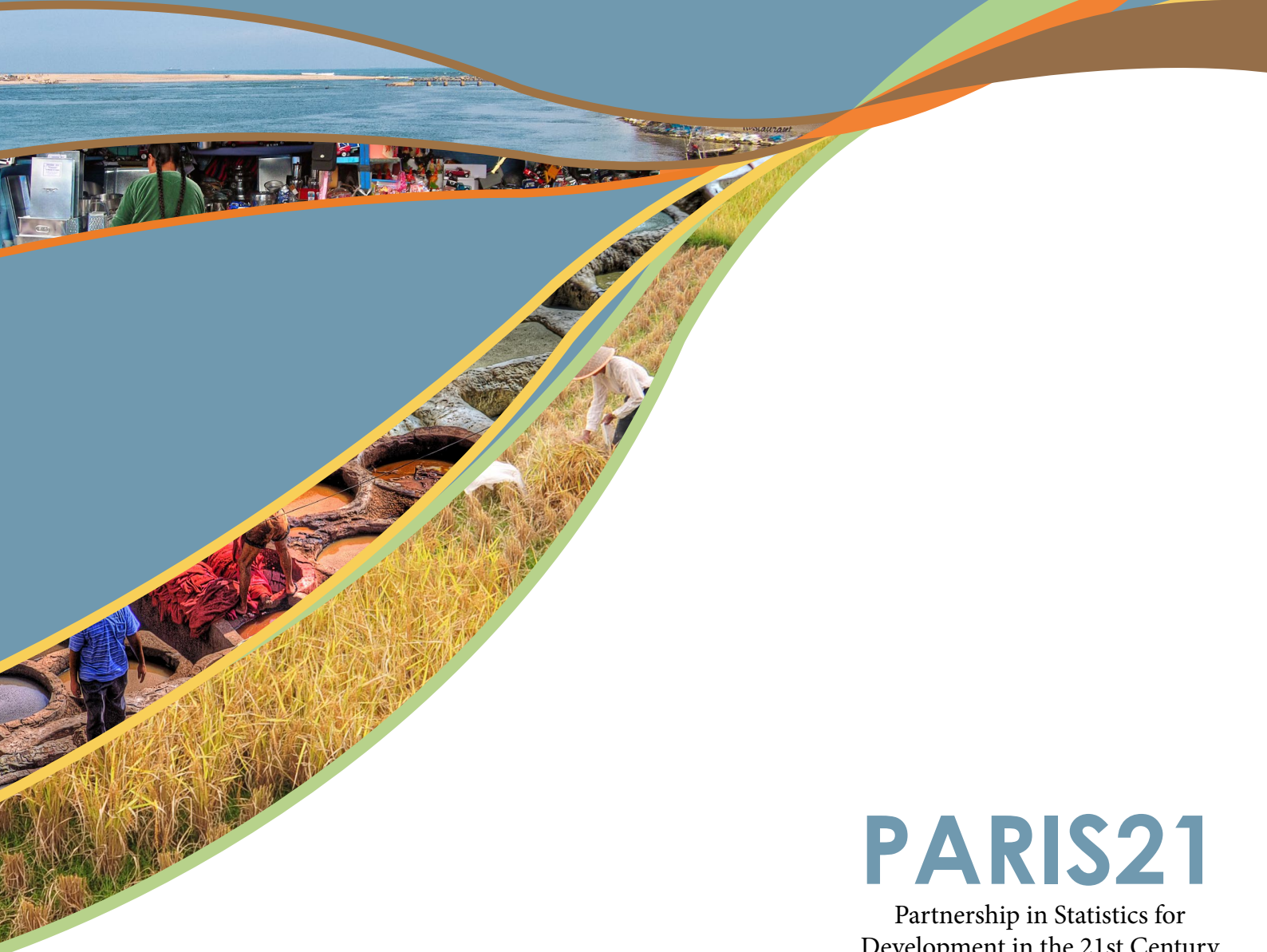


Realising the Data Revolution for Sustainable Development: Towards Capacity Development 4.0

Niels Keijzer and Stephan Klingebiel



PARIS21

Partnership in Statistics for
Development in the 21st Century

Discussion Paper No. 9

March 2017



Disclaimer

The opinions expressed in this paper are those of the authors and should not be attributed to the PARIS21 partnership or its members. The opinions expressed and arguments employed are those of the authors. Working Papers describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which PARIS21 works.

Acknowledgements

The authors are grateful for the comments and suggestions provided by Shaida Badiee, Graham Eele, Johannes Jütting, Thilo Klein, Mary Strode and Kofi Zougbede. A draft version of this paper was circulated at the 2017 UN World Data Forum in Cape Town.



Realising the Data Revolution for Sustainable Development: Towards Capacity Development 4.0

Niels Keijzer and Stephan Klingebiel¹

¹Niels Keijzer (niels.keijzer@die-gdi.de) and Stephan Klingebiel (stephan.klingebiel@die-gdi.de) are based at the German Development Institute / Deutsche Institut für Entwicklungspolitik (DIE).

CONTENTS

1. Introduction3

2. The case for a new approach5

3. Capacity development 4.0: A strategic approach10

4. Conclusions and proposed actions18

Annex 1: Commitments on statistical capacity development made during recent international fora20

Annex 2: List of results indicators Kenya Statistics Program-for-Results.....21

Bibliography22

1. Introduction

An ever-deepening data revolution is shaping everyday lives in many parts of the world. As just one of many mind-boggling statistics on Big Data, it has been estimated that by the year 2020, about 1.7 megabytes of new information will be created every second for every human being on the planet. The benefits of the data revolution extend to different groups of people, social movements, institutions and businesses. Yet many people and countries do not have access to these positive benefits and in richer countries potentially positive changes raise suspicion amongst citizens as well as concerns related to privacy and confidentiality. The availability of potential advantages is, to a large extent, guided by levels of development and income. Despite the rapid spread of mobile phone technology that allows regions otherwise disconnected from the grid to 'leapfrog' in terms of using and producing data and statistics, poor people are still less likely to benefit from the dramatic changes in the field of data.

Against the background of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), the main challenge for statistics is to manage the data revolution in support of sustainable development. The main priorities are the broadening and deepening of production, dissemination and use of data and statistics, and achieving them requires identifying those population groups which are most vulnerable and making governments more accountable to their citizens. In parallel, the risks accompanying the data revolution need to be mitigated and reduced, including the use of data for purposes of repression or otherwise infringing on the privacy of citizens. In addition to representing a universal agenda that breaks away from the dichotomy of developed and developing countries, the new agenda calls for tailor-made approaches in each country or region concerned, supported by global actions. The 2030 Agenda further states the international community's realisation of the need to move away from 'business as usual' in international support for data and statistics.

The most important driving forces shaping the data revolution are domestic (legal) frameworks and public policies across the globe. This applies not only to wealthier countries but also developing countries², and external support cannot compensate for absent domestic leadership and investment. Technical, legal and political factors all affect whether countries are willing and able to succeed in benefiting from the data revolution. However, in both low income countries and lower-middle income countries, and to some extent in upper-middle income countries, we can observe two constraining factors in this regard, capacities and funding. These factors are, to some degree, interrelated: if funding is not sufficiently available it might be difficult to increase the capacities required, and if capacities are insufficient funding issues might be more challenging.

Against this backdrop, several important international initiatives and debates seek to help address and overcome constraints in developing regions and to mobilise Official Development Assistance (ODA)³ resources. These initiatives share a number of common starting points (IEAG, 2014; PARIS21, 2016; GPSDD, 2016; Jütting, 2016; UNSG, 2016; Open Data Watch, 2015; 2016):

- **2030 Agenda and SDGs provide a statistical groundwork:** The 2030 Agenda, its 17 SDGs, the 169 complex targets and 230 indicators are a statistical groundwork based on a global consensus.⁴
- **National ownership and leadership is crucial:** National data ecosystem actors, also referred as National Statistical Systems (NSS), have the lead in providing and using statistics that are both a means and an end to promoting the 2030 Agenda.⁵
- **Focus on all three categories of SDG indicators⁶:** There is a global consensus that efforts should concentrate on existing data or known collection methodologies for SDG indicators, yet there is also acknowledgement that for many indicators measurement is still at the drawing board stage.

² We use our paper the term 'developing countries' to refer to all low and middle income countries.

³ We use the terms 'ODA' and 'development co-operation' interchangeably.

⁴ The 230 indicators as adopted in June 2016 are available here:

<https://unstats.un.org/sdgs/indicators/Official%20List%20of%20Proposed%20SDG%20Indicators.pdf>

⁵ The 2015 Addis Ababa Agenda for Action (AAAA) refers to National Statistical Offices (NSOs), with the recent UN World Data Summit now referring to the concept of NSS.

