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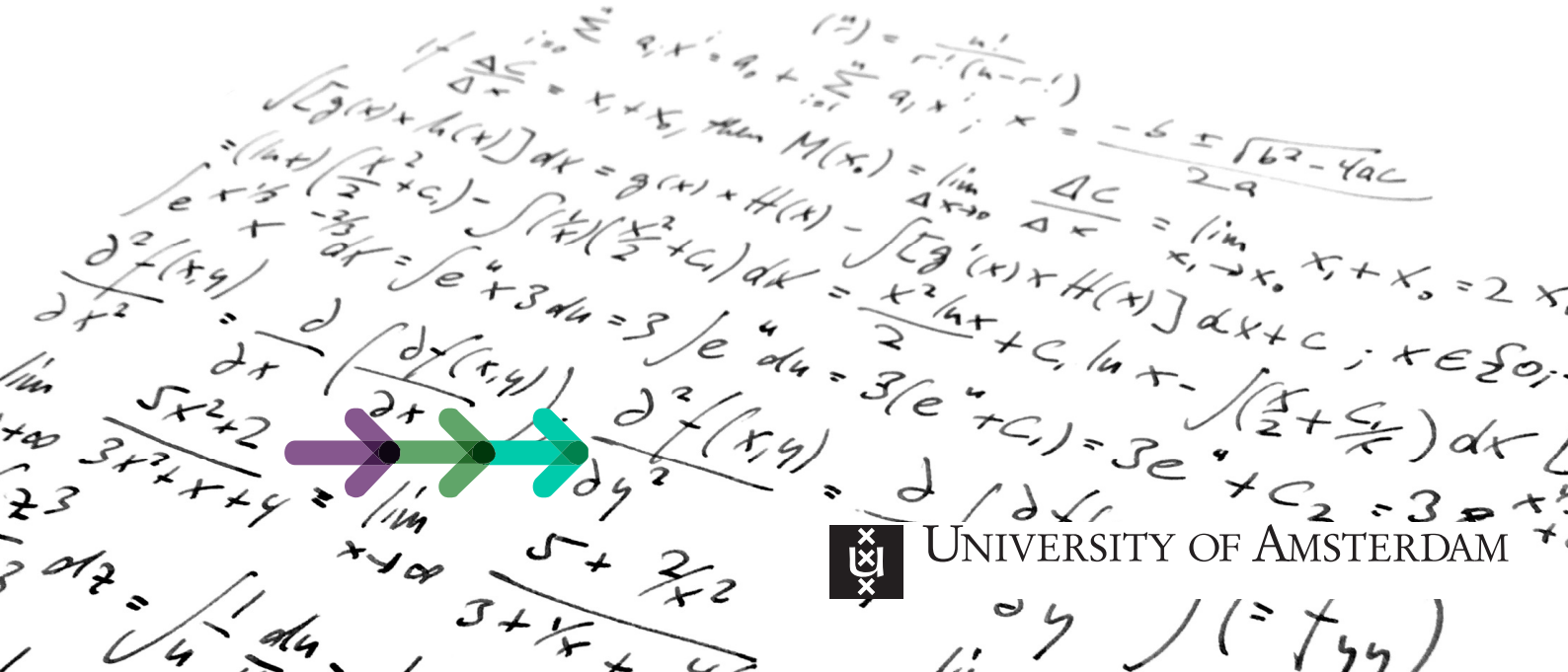

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ABSTRACT. Monitoring the Sustainable Development Goals (SDGs) requires an enormous amount of multidimensional data, beyond the narrow confines of headline macroeconomic statistics. Collecting this data presents a major challenge, however, for poor countries where statistical capacity is low. International organizations such as the World Bank and IMF are at the forefront of efforts to collect the necessary data and improve statistical capacity accordingly. But for these IOs, collecting data from member countries also plays crucial roles in their primary functions as international financial institutions. To what degree is the multidimensional approach of the SDGs mirrored in the statistical practices of the IMF and World Bank? I find a gap between the ambitions of the SDGs and statistical efforts on the ground, particularly in low-income countries. I find that, due to pathologies in the cooperation between IOs, the demands of the IMF prevail over the less coercive efforts of the Bank and other lenders. As a result, the quality of socially and environmentally oriented development statistics suffers while the economic and financial statistics required for macroeconomic surveillance are prioritized. There are negative consequences not only for the quality and availability of data, but also for the aspired development outcomes.

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Introduction

International organizations (IOs) are fueled by data. The economic and social statistics that IOs collect from member states both enable policy intervention and contribute to IOs' knowledge-based authority. The World Bank, for instance, is referred to as a 'knowledge bank' (Enns, 2015), and the International Monetary Fund (IMF) maintains an image of a rigorous, all-seeing authority on countries' economic health (cf. Best 2012; Moschella 2012). Statistics are not only needed to carry out evidence-based policy – they fundamentally shape how IO staff and departments see the world and make it legible (Broome & Seabrooke, 2012; Vetterlein, 2012).

For decades, IOs such as the World Bank and IMF have been at the forefront of global efforts to shape national statistical systems and harmonize official statistics, but their responsibilities have changed in recent years. The Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs) thrust the policy implications of statistics onto center stage and brought about new roles for IOs (Clegg, 2010; Gutner, 2010). These global agendas marked a shift in development policy away from narrowly economistic approaches. To make this happen, the metrics used to gauge development will also have to expand into non-economic dimensions. Thus, the SDGs have increased the urgency of collecting a wide range of economic, social and environmental data that go beyond a traditional emphasis on macroeconomic indicators such as GDP or statistics about the debt and inflation.

On the one hand, the World Bank and IMF have committed to supporting the SDGs and are among the organizations responsible for assisting member states to produce SDG data. But, on the other hand, their efforts to harmonize economic statistics and obtain country data long precede the SDGs and play crucial roles in their primary functions as international financial institutions engaged in lending, research and macroeconomic surveillance. To what degree are the data ambitions of the SDGs mirrored in statistical practices of the IMF and World Bank on the ground? And, if there is a gap between ambitions and practices, why is that?

While the IMF and the World Bank have been closely studied and criticized for imposing rigid macroeconomic and financial sector policies on developing countries (e.g. Cammack 2004; Peet, 2004), their efforts in statistics have been left largely unexamined. They have responded to criticisms of their policies in the developing world with attempts at rebranding,

though some have argued that a true paradigm shift has failed to materialize (Fine & Van Waeyenberge, 2013; Van Waeyenberge, Bargawi, & McKinley, 2013). Literature on the politics and sociology of statistics has for the most part not been linked to international political economy literature on IO behavior. While it is clear that the worldwide influence of GDP is the result of IO efforts (Fioramonti, 2013; Masood, 2016; Philipsen, 2015; Schmelzer, 2016), we do not know whether this is at the expense of other knowledge.

