the UN, IMF and IBRD increased the demand for post-war economic data from African countries. From the 1940s onwards, British but especially French colonisers invested in reforming their statistical systems, as a result of which data gathering initiatives were undertaken and statistical units and offices in African colonies were set up, strengthened or made more independent⁴⁹.

⁴⁶ European Report on Development, 2013

⁴⁷ Frankema and van Waijenburg, 2013.

⁴⁸ Serra, 2013.

⁴⁹ Gervais and Marcoux, 1993; Serra, 2013.

The first published estimation of the national accounts produced in Northern and Southern Rhodesia (now Zambia and Zimbabwe) were undertaken as a test case by the British for facilitating inter-colonial comparisons in terms of revenues and revenue potential. However, these excluded the value added of output produced by ‘African producers’. Unrecorded (informal) economic activity and output meant for consumption were not considered eligible activity to contribute to national income and colonial objectives, nor compatible with the adopted income approach⁵⁰.

This lack of attention to measuring and including informal activity, particularly smallholder farming, into national accounts statistics still prevails in Sub-Saharan Africa. This is not for lack of production methods to measure informal activity: these have been in place in Asian and Latin American countries for some time⁵¹. Instead, due to colonial and post-colonial optimism about modernisation and industrialisation in Africa, data collection on industrial sectors and large-scale commercial agriculture was prioritised, and marked the ‘production boundary’ of national accounts. In some cases economists did not consider the idea of standardised national accounts to be meaningful to the African context, as concepts of wealth, formality and work vary between cultures, leading to divergent methods and classifications for measuring national income.⁵²

It can therefore be argued that, aside from the technical difficulties of measuring informal activity, this persistent data gap is partly due to the structures for producing official statistics embedded in the formal post-independence economy. Decisions taken to suit available techniques to prevailing objectives⁵³ and perceptions proved hard to reform. After the formalisation of state institutions including parastatals in African countries, any commodities marketed outside these channels still went unrecorded and so do not generally contribute to national income. This is, as Jerven (2011) notes, an expression of an ideology on the “assumed relationships between the measured and the unmeasured economy” – in extreme cases large parastatals and marketing boards were taken to represent the entirety of economic activity and therefore provided all the data on trade and services.

This also holds true for non-economic official statistics: the different legal systems of colonising powers and policy priorities emanating from them strongly affected statistics production prior to independence⁵⁴. For instance, complaints by West-African research institutes about the lack of crime statistics in French ex-colonies⁵⁵ can be linked to the fact that the French legal system prioritised legal statistics, and had a very uniform definition of crime (whereas the British system considered order vital to the success of colonies, therefore prioritising police data and crime statistics). Furthermore, the French Constitution prohibits census-taking from collecting demographic data on race, ethnicity or religion.

Geography, demography and (natural) resource endowments

Colonial administrations were originally established in order to draw on and extract resources of other countries for commercial purposes. The amount, location and potential value of these resources have affected the objectives and as such the production and usage of official statistics in African countries in

⁵⁰ Fisseha, 2012

⁵¹ Jerven, 2013 and Lipton, 2013.

⁵² Jerven, 2011

⁵³ British Colonial Regulations demanded from Governors that statistics be gathered in a standardised format – the so-called Blue Books, produced from 1822 to 1953 – on a great number of subjects, for inspection by the Colonial office as well as the House of Commons Select Committee on Finance. While headings on what had to be reported were given, with an emphasis on taxation, Governors were themselves responsible for completing the Blue Book using the most appropriate methods, including categorising the headings as was seen fit. As a result of classifications autonomously developed by British civil servants, the Blue Books instituted population divisions according to linguistics or physical features.

⁵⁴ Ademoglu & Johnson, 2005

⁵⁵ Colloque de criminologie comparé en Afrique occidentale, 1973

several ways – both during colonialism and post-independence. These also shaped the production and usage of official statistics: the attitudes of colonisers towards public administration⁵⁶.

The size of colonies affected how they were divided into geographical units, how land tenure rights were administered and how tax revenues were collected. French colonial administration demanded that there be a district administrator stationed in every district, keeping tax and population records according to a standardised system. Districts had to raise part of their own budget, incentivising collection of official statistics. As such, the statistical system in Francophone Africa often consists of a large network of agents collecting disaggregated data since colonial times⁵⁷.

The colonial legacy also introduced demographic demarcations through official statistics. Not only did colonial administration determine how populations were divided, and so the framework for any population statistics, but administrations often favoured specific ethnic or social groups: “When the British left [India], areas where landlords collected the revenue had an elite class that had enjoyed a great deal of economic and political power for over a century: there was no counterpart to this class in the non-landlord areas. This meant that these areas inherited a more unequal land distribution at the time of independence, and a very specific set of social cleavages.”⁵⁸ These groups would often take over tax revenue collection, and as such official statistics production, post-independence – India and Nigeria are notable examples of this in the case of the British colonial heritage.

This is not to say that these are the only, nor the determining factors that underlie current statistics production and use, but that these long-run effects are likely to be present in some form.

3.2. Formal and informal institutions

This section looks at how both formal and informal institutions shape the particular context in which official statistics are produced and used. Formal institutions include the laws, regulations and treaties of a country, whereas informal institutions refer to less visible features such as beliefs, norms and culture. These coexist and -evolve in any country context and shape the incentive environment in which multiple actors operate. Legal frameworks for official statistics are statements of the objective for their production and usage, and are in turn shaped by the structural environment. Understanding these interactions between formal and informal institutions helps to assess the scope for reforms, including the incentives for ruling elites engage in reform processes.

Legal frameworks and administrative arrangements

National Constitutions and related legal acts indicate the objective for the production of national statistics: who is responsible for the production of what official statistics, for what purpose and for whom. The Constitution indicates the procedures according to which laws are made – including which organ of the state produces proposals, based on what – as well as the organisation of powers in government and decision-making. It will furthermore indicate the process and organisations through which the national budget is apportioned.