⁶ The following are distinguished: (1) Indicator conceptually clear, established methodology and standards available and data regularly produced by countries; (2) Indicator conceptually clear, established methodology and standards available but data are not

- **There is a significant ODA funding gap for crucial SDG data:** The total amount of development co-operation needed to support the production of Tier I and II indicators for the SDGs is expected to be USD 635 to USD 685 million a year over the period of 2016 to 2030. The current ODA level does not provide sufficient resources; to support the production of SDG indicators, an annual increase in aid of USD 350 to USD 400 million is needed.
- **Increasing effectiveness for ODA:** International debates reflect on a growing realisation of the need to relaunch and revitalise efforts to increase the effectiveness of development co-operation in support of data and statistics. Lessons from evaluations point to both a need to widen the scope of interventions and opportunities for improving how they are designed, implemented and co-ordinated.

So far, international debates on increasing and improving ODA support for statistical capacity development have been inconclusive and not resulted in concrete operational steps. A number of key international policy statements focus on the need to improve the effectiveness of related approaches. These include the 2030 Agenda, the outcome document of the 2015 UN Conference on Financing for Development and the Cape Town Global Action Plan on Sustainable Development Data (see Annex 1). However, as a matter of urgency these general statements of intent now need to be translated into effective action.

This paper presents dedicated reflections on this important aspect of the international debate. Whereas international commitments emphasise the need for more resources and investments, they only stand to benefit statistical systems if they are guided by a fundamentally new vision guiding concerted action by all relevant stakeholders. That vision for **‘Capacity Development 4.0’**, a term first coined by PARIS21 (Jütting, 2016; Jütting, 2017), is set out below and discussed with regard to its implications for moving away from business as usual to realise the SDGs. In essence, a Capacity Development 4.0 (CD4.0) approach requires fundamental reforms in both co-operation substance and the process to establish patterns of co-operation in support of capacity development for data and statistics, drawing on insights developed in the context of emerging discussions on ‘Industry 4.0’ (see PwC, 2016). It does not imply a linear step following the successful realisation of CD1.0, 2.0 and 3.0. As is made abundantly clear in available independent evaluations and academic research referred to here, CD4.0 instead reflects a combination of finalising an unfinished agenda of applying key aid and development effectiveness principles – particularly those insights gained in more general research on capacity development – as well as innovative approaches to capacity development that are equally sensitive to technical innovation as to collective action opportunities and challenges on data and statistics.

2. The case for a new approach

2.1 Development co-operation and statistical capacity

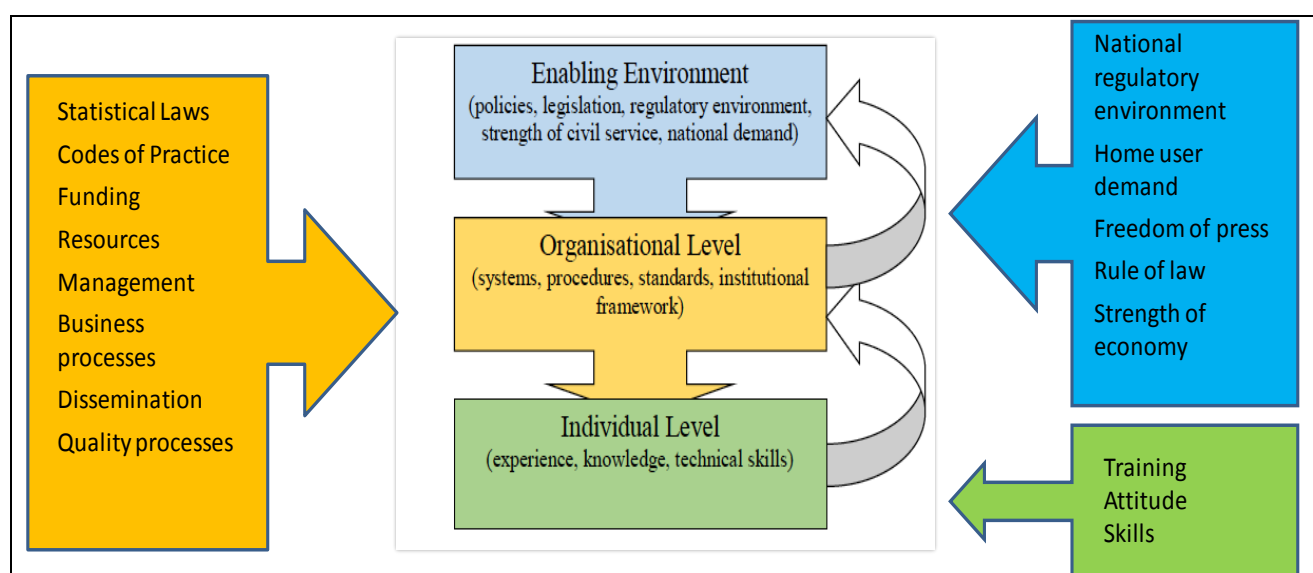
International development co-operation is by definition an information-dependent exercise. Throughout the decades, efforts have been made to ensure adequate data for informed decision-making, implementation and adjustment, as well as evaluation and learning. The turn of the millennium, and various global development policy statements adopted since then, have increased the momentum for **evidence-based policy making**. At the same time, development co-operation continues to be pursued under conditions that are far from conducive. Limited access to information, poor quality of data in developing countries and an absence of consensus between recipient countries and their international partners on how to address this challenge unfortunately remain facts of life.

This raises the question of how international co-operation can complement efforts of developing countries to improve the production of relevant data and information for development. These efforts may pursue instrumental ends (i.e. data is needed to plan, implement or evaluate projects), yet are often also intrinsically motivated by a desire to augment **statistical capacity**, which a recent UN System-Wide Evaluation defines as:

“the process of changes at the levels of individuals, organizations and enabling environments in a national statistical system through which the system obtains, strengthens and maintains its capabilities to set and achieve its own statistics development objectives over time” (UNSG, 2016: 19-20).⁷

The evaluation further suggests that statistical capacity comprises two overall functions: **vertical capacities** (sectoral or technical, e.g. surveys) and **horizontal capacities** that enable the use of technical skills (such as basic infrastructure) (Ibid.: 20). Drawing on this evaluation, efforts have been made to operationalise the definition by distinguishing three levels of statistical capacity and the various inputs that contribute to capacity (see Figure 1).

Figure 1: Three levels and respective inputs for statistical capacity development



Source: Adapted from Strobe, (2017)

Policy debate on promoting statistical capacity should not happen in a vacuum but should draw on insights on supporting capacity development in different countries and contexts. First and foremost, it should be acknowledged upfront that external interventions do not ‘develop’ capacity; this is an **endogenous** process by the stakeholders

⁷ Past efforts to evaluate and learn from statistical capacity development efforts have been hampered by a lack of consensus on how to define statistical capacity, and there is no such broad-based consensus for the definition presented here either. Discussing these definitions however lies beyond the specific aim and purpose of this paper.

concerned. Under the right conditions, external interventions may support or otherwise facilitate their efforts. This calls for tailor-made interventions that correctly interpret, adjust and connect to local priorities and dynamics.

2.2 The 2030 Agenda and statistical capacity development

The 2030 Agenda – with the SDGs at its centre – sets out a vision for global sustainable development that goes far beyond the MDG agenda. In addition to the broadened thematic scope, it strongly accentuates the need for cross-border actions to address challenges not confined to the territories of individual nation states. As an input to the international negotiations that resulted in the adoption of the 2030 Agenda, the UN Secretary General convened an Independent Expert Advisory Group to advise him on a **data revolution** for sustainable development. The Advisory Group identified four key pillars that underpin a successful and concerted effort to realise this revolution: (1) legislation, principles and standards; (2) technology, innovation and analysis, (3) capacity and resources, and (4) leadership and governance (IEAG 2014).

Annex 1 to this paper presents key commitments to statistical capacity development as incorporated in the 2015 Addis Ababa Action Agenda and the 2030 Agenda, as well as the **Cape Town Global Action Plan for Sustainable Development Data** (CTGAP) presented at the 2017 UN World Data Forum. The first two statements make statistical capacity development a key priority and reaffirm the central role played by **National Statistical Offices (NSOs)**, yet largely restrict their explanation of statistical capacity to describing what is needed for the 2030 agenda (i.e. more and better data and statistics). The recently adopted Global Plan complements and guides these existing commitments by setting out operational objectives and targets for statistical capacity development. The CTGAP does not refer to NSOs but instead introduces the concept of **National Statistical Systems (NSS)**, which is considered to encompass a broader set of stakeholders beyond NSOs (UN, 2017).

Under the new agenda, statistics do not merely serve an instrumental monitoring purpose in relation to the SDGs, but rather directly feed into and inform country response strategies to attain these goals (UNSG, 2016). Data and statistics constitute a key **means** to achieving the 2030 Agenda, yet are themselves **integral goals** of this agenda in their own right. This was acknowledged at the recent UN World Data Forum, where an action plan was adopted that calls for a *“global pact or alliance that recognizes the funding of NSS modernization efforts is essential to the full implementation of Agenda 2030”* (UN 2017: 1). The action plan sets out six areas with specific objectives and concrete actions to realise this ambition, with the annual UN Statistical Commission and the High-Level Political Forum being the key fora to monitor progress made and reinforce momentum.