I find that there is indeed a gap in the ambitions of the SDGs and statistical efforts on the ground. This gap is most acute in countries with low statistical capacity, which are overwhelmingly low-income countries (i.e. World Bank International Development Association [IDA] borrowing countries). These countries have the lowest degree of agency to implement local priorities above the competing priorities of IOs and foreign donors. In this context, the macroeconomic and financial data demanded by the IMF are often given precedence over the social and environmental data required for many of the SDG indicators. This outcome is the result of an institutional division of labor between the IMF and World Bank (and with other IOs), in combination with starkly different approaches to statistical governance. The World Bank approaches statistical capacity as a goal in itself and gives space for countries to independently establish national agendas. The IMF prevails because, in contrast, it requires specific data for macroeconomic surveillance and possesses legal and informal mechanisms to obtain it.

The findings are based on in-depth interviews with 36 current and former staff and directors of international statistical agencies including the IMF, World Bank, United Nations Statistics Division, UN ESCAP, private development consultants, and national statistical offices in Ghana, Laos and Thailand. They are supplemented by analysis of official documents and an extensive literature review. The article focuses on the efforts of the World Bank and IMF. These IOs are among a large number of actors engaged in the SDG agenda. They are especially important because they have close and long-established relations with member states and have already been attempting to influence government statistics for decades. They have the most truly global remit over national statistical systems and the most power (Barnett & Duvall, 2005) over the policies of developing countries.

The article speaks to academic criticisms of the SDGs, the professional and academic literature on statistical capacity in developing countries, and a growing body of IPE scholarship on the politics of indicators and rankings. Rather than scrutinizing the

methodologies of economic indicators, this article questions when and why certain types of indicators are privileged over others.

The findings shed light on previously overlooked yet fundamental aspects of governance by IOs: the extent to which, and how, the World Bank and IMF exert control over the production and reporting of data by members states. They have practical implications, too. The theme of the 2030 agenda is 'leaving no one behind'. To evaluate if this objective is met, we also have to consider whether some types of data are left behind. If non-economic SDGs are poorly measured because attention to economic statistics crowds out capacity to monitor them, then the policy efforts to work on and improve social conditions in line with these other SDGs will also suffer.

The next section reviews the literature on the political economy of official statistics, the Sustainable Development Goals, and theories of IO behavior. The third section provides a historical overview of statistical governance and descriptive background information on statistical capacity and the SDG indicators. The fourth section shows the variation between the IMF and the World Bank on three axes: the roles of statistics departments in IO bureaucracies; reasons for intervening in national statistical systems; and mechanisms for obtaining data. The fifth section explains how this variation and the division of labor between IOs places pressure on countries with low statistical capacity to prioritize macroeconomic statistics over non-economic SDG indicators.

Theorizing the governance of statistics

The Sustainable Development Goals are broad and ambitious, and monitoring them requires a great deal of data. For many developing countries, where the ambitions of the SDGs are most salient, meeting this demand puts a major strain on national statistical systems. The IMF and World Bank are key actors in the effort to produce the indicators needed to monitor progress on the SDGs. To understand how they engage with the SDGs and the consequences for member countries, two types of literature are useful. The first concerns the SDG indicators and the political economy of statistics more broadly; the second focuses on IO behavior, especially theoretical approaches that recognize IOs as autonomous actors in global politics. This section reviews this scholarship and builds a theoretical framework for the analysis that follows.

The SDGs have been met with mixed responses in academic literature. The wide scope of the Goals signals an embrace of a multi-dimensional approach to sustainable development and poverty reduction, and the emphasis on country ownership is a welcome change for many observers. Criticisms come for the most part in two varieties. The first is simply that there are too many goals, and thus that the agenda is unfocused and unrealistic. The final selection of the 17 goals, and the 232 associated indicators, is the result of a long and sometimes antagonistic negotiation process (Caballero, 2019; Kapto, 2019; Thérien & Pouliot, 2019).

The second criticism is more fundamental, namely that the SDGs fail to break with a neoliberal development paradigm that places the market at the center of development efforts (Ilcan & Lacey, 2015; Pingeot, 2016; Weber, 2015). Others criticize the SDGs' continued emphasis on aggregate global economic growth at the expense of environmental protection, in spite of the sustainability ambitions central to the agenda (Spann, 2017). At worst, this makes the SDGs self-defeating in the sense that goals related to environmental sustainability are in direct conflict with Goal 8, which calls for global GDP growth of 3 percent per year (Hickel, 2019).

The wide range of indicators required by the SDGs coincides with a 'dashboard' approach to development indicators. Rather than a narrow focus on singular indicators such as GDP, a dashboard includes many indicators analyzed in combination. Stiglitz, Sen, and Fitoussi (2009, p. 17) suggest that a dashboard approach is necessary when balancing policy goals: 'The assessment of sustainability is complementary to the question of current well-being or economic performance, and must be examined separately'. They note that attempting to combine multiple measures into a single indicator leads to confusion, likening it to a meter on a car that '[adds] up in one single number the current speed of the vehicle and the remaining level of gasoline' (ibid.). Yet Stiglitz et. al (ibid., p. 63) also acknowledge criticisms of indicator dashboards, notably 'that they lack what has made GDP a success: the powerful attraction of a single headline figure allowing simple comparisons of socioeconomic performance over time or across countries'.

The arrival of indicator dashboards in development policy coincides with widespread criticism of GDP. Many scholars have shed light on the limitations and biases of GDP (Coyle, 2014; Fioramonti, 2013; Hoekstra, 2019; Masood, 2016; Philipsen, 2015; Pilling, 2018). After all, macroeconomic indicators are no objective 'mirrors of the economy' (Herrera, 2010). Lehohla (2019) criticizes the SDG indicators on similar grounds, arguing that while they aspire to be

global, they cannot do justice to the vast array of local socioeconomic realities they purport to quantify.

