

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

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

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CONTENTS

1. Introduction.....	3
2. The case for a new approach	5
3. The SDGs as a catalyst.....	8
4. Operationalising ‘capacity development 4.0’	11
5. Conclusions and suggestions for further discussion	15
6. Annex	16

1. Introduction

An ever-deepening 'data revolution' dominates all areas of everyday life 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. At the same time, many people and countries do not access these positive benefits. To a large extent their distribution is guided by levels of development and income. Despite the rapid spread of mobile phone technology, allowing regions otherwise disconnected from the grid to 'leapfrog' in terms of using and producing data and statistics, poor people still are 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 is to manage the data revolution in support of sustainable development. Broadening and deepening production and use of data and statistics represent main priorities, and require identifying those population groups which are most vulnerable and making governments more accountable to their citizens. At the same time those risks coming along with the data revolution needs 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 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 force to shape the data revolution are domestic policies and reforms in all regions of the world. This applies to wealthier countries but also for developing countries, and external support cannot compensate for absent domestic leadership and investment. Both technical and political factors will affect whether countries are willing and able to succeed in benefiting from the data revolution. However, especially in 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. Both factors are, at least to some extent, interrelated. If funding is not sufficiently available it might be difficult to increase the capacities required. And vice versa: 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 mobilizing Official Development Assistance (ODA)² resources. These initiatives share a number of common starting points (IEAG 2014; PARIS21 2016; GPSDD 2016; Jütting 2016; UNSG 2016):

- **2030 Agenda and SDGs provide a statistical groundwork:** The 2030 Agenda, its 17 SDGs, the 169 complex targets and 230 indicators are a reliable statistical groundwork based on a global consensus.
- **National ownership and leadership is crucial:** National data ecosystem actors, in particular National Statistical Offices (NSOs), are of utmost importance.³
- **Focus on Tier I and Tier II SDG indicators:** There is a global consensus that efforts should concentrate on existing data or known collection methodologies for SDG indicators.
- **There is a significant ODA funding gap for crucial SDG data:** The total amount of development cooperation needed to support the production of Tier I and II indicators for the SDGs is expected to be \$635 to \$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 \$350 to \$400 million is needed.
- **Increasing effectiveness for ODA:** International debates reflect a growing realisation of the need to relaunch and revitalize efforts to make development cooperation in support of data and statistics more effective.

So far, international debates on ODA support for statistical capacity development is not conclusive in terms of concrete operational steps. A number of international policy statements focus on the need to improve the effectiveness of related approaches, key among which the 2030 Agenda and the outcome document of the 2015 UN Conference on Financing for Development (see the annex to this paper). However, as a matter of urgency these general statements of intent now need to be translated into effective action.

² We use the terms "ODA" and "development cooperation" interchangeably.

³ Striking examples for the relevance of national data ecosystems and existing deficits in African countries are provided by Jerven 2013.

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 that guides concerted action by all relevant stakeholders. That vision for **'Capacity Development 4.0'**, a term first coined by the PARIS21 network (Jütting 2016), is set out below and discussed as to its implications for moving away from business as usual to realise the SDGs.

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2. The case for a new approach

International development cooperation is by definition an information-dependent exercise. Since day one of ODA efforts have been made to ensure adequate data for informed decision making, implementation and adjustment, as well as evaluation and learning. Throughout the decades development cooperation has had to operate under conditions that – from a data point of view – were far from conducive. Limited access to information, poor quality of data in developing countries but also absent consensus between recipient countries and their international partners on how to address this problem unfortunately remain facts of life.

It needs to be emphasised that there is no such thing as capacity-neutral development cooperation. An external intervention by its very nature affects domestic capacity since its core aim is to influence dynamics. At the same time, external interventions do not ‘develop’ capacity, this is an endogenous process by the stakeholders concerned. Under the right conditions, external interventions may support these endogenous efforts. While keeping this in mind, statistics on ODA seek to isolate those interventions that primarily seek to develop capacity, which would apply to most international support for statistical capacity development, as shown in box 1.

Box 1: Defining capacity development support (CDS) for data and statistics

The bulk of CDS assistance is delivered in the form of technical cooperation (TC), defined as *“provision of know-how in the form of personnel, training, research and associated costs whose primary purpose is to augment the level of knowledge, skills, technical know-how or productive aptitudes of the population”* (OECD, 2010: 15).