A recent analytical effort set out a so-called sustainable development **data ecosystem**, which should serve both as a basis for domestic planning as well as to guide external analysis and support. It takes at its centre the NSS, which thus conceptualises this system as consisting of relevant public sector actors with the NSO at its apex, as well as four actors with which it relates: (1) government agencies, (2) the private sector, (3) civil society, and (4) UN, regional and international agencies. The report explicitly notes that the four actors are all *“users of statistical data as well as providers in their own right”*, and for this reason consider that NSS should emphasise and expand their engagement in the area of standard setting and quality control, as opposed to leading in the production of data and statistics (GPSDD 2016: 5).

As one of its overarching principles, the recently adopted CTGAP acknowledges the crucial role of co-operation between stakeholders across national as well as regional borders to support countries in developing capacity for data and statistics, yet maintains that any such efforts should be conducted in full consultation and co-ordination with NSOs. While this agreement provides guidance and direction, it should not be understood to negate the reality in many developing country governments where NSOs no longer play such a central role (see, for instance, Jerven, 2013; Taylor, 2016), and would thus not by definition be well-positioned to take a co-ordinating or managerial role vis-à-vis any additional external support. Moreover, effective support also requires that donors have an honest look at their own established approaches to supporting statistical capacity development and consider what lessons can be drawn from past efforts.

2.3 Priorities, lessons learned and challenges for statistical capacity development

The World Bank’s Statistical Capacity Indicator (SCI) database shows an improving global and regional trend (UNSG Annex, 2016: 26). However, recent research points to fundamental challenges of National Statistical Offices in various African states as well as other regions in the global south (Jerven, 2013; Fioramonti, 2017; Taylor, 2016). This indicates

a **wide range** of situations when it comes to statistical capacity: while some countries face specific challenges and articulate precise demands for international co-operation, in other countries everything is (and remains) a priority. That same variety of situations applies to the **regional level**, which should be taken into account when tackling the collective problems prioritised under the 2030 agenda.⁸

The SDGs are a **game changer** in their breadth and ambition, and have rendered past patterns of support to statistical capacity development out of date. While often successful in generating the outputs required in terms of household surveys, national and sub-national data and so on, external evaluations find that the long-term effectiveness and sustainability of past co-operation efforts supporting viable and effective data and statistical systems have been hampered due to a reliance on overly **reductionist and supply-driven approaches** (see OPM, 2009; ODW, 2015; UNSG, 2016).

The efforts were reductionist in that they would typically focus on gap-filling absent data (e.g. on HIV/AIDS prevalence among the population). By extension, the efforts were often supply-driven in the sense that they implicitly prioritised obtaining the data irrespective of the consequences this had for the NSO capacity and that of relevant organisations and stakeholders in the countries agreed. Objectives of CDS projects are typically overambitious as well as vague, while their relatively small size compared to other interventions means that they tend to be evaluated at an aggregated macro-level and lead to recommendations at the overall strategy level as opposed to individual interventions.

These patterns of co-operation point to a **collective action challenge** in the area of reforming support for statistical capacity development: donors know that it takes experimentation, risks and fundamental changes in practice to do it well, but through their actions they express a preference for other donors to do so. Good data and statistics are considered a public good, and the limited visibility and ‘poster-friendliness’ of support for data and statistics means that many donors would prefer other donors to provide these public goods for them.⁹

Bilateral donors in particular have a tendency to use **direct approaches** for statistical capacity development support and are seen to lack interest in joined-up approaches such as basket funds and multi-donor trust funds. This brings a risk that donors formulate interventions that on their own seem relevant and appropriate, but do not blend well with or possibly even contradict other interventions. In doing so, donors often fall into the temptation of reductionist approaches that seek to identify a broken part in the ‘data machine’ whose replacement should enable it to function optimally again.

Although there is adequate understanding of technical bottlenecks to the production of statistics in developing countries, the provision of effective support in this area is hampered by an inadequate understanding and acknowledgement of the political economy of the funding, production and use of statistics in developing countries. Support needs to be explicitly designed and targeted to overcome known political economy constraints and encourage countries in their efforts to alter prevailing incentives for producing and using statistics (Krätke and Byiers, 2014; Taylor, 2016). A recent UN system-wide evaluation observed that *“challenges of supporting capacity development for greater and deeper use are complex and are as much about addressing incentives and political constraints as they are about helping to develop individual technical capacities to undertake statistical analysis”* (UNSG 2016: 37).

To guide efforts in this area, the following table sets out the various functional and political dimensions of statistical capacity development that can be pursued through international co-operation.

⁸ Examples of such cross-border challenges include clean water, sustainable fisheries management, as well as human mobility.

⁹ The same donors would nonetheless invest in producing such data in more ‘projectised’ forms by means of monitoring and evaluation activities.

Table 1: **Four dimensions of capacity change in data and statistics**

	Functional: technical and economic efficiency of data and statistics production, and professional quality	Political: the provision of vision, direction and well as concrete support for the generation and use of data and statistics
Internal: supply-side change	<i>Internal/functional:</i> national data and statistics strategy, NSO structure, work processes, internal relationships	<i>Internal/political:</i> leadership commitment, material and non-material incentives for the (non) use of data, possible vested interests, conflicts
External: demand-driven change	<i>External/functional:</i> timeliness and adequacy of resources, performance targets set by parliament or other bodies, oversight bodies and accountability requirements	<i>External/political:</i> donor pressure for producing particular priority statistics, customers, competitors, media attention

Source: definition and presentation adapted from Boesen, 2010: 149

2.4 Capacity Development 4.0

In this context and in view of the challenges identified in the previous section, effective support for statistical development requires fundamental change in the ‘how’ and the ‘what’ of this support. The largely political challenge of ensuring greater collective effectiveness in statistical capacity development must adjust itself to the changing nature of data creation, exchange and use.

Analogous to the ‘Industry 4.0’ (or fourth industrial revolution) concept, which involves digital ecosystems integrating all physical assets of society, a concept of ‘**Capacity Development 4.0**’ (CD 4.0) can guide fundamental re-design of statistical capacity development interventions. This concept was originally coined by PARIS21 and serves as a useful heuristic device to help consider more fundamental changes in current patterns of co-operation in support of capacity for data and statistics in developing countries (Jütting, 2016; Jütting, 2017; see also PARIS21 and ODW, 2017). Drawing on digital technologies such as mobile devices, location detection and cloud computing, three key drivers can be distinguished that characterise a CD 4.0 approach to supporting statistical capacity development (PwC 2016: 6):

1. **Digitisation and integration of vertical and horizontal value chains:** processes become integrated throughout organisations, while also moving beyond internal operations towards including all key value chain partners. Statistics are no longer autonomously collected and reported on at a central location, but rather simultaneously generated and used by various actors.
2. **Digitisation of product and service offerings:** various products used by citizens will be used to generate approaches to data collection and analysis to allow for adaptive management. Citizens have increased access to and use of data in a ‘tailor-made’ fashion, as opposed to having to first locate these in more fixed products such as large reports.
3. **Digital business models and customer access:** disruptive technologies have the effect of ‘disintermediating’ official producers of statistics and developing country citizens, given that the technologies empower them to collect and publish their own data. Examples include the independent monitoring of election results and/or violence using mobile phones, which raises fundamental questions as to how public authorities may use such innovations to strengthen democracy as opposed to considering them as threats.

Whereas past support for statistical capacity development has been critiqued for being overly ‘supply-driven’, the three key drivers also reflect the logical flaws and incorrect assumptions contained in dichotomising a supply- and demand-side (or ‘producer’ versus ‘user’) of data and statistics. The findings of a large scale research project on African governance convincingly criticise such approaches for assuming that actors are unambiguously committed to public good objectives and that this act makes others behave better.¹⁰ They recommend that reform efforts instead

¹⁰ All project outputs, including the synthesis report, are available for download here: <http://www.institutions-africa.org/>

focus on ensuring that all relevant actors can find ways to **act collectively in their own best interest** (Booth 2013). Applying these findings to development practice would have strong implications for the ways in which statistical capacity development interventions are designed (in the past often through consultation with either ‘producers’ or ‘users’) and consequently for the nature of the initiatives taken forward.

As a consequence, a CD4.0 approach to capacity development for data and statistics requires **fundamental reforms** in both co-operation substance and process. As per this combination of reform drivers, it needs to be emphasised that CD4.0 starts with a blank slate. Available independent evaluations and academic research referred to here make it clear that CD4.0 reflects a combination of finalising an unfinished agenda of applying key aid and development effectiveness principles – particularly those insights gained in more general research on capacity development – and innovative approaches to capacity development that are equally sensitive to technical innovation as they are to collective action opportunities and challenges on data and statistics.

The following table presents further pointers as to how support for statistical capacity under a CD4.0 approach would need to evolve beyond established patterns of co-operation. These pointers, as presented by PARIS21 and Open Data Watch at the most recent UN World Data Forum, provide inputs to the next section that will further examine its operational implications.