Political economy literature on statistical capacity (Dargent, Lotta, Mejía, & Moncada, 2018; Devarajan, 2013; Jerven, 2013; Taylor, 2016) provides a quite different perspective of the status of official statistics in policymaking. The main concern here is the weakness (in terms of quality and reliability) of statistics rather than their strength. Within countries, low statistical capacity hinders the abilities of policymakers to make well-informed choices and of analysts to make well-reasoned assessments (Devarajan, 2013). Internationally, it damages cross-national comparability, foreign policy (including trade and development policy), and market intelligence for trade and finance (Mügge, 2019). Jerven (2013) has demonstrated that the national accounts statistics for sub-Saharan African countries are in many cases unreliable or simply unavailable. Similarly, World Bank economist Devarajan (2013) has announced a 'statistical tragedy' in sub-Saharan Africa stemming from the unreliability of GDP, poverty, and population statistics. This suggests that claims about growth in the region rest on shaky foundations: 'In short, in presenting GDP per capita for many African countries, we cannot be sure of either the numerator or the denominator' (ibid., p. S11).

The global governance of statistics involves several functions, including: developing methodologies and setting international standards; providing lending and aid for statistical capacity building and providing technical assistance; and monitoring countries' compliance with international standards and evaluating data quality. IPE literature has studied IO behavior extensively but has thus far mostly overlooked the statistical departments of IOs as consequential actors (cf. Samuel, 2014). Yet IPE theories of IO behavior give important insights that help explain statistical governance. As Skovgaard (2017, p. 344) points out, IO behavior literature can be clustered into studies that focus on intra-organizational influences (generally constructivist and sociological institutionalist) and those that focus on extra-organizational influences (often explained with principal-agent theory).

Intra-organizational analysis focuses on the bureaucratic culture of IOs, the influence of ideas and norms on behavior, and the agency of IO staff and departments (Ban, 2015; Broad, 2016; Barnett & Finnemore, 2004; Enns, 2015; Kentikelenis & Seabrooke, 2017; Momani, 2007; Reinold, 2017; Vetterlein, 2014). Many scholars emphasize the role of knowledge and perceived expertise as a source of authority for IOs. For instance, in the 1990s under president James Wolfensohn, the World Bank rebranded itself as the world's 'Knowledge

Bank' (Enns, 2015). However, rather than signaling a departure from the Bank's long-standing preoccupation with liberalization and economic growth, the knowledge bank discourse 'presented a narrow and reductionist notion of knowledge, characterizing knowledge as a form of capital to be leveraged for economic growth' (ibid., p. 68; see also Mehta, 1999, 2001). The cognitive authority of IOs is evident in the increasingly quantified nature of their work. The generation of benchmarks and indicators widely perceived as authoritative and legitimate, even when they are not, is an important source of informal power for IOs (Best, 2012; Broome, Homolar, & Kranke, 2018; Freistein, 2016; Seabrooke, 2012; Sending & Lie, 2015; see also Moschella, 2012).

Other scholars have emphasized the agency of staff within particular IO departments, such as the area departments of the IMF (Chwieroth, 2013) and the research departments of the World Bank (Broad, 2006; Enns, 2015). To date, however, the statistical departments of IOs have not been considered as actors in their own right. Broome and Seabrooke's (2012) concept of analytic institutions – '...the specialist units, departments, committees, adjudicatory bodies and others housed by or linked to IOs that develop the cognitive framework for understanding and solving policy problems' (ibid., p. 3) – is a fitting label for IO statistics departments. As 'institutions endowed with analytical capacities for a programmatic purpose' (ibid.), IO statistics departments are influenced by the professional norms of economic statisticians (DeRock, 2019) but work within the organizational constraints of the IOs in which they are situated.

Extra-organizational analysis of IOs is often associated with principal-agent (PA) theory. Unlike liberal IR theories, PA approaches (Abbott & Snidal, 1998; Copelovitch, 2010; Elsig, 2012; Hawkins, Lake, Nielson, & Tierney, 2006; Nielson & Tierney, 2003) accept that IOs can act independently. PA theory can help explain why IOs such as the World Bank sometimes act autonomously and at other times respond to demands of member states (Nielson & Tierney, 2003). Principals are most often understood to be groups of powerful member countries. IOs can also act simultaneously as principals and agents vis-à-vis member states (Clegg, 2010; Gutner, 2010; Tamm & Snidal, 2014). Despite being ontologically distinct, PA and constructivist theories of IO behavior are not incompatible (Clegg, 2010; Skovgaard, 2017; Weaver, 2007). They help shed light on the external and internal dynamics of IO behavior, respectively.

Gutner (2010) and Clegg (2010) both address aspects of IOs' engagement with global development agendas and indicators, acknowledging PA dynamics as well as internal

factors. In an analysis of the IMF's participation in the MDGs, Gutner (2010) argues that the poor outcome of the IMF's role in poverty reduction is an example of IO pathology resulting from holding a dual role as both principal and agent (ibid., p. 269). As the IO 'least capable of embracing any bold new initiatives for poverty reduction', the IMF was ineffective in working toward the MDG goals delegated to it (ibid., p. 268). Turning to the World Bank, Clegg (2010) explains the proliferation of poverty indicators within the Bank's research arsenal. He argues that demands for transparency by the U.S. as a principal encouraged Bank staff to produce an increasing range of poverty indicators. The technical nature of generating indicators gave increased independence to staff who supported a shift in Bank policy toward measuring poverty multidimensionally (ibid.). Drawing upon PA theory, in this article the IMF and World Bank are understood to be both principals and agents in the governance of statistics. As agents, they have been mandated the task of overseeing parts of the SDG indicator framework. As principals, they place demands on member states to produce statistics.

Literature on IO behavior tends to overlook the interaction between IOs. In the realm of statistical governance, it is crucial to pay attention to interaction, given the large number of stakeholders with oftentimes conflicting objectives. This article takes inspiration from the concept of 'institutional interaction' (Skovgaard, 2017), but with a slight alteration. Rather than interaction, it is the separation of roles of responsibilities between the IMF and the World Bank that is of interest. The two organizations, along with a multitude of other IOs, NGOs, and states, often intervene in the national statistical systems of the same countries, at the same time, but focused on different aspects of the statistical system. In developing countries, the issues prioritized by the IMF often take precedence over those of the Bank. This can be explained by intra-organizational factors: the roles of statistical departments as analytic institutions in IO bureaucracies, the ways in which member state data is utilized by the IOs, and the formal and informal mechanisms used to promote data provision. There is important variation on each of these axes between the IMF and the World Bank. The following section provides background information on these efforts and their relation to the SDGs.