TC is provided in many different ways, including by specialized development agencies, Non-Governmental Organisations (NGOs) and the private sector, either through direct contracting or competitive tendering. A wide range of interventions can be covered: twinning between OECD organisations and developing country counterparts, long-term (local or foreign) ‘embedded’ advisors, short-term consultancies, and various types of training.

As recognised by the OECD, and contrary to its own definition, it should be emphasised that reported TC activities often pursue other objectives than supporting capacity development, such as project appraisal, monitoring and evaluation of development interventions, and financial oversight.

The World Bank suggests the following definition of CD in the field of data and statistics: Statistical capacity is the ability of countries to meet user needs for good quality statistics – usually those statistics that are considered “official” (i.e. those statistics produced by governments as a public good). Timely and reliable statistics are a key part of development, particularly the broad development strategies that are often referred to as “managing for results”. The overarching strategy is guided by a global action plan (commonly referred to as the Marrakech Action Plan for Statistics or MAPS) to improve national and international statistics agreed during the Second Roundtable on Measuring for Results, held in Marrakech, Morocco, February 2004.

Source: OECD statistical guidelines & World Bank (<http://www.worldbank.org/en/data/statistical-capacity-building/overview>) & Keijzer 2014

Overall, the scores for the Statistical Capacity Indicator (SCI) show an improving global and regional situation on average (UNSG Annex 2016: 26). However, anecdotal evidence suggests that government capacity for producing basic statistics in fact declined in several developing countries during recent decades. This reflects that donors and developing country governments both lost interest in developing government capacity for producing basic statistics. An independent evaluation noticed that in the whole of Africa only four countries were capable of producing basic statistics on agriculture (FAO 2008). Other studies observed that international demand for statistics often superseded local demand, which goes to the heart of the challenge (OPM 2009).

It has been observed that “as an object of study, ‘capacity’ is too big and too intangible a concept. This makes it difficult for researchers to engage productively and critically with questions around capacity development” (Mallett et al 2014: 6). Development policy strategies, including the new 2030 Agenda, typically use the term ‘capacity’ in a rather loose and instrumental manner, as a means to other ends as opposed to a legitimate goal in itself. Although OECD members formally subscribe to a shared definition of capacity as the “ability of people, organizations and society as a whole to manage their affairs successfully”, actual practice often implies a definition of capacity as a country’s ability to successfully implement development interventions (Keijzer 2014).

These general observations on CDS apply equally and fully to the field of statistics, as observed in recent evaluations and assessments (OPM 2009; Krätke and Byiers 2014; UNSG 2016). In order to escape the fallacy of supply-driven support, cooperation partners are advised to be as explicit as possible in determining how external support should facilitate specific changes in the capacity of national data ecosystems. Moreover, partners should resist 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. Support for data and statistics are instead advised to take account of both the functional and political dimensions of capacity change and consider how both internal and externally motivated demand for change can be harmonised. These are presented in the following table.

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 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		

As per their supply-driven and instrumental orientation, prevailing patterns of CDS have strongly focused on functional dimensions of capacity, while neglecting its crucial political dimensions (OPM 2009). 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). Although there is adequate understanding of technical bottlenecks to the production of statistics in developing countries, the provision of effective CDS in this area is hampered by an inadequate understanding and acknowledgement of the political economy of the production and use of statistics in developing countries. Support needs to be explicitly designed and targeted to overcome known political economy constraints and support countries in their efforts to alter prevailing incentives for producing and using statistics (Krätke and Byiers 2014). A sharp disconnect and absence of meaningful exchange between communities of practice on data and statistics and on governance unfortunately prevails, and should be overcome in order to render CDS for data and statistics more effective.

When drawing back to the existing international agreements on promoting the effectiveness of development cooperation, particularly the influential series of high-level fora from 2005-2011, four key general challenges should be recognised and responded to by donors in order to strengthen the effectiveness of statistical capacity development. A shared diagnosis is the only convincing and effective way to agree on adequate treatment:

1. First of all, there is a **collective action challenge** in the area of reforming CDS for data and statistics: 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 makes that many donors would prefer other donors to provide these public goods for them.
2. Bilateral donors 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. The problem is that donors would not seem to feel concerned if this were to be the case.
3. A first step to improving CD support lies in **developing the capacity of donors**. Donors are challenged to adapt their approaches towards a more context-sensitive and flexible engagement, yet evidence shows that donor procedures and organisational setups remain rigid and standardised. Beyond individual performance, more joint efforts are needed too, as is discussed below. A recent evaluation of the UN’s efforts in the area concluded that various UN entities do not always act in a coordinated, coherent and integrated system manner in support of statistical capacity development (UNSG 2016).
4. Finally, donors and their partners need to be **concrete and specific** about what capacity changes they pursue through their interventions. Objectives of CDS projects are typically overambitious as well as vague, while their relative 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.