Table 2: **Capacity Development 4.0: implications for change**

Traditional Approach	New Approach
<i>Bilateral approaches, supply-driven, limited to NSS</i>	<i>More complex, fast-moving, multiple stakeholders</i>
<ul style="list-style-type: none"> • Heavy reliance on technical/“functional” aspects of CD e.g. survey design, running of the data system • Focus on supply side, data production and producer • Focus on national statistical systems, little focus given to outside users • ODA funding low; co-ordination failures, limited results-evidence base funding; scatter among sectors on a needs-basis (e.g. health) 	<ul style="list-style-type: none"> • Expansion to building partnerships, fostering “soft skills” such as leadership, change management, advocacy • Focus on right format of production (disaggregation, open, geospatial integration) as well as on data user and the impact • Strengthening of user groups to consume and disseminate data; focus on data literacy • Increased funding levels and types of (domestic and international); results-based funding; focus on national level and supporting country systems
<div> • Data Producers • Data Users • Donors </div>	

Source: reproduced from PARIS21 and Open Data Watch (2017)

Before moving on to setting out further ideas on how to translate CD 4.0 into practice, we take a moment to ‘manage the expectations’ of the reader. The ideas presented in this section on the requirements of a CD4.0 approach are ambitious and raise fundamental questions, such as to how to co-ordinate and ensure quality of data being produced in real-time. Whereas some may construe these priorities as less realistic for developing countries, these countries are much less affected by the laws of reducing returns affecting OECD states and may in fact be better placed to access **first mover benefits**. This is shown in countries such as Kenya, where central government has resisted fundamental change in statistical production and use, but where Kenyan citizens outpace OECD citizens in terms of their use of mobile banking and mobile transport services.

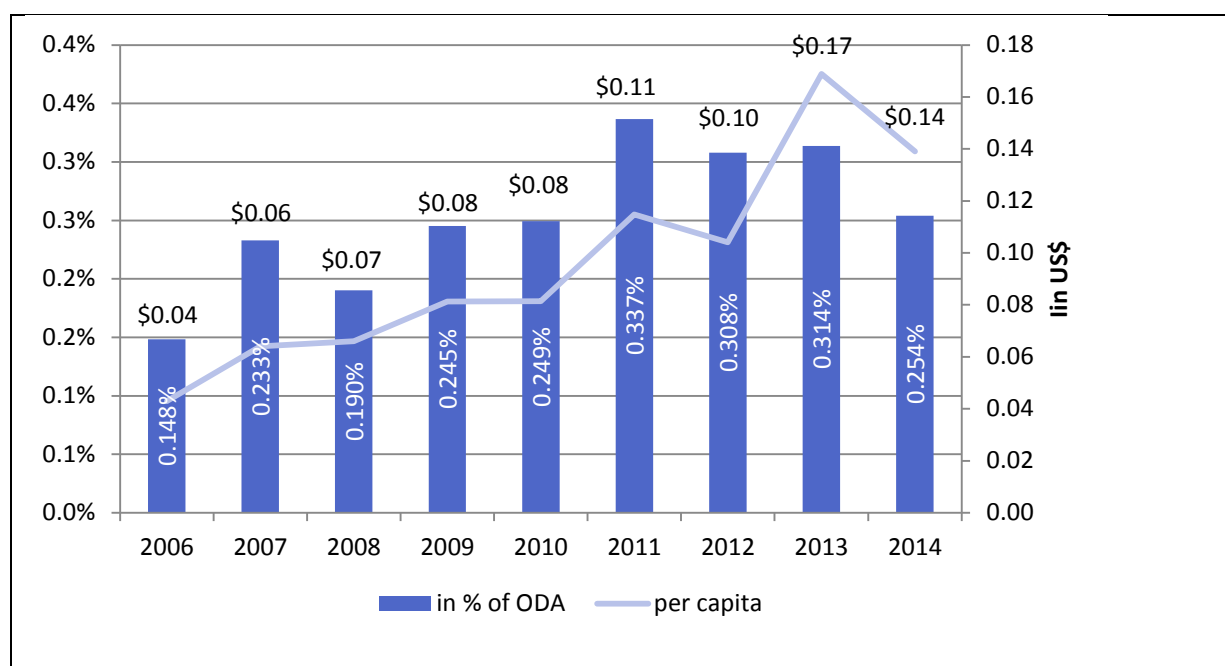
If anything characterises present-day data ecosystems in developing countries, it is this **discontinuity**: national patenting offices maintaining paper-based records, contrasted by ‘leap-frogging’ mobile data users and producers that extend far beyond the country’s physical infrastructure and electricity grids. This reality raises the managerial question as to whether and how the NSS and public legislation could guide and facilitate such leapfrogging, where desired, as opposed to hindering it.

3. Capacity development 4.0: A strategic approach

3.1 Costing the data revolution

The costs for funding and realising the data revolution have been assessed at well above current levels of ODA for statistical capacity development. ODA for statistics represented a mere 470 million USD in 2014 (or 0.35% of total ODA) and representing a small amount. Moreover, the support is provided in a highly erratic manner (e.g. in 2013 42% went to the Asia-Pacific region, and only 7% in 2014). On the positive side, support is less fragmented compared to other areas of support, with the top five donors together committing 72% of all funding in 2014. However, this number also reflects that many OECD donors do not consider data and statistics a priority co-operation area (see Figure 2).

Figure 2: Support to statistics per capita and as percentage of total ODA



Source: Adapted from PARIS21 PRESS 2016; pg. 15

Bridging this gap through a 'business as usual' approach by multiplying existing patterns of co-operation will likely result in increased fragmentation, high transaction costs and run the risk of distorting statistical capacity. It may in fact lead to the production of data and information at the *expense* of statistical capacity, by extracting these rationales that are driven by the short-term with no due regard for the long-term development of the system.

The development of 'data compacts' between developing country governments and international partners has been suggested as a means to bring together national priorities in a consistent manner and facilitate joint analysis and support by donors. These compacts should start from the realisation that capacity does not develop overnight and that 15 years – much longer than the duration of a typical development project – is a realistic window to expect changes to occur (GPSDD, 2016). In the following section, we present and describe four strategies to promoting Capacity Development 4.0 following the conviction that statistical capacity needs to feature front and centre in such data compacts.

3.2 Four strategic pillars to promoting Capacity Development 4.0

Based on international debates on data revolution, the implementation of the Agenda 2030 and its SDGs (including the role of data and statistics), the aid and development effectiveness discussions over the last 10 to 15 years and the specific lessons learnt in the area of capacity development support we propose a new approach for 'capacity development 4.0' (CD 4.0) (Jütting, 2016).

The CD 4.0 approach outlined above is innovative in two regards: substance and process. First, our strategy brings together all key areas which have important consequences for improving data ecosystems in developing regions. The composition of our proposed approach therefore differs from former approaches that were more reductionist (e.g. targeting specific operational bottlenecks). Second, CD 4.0 is innovative when it comes to specific elements which form the total of the strategy, as well as how this strategy is planned and delivered. Our suggestions on aid delivery, for example, are informed by the latest discussions in this specific area.

In total our CD 4.0 strategic approach includes four pillars:

1. **CD 4.0 provides a new justification** for data and statistics from systemic perspectives. The approach is based on a broad concept about the role of a functioning data ecosystem. Traditional explanations were focused on technical aspects of data and statistics whereas our approach reflects a new global context (Agenda 2030 and its SDGs) and a data ecosystem which is a driving force for main actors to contribute to such a systemic approach. Thus CD 4.0 is about a **fundamental shift in terms of a narrative**.
2. **CD 4.0 reflects on the political-economy of main stakeholders**. Lessons from the past show that there is a clear need for outside support of data ecosystems in developing regions. However, there are two main constraining factors. First, development co-operation providers seem to have limited incentives to invest in this field. Second, governments in many developing countries might not fully support the idea of a high-quality and transparent data ecosystem, or pursue markedly different priorities in this regard. This might also contribute to limitations of an effective strategy in support of a data ecosystem. **CD 4.0 takes those constraints into account**.
3. **CD 4.0 needs to be evidence-based and grounded in main national discussion forums**. The empirical ground for policy-makers is still quite thin. Hence a more strategic collection and use of empirical evidence needs to be promoted. At the same time any CD 4.0 strategy needs to be adjusted and owned by all relevant stakeholders in a given country. **CD 4.0 is therefore addressing those important dimensions at a strategic level**.
4. The **implementation of CD4.0** in those countries which are in need of development co-operation support for data and statistics needs to bring changes to **aid modalities**. Aid modalities address how support is delivered and past experiences show that this is the key for innovations in operational terms. Even though aid modalities address 'technical aspects' they are a crucial dimension for a successful CD 4.0 strategy, reflect a broad set of norms and standards and have consequences on the political-economy of actors (e.g. the power relationship between aid providers and aid recipients). Thus, any **CD 4.0 strategy needs to pay attention to the aid modality debate** and its relevance to a data ecosystem.