Background: international statistics from the 1940s to the SDG era

Harmonization and statistical capacity

The emergence of globally harmonized official statistics is a relatively recent phenomenon. Its origins are in two historical developments. The first is the period of European colonialism, when colonial authorities collected a limited range of statistics – primarily agricultural and demographic statistics – for purposes of revenue extraction (taxes) and administration (Khan, Wales, & Stuart, 2015, p. 3). Data collection in these areas was often continued by post-independence governments in African countries and other former colonies (ibid.). The second is the formation of international organizations such as the IMF, World Bank, and United Nations in the aftermath of World War II. Harmonized economic statistics were crucial to the missions of these newly formed organizations, above all for purposes of monetary stability and post-war reconstruction (Ward, 2004). Only 46 countries were members of the UN when the system was founded, most of which were industrialized countries. As political independence and decolonization accelerated and many newly independent states joined the UN, these countries were incorporated into international statistical standards such as the UN System of National Accounts (SNA) and the IMF Balance of Payments Manual (BPM).

Following WWII there was strong emphasis on economic statistics – particularly national accounts, which were first constructed for developing countries on a small scale in the 1950s and increasingly in the 1960s (Khan et al., 2015, p. 4). Social statistics were for the most part not collected in developing countries. The focus on national accounts was in line with a Keynesian approach to encouraging economic growth (ibid.). Speich (2008, pp. 14-21) argues that GDP spread so quickly and gained a prominent role in development policy partly because it made comparisons and quantitative analysis so easy. GDP per capita and similar concepts 'enabled the experts to travel easily from one developmental case study to another. The performance of the Mexican economy could be used as a benchmark for Nigeria and the East African Community seemed comparable to Indonesia' (ibid., p. 21). An interviewee at the UN Statistics Division agrees that

> economic statistics was very central in the whole development philosophy. It was about creating efficiency, and GDP, investments, exports and imports that would drive development. So economic statistics was very central to that process. (Interview with Chief of UNSD Economic Statistics Branch, New York, 2019)

According to Ward (2004, p. 7), in the early decades of the UN and the Bretton Woods Institutions, 'an emerging consensus soon began to drive the development debate'. In particular, the concept of full employment was a central goal of all industrial countries and written into the mandates of the UN, IMF, and World Bank. 'For the developed industrial countries, this objective was viewed as synonymous with poverty reduction, and it accounts for the statistical preoccupation with GNP, growth, and the national accounts' (ibid.). In this early period, Ward argues, the preferences of the U.S. had a major impact on global statistical policy. There was 'strong suspicion of "social" measures and oblique criticism of any statistics that appeared to hint at some measure of social achievement or equity' (ibid., p. 10).

Beginning in the early 1970s, IOs began to incorporate more social statistics through new household surveys like the United Nations Household Survey Capability Program (UNHSCP) (Khan et al., 2015, p. 4). In the World Bank, the first set of indicators to complement GDP were introduced in 1978 under Bank president Robert McNamara (Fioramonti, 2013, p. 96). The introduction of the Living Standards Measurement Survey in 1983 by the Bank was another major step in statistics toward a development agenda focused on poverty reduction rather than growth alone (Khan et al., 2015, p. 4). A major increase in demand for country data for policy by IOs was noticeable starting in the 1990s. Among other things, the IMF launched the General Data Dissemination System (GDDS [described below]); the Millennium Development Goals began in 2000, with major implications for statistical systems; and the World Bank and IMF introduced the data-intensive Poverty Reduction Strategy Papers (PRSPs) in the early 2000s as part of the Heavily Indebted Poor Countries initiative.

The demand for data in recent decades goes hand in hand with the emergence of statistical capacity as an objective of development policy. The World Bank's Statistical Capacity Indicator (SCI) assigns countries scores based on methodology, periodicity, and source data on a 0-100 scale. On average for all World Bank lending groups, the SCI only improved by 2 points between 2004 and 2017 (PARIS21, 2019, p. 25). By region, Africa and Oceania (which includes many small island states) perform substantially lower than other regions. In many

countries, staff and budgets are extremely limited, as a UN Statistics Division statistician specialized in capacity-building explains:

> So, you know, I work with some very small countries – you know, in the Caribbean or elsewhere – and they might have one person doing all the economic statistics, CPI, national accounts, everything. And if that one person leaves you're right back to square one. (Interview with UNSD statistician, New York, January 2019)

According to research by PARIS21 (2019, p. 16), 'more than half of all African NSOs perceive that capacity [programs] did not involve sufficient consultation between national and international stakeholders; worldwide, one third of NSOs consider that [programs] are not meeting their needs'. For one thing, donors are uncoordinated, often placing different demands on a single country at the same time for various types of statistics (ibid., p. 17). Moreover, 'Areas such as environmental statistics are not getting enough support, while the majority of recent funding has been allocated to economic and demographic statistics' (ibid.).

Statistics for the Sustainable Development Goals

In 2015, the UN Statistical Commission established the Inter-Agency Expert Group on SDG Indicators (IAEG-SDGs), composed of 27 representatives of National Statistical Offices (NSOs) (Thérien & Pouliot, 2019, p. 12). The expert group led the development of the SDG global indicator framework, which was approved by the UN General Assembly in 2017 (ibid.). The SDGs are comprised of 17 goals and tracked by, at present, 232 agreed upon indicators. Monitoring the Goals thus requires a great deal of data. One response to this challenge has been a call for a 'data revolution' (Data Revolution Group, 2014). A UN advisory group stresses the potential for revolutionizing data collection for sustainable development:

> New technologies are leading to an exponential increase in the volume and types of data available, creating unprecedented possibilities for informing and transforming society and protecting the environment. Governments, companies, researchers and citizen groups are in a ferment of experimentation, innovation and adaptation to the new world of data,

> a world in which data are bigger, faster and more detailed than ever before. This is the data revolution. (Data Revolution Group, 2014, p. 2)

The increased demand for statistics, in large part a result of the SDGs, is difficult or impossible to keep up with for most countries. According to the acting director (at the time of interview) of the UN ESCAP Statistics Division, speaking about the Asia and Pacific region, the SDGs have created both significantly more demand for statistics from data users, and also 'a lot of hype about it in the sense that, which we are seeing at the moment, is it results in a lot of requests from countries, international agencies for our support to strengthen statistics' (Interview with ESCAP Statistician 1, Bangkok, June 2018). ESCAP, like other agencies, is 'trying to figure out how we can strategically best actually meet that increased demand' (ibid.).