Specific statistical legislation (such as Statistical Acts) also exists to give specific guidance to the process of producing official statistics by: indicating what are official statistics; for whom they are produced; the structure and powers of organisations delivering official statistics and; the principles on which official statistics are produced. Statistical legislation exists to clarify tasks, arrangements and roles in the production of official

⁵⁶ Frankema and van Waijenburg, 2013; Bonnacase, 2012.

⁵⁷ Huillery, 2006

⁵⁸ Banerjee and Iyer, 2005

statistics, the extent to which the government has power to do so and how it guarantees the confidentiality of information gathered⁵⁹. It also indicates whether there are **restrictions for disseminating particular official statistics**. Statistics South Africa is mandated to publicly provide anonymised official statistics, though policy restricts Mozambique's Instituto Nacional de Estatística from sharing certain types of data (microdata), though national level official statistics are published on its Data Portal⁶⁰.

Legal frameworks are important for the production of official statistics, as they indicate who and what is counted based on government priorities and, therefore, who and what counts. During apartheid in South Africa, policy-making and the administration and governance of public life, and therefore the production of official statistics was undertaken for the white minority population. Any segment of the black population noted in official statistics were only measured and included for the purpose of control and (racial and geographic) segregation expressed in the Constitution⁶¹. As such, up to 1996 there were no national benchmarks or nation-wide official statistics. Only in 1999 was a new Statistics Act adopted which detailed a reform process to include the black population in all official statistics.

Moreover, the constitution and statistical legislation denote the legal role afforded to particular official statistics in allocating power and/or state resources. This can shape incentive structures behind the production of official statistics – as, for instance, Ministries of Education in many Anglophone African countries allocate budget to public schools according to the numbers of children that are registered, incentives to over-report are created⁶². Population data in many countries is linked to state budget allocation or seats in particular houses of parliament – which branch of the government is responsible for producing and publishing this statistic becomes a sensitive issue. For instance, the 2007 revision of the Nigerian Statistical Act, setting up the Nigerian Bureau of Statistics, had to scrap reforming roles on gathering population and vital statistics from the proposed bill as the 1999 Constitution provides the National Population Commission (and not the Federal Statistical Office) with this mandate⁶³.

Legislative frameworks thus define the contours of the *production and usage* of statistics in practice, including the government structures and administrative arrangements involved in their production. In the majority of developing countries, statistical legislation preserves the independence of national statistical offices. These are commonly established as a corporate body with a separate budget from the state, accountable primarily to parliament, and associated with government ministry or ministries, particularly the Ministry of Finance or Planning.

Where national statistical offices are not administratively autonomous, they are departments in a central ministry, usually the ministry of finance or planning, and their staff, including the Director of the national statistical office, are civil servants appointed using civil service procedures. Whereas there is no definitive 'best practice' institutional model of the degree of autonomy of statistical offices or departments, a **preference is usually expressed for an independent statistical office**⁶⁴. Aside from enabling the credible and impartial production of official statistics, an autonomous statistics office is thought to be in a stronger position to make use of accountability mechanisms described in the constitution and statistical legislation than one that is

⁵⁹ See UNSD, 2003, Khawaja and Morrison 2003 and Holt 2003.

⁶⁰ Woolfrey, 2013

⁶¹ Lehohla, 2005

⁶² Jerven, 2013

⁶³ Akinyosoye, 2008.

⁶⁴ UNECA (2008) supports this, but notes three commonly expressed concerns about having an autonomous statistical office. First, autonomy would distance the national statistical office from government ministries, necessitating a consistently outward-looking approach by the office in developing linkages with other government departments. Secondly, autonomy increases pressure on the NSO to be financially independent – an unrealistic proposition for most African countries. Lastly, autonomous NSOs can be viewed as parastatal organisations, leaving them open to prejudice about patronage, mismanagement and rent seeking from previous experience with such organisations in African countries.

integrated into or across government. It can in theory exert authority not only over the figures it produces itself, but those produced by other government departments.

The past three decades have seen a wave of legislative reform and ‘autonomisation’ of statistical offices worldwide – statistical legislation enacted in African countries as a result of these reforms was intended to clarify accountability mechanisms of the statistical office towards government and other stakeholders. How these reforms have played out varies to a large degree: whereas the establishment of the Ugandan Bureau of Statistics is seen as a successful, relatively linear series of reforms, the roles and responsibilities in the Nigerian statistical system have frequently changed hands since the enactment of the Statistics Act in 1957⁶⁵.

Informal rules of the game

State reforms, including autonomisation of statistical offices, were undertaken frequently post-independence in African countries, first to assert greater national ownership of the national statistical system and subsequently to suit legal reforms with the underlying motive of asserting greater independence from political influence in order to increase the credibility of statistical offices (as well as other institutions) following controversy⁶⁶. This has however not resulted in more and better production and usage of official statistics.

Statistical agencies and systems in African and other developing countries have stayed (or become more) similar in design and in legal mandate to those in developed countries⁶⁷. Despite these reforms, **national statistical offices in Africa, even those whose autonomy is anchored in legislation, are found not to be sufficiently autonomous** according to the Reference Regional Strategic Framework (RRSF) for Statistical Capacity Building in Africa (2010). The RRSF notes that, despite the autonomy of statistical agencies, the main producers of official statistics do not manage their own workloads or budgets, putting pressure on their capacity to coordinate, undertake and support the production and assist in the interpretation of official statistics.

Despite autonomising and decentralising reforms in many African countries, resources and actual decision-making power have in practice remained centralised. In particular, capacity to generate and analyse information remains concentrated centrally in the best of cases - statistical systems have not branched out strongly from central ministries (Finance, Health)⁶⁸. This matches the modes and practices of decision-making: few overt references are found in Constitutions of official statistics being the basis for decision-making (instead describing who rather than what factors are involved in the decision).