Table 3: **CD 4.0 strategy: Pushing the agenda further**

CD 4.0 pillars	Traditional approaches / recent status quo	Changing context	CD 4.0
Justification and narrative	Technical focus on data and statistics Topic not well linked on the overall development strategy of countries	Adoption of Agenda 2030 and SDGs Stronger emphasis on evidence-based policies in international debates	A functioning data ecosystem is crucial for sustainable development processes from an overall perspective
Political-economy of main stakeholders	Traditional assumption: All actors are in favour of a data and statistics agenda Focus on NSO (less on data ecosystems)		Data and statistics not automatically high on donors' agenda Partner countries not always in favour of a functioning data ecosystem
Evidence-based and grounded in main national discussion forums	Some efforts in terms of evaluations Dialogue on data and statistics mainly in specialised forums on national level		Evidence (incl. evaluations) is a key component of a CD 4.0 strategy Data and statistics topics need to be part of overall development debates in a country (incl. dialogue host government and donors)
Aid modalities	Some survey specific funds, some NSO support, few resources for MDTF (multi-donor trust funds)	Little remaining momentum regarding former "aid and development effectiveness" agenda (Paris declaration etc.)	Scaling up of support for data and statistics Results-based aid / PforR (Program-for-results) for this field Basket funding for data and statistics

Source: Own compilation, drawing on PARIS21 and Open Data Watch (2017)

I. In search of a strategic narrative for CD 4.0

It is crucial to determine a strategic narrative and to ensure adequate conceptual guidance for CD 4.0. The ongoing data revolution and a highly dynamic landscape in international and transnational co-operation (increasing number of actors, changes with regard to development co-operation, etc.) demand a justification for CD 4.0 which is essentially different from previous approaches.

- **Policy relevance of CD 4.0 for ODA providers:** A main constraining factor for more effective development co-operation in support of data and statistics may be in the limited attractiveness of the topic for ODA providers. Data and statistics might be seen by several actors as technical aspects which are not directly related to final development goals.

There is a necessity to develop a more convincing narrative on data and statistics which is a stronger selling point for ODA actors. This applies in several ways (see below) to stakeholders in ODA receiving countries and in ODA donor countries. **ODA in the 2030 Agenda era needs to be much more evidence-based:** The main selling point for different stakeholders could be the foundation for improved evidence-based policy decisions

through improved data and statistics. The implementation of the 2030 Agenda, its goals, targets and indicators are oriented towards measurable contributions. ODA needs to put much more effort in support of evidence-based contributions (including sufficient transparency in terms of comprehensive data on ODA¹¹) and needs to abandon blueprint-oriented approaches in favour of more data-based adaptive and context-specific solutions. This is why data and statistics are increasingly relevant for development co-operation.

- **CD 4.0 contributes to mutual accountability:** In terms of mutual accountability functioning data ecosystems are crucial. Vertical (linkages between local, national, regional and global layers) and horizontal (between different policy fields) accountability systems require reliable and transparent data (Mahn, 2017). Thus, CD 4.0 is a main pillar for broader governance systems within partner countries. Furthermore, data financed by public ODA resources should be released through open data portals (CGD / APHRC, 2014:20).
- **CD 4.0 needs support through ODA:** CD 4.0 is a crucial element for the use the opportunities afforded by data and statistics in support of the Agenda 2030. Data and statistics are a driving force behind reforms and results-based approaches in many countries. In low income and middle income countries ODA might be an important enabler in this regard, yet the effectiveness of additional ODA will only be realised when adequately supported by additional domestic resources mobilised by these countries (SDSN, 2015).
- **There is a sufficient global consensus on the role of data and statistics:** CD 4.0 already has a sound grounding in international rules and standards. The Busan Action Plan for Statistics (BAPS)¹², the Cape Town Global Action Plan for Sustainable Development Data¹³, and the PARIS21 Road Map¹⁴, as well as the data and statistics related debates in the context of the Agenda 2030 consensus and the expected outcome of the UN World Data Forum early 2017 in Cape Town provide a sufficient starting point for concrete next steps on the international and national levels, including for actors in the field of development co-operation.
- **The national level is most important for CD 4.0:** The main challenge is not finding global consensus, but translating it into effective practice at the national level. The national level is most important for a CD 4.0 approach. The existing global consensus provides an overall framework whereas the national level is essential for the application and the implementation.
- **Potential conflicts of interest between the global and the national level might undermine country ownership:** There is an important push at the global level to use the opportunities of the data revolution. This view might not always be shared by (all) actors within countries, as per their experiences of how these technologies are adjusted and used in their respective contexts. One example is the recent actions by developing country governments that temporarily suspended internet or social media access during general elections. Top-down push of these technologies may lead to a lack of broad-based ownership as a key requirement for any sustainable efforts to improve capacities for data and statistics (see Box 1).
- **Need for better global networking:** A number of actors and global platforms can contribute to more effective and efficient approaches in support of CD 4.0. Related topics should be more directly part of the agenda of, for example, the Global Partnership for Effective Development Cooperation (GPEDC), the UN Development Cooperation Forum (DCF) and the Effective Institutions Platform¹⁵. The collaboration of PARIS21 and GPSDD on the one hand and these rather “development cooperation focused platforms” on the other needs to be much closer.

II. Political-economy of actors and actor constellations

Interests, functions and roles of actors are crucial when it comes to support for data and statistics. A CD 4.0 strategy needs to reflect on some basic aspects related to domestic and external actor constellations.

¹¹ See, for example, the International Aid Transparency Initiative: <http://www.aidtransparency.net/>

¹² <https://www.paris21.org/sites/default/files/03-Busan-implementation-March2012.pdf>

¹³ http://unstats.un.org/sdgs/files/global-consultation-hlg-1/GAP_HLG-20161021.pdf

¹⁴ <http://datarevolution.paris21.org/sites/default/files/Road map for a Country led Data Revolution web.pdf>

¹⁵ <http://www.effectiveinstitutions.org/en/>

- **Development co-operation in support of the internal aspects of functional and political capacity changes** (see Table 1): A stronger and more qualified internal market for appropriate data and statistics can be supported through ODA. In this regard parliaments, media, civil society organisations and the private sector especially are crucial players with a strong and legitimate demand for reliable and transparent data and statistics (OPM 2009). The role of those players can be strengthened by development co-operation. For example, experiences in support of budgetary committees show that capacity in a number of parliaments is rather weak. In this regard CD 4.0 might use experiences coming from strategies in support of public financial management systems (PFM) (see, for example, de Renzio, Andrews and Mills, 2010). Conceptual overlaps between data ecosystem and PFM perspectives (systemic view, need to strengthen national systems, etc.) can further strengthen a mainstream approach in support of data and statistics.
- **Development co-operation in support of external aspects of functional and political capacity changes** (see Table 1): NSOs and all parts of national and sub-national governments have a crucial role to play when it comes to managing and verifying overall aspects of data, statistics and the overall data ecosystem. Development co-operation should, therefore, focus not only on NSOs but also other relevant actors and their specific role to provide adequate data and statistics which are open and accessible to all stakeholders (with some interpretation).¹⁶
- **Reliable and transparent data and statistics might not always be in the interest of main actors in countries:** Since the actor constellations in partner countries are heterogeneous ODA should not expect that main actors are always in favour of improving data and statistics as they may in fact sometimes harm their interests, or be distorted to serve them. Poorly governed and fragile countries, for example, might want to avoid transparency about development results because this might lead to critical responses from media and civil society organisations and donors. In such a context it might be difficult for donors directly or solely to focus on technical aspects.

III. Preparing the ground: Operational aspects for development co-operation in support of a CD 4.0 strategy

Effective and efficient development co-operation approaches in support of data and statistics need to build on experiences and lessons learnt. This is why CD 4.0 should emphasise the role of evidence (including available evaluation evidence on past data and statistics projects) and the predominant principle of ownership right from the beginning.

- **A new evaluation on support to capacity development for data and statistics:** A useful recently finished evaluation on approaches in support of data and statistics focused on contributions from the UN development system (UNSG, 2016). In addition, various synthesis evaluations present helpful summaries of available lessons learned from earlier efforts to support capacity development for data and statistics (Open Data Watch, 2015; OPM 2009).
There is a strong need to kick off the process for a broader follow up study so as to explicitly contextualise and specify these lessons learned in relation to the implications of the 2030 Agenda. Such an evaluation and the whole process around such an evaluation could provide more insights in operational terms and heighten awareness on the topic at the management level amongst donors.
- **Developing countries should be more specific and pro-active in articulating demand for CD 4.0:** The most important way towards more appropriate support of data ecosystems is a clearly defined demand by partner countries. Developing countries should explicitly articulate their demand in consultations with bilateral and

¹⁶ We refrain here from using the commonly used terminology of a 'demand and supply side' for data and statistics. In addition to recent trends in which actors are simultaneously producers and users of data, recent research on support to governance in developing countries has problematised the supply and demand side categories as possible orientation points for development co-operation. Development co-operation should not be about one group of actors – perceived as either on the demand or supply side – to get another group to behave better, but about all actors finding ways to act collectively in their own best interests (see Booth 2013).

multilateral donors, based on a multi-actor assessment of established patterns and quality of data and statistics as well as opportunities for facilitating collective action.