While it is clear that this agenda remains largely unfinished, the largely political challenge of ensuring greater collective effectiveness in statistical capacity development also requires to 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 cooperation in support of capacity for data and statistics in developing countries (see Jütting 2016). Drawing on digital technologies such as mobile devices, location detection and cloud computing, three key drivers can be distinguished that create the need for CD 4.0 (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 for generating approaches to data collection and analysis to allow for adaptive management.
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.

Some of the ideas presented here may appear as ‘science fiction’ to many OECD contexts, and thus even less realistic for developing countries, yet developing countries are much less affected by the laws of reducing returns affecting OECD states. In reality this is shown in countries such as Kenya, where central government have 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 there is anything characterizing 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.

3. The SDGs as a catalyst

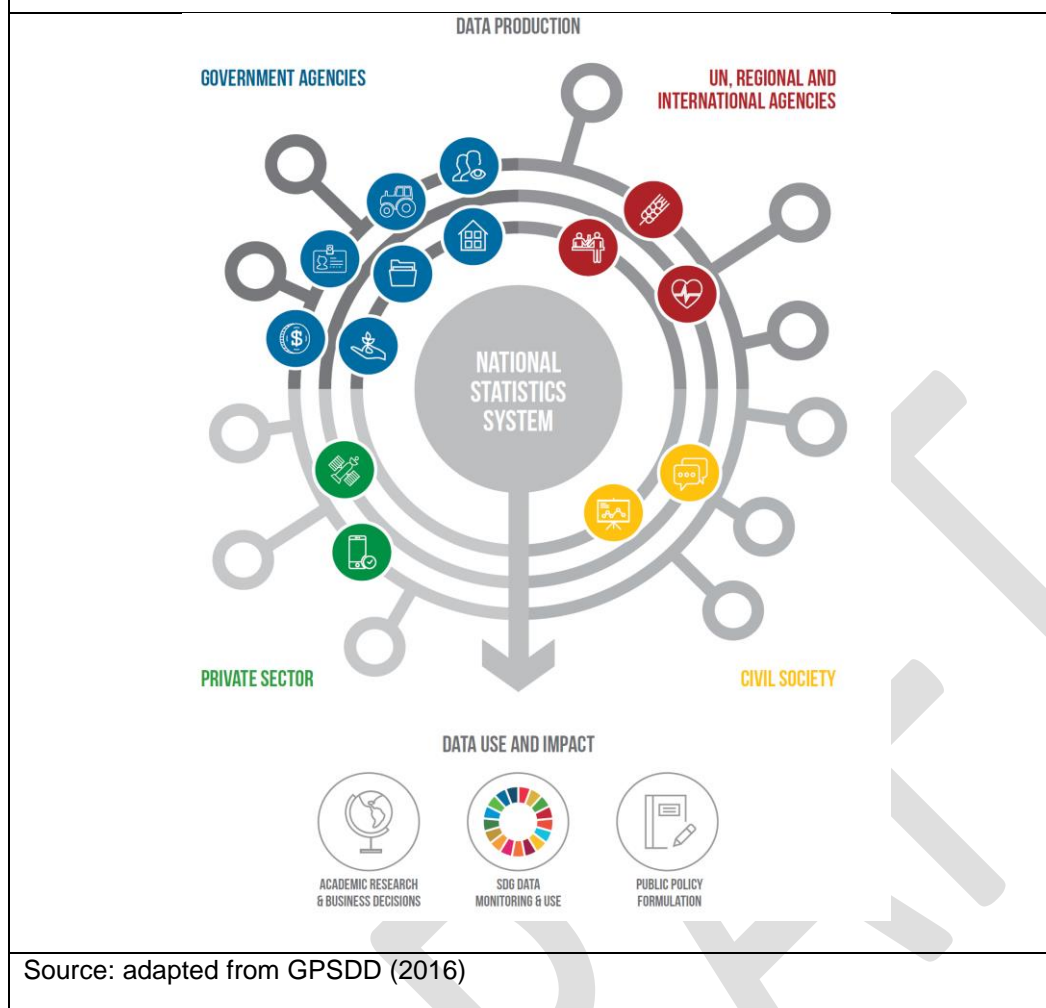
The 2030 Agenda – with the SDGs at its center – sets out a vision for global sustainable development that goes far beyond the past MDG-agenda. In addition to the broadened thematic scope, it strongly accentuates the need for cross-border actions to address challenges that are not confined the territories of individual member states. A recent system-wide UN evaluation concluded that the UN has not always considered statistics as a national governance issue and has thus not given it the priority it deserves in order to facilitate the use of statistics to achieve national development goals. 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).