In many African countries, the statistical legislation indicates that official statistics have to be approved by the relevant minister or other senior official in a relevant (parent) ministry as well as the central bank⁶⁹. Statistical boards, inter-ministerial committees or boards with wider representation provide an additional centralised decision-making check before official statistics are published, offering space for political bargaining. A generally low level of interest and involvement in official statistics and their production by non-specialist audiences has been remarked. For instance, despite a prominent role being afforded to statistics users’ committees in various Statistical Acts, such committees rarely if ever meet⁷⁰.

Decision-making in many areas – fiscal and macroeconomic policy, health and education policy – is often based on maintaining or increasing political influence, practical convenience, donor demand or

⁶⁵ UNECA, 2008, Akinyosoye, 2008.

⁶⁶ Jerven, 2011. For an overview of reforms in national statistical offices and systems, see https://unstats.un.org/unsd/dnss/kf/history_country_docs.aspx

⁶⁷ Elele, 1989.

⁶⁸ AbouZahr and Boerma, 2005.

⁶⁹ Jerven, 2013.

⁷⁰ PARIS21, 2005.

a combination of these. This indicates that official statistics are in practice not seen as a key factors in decision-making, which in turn affects their *production* and *usage*. It reduces the importance of statistics being independently and centrally overseen and produced (something happening on paper but not in practice in many countries). It is not unusual for multiple government agencies or ministries to collect data and statistics on the same or similar phenomena, as it offers a desirable check on the performance of statistical agencies⁷¹.

Having different sources for different components (coordination, analysis, storage etc.) or sectors (health, population, economics etc.) of official statistics production can be an effective arrangement. The extent to which multiple sources of data and statistics are conducive to **producing and using good official statistics is a function of trust - both among government institutions and between government and their citizens.** In Nigeria, for instance, where trust between various parts of the government as well as trust in the government by citizens is fragile, the process of statistics gathering (either independently or cooperatively) is perceived as a form of audit or investigation⁷².

The likelihood that data collection and management techniques will differ significantly between different actors is then high, as well as the chances of duplication or siloes forming between institutions due to rivalries, undermining the credibility of these statistics. As an example, five separate agencies aside from the Institut National des Statistiques (INS) collect 'official' trade statistics for the Democratic Republic of Congo: the customs agency OFIDA (Office des Douanes et Assises); the provincial commerce departments; the export control agency OCC (Office Congolais de Controle); provincial departments of responsible for the product traded (e.g. the Division des Mines et Géologie in the case of minerals) and for some products the certification office CEEC (Centre d'Expertise, Évaluation et Certification): "The various agencies each collect their own sets of trade records, and not every agency covers every product in its statistics...Even where the same product and the same transaction is covered by several agencies they can register different numbers."⁷³

Without political incentives in place to promote strong coordination , government agencies and offices produce (micro)data for their own purposes. Lack of clarity on amounts exported in the Congolese case, in part due to the legal administrative complexities of who gathers what data, creates opportunities for rent-seeking through smuggling and fraud supported by seemingly official statistics. Having many sources of data also leaves production and usage open to bias towards those data and statistics seen as more important for either national policy objectives or revenue extraction. For instance, wages in one agency are significantly higher than another a shortage of key staff may arise⁷⁴.

The gap between formal rules and informal practice is an element of statistics production and use is therefore a characteristic that can not be ignored in promoting a Data Revolution. The interaction between the historical and more structural factors discussed in section 2.1, and how these then play out in terms of the formal and informal institutions around statistics production and use, in turn affect the incentives and room for manoeuvre of the different actors involved in data collection, production and use.

Understanding statistical reforms

Incomplete independence, particularly in terms of budget and workload, as well as frequent reforms of statistical agencies in African countries are indicative of what has been called 'isomorphic mimicry' –

⁷¹ Indeed, projections by the US Commerce or Treasury Departments are compared to those of the Congressional Budget Office as well as those of academic and private researchers – official statistics compete with other public as well as private statistics on quality, in a manner of stimulating and informing public discussion rather than confusing it.

⁷² Ogun, 1998

⁷³ Pole Institute, 2007

⁷⁴ This has happened with several specialised poverty trend analysis departments that monitor progress on the MDGs. See Redi et al, 2006.

organisations or groups of actors incentivised to “adopt modern or best-practice forms or notional policies even when these are not followed up by, or are even consistent with, actual functional performance in the context of a given organization’s actual capability for policy implementation.”⁷⁵ In situations where institutions need legitimacy to survive in a context of constrained resources, it is often more easy to achieve form-based rather than functional results and use those as signals: reforming institutions to adopt the shape determined by counterparts and stakeholders one is held accountable to.

From this perspective, the process of production of official statistics, as well as the reform of statistical agencies and systems, are stronger signals from actors to their various constituencies, including donors, than what the figures themselves contain, indicating a commitment to reform (particularly decentralisation), modernisation and effective policy-making⁷⁶. The underlying interests and incentives behind such signals will be discussed in the next section.

A common element across public management reforms is that stated ambitions for and on reform are almost always higher than actual reform decision and operationalisation of those decisions. Looking at policy reform in developed countries, Politt states that “reforms are often built more on faith and reputation than on proven past good works”⁷⁷. Policy and institutional reforms based on externally identified models and approaches can easily lead to strengthened external legitimacy (by signalling intent) without actually changing the existing institutional structure. The scope and slow pace of reforms means they will invariably run into existing informal arrangements that characterise the operating environment of institutions⁷⁸.