- **A national strategy on data and statistics is crucial for ownership and the country context:** A National Strategy for the Development of Statistics (NSDS) is an inclusive process and the most important pillar and starting point of all development co-operation in this field. Such a strategy should apply global rules and standards in the country specific context. It would be also the most important starting point for any kind of development co-operation support.
- **Development co-operation partners should use in-country fora:** In-partner countries' fora on development should actively put the topic of data and statistics on the agenda. Those meetings should be used to involve different stakeholders (NSOs, other government institutions, parliaments, civil society organisations, media, private sector, etc.) to get a better understanding of pressing needs, to agree on alignment aspects with the partner governments strategies (especially NSDS) and to harmonise development co-operation activities. CD 4.0 should proactively include and use links to areas which are close to the data ecosystem of a country and the respective fields of development co-operation. This applies most notably to the whole field of PFM and discussions on Monitoring and Evaluation systems.
- **Prioritise the use of developing country systems in planning, implementing and evaluating CD 4.0 approaches:** There is considerable evidence of the limitations of dominant capacity development approaches in development co-operation. One central aspect (based on the aid effectiveness literature) for overcoming those failures of the past is a consequent "use of country systems" (Keijzer, 2016). By using country systems a number of negative aspects can be mitigated or reduced (e.g. 'value for money'; incentives for donor agencies to implement projects, etc.). However, using country systems is in need of sometimes ambitious requirements of the governance quality and development commitment of stakeholders in the partner country. Table 4 draws from influential work on public finance management and distinguishes three dimensions of country systems to inform an effective approach for statistical capacity development.

Table 4: Three dimensions of using country systems in statistical capacity development

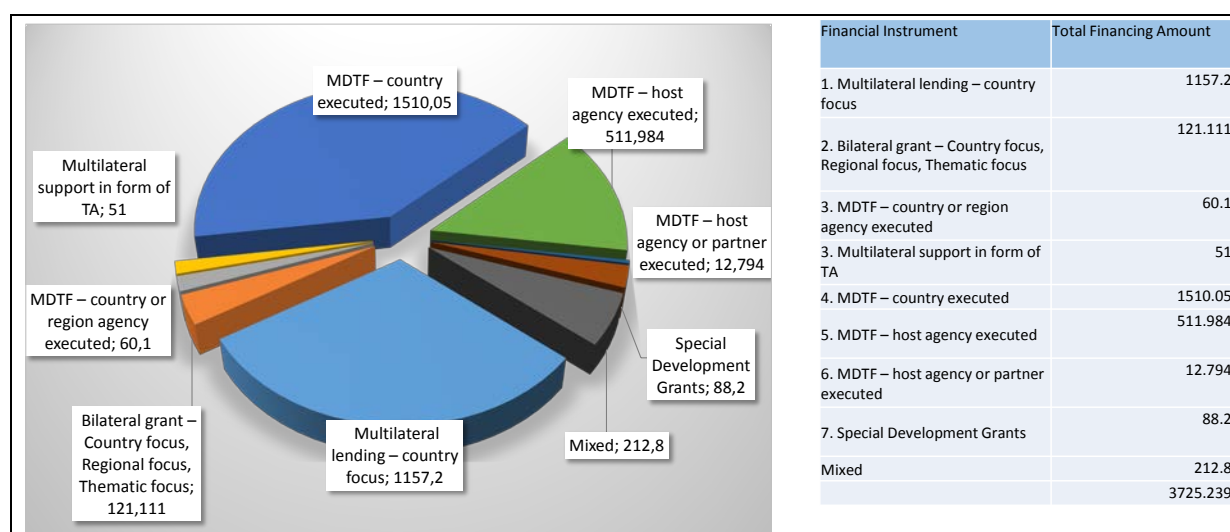
Dimension 1: Planning and budgeting	Dimension 2: Public Finance Management systems	Dimension 3: Financial oversight and evaluation
1.1: Statistical capacity development interventions are integrated in government's plans and budget requests	2.1: Funding for statistical capacity development is disbursed into the main treasury account and managed through government systems	3.1: Statistical capacity development interventions are recorded and accounted for in government accounting systems
1.2: Statistical capacity development interventions are included in the government budget documentation	2.2: Procurement of inputs for statistical capacity development follows government standards and procedures	3.2: Statistical capacity development interventions are audited by the supreme audit institution
1.3: Statistical capacity development interventions are included in budget appropriations approved by parliament		3.3: Statistical capacity development interventions are included in government's ex-post reports

Source: definitions adapted from CABRI (2009)

IV. Delivering support: aid modalities

Aid modalities are important for delivering effective development co-operation and Figure 3 shows how current patterns of co-operation in support of data and statistics strongly rely on the use of Multi-Donor Trust Funds. Any strategy in support of CD 4.0 may however likely include a high number of additional small activities. In their response, development co-operation partners should consider how to avoid "too many small interventions" (Klingebiel, Mahn, and Negre, 2016) and rather focus on comprehensive and co-ordinated interventions delivered through an appropriate set of aid modalities.

Figure 3: Current Funding for Statistics per Financial Instrument – Commitments in millions USD



Source: own elaboration using data from Open Data Watch

From the perspective of donor agencies support for data and statistics might be a challenge for several reasons. First, the current narrative is only partly convincing for main stakeholders in donor countries (see the first pillar of our CD 4.0 strategic approach). Second, many activities are small. It is unattractive to provide funding, for example, for a number of specific surveys as such an approach would entail high transaction costs. Third, for several donors it might be a challenge if the investment portion for data and statistics support is small.

Reflecting on those specific challenges we propose to focus on three ways of providing ODA for data and statistics:

- Results-based aid:** Results-based aid (RBA) aims to identify outputs or outcomes that can be measured and quantified – that is, results that can be directly linked to development activities (Klingebiel and Janus, 2014). This aid modality has a high potential for innovations and strong incentives for reforms in partner countries. Results might be related to systemic aspects (such as the quality of work of NSOs as such) or more specific outcomes (like the quality or interval of a survey). The World Bank has developed the most important application (at least in terms of volume): Program for Results (PforR). Currently, there is one ongoing PforR specifically on statistics in Kenya, which is described in Box 1.¹⁷

Box 1: Kenya Statistics Program-for-Results

In September 2015 the World Bank approved a USD 50 million programme to support the Kenya National Bureau of Statistics (KNBS) to generate better and more accessible data to inform policy makers and contribute to strengthening its capacity.

The Kenya Statistics Program-for-Results is innovative and marks a global debut in the use of the PforR instrument to support the development of statistics in a country.

The programme supports the Government of Kenya to fill data gaps, improve the quality of key official statistical products and processes, enhance dissemination practices and make data more accessible, and contribute to strengthen the capacity and management systems of the KNBS.

The development objective of the Statistics Program (SP)-for-Results Project for Kenya is to support the KNBS to generate better and more accessible data to inform policy makers and contribute to strengthening its capacity. Progress towards the programme development objective (PDO) will be monitored through four PDO-level indicators which, together, provide a coherent framework to measure the increased capacity of KNBS to generate

¹⁷ <http://www.worldbank.org/en/news/press-release/2015/09/10/world-bank-supports-better-statistics-in-kenya>

better and more accessible data to inform policy-making. The SP was endorsed by the KNBS Board in December 2014 and is organised around six strategic focus areas: (1) addressing data gaps; (2) improving the quality of statistical information; (3) mainstreaming statistics in ministries, departments, and agencies (MDAs), and county governments; (4) expanding communication, dissemination, and access to statistical information; (5) strengthening human resource management; and (6) undertaking institutional reforms and good governance.

The activities supported by the new operation are aligned to the Government's Vision 2030 and the second Medium Term Plan, which underscore that data and statistics are essential for evidence-based policy making and also for monitoring the development impact.

Annex 2 provides a list of results indicators used for the SP.

Source: Compiled on the basis of information from <http://projects.worldbank.org/P149718/?lang=en&tab=overview>; accessed March 14th, 2017

- **Pooling arrangements:** Pooling arrangements (like basket funds) give an opportunity to development co-operation actors for more effective and efficient ways to support a sector or sub-sector. Donors pool their resources and thereby reduce transaction costs. Pooling arrangements might be under the oversight of partner country governments (when appropriate) or a separate and independent entity. Support of data and statistics is an appropriate field for such an aid modality. **In sum, a pooling arrangement might overcome a number of constraining factors for increased support for data and statistics.**
- **Sector budget support:** In general terms, (sector) budget support is the most advanced way for programme-based approaches and the "use of country systems". However, the requirements for budget support are quite high (in terms of fiduciary risks and a political trust relationship). Overall, sectoral budget support would be an appropriate aid modality to support data and statistics in partner countries with a high developmental commitment. However, over the last two to five years especially bilateral donors and even multilateral donors finished or at least reduced their budget support programmes.

Box 2: A "Global fund for data and statistics"?

In the area of development co-operation the idea of private sector-like funds with a focus on a specific objective is quite popular. "Vertical funds" were established, for instance, in the context of the implementation of the MDG agenda. There is particularly evidence in the field of health that this business approach might be effective to tackle specific diseases like malaria or tuberculosis. Currently an international debate is taking place to expand this approach to the education sector.