In their breadth and ambition, the SDGs are a game changer and have rendered past patterns of support to statistical capacity development out of date. While often successful in terms of generating the outputs required in terms of household surveys, national and sub-national data and so on, the long-term effectiveness and sustainability of past cooperation efforts in terms of supporting viable and effective data and statistical systems have been hampered due to a reliance on overly reductionist and supply-driven approaches. The efforts were reductionist in that they would typically focus on gap-filling in terms of absent data (e.g. on HIV/Aids prevalence among the population) whereas NSOs may have had other more urgent priorities – or simply considered everything to be a priority. 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 concerned.

Four pillars are considered as key to realising the data revolution: (1) principles and standards; (2) technology, innovation and analysis, (3) capacity and resources and (4) leadership and governance (IEAG 2013). UN-summits held in 2015 maintain that National Statistical Systems (or Offices) should continue playing a central role in generating, disseminating and administering data, herein supplemented by civil society, academia and the private sector. While this agreement provides guidance and direction, it should not be understood as to negate the reality in many developing country governments where NSOs no longer play such a central managerial role. Effective capacity development support for data and statistics should take this reality as a starting point, as opposed to departing from a more desirable yet unrealistic starting point.

A recent multi-stakeholder analytical effort sought to reconcile the desired and actual state of affairs and proposed a heterogeneous National Statistical System involving data production, use and impact by multiple stakeholders for their respective multiple goals and responsibilities. They 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 (GPSDD 2016). Figure 2 visualises the principal stakeholders and actions associated to the ecosystem concept.

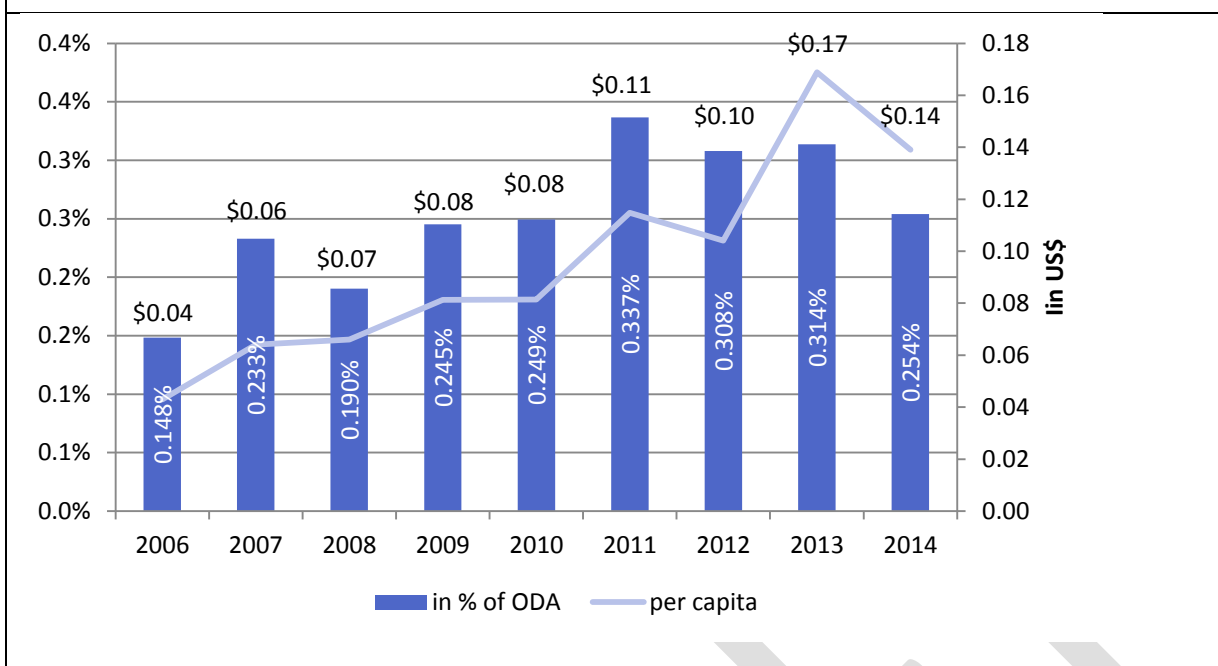
Figure 2: The Sustainable Development Data ecosystem