This is not to say that isomorphic mimicry is a phenomenon with purely negative implications for statistical production and usage. While the instances described by Andrews (2013) are prevalently negative, Krause (2013) notes that: “governments mimic one another all the time, often quite successfully.” In not knowing how to tackle challenges, states look to others for examples – this is particularly the case for institutions and practices in public financial management.⁷⁹ Mimicry can provide the basis for successful adaptation towards effective institutions. The degree to which mimicry of model statistical agencies’ arrangements and practices is a step towards adaptation depends on the context and intent of the reform.

3.3. Actors

Actors making decisions and taking action on the production and usage of official statistics operate within the incentives structures and institutional contexts shaped by structural factors and formal and informal institutions. Two categories of actors are particularly relevant: political elites and state bureaucrats. This section looks at how they respond to their setting and influences, and how their perceived ideologies affect decision making on the production and usage of official statistics.

Political elites

Elites are defined as individuals that command high amounts of political, military, financial and/or economic power and as such drive the process of priority-setting and decision-making. This gives shape to what official statistics are demanded in government and the level of priority placed on them. They are typically those actors that have the decision-making power to drive through legislation and reforms, as well as the leadership to influence decision-making and bureaucratic cultures, and are able to make decisions

⁷⁵ Pritchett, Woolcock and Andrews, 2010

⁷⁶ Andrews, 2013.

⁷⁷ Pollitt, 2011, Andrews, 2013.

⁷⁸ Pollitt and Bouckaert, 2011.

⁷⁹ Chile and Mexico, for instance, closely mimicked financial institutional arrangements from OECD countries (as well as those of each-other), which included the architecture for producing national accounts and inflation statistics, Krause, 2013.

which affect the distribution of resources to other actors, particularly state bureaucrats. In some cases they are the best educated in their sphere of influence.

For many elites, particularly in Africa, political survival is (one of) the principal motivation(s) to their actions. They are on the one hand faced with pressure from politically excluded groups, and on the other with power struggles both horizontal (between elites and elite factions) and vertical (between higher and lower-level elites and supporters). Such struggles strongly affect policy decisions, the provision of public goods and the shape of formal and informal institutions – these struggles also typify the competitive clientilism and patronage seen in many developing countries⁸⁰. Elites in democratic systems engage in these in order to maintain support coalitions and win elections.

Political elites are likely to perceive four specific roles and objectives for official statistics: 1) a policy-making tool; 2) a signal to supporters and detractors; 3) a means for enhancing control over rents and revenues; and 4) a source of pressure and competition to their position. Which of these objectives dominates depends on the structural and institutional factors highlighted above, and shapes the choice of (reform for better) production and usage of official statistics. In addition, two factors influence elite decision-making on official statistics: their access to sources of financing and their political ideology.

Elites depend on state revenues, private investment and other (legal or illegal) sources of financing to implement policies, support the formal economy and organise coalitions. Whether or not such finance has to be earned, through tax revenues, or grants and loans from other states and international organisations, or not, e.g. rents from abuse of authority or control of parts of the economy, determines the accountability relationship elites have with their citizens and supporters⁸¹ – in this case: incentives to invest in the production (publication) and usage of official statistics may be affected.

Sources of finance depend on the resource wealth of a country, and the priority given to particular sectors and resources through institutional arrangements developed during colonialism and post-independence. It is often possible for elites to fall back on unearned rents, including from extractive natural resources (e.g. minerals and oil), official foreign aid to the government, and agricultural commodity exports, but how easily state resources can be (re-)allocated and policies can be implemented varied a great deal.⁸² This will affect the shape of the national statistical system, with more attention being paid to those sectors where revenues and rents have historically been derived from, and from which there is most potential for growth.

How elites go about acquiring sources of financing and how these are then used (the balance between policies, sectors or coalitions) depends on the extent to which their motivations are ideological and/or pragmatic, possibly geared towards survival. This determines whether elites are interested in increasing their own and others' wealth in the short-run or in the longer run. If the former, then considerable statistical capacity is only necessary to have information on key sectors for which rents can be extracted (with an interest to not publish those statistics), and the majority of official statistics serve as mere signals. Key sectors of national economies are then particularly inviting for misreporting. With little statistical capacity at the national level, misreported figures are not easy to identify and verify⁸³. In the latter case, elites are interested

⁸⁰ Whitfield & Therkildsen, 2011; Kahn 2012

⁸¹ Moore, 2011.

⁸² Whitfield & Therkildsen, 2011

⁸³ For instance, Ethiopia has reported remarkable increases (over 40%) of in the period of 2004-9 (more so than in Asia's Green Revolution) without significant indication of intensified agriculture through fertilisers, improved seeds or irrigation (see Dercon and Hill, 2009) – yet as foreign direct investment in land ownership continues to pore into Ethiopia these figures remain unchecked. Such cases, left unverified, have implications for the validity of national GDP and GDP growth figures.

in centralising control over rents and revenues⁸⁴, for which investment in official statistics becomes more broadly necessary.

In both cases signalling remains important, which is why elites often prefer expressing official statistics in terms of ‘estimates’. Estimates provide elite actors with best-in-class arguments that are nevertheless dismissible, and which can be revised once methods change at a later point in time⁸⁵. It responds clearly to the need for political elites to be able to develop and deliver specific political messages with whatever tools they need. To this can also be added that the demand for official statistics depends also on elites’ capacity to understand and absorb numerical facts and details (linking numerical facts to policy formulation and developmental understanding). Signalling also offers an explanation as to why the majority of National Strategies for the Development of Statistics (NSDS’) have been agreed yet implementation is lagging behind.

As such, various types and mixtures of political regimes and elite perceptions and ideologies can lead to improved production and usage of official statistics. While detailed case studies to draw on for evidence of the detailed dynamics leading to sustained improvements in statistical capacity are scarce, initial analysis of the experiences of Rwanda offers some insight (as noted in Box 3).