Would it be useful to have a similar approach for data and statistics? In our view the potential for such an approach is rather limited. First of all, the existing multi-donor trust funds reflect to a large extent the idea of a targeted global fund. Thus, a technical vehicle in the sense of a global fund exists already at least in an operational sense. Second, and probably most important, we think there is a significant difference between target specific objectives in social sectors and target specific approaches in other areas. Social sector specific targets may attract donor funding more easily than targets in other fields. Third and last, a 'vertical' response to the data revolution would run the risk of going against the ideas on national compacts advanced in current policy debates on the data revolution, while also running a greater risk of bypassing NSOs in determining priorities and operational responses.

Source: own elaboration

4. Conclusions and proposed actions

The ongoing data revolution, a significantly changed global context through the 2030 agenda and the necessity to use evidence more effectively in development co-operation have led to a clear momentum in international support of data and statistics. The UN World Data Forum in Cape Town represents an important milestone for the global debate, yet in view of the challenges at hand can only be a meaningful starting point (Jütting, 2017). These dynamics need to be addressed at the national level worldwide and require more vigorous and concerted international support.

The analysis presented in this paper demonstrates the need to speed up efforts in several regards. Recent years were to some extent supportive in bringing issues on data and statistics to a broader audience and closer to the management level of main stakeholders (including development agencies, partner countries' government institutions', etc.). Not least the dynamics of the 2030 Agenda and related initiatives (like "A World that Counts"; IEAG, 2014) were important elements for a stronger interest in related topics. At the same time the crucial role of data and statistics for the political-economy of countries and of development co-operation actors are often not addressed in discussions beyond rather narrow circles of experts and thus largely fail to translate into more effective co-operation. This is why efforts to develop a more convincing "narrative" on data and statistics are an important challenge.

Concrete approaches to support developing countries in the area of data and statistics also remain a challenge and are partly related to the issue of a stronger "narrative". If decision makers in development agencies, for example, look at the topic from a technical angle it might be difficult to choose data and statistics as a relevant area for support (since it is not looked at as a development goal in itself). In addition, specific instruments in support of concrete data and statistics requirements (e.g. support for a survey) and data ecosystems (e.g. to support the demand for good data and statistics through parliaments, media and civil society organisations) need to be developed or sharpened. Unless additional efforts are made, the political economy of established patterns of support for statistical capacity will likely reproduce 'business as usual' approaches that may not have adequate potential to effectively promote the 2030 Agenda.

Furthermore, linkages between main international debates relevant for data and statistics are sometimes weak or even non-existent. Development co-operation communities should more systematically look at how to integrate dimensions of data and statistics and make genuine efforts to promote capacity development for data and statistics as both a means and an end in itself. Absence of such efforts would likely mean that a more instrumental view of data and statistics as needed for effective implementation of development co-operation continues to dominate. To support this change in overall policy and priority, specialised data and statistics communities need to reciprocate by more forcefully engaging in broader discussions on development co-operation. The UN World Data Forum is an important initiative in this regard, and next steps should cover additional engagement in the High-Level Political Forum, Development Cooperation Forum, as well as other relevant international or supranational fora.

In general terms, for countries in developing regions ODA can play a decisive role in the field of data and statistics. Many low and to some extent middle income countries are in need of external support to increase and improve quality capacities for data and statistics, respectively the ecosystems of data. This is why a Capacity Development 4.0 strategy is required. Based on our brief analysis we propose **six main actions** to shape and promote this strategy:

First, developing countries (especially those ministries/entities in charge of overall planning aspects, NSOs and parliamentary committees in charge of data and statistics) should reflect more actively on their needs in support of data and statistics. They should use existing national dialogue fora with development partners to discuss their strategies and their ODA needs.

Second, bilateral and multilateral donors and partner countries should jointly develop a new narrative on how ODA can play a stronger role in data and statistics; the role of data and statistics for overall aspects of the political-economy of countries (transparency and accountability aspects, etc.) needs to be a centre piece. As in other areas of development co-operation ODA should play a supportive role and not replace or substitute domestic efforts. Data and statistics could be more directly part of the agenda of, for example, GPEDC, DCF and the Effective Institutions Platform. The relevance of the topic goes well beyond technical aspects, and a more pronounced political dimension will help to convince policy makers in times when ODA budgets are under stress.

Third, the topic needs to be addressed with representatives of South-South Co-operation providers. Countries like China, India, Brazil and South Africa are assumed to have a unique expertise in the field of data and statistics. Similar discussions on potential areas of collaboration need to take place with private sector representatives.

Fourth, partner countries and development partners need to use proactively innovative aid modalities. There is a high potential for results-based aid (not at least PforR) in support of data and statistics. Results-based milestones (increase of capacities in partner countries; drawing on the example of the ongoing PforR in Kenya) need to be set for ODA providers.

Fifth, development co-operation needs to work more intensively in those countries which are lagging in the field of data and statistics. Countries involved in the “New Deal for Engagement in Fragile States”¹⁸ might be considered as a key partner for those discussions, as well as relevant members of the group of Small Island Developing States (SIDS).

Finally, existing international data and statistics platforms need to continue their work. PARIS21 in particular has a unique knowledge and convening power. The heterogeneous profile of actors in the field of data ecosystems is both an asset (inclusive approach which involves a number of public and private actors) and a challenge (sometimes conflicting interests of actors). This makes the work of an ‘orchestrator’ (Klingebiel and Paulo, 2015) like PARIS21 even more valuable. In view of the implications of CD 4.0 for co-operation substance and process, PARIS21 could consider facilitating broader multi-stakeholder exchanges on data and statistics in particular regions and countries so as to identify opportunities for collective action that can inform future co-operation efforts as well as evaluation and research.

¹⁸ <https://www.pbsbdialogue.org/en/new-deal/about-new-deal/>

Annex 1: Commitments on statistical capacity development made during recent international fora

2030 Agenda for Sustainable development (2015)	Addis Ababa Action Agenda (2015)
<p>Paragraph 45: (...) Quality, accessible, timely and reliable disaggregated data will be needed to help with the measurement of progress and to ensure that no one is left behind. Such data is key to decision-making. Data and information from existing reporting mechanisms should be used where possible. We agree to intensify our efforts to strengthen statistical capacities in developing countries, particularly African countries, least developed countries, landlocked developing countries, small island developing States and middle-income countries. We are committed to developing broader measures of progress to complement gross domestic product (GDP).</p> <p>Paragraph 57: We recognize that baseline data for several of the targets remain unavailable, and we call for increased support for strengthening data collection and capacity building in Member States, to develop national and global baselines where they do not yet exist. We commit to addressing this gap in data collection so as to better inform the measurement of progress, in particular for those targets below which do not have clear numerical targets.</p> <p>Related targets: 17.18, 17.19</p>	<p>Paragraph 125 (fragment): National statistical systems have a central role in generating, disseminating and administering data. They should be supplemented with data and analysis from civil society, academia and the private sector.</p> <p>Paragraph 126 (fragment): We will seek to increase and use high-quality, timely and reliable data disaggregated by sex, age, geography, income, race, ethnicity, migratory status, disability, and other characteristics relevant in national contexts. We will enhance capacity-building support to developing countries, including for least developed countries, landlocked developing countries and small island developing States, for this purpose and provide international cooperation, including through technical and financial support, to further strengthen the capacity of national statistical authorities and bureaux.</p>
Cape Town Global Action Plan for Sustainable Development Data (2017): six strategic areas	
<ol style="list-style-type: none"> 1. Coordination and strategic leadership on data for sustainable development 2. Innovation and modernization of national statistical systems 3. Strengthening of basic statistical activities and programmes, with particular focus on addressing the monitoring needs of the 2030 Agenda 	<ol style="list-style-type: none"> 4. Coordination and strategic leadership on data for sustainable development 5. Dissemination and use of sustainable development data 6. Mobilize resources and coordinate efforts for statistical capacity building

Annex 2: List of results indicators Kenya Statistics Program-for-Results

Under this World Bank programme, capacity strengthening is implicitly measured by two of the four programme-level indicators. The programme assumes that improved performance of the Kenya National Bureau of Statistics (KNBS) will indicate an increase of its capacity: *“if KNBS succeeds in producing regular poverty monitoring statistics and better real sector economic data, then capacity of KNBS must have been strengthened. In particular, achieving the latter will demonstrate the capacity of KNBS to implement integrated survey programs”* (World Bank, 2015: 51).