The SDG global indicator framework assigns 'custodian agencies' responsible for overseeing the provision of certain SDG indicators. The IMF is the custodian agency for four SDG indicators measuring: financial access, financial soundness, total government revenue as a proportion of GDP by source, and the proportion of the domestic budget funded by domestic taxes (IMF, 2019, p. 33). The IMF also participates in developing methodologies for other SDG indicators involving economic statistics (ibid.). Roughly 40% of the SDG indicators include economic variables, directly or indirectly (PARIS21, 2019, p. 35). The IMF argues that 'By providing [capacity development] to improve key economic variables, such as GDP, balance of payments data and government finance statistics, the measurement of SDG indicators can be made more accurate and reliable' (IMF, 2019, p. 33). The World Bank is a custodian or co-custodian for 20 indicators. The Bank also participates in developing and monitoring 22 additional indicators (World Bank, 2019, pp. 121-122). The 42 indicators with which the Bank is involved 'cover a range of topics including poverty and inequality, social protection, gender equality, financial access, remittances, health, energy, infrastructure, and others' (ibid.).

Statistics in the IMF and World Bank: bureaucracy, capacity, and coercion

Despite the similarities between the IMF and World Bank as major international financial institutions, there are important differences in their approaches to and uses of statistics. These organizational characteristics vary in three areas: the role of the statistics

departments in the broader organizational structure of the IOs; reasons for intervening in national statistical systems and approaches to statistical capacity building; and the formal and informal mechanisms applied to obtain data from member countries. Such variation between the World Bank and IMF helps to explain why their relations with member states play out as they do, and why they engage so differently with the SDG indicators framework.

Analytic institutions: The roles of statistical departments in the World Bank and IMF

At the World Bank, the department responsible for the coordination of statistical issues and the maintenance of databases is the Development Data Group (DDG). DDG is part of the Development Economics Vice Presidency, the research and data branch of the World Bank. According to a World Bank statistician, DDG is a 'de facto statistics department' rather than a 'real' statistics department (Interview with World Bank statistician 1, Washington, January 2019). That is, there is no formal statistics department equivalent to that of the UN or IMF. This has begun to change over the years as DDG has evolved in the direction of a more formal statistics department (ibid.). Earlier in the World Bank's history, DDG was focused primarily on macroeconomic statistics. Until approximately the turn of the century DDG was mainly focused on a few tasks, including the production of flagship World Bank publications such as the World Development Report, the compilation of debt statistics and other headline indicators, and managing databases (Interview with World Bank statistician 2, Washington, January 2019). Now, there is increased focus on poverty statistics and household surveys. The broadening of DDG's remit coincides with the launch of the Millenium Development Goals.

The IMF, in contrast, does have a formal statistics department. The IMF Statistics Department, also referred to as STA, is crucial to the data-intensive work of the IMF as a whole. The activities of the IMF fall into three main categories – surveillance, lending, and technical assistance – each of which relies heavily on regular and timely macroeconomic and financial sector data. Put simply, the IMF is composed of two kinds of departments: area departments and functional departments. STA is considered a functional department Interview with IMF statistician 1, Washington, January 2019). Functional departments support area departments, and thus STA supports area departments on data and statistics. All other IMF departments consult with the statistics department whenever they have questions about country data or other queries (Interview with IMF Statistician 2,

Washington, January 2019). But area departments also collect data from member states. STA trains countries to provide area departments with data they need. That is 'the most important mandate of STA' (ibid.). Another role of STA is publishing data. For this purpose, 'STA asks countries to produce data only based on the most modern methods – for example, BPM6 [Balance of Payments Manual 6]' (ibid.). Moschella (2012, p. 60) describes the Fund's area and thematic departments as analytic institutions with the purpose of 'defining a policy problem, diagnosing its causes, and prescribing the economic policies that member states are expected to adopt for its solution'. They enable the in-house research done by IMF economists as well of the role of monitoring member countries through Article IV surveillance (ibid.). Economic data is crucial to all of this, making the statistics department a vital part of the IMF organizational structure.

Diverging approaches to statistical capacity building

The primary role of the World Bank in statistical capacity building is as a lender. The Bank has established several lending facilities, most notably the Trust Fund for Statistical Capacity Building (TFSCB) that was set up in 1999. The TFSCB provides small grants up to USD $500,000 over two or three years to low-income countries or to regional organizations to implement statistical capacity building projects (IEG, 2011, p. xv). It was not until relatively recently that statistical capacity was firmly on the World Bank's agenda. 'Statistical capacity improvement' was discussed for the first time by the World Bank Executive Board at an informal session in 2002 (Eele, 2006, pp. 1-2). The Board concluded that 'support for the international statistical system should be expanded, to underpin the results agenda and PRSPs'.

The Bank's approach to statistical capacity building is characterized by cooperation and delegation. At the Second International Roundtable on Managing for Development Results in Marrakech, Morocco in 2004, DDG presented a proposal for the Marrakech Action Plan for Statistics (MAPS). MAPS quickly became the overarching international framework for statistical development and was extended in 2015 as the Busan Action Plan for Statistics. The Banks's Development Grant Facility provided USD $41.4 million for MAPS projects over the period 2006-14 (Ngo, 2015, p. 9). MAPS was formed partly in response to the data demands of the MDGs (World Bank DDG, 2004: 2), and the Busan Action Plan fills the same role for the SDGs. The Bank was also instrumental in setting up the Partnership in Statistics for Development in the 21st Century (PARIS21), which was established in 1999. PARIS21 was

created to 'build and strengthen the statistical systems – national and international – necessary for setting development policies and monitoring outcomes' (World Bank DDG, 2004, p. 2). PARIS21, which has its offices within the OECD headquarters in Paris, continues to be one of the leading actors in statistical capacity building.

The Bank establishes partnerships not only with countries receiving capacity building assistance but also countries that help to provide it. DDG has memorandas of understanding (MOIs) with many countries including Denmark, Norway and the Netherlands, as well as with independent consultants (Interview with World Bank Statistician 2, Washington, January 2019). The partnerships with NSOs of high-income countries, especially EU countries, are necessary in order to have a suffient number of experts to carry out TA. For example, the Bank has a partnership with the Netherlands, wherein Dutch government statisticians provide expertise to Carribbean states through World Bank funding schemes (ibid.).

At the IMF, capacity building and technical assistance is closely integrated with the Fund's surveillance and lending operations (IMF, 2015; Reichmann, 2015). 'Surveillance is the bread and butter' of the IMF, and statistics are crucial to this (Interview with IMF statistician 3, Washington, January 2019). STA 'focuses [capacity building] on areas that are considered most important to reduce risks and vulnerabilities to economic stability and, therefore, improve conditions for sustainable economic growth' (IMF, 2018). In terms of IMF capacity development allocation by region, in 2018 the real sector (national accounts, price statistics, and merchandise trade) received the highest share of technical assistance in all regions outside of Europe – accounting for roughly 40 percent in all regions outside of Europe (IMF, 2018, p. 10). In Sub-Saharan Africa for example, real sector statistics accounted for more than half of IMF capacity development, and government finance statistics slightly over 25 percent, with the rest allocated to (in decreasing order) external sector, monetary and financial, and data dissemination and multisector (ibid.). Sub-Saharan Africa accounted for 43 percent of all IMF capacity development, followed by Asia and the Pacific (19 percent), Western Hemisphere (18 percent), Middle East and Central Asia (13 percent), and Europe (7 percent) (ibid.) .