Box 3. The dynamics of sustained investment in statistical capacity in Rwanda

Amid remarkable progress on social and economic development, Rwanda has significantly increased its statistical capacity. It has rapidly improved its ranking in the Statistical Capacity Indicator from 2006 onwards, rising to be the second-highest ranked African country after Mauritius. Several political economy factors have contributed to this.

Despite clear ethnic divides, political organisations and coalitions in Rwanda have been committed to power-sharing and non-ethnic politics since before the 1994 genocide – this tendency has only grown stronger afterwards, with a formal power-sharing principle being incorporated in the 2003 constitution as well as a clear commitment to effective and equitable public service delivery. This commitment not only exists in formalised commitments of political elites, but is also institutionalised in state and public practices: “There is a real commitment to consistent implementation which arises from the fundamental political calculation that promoting prosperity and ultimately defeating Hutu extremism depend on it.” (Booth et al, 2014)

As a result, the Government of Rwanda has adopted an explicitly results-oriented approach to managing its national development, which enjoys broad support by the population as well as the international community. Amid a process of public sector reform starting in 1997, the need for better official statistics was further highlighted following a food shortage crisis as well as discouraging poverty and inequality statistics published in 2004. In response, the state developed a structure of *Imihigo* contracts; performance-based agreements between the president and district mayors, supervised by the prime minister. These were introduced as an accountability mechanism in order to ensure the implementation of priority service delivery programmes at district level. The management of these contracts required increasing amounts of data and information by the president and prime minister’s offices.

Concurrent legislative and public sector reforms in the period 1997 to 2005 clarified and integrated the responsibilities and capabilities for the production of official statistics. The 2005 organic law on the organisation of official statistics defines the term, as well as the actors involved in gathering them – both this law and its 2013 revision legally compel persons and organisation to collaborate with surveys and share data gathered with the National Institute for Statistics of Rwanda (NISR). The NISR is designated as ‘the only institution entrusted to provide official statistics to the Government, business community and the public at large. However, the NISR can allow other competent organs to provide official statistics once

⁸⁴ Kahn, 2012

⁸⁵ Jerven, 2011.

the methods, quality and standards have been established and guaranteed.' The institute works closely together with any data producer when they design a survey or study, and get approval before publishing the figures.

Following the NISRs establishment the investment in official statistics production strongly increased – from 90 million francs in 2002 to over 500 million francs in 2007. Presidential sponsorship has concurrently given official statistics an increasingly prominent role in public policy: official statistics are given a prominent role in steering the national Economic Development and Poverty Reduction Strategy (EDPRS), which was closely followed by the first National Strategy for the Development of Statistics (NSDS1). Line ministries perceive the NISR as effectively supporting them to improve the quality of administrative statistics and to drive the agenda for the need for evidence and good quality statistics to support this.

This is in part due to the support from donors. Nationally owned and developed strategies such as the EDPRS and NSDS have managed to galvanise and coordinate donor support (by AfDB, UN agencies, World Bank, BTC, IMF and DFID) for statistical capacity development. Whereas the priorities of the Rwandan government shine through in donor support delivered (the majority of technical assistance goes towards producing real sector statistics and supporting the NSIR), donor agencies have further impressed the need for quality statistics in agreeing a Common Performance Assessment Framework (CPAF) – budget support operations are conditional on the tracking of development results.

Sources: Ngo and Flatt, 2014, OPM 2009b, Booth et al 2014.

State bureaucrats

Bureaucrats are the principal actors in charge of the production of official statistics, and also take active part in their usage. Key bureaucratic posts, such as the heads of statistical offices as well as the heads of ministerial departments and divisions with a large demand for official statistics, are relatively senior in level and are often appointed. They can as such be considered part of the lower level faction of the ruling government coalition.

The stronger (more well-respected, political supported, institutionally independent etc.) these bureaucrats are, the more easily they can constrain resource allocation decisions by political elites.⁸⁶

Their interest in official statistics is then determined by the extent to which these are prioritised by political elites, the nature of the formal and informal practices in place, and the extent to which their distributive demands of rents and revenues are being met, as well as their ideologies. Where potential users of official statistics (elites as well as senior bureaucrats) are unable to use them in their work (due to low capacity to understand and absorb numerical facts and details) this can lead to ad-hoc policy-making on subjective or ideological grounds⁸⁷.

In this case, the pressure for the production of official statistics is low (as is the funding). The widespread acknowledgement that official statistics departments and initiatives are under-resourced and insufficiently autonomous⁸⁸ shows this is often true in African countries. Bureaucrats also being the professionals charged with commissioning, gathering, sorting, compiling and disseminating official statistics, are also susceptible to incentives to misreport certain official statistics. Health workers professionally engaged in realising the work behind the MDGs, for instance, have been found to sometimes be responsible for baselining, measuring and monitoring progress towards health targets and goals – a perverse incentive which has led to overestimation⁸⁹. The same has been found for agricultural statistics in Tanzania⁹⁰.

⁸⁶ Whitfield & Therkildsen, 2011

⁸⁷ Bedi et al, 2006.

⁸⁸ PARIS21, 2005; RRFS, 2010.

⁸⁹ AbouZahr et al 2007.

⁹⁰ Sandefur and Glassman, 2012

Yet examples abound of exemplary statisticians in countries such as South Africa, India, Uganda and others – these have often made use of the signalling function of official statistics to exert pressure on political elites precisely by drawing the link between the quality of statistics and state governance⁹¹. In recent instances of statistical reform, Statistics Acts aim to aggressively expand the powers of their Directors. It is only a relatively recent phenomenon that Statistical Acts or similar legislation designates that the Statistician-General can define what counts as official statistics⁹². Whether this is an instance of signalling or a positive development remains to be seen, but may be a lever that a Data Revolution might be able to use.