The four programme objectives concern:

1. Inform development strategies, policies and poverty reduction programmes of the Government of Kenya
2. Produce regular poverty monitoring data and statistics
3. Produce better real and external sector economic data
4. Improve access to official household survey microdata

The programme is built around seven disbursement linked indicators (DLIs) which are expected to promote the attainment of these programme objectives. Their selection was guided by two criteria: (a) DLIs signal and monitor a milestone along the results chain without which the programme objectives cannot be achieved and/or (b) DLIs signal incentives for rewarding performance to encourage the practice of managing for results. The following table presents the seven DLIs as incorporated in the programme (World Bank, 2015: 52):

Program Indicator	Type	DLI
IRA 1: Data gaps filled and capacity strengthened through the implementation of integrated survey programs		
Implement an integrated program of economic surveys to fill National Accounts source data gaps	Output, intermediate outcome	DLI-1
Implement an integrated program of household surveys to fill key poverty, labor socio-economic data gaps		DLI-2
IRA 2: Quality of key official statistical products and processes improved		
Strengthen capacity to produce better real sector economic data	Output, intermediate outcome	DLI-3
Compile the IMF Data Quality Assessment Framework (DQAF) for five macro-economic datasets	Output	DLI-4
IRA 3: Dissemination practices strengthened and access to data improved		
Develop an Advanced Release Calendar (ARC) and scale-up data coverage	Output, intermediate outcome	DLI-5
Improve access to official household survey microdata	Output, intermediate outcome	DLI-6
IRA 4: Management systems strengthened		
Implement the Corruption Risk Assessment (CRA) action plan and strengthen financial management, filing and procurement systems	Process indicator, intermediate outcome	DLI-7

Bibliography

Boesen, N. (2010), Institutions, Power and Politics - Looking for Change Beyond the Boundaries, the Formal and the Functional, in: Ubels, J., N. Acquaye-Baddoo and A. Fowler, A. [eds.] (2010): *Capacity Development in Practice*, Earthscan, London.

Booth, D. (2013), *Development as a collective action problem. Addressing the real challenges of African governance, Synthesis Report of the Africa, Power and Politics Programme*, Overseas Development Institute, London.

(CABRI) Collaborative Africa Budget Reform Initiative (2009), *Putting aid on budget. Good practice note: using country budget systems*, CABRI, Pretoria.

Centre for Global Development (CGD) and The African Population and Health Research Center (APHRC) (2014), *Delivering on the Data Revolution in Sub-Saharan Africa, Final Report of the Data for African Development Working Group*, Washington, DC.

De Renzio, P., M. Andrews and Z. Mills (2010), Evaluation of Donor Support to Public Financial Management (PFM) Reform in Developing Countries, *Analytical study of quantitative cross-country evidence*, Overseas Development Institute (ODI), London.

Eele, G. (2015), Building Statistical Capacity - The Challenges, PARIS21 Discussion Paper No. 7, July 2015, www.paris21.org/sites/default/files/PARIS21-DiscussionPaper7-StatisticalCapacity.pdf

Fioramonti, L. (2017), *The World After GDP: Politics, Business and Society in the Post Growth Era*, John Wiley & Sons, Hoboken.

Global Partnership for Sustainable Development Data (GPSSD) (2016), The State of Development Data Funding (SDDF) 2016, <http://opendatawatch.com/wp-content/uploads/2016/09/development-data-funding-2016.pdf>

IEAG (Independent Expert Advisory Group on a Data Revolution for Sustainable Development) (2014), A World that Counts, Mobilising the Data Revolution for Sustainable Development, Report prepared at the request of the United Nations Secretary-General, by the Independent Expert Advisory Group on a Data Revolution for Sustainable Development, New York.

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

Jerven, M. (2016), *How Much Will a Data Revolution in Development Cost?*, Forum for Development Studies, <http://dx.doi.org/10.1080/08039410.2016.1260050>

Jütting, J. (2016), Capacity Building, Yes – But How To Do It?, <http://undataforum.org/WorldDataForum/capacity-building-yes-but-how-to-do-it/>

Jutting, J. (2017), The World Of (Official) Data And Statistics; Not Yet Dead, www.huffingtonpost.com/johannes-jutting/the-world-of-official-dat_b_14412134.html

Keijzer, N. (2014), Reforming the hand that feeds you? Managing capacity development support in Cambodia and Malawi, DIE discussion paper 20/2014, Bonn.

Keijzer, N. (2016), "Open Data on a Closed Shop? Assessing the Potential of Transparency Initiatives with a Focus on Efforts to Strengthen Capacity Development Support," *Development Policy Review* 34(1), 83-100, DOI: 10.1111/dpr.12146

Klingebiel, S. and H. Janus (2014), "Results-based aid: potential and limits of an innovative modality in development cooperation," *International Development Policy*, 5.2, 2014, <http://poldev.revues.org/1746>

Klingebiel, S., T. Casjen Mahn and M. Negre (2016), Fragmentation: a key concept for development cooperation, in: Klingebiel s., T. Casjen Mahn and M. Negre (eds.), *The fragmentation of aid: concepts, measurements and implications for development cooperation*, Basingstoke.

Klingebiel, S. and S. Paulo (2015), Orchestration: an instrument for implementing the Sustainable Development Goals, Briefing Paper 14/2015, German Development Institute / Deutsches Institut für Entwicklungspolitik (DIE), Bonn.

Krätke F. and B. Byiers (2014), The Political Economy of Official Statistics, Implications for the Data Revolution in Sub-Saharan Africa, PARIS21 Discussion Paper No. 5, online: DP-170-Political-Economy-Official-Statistics-Africa-December-2014.

Mahn, T. (2017), Accountability for Development Cooperation under the 2030 Agenda, DIE Discussion Paper, Bonn.

OECD, (2013), Strengthening National Statistical Systems to Monitor Global Goals, OECD and Post-2015 Reflections, Element 5, Paper 1, www.oecd.org/dac/POST-2015%20P21.pdf

Open Data Watch, (2015), Partnerships and Financing for Statistics: Lessons Learned from Recent Evaluations, <http://opendatawatch.com/wp-content/uploads/2015/12/Partnerships-and-Financing-for-Statistics-Lessons-Learned-1.pdf>

Open Data Watch, (2016), Aid For Statistics: An Inventory of Financial Instruments, online: <http://opendatawatch.com/wp-content/uploads/2016/09/2016-Aid-For-Statistics-An-Inventory-of-Financial-Instruments.pdf>

OPM, (2009), *Evaluation of the Implementation of the Paris Declaration, Thematic Study of Support to Statistical Capacity Building, Synthesis Report*, London / Glasgow.

PARIS21, (2016), *Partner Report on Support to Statistics*, www.paris21.org/sites/default/files/PRESS-2016-web-final.pdf

PARIS21 and Open Data Watch, (2017), Capacity building for modernization of institutions, governance and business processes, Presentation at the UN World Data Forum, Johannesburg, (unpublished).

Price Waterhouse Coopers, (2016), *Industry 4.0: Building the Digital Industry* www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry-4.0-building-your-digital-enterprise-april-2016.pdf

SDSN, (2015), *Data for Development: A Needs Assessment for SDG Monitoring and Statistical Capacity Development*, <http://unsdsn.org/resources/publications/a-needs-assessment-for-sdg-monitoring-and-statistical-capacity-development/>

Strode, M., (2017), Effective National Statistical System Assessments: Heading Towards Open Frameworks, Presentation given at the March 2017 – 49th UN Statistical Commission.

Taylor, M., (2016), The Political Economy of Statistical Capacity: A Theoretical Approach. Inter-American Development Bank Discussion Paper IDB-DP-471, <https://publications.iadb.org/bitstream/handle/11319/7794/The-Political-Economy-of-Statistical-Capacity-A-Theoretical-Approach.pdf?sequence=2>

UN Statistical Commission (UNSC), (2016), Provisional Proposed Tiers for Global SDG Indicators, <https://unstats.un.org/sdgs/files/meetings/iaeg-sdgs-meeting-03/Provisional-Proposed-Tiers-for-SDG-Indicators-24-03-16.pdf>

UN Secretary General (UNSG), (2016), Evaluation of the contribution of the United Nations development system to strengthening national capacities for statistical analysis and data collection to support the achievement of the Millennium Development Goals and other internationally agreed development goals, A/71/430, www.un.org/ga/search/view_doc.asp?symbol=A/71/431

UN Secretary General (UNSG Annex), (2016), Evaluation of the contribution of the United Nations development system to strengthening national capacities for statistical analysis and data collection to support the achievement of the Millennium Development Goals and other internationally agreed development goals, Technical Appendix, [www.unjiu.org/en/reports-notes/CEB%20and%20organisation%20documents/Technical%20Appendix JIU REP 2016 5 Final.pdf](http://www.unjiu.org/en/reports-notes/CEB%20and%20organisation%20documents/Technical%20Appendix%20JIU%20REP%202016%205%20Final.pdf)

UN, (2017), Cape Town Global Action Plan for Sustainable Development Data, <http://undataforum.org/WorldDataForum/wp-content/uploads/2017/01/Cape-Town-Action-Plan-For-Data-Jan2017.pdf>

World Bank, (2015), Kenya - Statistics Program-for-Results Project, Program Appraisal Document, <http://documents.worldbank.org/curated/en/349731468000003619/pdf/98312-PAD-P149718-IDA-R2015-0231-1-Box393188B-OUO-9.pdf>

World Bank, (2017), Statistical Capacity Building: Overview, www.worldbank.org/en/data/statistical-capacity-building/overview

PARIS21

Partnership in Statistics for
Development in the 21st Century

Discussion Paper No. 9
March 2017