The overarching strategy of STA is changing in response to a renewed mandate from former managing director Lagarde in 2018. IMF staff claim that the changes are taking STA in a less coercive direction: 'We are not preaching the gospel so much anymore. There has been a sea change – not just in STA, but overall at the Fund – in terms of placing country needs first'

(Interview with IMF statistician 2, Washington, January 2019). For example, in contrast to past practices, the IMF now 'will not go to a country and say, "You're on BPM4, you need to update"' (ibid.). This also involves a more hands-off approach with the data reported by countries. Whereas validation of data by the IMF was largely done manually in the past, it is now more often validated automatically (ibid.). The same is true for SDG data within the Fund's domain in that there is less adjustment of the data. Despite these institutional changes, the primary role of country data for the IMF remains the surveillance function. Typically a few key indicators – including GDP, debt and international reserves – get the most attention in country surveillance (interview with IMF Statistician 1, Washington, January 2019). According to an IMF statistician,

> When countries ask for advice, we take a look at what the needs are. For example, a country might have a large informal sector but a small financial sector. We actually have a big influence over what countries prioritize, and we also know a lot about the countries. We know what information they need to provide in order to carry out good surveillance. (Interview with IMF statistician 3, Washington, January 2019)

According to IMF statisticians, the Fund has moved away from a heavy-handed approach to obtaining data from member states. But, in contrast to the Bank, the Fund is still concerned with procuring specific indicators. Thus, while both IOs can claim to support country ownership, for the IMF this means ownership over the process of data collection rather than the choice of indicators. By helping to establish and working closely with PARIS21 and the Busan Action Plan for Statistics, the Bank has genuinely embraced country ownership in terms of setting local priorities for national statistical systems, despite the continuing importance of macroeconomic statistics such as GDP and debt for World Bank research and policy.

Mechanisms to procure member state data

To the extent that the Bank is involved in encouraging member countries to produce certain indicators, it is indirectly and through informal mechanisms. An example is the Statistical Capacity Indicator (SCI). The SCI is the only comprehensive indicator for statistical capacity. Compliance with international standards, including the System of National Accounts and the Balance of Payments Manual, contributes to a country's score. The SCI

has had mixed results thus far. Initially, raising awareness about statistical capacity and creating peer pressure were the motives for creating it (Interview with World Bank Statistician 2, Washington, January 2019). 'It can be good to have a comparison. People would see that other countries and also people within the Bank were paying attention, and they would do something about it' (ibid.).

To a limited extent, the Bank can also place pressure on national statistical systems through conditional lending. In addition to specialized vehicles like the TFSCB, the Bank also provides loans for statistics through regular lending (in the form of IDA credits or IBRD loans). Regular lending can take the form of stand-alone statistical capacity projects, or statistics can be part of, say, a large-scale public sector reform project (ibid.). If it is the former (statistics only), there is no need to add conditions (ibid.). But in some such projects, a World Bank team does in fact add conditions – for example a requirement to prepare statistics legislation. There is disagreement among Bank staff over whether this is appropriate. One interviewee said that 'If countries had the capacity to do it, they would' (ibid.). However, when this type of conditionality is included in World Bank lending, it does not place demands on prioritizing certain types of statistics but rather concerns fundamental capacity-building issues such as the imposition of statistics legislation, as in the preceding example.

The IMF has both formal and informal means of promoting data provision. The 'fundamental need for information was transformed into specific obligations for members, as ingrained in the original IMF Articles of Agreement' (De Las Casas, 2016, p. 1). The current legal framework includes a minimum set of data that member countries are required to report and the steps that are followed 'in the relatively infrequent cases of misreporting' (ibid.). The first step in 'disciplining' countries for failing to provide required data is censure (Interview with IMF Statistician 1, Washington, January 2019). Thereafter, a country can be declared ineligible to borrow from the Fund. Venezuela is an example of a country that has been censured (ibid.). Moreover, there have been cases of the IMF including demands for statistics reporting or statistical system reform into conditional lending (Interview with IMF statistician 3, Washington, January 2019). 'It is rare, but when it happens it's macro-critical' (ibid.). From the IMF's perspective, a macro-critical situation would arise when IMF staff 'really do not have a grip on some part of a country's economy, for instance government finance' (ibid.).

Beyond the legal framework, the IMF has taken informal measures to encourage states to report the data it requires. Indeed, 'the information members share with the IMF de facto, on a voluntary basis, vastly exceeds the minimums required by the legal framework' (De Las Casas, 2016, p. 10). The most notable means by which the Fund promotes voluntary data reporting (while also reinforcing legally required data provision) is through the data standards initiatives. The IMF Standards for Data Dissemination were created in 1996 in response to perceived data gaps leading up to the 1994 Mexican financial crisis. There are three tiers of Data Standards based on a country's level of statistical capacity and integration in international capital markets.

The lowest level, the Enhanced General Data Dissemination System (e-GDDS), involves closer monitoring and lower requirements than the others. Participating countries are required to undergo yearly evaluations by IMF staff. Subscription is voluntary but involves strict commitments in order to participate (IMF, 2019a, p. 1). The next level, the Special Data Dissemination Standard (SDDS), is intended 'to guide countries that have, or that might seek, access to international capital markets in the dissemination of economic and financial data to the public' (ibid.). The goal of the e-GDDS is to prepare countries for entry into the SDDS. The Special Data Dissemination Standard Plus (SDDS Plus) is the highest tier, aimed at countries with systematically important financial sectors (ibid., p. 2). The e-GDDS requires dissemination of 14 categories of macroeconomic and financial data, the first of which is National Accounts (GDP). The others are: consumer price index, central government operations, central government gross debt, depository corporations survey, central bank survey, interest rates, stock market, balance of payments, external debt, official reserve assets, merchandise trade, international investment position, and exchange rates. The only demographic indicator is population.