3.4. Technical and governance characteristics

What appear like purely technical features of public goods often affect the way in which users and producers behave. For instance, the technical and governance characteristics of or the nature of transactions for particular public goods strongly affect how rents are generated and distributed. This section discusses how the technical nature of statistics collection, in general and at sectoral level, affects the room for manoeuvre that actors have to produce and use official statistics.

The statistics community, comprised of professional statisticians, has a strong perception of what constitutes ‘good data’ and ‘good statistics’. Official statistics are expected to be produced according to a number of quality standards in order to be credible, as summarised in Box 4. Particularly, methods used in the collection of primary data are key to determining the quality and credibility of official statistics – most African countries are members of the IMF’s General Data Dissemination System, whose Data Quality Reference Site⁹³ lists approaches and tools for producing quality macroeconomic and financial data and statistics.

While essential as a means of ensuring the credibility of official statistics, in cases where actors (elites and bureaucrats specifically) want to produce them, these quality standards can also function as obstructions to statistical production, usage and reform. As a result of not sufficiently meeting these markers, some data does not get published, as the National Statistical Office finds them to be of poor quality – the Central Statistics Department of the Gambia has for instance argued this⁹⁴. While superficially an indication of the need for further support for capacity building, this is also indicative of a likely vicious cycle between the political dynamics and incentives at play and the technical nature of statistics production.

Box 4. Standards for quality, credible official statistics.

Though not universally agreed, several standards are recurrently mentioned that data used for compiling official statistics would need to meet in order to be considered good quality. These include:

- **Accuracy:** to what extent there is a notable difference between the estimate and the true value of the phenomenon the official statistic aims to measure;
- **Coverage;** who and what part of the object of analysis is covered, particularly in demographic and geographic terms;
- **Timeliness;** the amount of time between the reference period of the data and its publication;
- **Consistency and comparability;** to what extent can the data be compared to similar data from different time periods, from different geographies (both nationally and internationally) and between different domains such as industries or household types. This relates both to the thoroughness of the application of the production methodology, as well as to the fit of the methodology selected;
- **Relevance and interpretability:** to what extent it meets users’ needs in addressing current and upcoming issues,

⁹¹ Lehohla, 2002; Tendulkar, 2009.

⁹² Holt, 2003; UNECA, 2008

⁹³ See <http://dsbb.imf.org/pages/dqrs/home.aspx>

⁹⁴ Gambia Central Statistics Department, 1985

and can it be usefully interpreted when matched against other data sources and official statistics, also by those not immediately familiar with the data;

- **Availability and accessibility:** how easy the data is to find and access, in what format(s) and regularity they are disseminated, how is it curated and preserved;
- **Independently produced and managed:** Produced, managed and stored responsibly according to norms and standards

As per these definitions, there is a large overlap between official and quality statistics.

Source: AU, 2009; US Census Bureau, 2013

The simple, practical facts of data gathering for official statistics – what is counted, where, how, why and by whom are important issues with political implications. Who is checking the quality and who compares the data gathered in different locations and who communicates the data are also socio-politically sensitive factors which bureaucrats need to navigate. Quality standards and practices put additional pressure on such decisions, countervailing or reinforcing interests and incentives created for actors by structural factors and institutions.

For instance, the 1996 population census in South Africa provided a credible information base for policy-making, as well as a symbol for a unified population “...as a nation-building exercise (counting all South Africans as part of a consolidated nation for the first time). However, this was a high-risk operation. Most plans were completed less than 12 months from the census date, while some, covering for example payment of temporary field staff, were only finalized as enumeration drew to a close! Data capturing was undertaken in nine separate locations (one in each province) – a bad decision for control of quality and accuracy, although a good one in terms of equal access to temporary employment in each province. Later the organization regretted the decision as management infrastructure was stretched across processing centres to deal with wildcat strikes”⁹⁵.

For the actors involved in the production and usage of statistics, furthermore, quality standards are the markers of reputation risk. As quality standards for official statistics are recognised widely among professional statisticians, based on internationally agreed guidelines (see the next section) that can easily be compared to individual statistical outputs, professional statisticians can easily form an opinion of the quality of statistical outputs from particular countries. Political elites seeking to signal, enhance control, avoid pressure or competition or make effective policies want to be credible in doing so. Professional bureaucrats also want to avoid reputational risks, partly in order to retain their current position as well as chances of finding gainful employment elsewhere as professional statisticians (see next section).

For example, there is widespread resistance towards rebasing of national accounts figures in African countries or indeed making attempts to include the informal sector. The Zambian Central Statistics Office has warned in a proposal to revise national accounts estimates that including the informal sector would come at the cost of the comparability of the statistics, both to previous ranges and to other countries, due to an exaggeration of GDP. Concern was also expressed on the coverage, accuracy and consistency of estimates of informal sector output⁹⁶.

The production characteristics of specific (sectoral) official statistics, as their usage in governance, tread the line between difficult and sensitive to measure⁹⁷. This is particularly true for national accounts and income measurement, which involves a large number of estimations and aggregations in which interest-

⁹⁵ Lehohla, 2005.

⁹⁶ Jerven, 2011.

⁹⁷ CGD & APHRC, 2014 provides examples of how various sector characteristics interact with drivers to create particular discrepancies in the data for primary school enrolment, inflation and vaccination rates.

driven choices end up being made. As Lipton (2013) highlights, the difference between Nigeria's GDP and GNP figures has remained small and stable year-on-year. Yet GNP contains investment and remittance inflows as well as outflows of oil royalties, which can reasonably be assumed to fluctuate. As such, national accounts figures can be assumed to contain measurement inaccuracies based on cross-border flows of factor payments, the former of which are hard to measure accurately, while interests exist not to accurately report the latter. Accurate measurement of such flows would necessitate an understanding where they came from or are going to.

3.5. External factors and global drivers

External drivers - such as international standards and practices on official statistics as well as donor nation resource flows - affect how actors in a national context engage in statistical production and usage by influencing the sources of rents and the institutional environment, and as such the incentive structure.