Source: adapted from GPSDD (2016)

The costs for funding and realising the data revolution have been assessed as 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 therefore all in all represents a modest amount. The support is moreover provided in a highly erratic manner (e.g. in 2013 42% went to the Asia-Pacific region, which declined to 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, which however also reflects that many OECD donors do not consider data and statistics a priority cooperation area (see figure 3). Bridging this gap through a 'business as usual' approach by means of multiplying existing pattern of cooperation however will likely result in increased fragmentation, high transaction costs and run the risk of distorting statistical capacity. As a means to bringing together national priorities in a consistent manner and facilitating joint analysis and support by donors, it has been suggested to develop 'data compacts' between developing country governments and international partners. These compacts should start from the realisation that capacity does not develop overnight and that 15 years – way beyond the duration of a typical development project – is a realistic window to expect changes to occur (GPSDD 2016). Dominant ideas around the data revolution that inform policy discussions on the data compacts unfortunately do not adequately recognise political economic factors that influence how national statistical systems operate and why (Krätke and Byiers 2014).

Figure 3: Support to statistics per capita and as percentage of total ODA



Source: Adapted from Press 2016: 15

The lessons learned in promoting aid effectiveness principles in the period 2005-2011 (which continue but have otherwise lost much momentum) should be drawn upon when considering the further ideas on how to prepare and use these data compacts. Notably, research on fragmentation indicates different views on to what extent the ever-increasing number of players is problematic (Klingebiel / Mahn / Negre 2016)⁴, as well as whether it is realistic to expect a central government to effectively 'orchestrate' them. Critics describe today's development cooperation architecture as 'fragmented': inefficient, overly complex and rigid in adapting to the dynamic landscape of international cooperation. Others argue that a diverse and pluralistic aid system also brings benefits, such as greater choice over funding channels and instruments for developing countries.