Although the e-GDDS and SDDS are voluntary, there are several reasons for countries to participate. For one thing, compliance with standards such as the e-GGDS can help insulate countries from criticism of their official statistics. Statistical offices might use them as a 'key defense' (Interview with former IMF Statistician, Milton Keynes, June 2017). For example, if a country's GDP figures are criticized, a statistical office can respond by pointing out that they're complying with e-GDDS requirements (ibid.). Many countries participate in the IMF data standards because they want to improve their borrowing base and access financing on more favorable terms (Interview with IMF statistician 3, Washington, January 2019). Participating can also be a signal of a country's commitment to transparency. 'If countries

publish key data, it gives market actors a signal of transparency, even if the data is wrong' (Interview with IMF Statistician 1, Washington, January 2019).

Summary

In sum, despite their similarities as powerful international financial institutions, the roles of the Bank and Fund vis-à-vis statistics are starkly different. While the SDG agenda fits neatly into the Bank's poverty- and development-focused mission, the fit with the IMF's oversight of the international financial and monetary system is less clear. The IMF's role in macroeconomic surveillance also means that its departments rely on specific economic and financial indicators reported on a regular basis. The Bank, in contrast, takes a more hands-off approach to overseeing the statistical output of member states. These organizational traits also shed light on their dual roles as principals and agents. For the IMF, its role as principal takes precedence over its participation in the SDGs because it relies on country data for its oversight of the international financial and monetary system. Yet, there is little friction between its dual principal-agent role, since its responsibilities for the SDGs are within its specialty areas of macroeconomic and financial statistics. Nor is there conflict in the World Bank's dual role. Although the Bank relies on a wide range of data for its authoritative research and for its lending operations, it has less urgency in its position as principal. Its long-standing role as a lender for statistics, characterized by country ownership, aligns with its active participation in 42 SDG indicators. `

Institutional division of labor and the triumph of IMF priorities over World Bank country ownership

Among the many actors in global statistical governance, there is cooperation but also a division of roles and responsibilities with respect to the types of activities carried out, such as technical assistance, lending, and methodology. In principle, the various IOs involved in statistical governance – including not only the Bank and IMF but also the UN Statistics Division (UNSD), Eurostat, the ILO, OECD, World Health Organization, to name just a handful – cooperate and communicate so as to coordinate their activities, which overlap at the domestic level. Yet, there are limitations to this coordination. As a UNSD statistician explained,

> There's always a bit of a tension, though, because you know it's never going to be perfect. All the different organizations do have different priorities. You know, here at the UN it's very much about involving all countries. Everybody's got one vote at the UN, you know, 'leaving no one behind'. The real drive at the IMF, you've got to maintain the stability of the world financial system, so you've got a slightly different focus. You've got a lot of overlap but it's not 100 percent overlap. You know, World Bank is more about development goals. (Interview with UNSD statistician, New York, January 2019)

As the previous section of this article demonstrates, the IMF and World Bank indeed have different priorities with regard to statistics. In high-income countries, statistical capacity is sufficient to accommodate the demands posed by their membership in international organizations alongside domestic priorities. For example, several European countries produce satellite accounts to complement the System of National Accounts. But where statistical capacity is low, meeting the demands of IOs and donors places constraints on national statistical systems. Although SDG data can be obtained through one-off surveys or estimated by visiting experts, developing country NSOs in general lack the budget and capacity to independently produce all of the data required for SDG monitoring. This creates the need to set priorities. In principle, statistical capacity building aims to boost capacity enough that countries can produce official statistics without external assistance and based on domestic priorities. But in the short term, low capacity sharply reduces domestic agency to determine which economic and social and economic indicators are prioritized. As a UNSD statistician elaborated,

> It's that constant tension. Various organizations with funding coming in and say, you know, we've got money, we want you to do a study of trade or environment or whatever the issue is, gender. And of course the countries aren't going to say no to somebody with funding. (Interview with UNSD statistician, New York, January 2019)

The source of funding can have an effect on the characteristics of capacity-building projects. If the funding is bilateral, the training is always done by a statistician from that country. For example, 'if the funding is from USAID then it will always be a US statistician. This can be a problem, particularly in ex-colonial situations' (Interview with former IMF statistician, Milton Keynes, June 2017). In these cases, the former colonial power maintains a relationship

with the former colony, and most of the aid comes from that country. The same applies to IOs. Historically, both the IMF and the Bank have put pressure on member states to produce GDP. According to a former World Bank statistician,

> The World Bank and – well, particularly the World Bank – when they were looking at who is qualified for concessional lending would look at GDP per capita. And, of course, the economists in the Bank and the Fund, when they went to countries, wanted figures that they thought they knew what they were, so they would ask for GDP figures. (Interview with former World Bank statistician, Edinburgh, June 2017)

According to a World Bank statistician, national accounts and prices are seen as priorities both within the Bank and among staff of national statistical offices. The interviewee emphasized the importance of improving national accounts and GDP for Sub-Saharan African countries, among other reasons for increasing confidence in the quality of the figures (Interview with World Bank Statistician 1, Washington, January 2019). Even though the Bank does not explicitly pressure member countries to prioritize macroeconomic statistics like the IMF does, member countries frequently request assistance on national accounts (ibid.).

The de facto prioritization of macroeconomic statistics is reflected in the view of a former IMF statistician that countries with low statistical capacity should first 'get the basics right' (Interview with former IMF Statistician). For example, in an interview, a former IMF statistician expressed that satellite accounts can distract from higher priorities and that 'the basics have to be in place first' (ibid.). Satellite accounts are extensions to the System of National Accounts which allow for complementary statistics on gender, natural resources, tourism, and so on, and can contribute to SDG indicators. Specifically, 'well-functioning national accounts have to come first. Moreover, it should be a separate project from the main activities of the statistical office so as not to take away resources from the fundamental work' (ibid.).

GDP is required for the indicators of 9 of the 17 Goals, and 40 percent of the SDGs directly relate to economic indicators. The strong economic focus of the SDGs has been welcomed by those who feel that macroeconomic statistics should come first (Interview with ESCAP Statistician 2, Bangkok, June 2018). 'So there is some sort of incentive for countries to develop their economic statistics, macroeconomic statistics' (ibid.). Capacity-building for economic statistics is not only a response to the SDGs. The opposite is also true: the

excitement around the Goals presents an opportunity for IOs and other actors to push for more attention and funding for official statistics. The linkages between GDP and many of the SDG indicators allows for national accounts to be prioritized while still, on the surface, contributing to the SDGs. With regard to the IMF's commitment to the SDGs, the IMF Executive Board determined that 'the primary contribution the IMF could make to supporting the global development agenda was to deliver on its core mandate of helping maintain macroeconomic and financial stability at both the global and national levels' (IMF, 2019b, p. 2).