Donor agendas and priorities

Donor governments and agencies each have their own particular understanding of what 'development' is, and what is necessary or preferred for achieving development outcomes. These preferences have not only dominated power relationships between donors and recipient governments, but have a variety of effects in African countries. For instance, the 'managing for results' and 'evidence-based policy making' agendas have popularised the notion of setting explicit goals and targets, including quantitative, for improved policies and programmes for development results⁹⁸. Measuring and reporting progress are an essential part of these concepts, and official statistics therefore not only play a part in setting public goals and targets, but also in monitoring progress⁹⁹. As Woolfrey (2013) notes: "Evidence-based policymaking is seen as an imperative to support political legitimacy". The agenda has also brought with it the idea of attaching financial reward to increases in official statistics.

Donor agencies need to remain accountable to their constituencies, for which they need to demonstrate that their work is showing results, primarily in their own terms. A significant proportion of the funds going to the development of statistical capacity currently goes to efforts to collect data relevant for donors, using their own methods and platforms. Meanwhile, as aid levels are allocated to donor agencies and programmes proportionate to the perceived scale and cost of the issues addressed, such organisations operate on the incentive to report the outstanding problems first, and report the highest estimate. This is typified by the WHO's discovery in the late 90s that the total sum of deaths reported by individual WHO programmes exceeded the total number of deaths worldwide several times¹⁰⁰. Such incentives to misreport official statistics can easily translate to elites and bureaucrats at the national level.

Three major driving initiatives for statistical institutions and capacity in Africa have been the Poverty Reduction Strategy Papers (PRSPs), the International Comparison Programme for Africa and the Millennium Development Goals. These have concentrated policy attention and financial incentives towards particular institutional forms, targets and indicators. Significant (donor) resources have been invested, "focussed on improving technical skills in the central statistical agency, and in particular in increasing the volume of data emerging, particularly from surveys in the social and demographic sectors."¹⁰¹ Assistance has come in the forms of funding, equipment, training or peer-learning from placements with foreign staff¹⁰².

⁹⁸ Marrakech International Roundtable on Managing for Development Results (MtDR), 2004

⁹⁹ UNECA 2008

¹⁰⁰ Murray and Lopez, 1996.

¹⁰¹ Ibid.

¹⁰² Sandefur and Glassman, 2012

Support has therefore helped with modelling and projecting to fill data gaps for international comparisons, not necessarily a priority for public administrations in Africa¹⁰³. Whereas national policy-makers and stakeholders in developing countries are generally interested in the same (micro)data as donor agencies and international institutions, the latter have a stronger interest in the aggregation and comparability of such data and statistics for their own policy-making purposes. “Donors ... lack incentives to comply with countries’ statistical priorities or invest in long-term statistical capacity building”¹⁰⁴: they principally seek to meet their immediate needs for data by investing in incidental surveys and censuses, oftentimes to suit their planning cycles rather than those of developing countries¹⁰⁵.

The donor community now “recognise explicitly that [...] donor organisations’ statistical priorities (including reporting to their own governments or boards on progress against e.g. MDGs) may differ from partner country statistical priorities (including having available economic series and facility-level data).”¹⁰⁶ Not only that, but not all MDGs were part of developing countries’ policy priorities – indicators under MDG 7, for instance, were in line with policy priorities for almost no African countries. Yet this can have positive externalities to offset the bias in official statistics production and usage it creates: a particular issue of national importance can be flagged through such efforts, leading to a policy response and subsequent higher appreciation of statistics in government¹⁰⁷.

For the majority of indicators and estimates, their selection and methodology is not discussed in close collaboration with the country or countries in question, particularly those that are externally commissioned¹⁰⁸. Reports of cases where donor pressures were resisted are few and far between. Sandefur and Glassman (2012) note the example of Tanzania, in which the World Bank and Bill and Melinda Gates Foundation put pressure on the government to align their methodology for calculating national poverty estimates to that being used in Uganda and Kenya in order to render the countries comparable: “A full switch [to the alternative] poverty series, and thus a loss of any ability to measure the progression of living standards over time in Tanzania, was averted only after strong resistance from the Tanzanian government.” In many other cases, however, such a dialogue is not had, and support for statistical capacity leads to unsustainable or inadequate production.

International standards

As noted in Section 2, many of the efforts to produce and adopt international standards have been instrumental in improving the availability and quality of specific data ranges in African countries. Accepted statistical quality standards and criteria include the Fundamental Principles of Official Statistics¹⁰⁹, as well as particular sectoral frameworks, such as the UN System of National Accounts and the IMF General Data Dissemination System (GDDS) and Special Data Dissemination System (SDDS). Developing and adopting standards for the collection, reporting and dissemination are seen by the international community as a manner in which to build confidence among the users and stakeholders of data and official statistics in their quality. The GDDS and SDDS metadata further includes reference to future plans for improving particular data ranges and statistical capacity¹¹⁰. Furthermore, international efforts to promote standards are increasingly coordinated, leading to a better readability of particularly economic and social statistics.

However, international standards and practices have evolved at a faster pace than the statistical systems in African countries. For instance, the System of National Accounts is now in its third revision,

¹⁰³ Sanga, 2013.

¹⁰⁴ Chen et al, 2013.

¹⁰⁵ Kiregyera, 2007

¹⁰⁶ OPM, 2009a

¹⁰⁷ Scott, 2005 – particularly Box 5 on Uganda.

¹⁰⁸ Wold, 2005; AbouZahr et al 2007; Chen et al 2013

¹⁰⁹ UNSD 2013.

¹¹⁰ Eele and Chinganya, 2005

whereas almost 20 African countries are still adhering to the original (1968) standard. This presents a serious hindrance to the development of domestic organisations and institutions – donor agencies and international organisations push standards and practices too hard “creating pre-mature load bearing so that stresses exceed capability”.¹¹¹ As such, it is unsurprising to find instances of isomorphic mimicry.