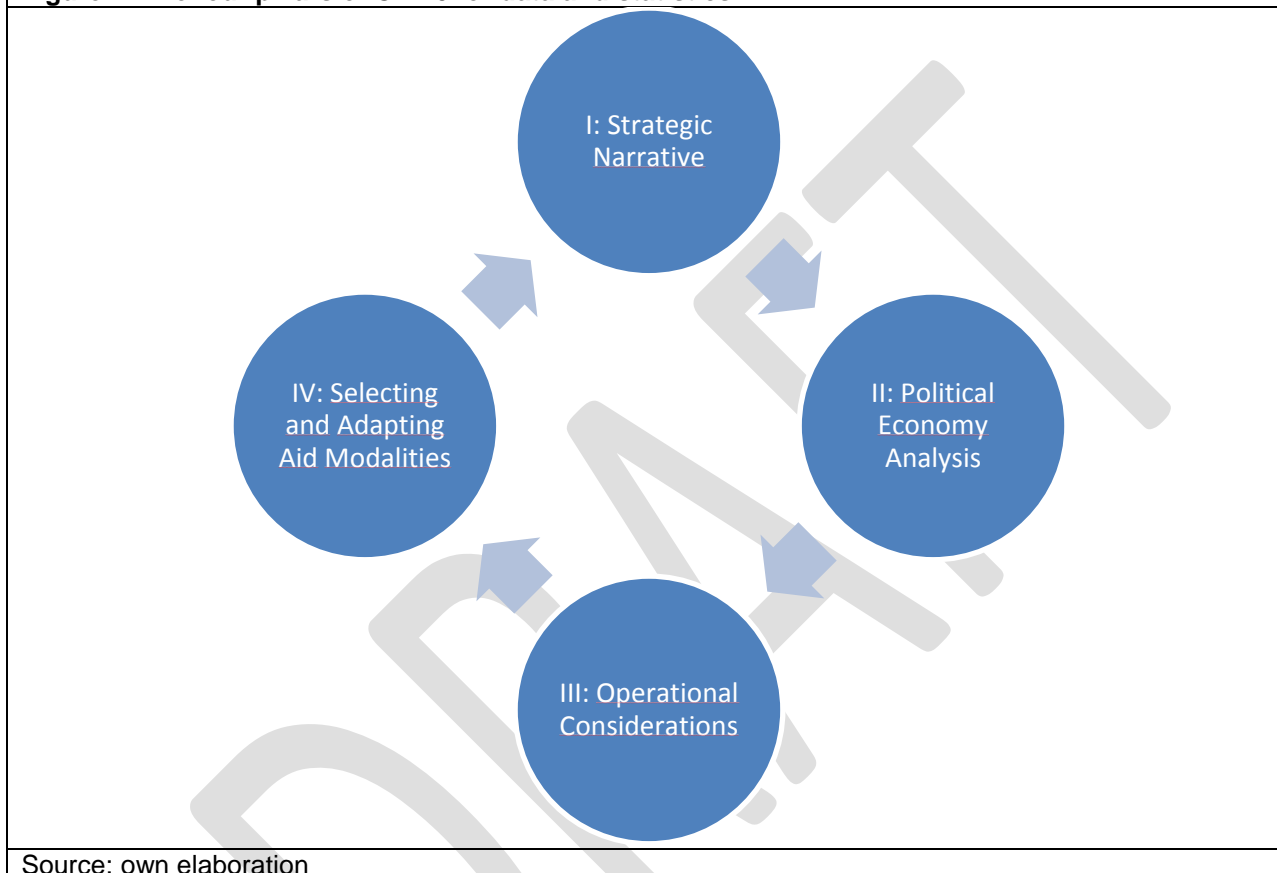
Research further points to strong differences between developing country governments in terms of the extent to which they assert themselves towards their international partners. Some governments prefer to centralise planning and make dedicated choices, while others prefer "to let a thousand flowers bloom" with a view to maximising available external resources. The EU and OECD have sought to promote 'self-coordination' in the absence of a strong developing country push, yet with limited results. The reason why only relatively small gains have made in promoting aid effectiveness principles in the area of statistical capacity development is that concrete and politically thorny questions have been ignored. These include the use of particular approaches that are less amenable to government involvement, such as in-kind technical assistance, but especially the way in which donors make decisions on selecting approaches from their 'tool box' and to what extent they allow developing country governments and other partners a say in this (Keijzer 2014).

⁴ Illustrations of fragmented UN system approaches to development cooperation in the area of data and statistics are described in UNSG 2016: 16-17.

4. Operationalising ‘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 an new approach for ‘capacity development 4.0’ (CD 4.0) (Jütting 2016). Analogous to the three aspects of Industry 4.0 presented above, we suggest four key pillars as the basis for a CD 4.0 approach to data and statistics:

Figure 4: The four pillars of CD4.0 for data and statistics



Source: own elaboration

I. In search of a strategic narrative for CD 4.0

Determining a strategic narrative and ensuring adequate conceptual guidance for CD 4.0 is crucial. The ongoing data revolution and a highly dynamic landscape in international and transnational cooperation (increasing number of actors, changes with regard to development cooperation, etc.) make it necessary to create 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 and more effective development cooperation in support of data and statistics can be regarded 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.
- **CD 4.0 is in need of support through ODA:** CD 4.0 is a crucial element for using the opportunities of data and statistics in support of the Agenda 2030. Data and statistics are a driving force for triggering 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 mobilized by developing country (SDSN 2015).

- **ODA in the 2030 Agenda era needs to be much more evidence-based:** The implementation of the 2030 Agenda, its goals, targets and indicators are oriented towards measurable contributions. ODA needs to put much more efforts in support of evidence-based contributions and needs to abandon blueprint-oriented approaches in favour of more data-hungry adaptive and context-specific solutions. This is why data and statistics are increasingly relevant for development cooperation.
- **There is a sufficient global consensus on the role of data and statistics:** CD 4.0 has already a sound grounding in international rules and standards. The Busan Action Plan for Statistics (BAPS)⁵, the Global Action Plan for Sustainable Development Data⁶, and the PARIS21 Road Map⁷, 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 level, including actors in the field of development cooperation.
- **The national level is most important for CD 4.0:** The main challenge is not in finding global consensus, but to translate 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 from the global level to use opportunities of the data revolution. This view might be not always shared by (all) actors within countries, as per their experiences of how these technologies are adjusted and used in their respective contexts. An example concerns 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 Platform⁸. The collaboration of PARIS21 and GPSDD on the one hand and these rather “development cooperation focused platforms” 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.