An IMF working paper on links between the SNA (the framework for GDP) and the SDGs argues that national accounts can accommodate many of the SDG indicators, including social and environmental dimensions (Alexander, Dziobek, & Galeza, 2018). However, this would require the creation of satellite accounts, 'where the broad structure of the SNA is maintained but some of the conventions of the central framework may be relaxed' (ibid., p. 10). The problem with reliance on satellite accounts is that they require capacity (skills, staff, and funding) that many low-income countries lack. Far from using an expanded SNA, low-capacity countries are using a limited version of the SNA – still consistent with the SNA and internationally comparable, but not fully implemented. A former World Bank statistician explained that

> A lot of countries never got much further than just calculating GDP. The SNA is much richer than that. It shows how the different sectors of the economy interact with one another. And it was then, and to some extent is still the case that a lot of countries don't get into that. Just as most economists don't get further than GDP. So, it's true that everybody uses the SNA, in the loose term, but not everybody's using the same version. Not everybody's making as much of it as everyone else. (Interview with former World Bank statistician, Edinburgh, June 2017)

What is more, when low-capacity countries create a National Strategy for the Development of Statistics (NSDS) – a roadmap and budget for the statistical system – international standards receive high priority. The NSDS framework is the foundation of the Busan Action Plan for Statistics and overseen by PARIS21, two initiatives that the World Bank was instrumental in setting up. An NSDS is a detailed plan for improving the national statistical system of a given country over of period of 5 to 10 years. 'Countries put standards like the GDDS or the BPM [Balance of Payments Manual] on their NSDS plans because they know

they can get funding for these things' (Interview with former IMF Statistician, Milton Keynes, June 2017). The external pressure to prioritize economic statistics comes in large part from the formal and informal mechanisms of the IMF. For example, Laos – the most recent country to join the IMF's e-GDDS – was strongly encouraged to join by both the IMF and World Bank (Interview with Lao Statistician, Vientiane, June 2018). For the Lao statistical office, national accounts, prices, and a census are very difficult to produce due to capacity constraints (ibid.).

From the domestic perspective, there are also incentives to prioritize economic statistics when constructing an agenda for the national statistical system:

> The other thing that happened – it happened in a number of places – because international organizations were really keen to have GDP, it was easier to get technical assistance to work on GDP than it was to get technical assistance to work on, say, a population census or some other – I was going to say road traffic statistics or something like that, that's a silly example – but, employment or health or whatever. (Interview former World Bank Statistician, Edinburgh, June 2017).

Summary

The fact that many statistical offices face high turnover and low staff (indeed, sometimes one person responsible for all economic statistics) is widely recognized. However, this state of affairs leads to an additional problem that has been overlooked. Namely, when staff and budgets of national statistical offices are so tightly constrained, statisticians cannot produce all of the data required for domestic use, let alone the data demanded by foreign actors. This means that aspirations of donors and of IOs, including capacity-building for SDG indicators, fall short. Even more consequential is that when choices have to be made with regard to which types of statistics are produced on a (semi-) regular basis and which are collected infrequently or not at all, low-capacity countries face strong external pressures to produce certain statistics rather than others. The World Bank takes a country ownership approach and does not have a strong bearing on particular indicators. The IMF has clear priorities and enforces these priorities for the sake of macroeconomic surveillance. Often, when countries request funding and assistance from the Bank, these requests line up substantially with the demands of the IMF.

Conclusion

Taken together, there is a gap between the ambitions of the SDGs and the statistical practices of the IMF and the World Bank on the ground. However, individually, each organization is dutifully carrying out its mandate for the SDG indicator framework. To understand how this happens, this article emphasizes the division of labor between actors, their individual priorities, and the way that these priorities interact. The different approaches of the two IOs, and the fact that the IMF's priorities are often predominant, is explained by characteristics of the IOs: the roles of statistics departments in the IO bureaucracies, the reasons for pursuing statistical capacity building, and the mechanisms in use for promoting data provision.

These characteristics were in place before the start of the SDGs. While the World Bank's statistical apparatus developed in close connection to the MDGs, statistics at the Fund have been driven by surveillance and crisis management, with the MDGs and SDGs only peripheral to these efforts. The variation in the ways the Bank and Fund approach statistical governance is not surprising. It lines up neatly with the reputations of the institutions and their approaches to global economic governance and development. But the variation is important because it shapes the character of statistical efforts on the ground in member states. World Bank statistical governance is more open-ended and leaves more room for country ownership and hence local priorities. This means little in practice, since there is a division of labor between the major IOs in such a way that allows the IMF's priorities to reign supreme.

This analysis of the World Bank and the IMF provides insights that extend to other international organizations as well. The IMF is unique in its use of statistics and its coercive approach to obtaining data from member countries. While no other organization matches the power and influence of the World Bank in development policy, other actors with a large role in statistical capacity building take similarly hands-off approaches. The UN Statistics Division, for example, plays a coordinating role for statistical capacity building and organizes regional trainings. And Eurostat is one of the largest providers of official development assistance for statistics, but does not have structural power over aid-receiving countries in the way that the IMF does.

These findings point out a pathology in the delegation of responsibilities for the SGD indicators. The question is not whether the World Bank is more genuine in its commitment to the Sustainable Development Goals. On the contrary, we should not expect the IMF to significantly diverge from its programmatic function related to macroeconomic and financial surveillance. Rather, the pathology emerges because one actor, the IMF, has a more urgent imperative for data collection and more effective mechanisms to enforce data provision. The IMF is unequivocally the most powerful actor in statistical governance, and the IO best suited to coerce (through conditional lending and legal provisions) or incentivize (through rankings and peer pressure) countries to comply with demands for data.

The SDGs have in many ways successfully strengthened the push for large-scale statistical capacity building beyond economic statistics narrowly defined. Yet, for the statistics department of the IMF, the SDGs have served as an umbrella approach that has not fundamentally changed its behavior. Instead, the IMF has been able to fulfill its mandate for the SDG indicator framework while continuing its focus on macroeconomic and financial statistics. The high prevalence of economic statistics in the SDG indicators makes this easy to do.

This is not to suggest that prioritizing macroeconomic data is in itself harmful to development outcomes or should not be collected. Rather, these findings demonstrate that the data ambitions of the SDGs are unrealistic given the state of statistical capacity in developing countries. As long as this is the case, economic statistics are likely to be prioritized as a result of the institutional dynamics between IOs. More importantly, as long as statistical attention to the full range of development goals suffers as a consequence of competing priorities, the ability to achieve progress on these goals will also suffer.

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