Whereas African countries have a presence in standard-setting fora for official statistics, the RRSF notes that there is “Insufficient African “voice” in elaboration of international statistical standards”¹¹². Mouyelo-Katoula and Paccoud (2009) support this and suggest an agenda for strengthening Africa’s voice in these fora.

3.6. Summing up the lenses

As the foregoing section has highlighted, there are a wide range of factors affecting the political economy behind the objectives, production and use of statistics in developing countries, particularly in Africa. These relate to long-run structural features such as the colonial origins of public administration and the role of statistics in state-building, that in turn affect both the formal rules and institutions in place as well as the actual practice of data production and use.

Together, and aligned with the technical factors associated with different data series and outside influences, all of which can support or undermine improvements in statistics quality, these factors highlight the challenges of improving statistics production and use in developing countries, and therefore the challenge for the Data Revolution.

¹¹¹ Pritchett, Woolcock and Andrews, 2010

¹¹² UNECA, 2006.

4. Implications for the Data Revolution

Discussions on the post-2015 global development agenda as well as a possible Global Partnership for Better Data focus attention on how to enhance the production and usage of quality data and statistics to inform policy-making towards sustainable development. Support to official statistics in Africa will tick at least one of the boxes of the response to the High Level Panel's call for a data revolution: stakeholders want more, better, disaggregated and frequent data and statistics post-2015.

Calls are being made to further improve statistical capacity as well as advocating for more and better data in African countries – new financing models and technological solutions to capacity and data gaps will undoubtedly be found. At the same time, this report and others¹¹³ highlight that official statistics are inherently political rather than only technical products. As such, a better understanding of the factors that drive and constrain the production and usage of official statistics at the national level – particularly the objectives of key actors in developing countries – are important for informing the policy initiatives, projects and programmes to tackle the statistical tragedy resulting from discussion on the data revolution.

This literature review and analysis has looked at how structural factors, institutions, key actors, technical characteristics and sector governance as well as international drivers interact to affect the objectives for, and consequent production and usage of official statistics. The analysis suggests that:

1. **A Data Revolution will only be effective in overcoming the decades-long challenges faced in improving official statistics to the degree that they take account of political reality.** Effectively, this means that 'Big Data', 'Data compacts' and other support mechanisms being discussed will need to be examined in terms of i) how they align with existing practices, incentives and power balances or ii) to what degree they alter the power relations and incentives. To the extent that new initiatives build on existing (informal) practices, this is more likely to succeed and avoid empty signalling or being undermined, than approaches that assume current practices can be quickly altered.
2. **The use of 'big data' by non-governmental actors may be effective in as much as it by-passes existing political bottlenecks to statistical reform.** The transparent availability of widely sourced data on the full range of economic and other activities may well allow domestic and international stakeholders to hold governments to account, not least to produce more credible data. But the case for how new technologies might do this for official statistics has yet to be made.
3. **A Data Revolution should not become a 'big bang' reform agenda.** Widely agreed or pursued models for national statistical systems and statistical reform have limited effectiveness. As Pollitt notes: "Too many politicians, consultants and even academics are looking for the 'next big thing', instead of looking for particular solutions to particular, well-researched problems in specific contexts. So we have had 'partnerships', 'network approaches', 'Lean', 'benchmarking', 'performance contracting', 'relational contracting', 'collaborative management' and a host of other techniques and approaches, each of which may work under certain circumstances but not under others". Successful public reform is frequently an iterative exercise, over considerable periods of time.
4. **Statistics availability is unlikely to be the watershed for improved statistical capacity in African countries.** The above indicates that a Data Revolution has to rethink *how* data and official statistics production and usage are supported, rather than how much. It should also look beyond technological solutions alone: "Whereas Big Data offers interesting opportunities to tap into data that is automatically generate it, and utilise it for the gathering of official statistics and for policy-making more broadly, they

¹¹³ See for instance Jerven 2012 and CGD & APHRC 2014.

provide no substitute for official statistics. Data must also be analysed, disaggregated and translated into forms useable by policymakers. Furthermore, Big Data struggles to respond to the sustainability and confidentiality issue, which national statistical systems offer a natural response to.”

5. **Official statistics are – and should be – comparable, but not standardised.** We need official statistics in a post-2015 world that can be compared across countries. However, the inherently political character of official statistics must be acknowledged in order to appreciate the links to state building and power. Actors have their, often legitimate, context-specific usages for official statistics, which affect their methods of production and usage – forcing a standardisation agenda on official statistics is therefore unlikely to be effective or desirable for achieving better data and statistics, and may encourage undesirable institutional responses (mimicry for the wrong reasons).
6. **‘Windows of opportunity’ can be sought for statistical reform in African countries.** Leave space to adapt initiatives under a Global Partnership to fit the particular history, culture and task of statistics offices and systems: reformers must adapt to local histories, resource endowments, institutional contexts and actors and ‘go with the grain’. This implies a locally knowledgeable presence over time, seeking to enhance ways to work with and support those actors in government and statistical offices that are able to leverage political interest in particular official statistics at multiple levels and across multiple organisations (not single champions).
7. **African public administrations’ needs need to be put first and ‘practical hybrids’ should be created.** The international community represents a big demand base for official statistics, but should not represent the primary one. NSDS are already country-specific, and a tool that has been adopted by almost all developing countries and even a few regional communities. Only reforms that serve the purposes of public administration and centralising revenues and rents in specific contexts will be effectively taken up. A Data Revolution should invest time in understanding country contexts through systematic political economy analysis - donor agencies are increasingly making efforts to understand the complexities of the contexts in which they intervene in order to improve their effectiveness. This means moving away from standard models of national statistical systems and focussing on those hybrid systems and organisations that work to suit the context.

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