- **Development cooperation in support of the internal aspects of functional and political capacity changes** (see table 1): Through ODA a stronger and more qualified internal market for appropriate data and statistics can be supported. In this regard especially parliaments, media, civil society organizations and the private sector are crucial players with a strong and legitimate demand in reliable and transparent data and statistics (OPM 2009). The role of those players can be strengthened by development cooperation (e.g. experiences in support of budgetary committees in a number of parliaments).
- **Development cooperation 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 overall aspects of data and statistics and all relevant contributions to the data ecosystem. Development cooperation should, therefore, focus on NSOs but also other relevant actors and their specific role to provide adequate data and statistics.⁹

⁵ <https://www.paris21.org/sites/default/files/03-Busan-implementation-March2012.pdf>

⁶ http://unstats.un.org/sdgs/files/global-consultation-hlg-1/GAP_HLG-20161021.pdf

⁷ http://datarevolution.paris21.org/sites/default/files/Road_map_for_a_Country_led_Data_Revolution_web.pdf

⁸ <http://www.effectiveinstitutions.org/en/>

⁹ 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 cooperation. Development cooperation 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).

- **Reliable and transparent data and statistics might be not always in the interest of main actors in countries:** Since the actors constellations in partner countries are heterogeneous ODA should not expect that main actors are always in favor of improving data and statistics. They may in fact sometimes harm their interests, or are distorted to serve them. Poorly governed and fragile countries, for example, might want to avoid transparency about development results in a country because this might lead to critical responses from media and civil society organizations 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 cooperation in support of a CD 4.0 strategy

Effective and efficient development cooperation approaches in support of data and statistics need to build on experiences and lessons learnt. This is why CD 4.0 should emphasize the role of evidence (coming not at least from evaluations) and predominant principal of ownership right from the beginning.

- **A new broad evaluation on development cooperation interventions:** A useful recently finished evaluation on approaches in support of data and statistics was focusing on contributions coming from the UN development system (UNSG 2016). The lasted main effort looking at a broader spectrum of development cooperation actors in the field of data and statistic interventions was an OECD evaluation finished in 2009 (OPM 2009). There is a strong need to kick off the process for a broader follow up study. Such an evaluation and the whole process around such an evaluation could provide more insights in operational terms but also give the opportunity to raise more attention for the topic on the management level of donors.
- **Partner countries should raise a more specific demand for ODA:** The most important way in support of more and especially more appropriate support of data ecosystems is a clearly defined of partner countries in consultations with bilateral and multilateral donors. Countries like Rwanda should be encouraged to approach proactively donors in this regard.
- **A national strategy on data and statistics is crucial for ownership and the country context:** If a national strategy on data and statistics is missing such an inclusive process would the most important pillar of all development cooperation in this field. Such a strategy should be the application of global rules and standards in the country specific context. It would be also the most important starting point for any kind of development cooperation support.
- **Development cooperation 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, to get a better understanding on pressing needs in the area, and to agree on alignment aspects with the host governments strategies and to harmonise on development cooperation activities in this field.
- **A CD 4.0 strategy need to avoid limitations of former capacity development approaches in ODA:** There is a lot of evidence about limitations of capacity building approaches in development cooperation. One central aspects (based on the aid effectiveness literature) for overcoming those failures of the past is a consequent “use of country systems” (Keijzer 2014). 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.)

IV. Delivering support: aid modalities

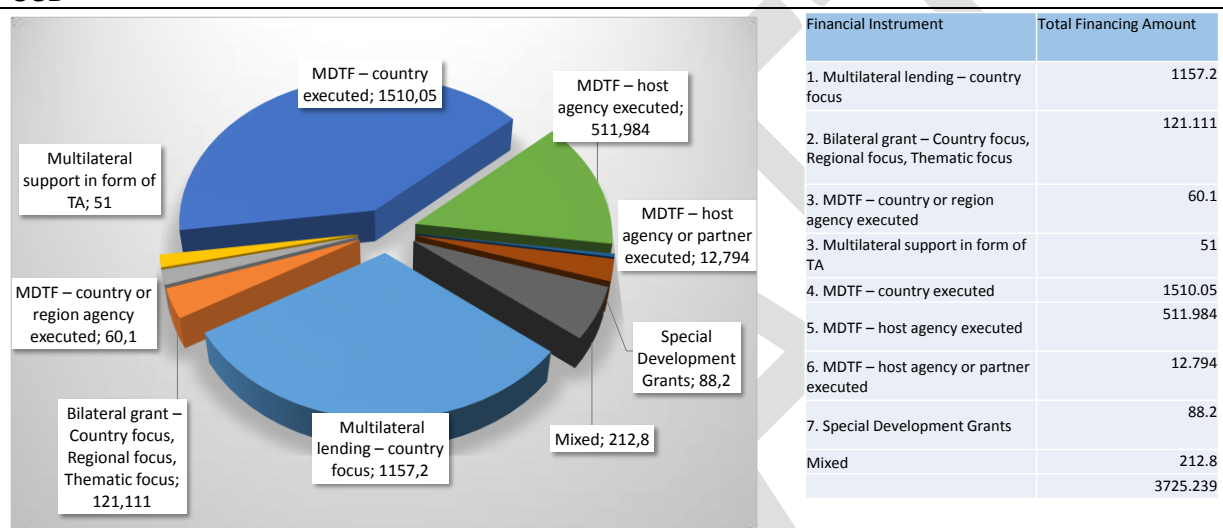
Aid modalities are important for delivering good development cooperation, with Figure 5 how current patterns of cooperation in support of data and statistics strongly rely on the use of Multi-Donor Trust Funds. Any strategy in support of CD 4.0 may however likely include a high number of additional small activities. In their response, development cooperation partners should consider how to avoid “too many small interventions” (Klingebiel / Mahn / Negre 2016) but rather focus on an appropriate set of aid modalities. We propose to focus on three specific ways how to provide 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 / Janus 2014). This aid modality has a high potential for innovations and strong incentives for reforms in partner countries. 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 (Kenya).¹⁰

- **Pooling arrangements:** Pooling arrangements (like basket funds) give an opportunity to development cooperation actors for more effective and efficient ways to support a sector or sub-sector. Donors pool their resources and reduce thereby transaction costs. Pooling arrangements might be under the oversight of partner country governments (when appropriate) or under the oversight of a separate entity. Support of data and statistics is an appropriate field for such an aid modality.
- **Sector budget support:** In general terms, (sector) budget support is the most advanced way for program-based approaches and the “use of country systems”. At the same time the requirements for budget support are quite high (in terms of fiduciary risks and a political trust relationship). Overall, sectoral budget support would be a quite 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 programs.

Figure 5: Current Funding for Statistics per Financial Instrument – Commitments in millions USD



Source: own elaboration using data from Open Data Watch

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

5. Conclusions and suggestions for further discussion

The ongoing data revolution, a significantly changed global context through the 2030 agenda and the necessity to use development cooperation more effectively and evidence-based 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. This dynamics need to be picked up on the national level in all countries as well and requires more vigorous and concerted international support.

For countries in developing regions ODA can play a decisive role in this regard. Many low and to some extent middle income countries are in need of external support for increasing and better quality capacities for data and statistics. This is why a Capacity Development 4.0 strategy is required. Based on our brief analysis we propose six main follow up steps:

Firstly, developing countries should reflect more actively on their needs in support of data and statistics. They should use existing national dialogue fora with development partner to discuss their strategies and their ODA needs.

Secondly, bilateral and multilateral donors and partner countries should develop jointly a new narrative why ODA has to play a stronger role in data and statistics. The topic 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.

Thirdly, the topic needs to be reflected with representatives of South-South-Cooperation providers as well. 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.

Fourthly, 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) need to be set for ODA providers.

Fifthly, development cooperation need to work more intensively on those countries where main actors might be not interested in reforms and improvements in the field of data and statistics. The “New Deal for Engagement in Fragile States”¹¹ might be considered as a key partner for those discussions.

Finally, existing international data and statistics platforms need to continue their work. Especially PARIS21 and GPSDD have a unique knowledge and convening power. The heterogeneous profile of actors in the field of data ecosystems is an asset (inclusive approach which involves a number of public and private actors) and a challenge (sometimes conflicting interests of actors) at the same time. This makes the work of an ‘orchestrator’ (Klingebiel / Paulo 2015) like PARIS21 even more valuable.

¹¹ <https://www.pbsbdialogue.org/en/new-deal/about-new-deal/>

6. Annex

Commitments on statistical capacity development made during recent international for a	
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>

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