15. The Potential of New Data to Accelerate the SDGs

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INTRODUCTION

The ambitious Sustainable Development Goals (SDGs) agenda promotes a broader sustainable development agenda, addressing complex development challenges and proposing solutions to a wide range of wicked development problems, from tackling the root causes of poverty to development of accountable and people-centred institutions. The 2030 Agenda for Sustainable Development contains detailed and all-encompassing targets and indicators that have to generate informed policymaking and accountability for the achievement of the SDGs by 2030. For this scope, the global indicator framework was adopted by the General Assembly on 6 July 2017.[250] According to this framework, there are three tiers of indicators for measuring the progress of SDG Agenda. Tiers I and II are conceptually clear and have an internationally established methodology, and of the 230 indicators only 25 percent of all indicators have data that are available in a publicly accessible format.[251] Whereas there is no standardized methodology for the Tier III indicators, it makes this cohort of indicators the most challenging in terms of measurement using official sources of data. At the same time, given the exponential increase in volumes of data and that only 0.5 percent of data is currently analysed,[252] it is exactly this space that is ripe for trying out new approaches, experimenting with new sources of data and demonstrating their viability in sensing, measuring and providing valuable insights to policymakers, enabling timelier responses.

In light of this, United Nations Development Programme (UNDP) offices around the world have been trying out new approaches to measuring Tier III indicators. This article draws on the experience of a cross-regional UNDP Data Innovation Project, honing into Moldova Innovation

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250 Resolution adopted by the General Assembly on, https://undocs.org/A/RES/71/313, 6 July 2017.

251 Casey Dunning and Jared Kalow, Center for Global Development, 'SDG Indicators: Serious Gaps Abound in Data', 2016, https://www.cgdev.org/blog/sdg-indicators-serious-gaps-abound-data-availability.

252 Guess, Angela, 'Only 0.5% of All Data is Currently Analyzed, Data Diversity, 2015, http://www.dataversity.net/only-0-5-of-all-data-is-currently-analyzed/.

Lab (MiLab), a joint project of UNDP Moldova and the Government of the Republic of Moldova, and Albania's measurement of jobs in sustainable tourism. The article at hand will demonstrate how alternative (user-generated, big data, sensor) data are a valuable and cost-effective source for the measurement of the SDG indicators and furthermore can be used more efficiently by public institutions in the policymaking cycle. The issue of using new data for the SDGs has a multiplicity of implications and associated risks, including related to privacy, access and overall security, which require further deliberation and are not fully addressed in this article.

CLOSING DATA GAPS

Global poverty measures may be off the mark by millions;[253] in effect, 230 million children worldwide are not properly registered[254] and even though we know that violence against women affects one in three women globally,[255] more detailed data are lacking. On SDG measurement, 42 percent of the indicators are Tier I, of which only 62 percent have publicly available data. These data gaps hinder the possibility to measure human outcomes and the progress towards the sustainable development agenda in a timely manner, across demo-graphics and geographies. Our digital breadcrumbs, a term coined by Sandy Pentland to describe the data trail that we leave behind,[256] such as phone records, credit card transac-tions, likes and shares on social media and other sources of data, have significant potential in this area: crowd-sourced image data from the Philippines is creating a real-time food price index,[257] in Tunisia Twitter data were used to understand attitudes towards corruption and in Côte d'Ivoire, call detail records were used to measure subnational development.[258]

In Albania, a country with a growing tourism industry,[259] a partnership between the National Statistical Institute, UNDP and the Oxford Internet Institute sought to find out how to measure the proportion of jobs in sustainable tourism industries (SDG indicator 8.9.2). Using data from Booking.com and TripAdvisor, the team developed a database of 1,700 hotels in the country and identified 89 variables across five categories: attributes, facili-ties, language, rating and share. The findings showed that sustainability is correlated to a higher number of stars and more reviews. These insights, unavailable before, are especially

253 Overseeas Development Institute, 'The data gap in global development', 2015. https://www.odi.org/opinion/9478-infographics-data-revolution-gap-sdgs-sustainable-development-goals.

254 Bopaiah, Minal, '7 Data Gaps in Women's Health that Show why We're #NotThere Yet', 2015 https://psiimpact.com/2015/03/7-data-gaps-in-womens-health-that-show-why-were-notthere-yet/.

255 Mlambo-Ngcuka, Phumzile, 'Gender-based Violence Movement Sees Tipping Point', 2013.

256 Pentland, Alex "Sandy", 'The Data-Driven Society', Scientific American, October 2013, http://connection.mit.edu/wp-content/uploads/sites/29/2015/01/Pentland-SciAmerican-Data-Driven-Society.pdf.

257 Baker, David, 'Photos are creating a real-time food-price index', 2016 http://www.wired.co.uk/article/premise-app-food-tracking-brazil-philippines.

258 Šćepanović, Sanja, Igor Mishkovski, Pan Hui, Jukka K. Nurminen and Antti Ylä-Jääskik, 'Mobile Phone Call Data as a Regional Socio-Economic Proxy Indicator', 2015, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4405276/.

259 Mejdini, Fatjona, 'Albania Aims to Build on Boom in Tourism', 2017 http://www.balkaninsight.com/en/article/albania-strives-to-save-the-growth-trend-in-tourism-04-03-2017-6.

important in guiding tourism-related investments and therefore driving its contribution to economic development.

Obviously, these types of data carry risks, including access in a sustainable way and limited representation (not everyone uses a smartphone, or is on Twitter). On the SDGs, on which governments report periodically, statistical institutions may shy away from fully relying on data sources which are controlled by external bodies, i.e., companies which set their own policies on data (re)usage. In the aftermath of the Cambridge Analytica case, Facebook is looking at strengthening protection of its users' data,[260] and some are arguing that the users themselves should be able to decide by whom and how their data are used.[261] Projects relying on Facebook data may face additional scrutiny and are likely to be affected by the change in policies.

NEW SOURCES OF DATA FOR BETTER POLICY DECISIONS

The data revolution is here, with the volume of data increasing exponentially: by some estimates, 90 percent of the data in the world has been created in the last two years and the volume is projected to increase by 40 percent annually. The data revolution is taking different shapes—the open data movement, crowdsourcing, Internet of things and big data— and is now enabling the rise of artificial intelligence and affecting our societies in a profound and unprecedented way. New technology enables those with access to it to understand and adapt their own behaviour: take the most efficient route, choose the form of transport, decide when to leave the house based on pollution levels, improve our health outcomes by tailoring our exercise routines or nudging us to sleep. But availability of information does not always lead to better decisions, in fact the practice shows that data abundance can also lead to a reverse effect and even paralyze our choice. Sometimes, it can lead to a Buridan's ass problem[262] when it is difficult to select the right data and make the right decision.

It is essential to ensure that the data infrastructure is placed in the correct political-economy context and presented in a way that is easily understandable. The abundance of data in and of itself does not translate into evidence-based decision-making or improved services in the public sector.[263] Considering that the Moldovan Government has committed itself to streamline the public administration reform, with modernization of public services being an inherent part of the reform, MiLab initiated a project on the development of a mechanism for citizens' feedback on the quality of public (governmental) services. At the same time, this

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260 Lomas, Natasha, 'Facebook to exclude North American users from some privacy enhancements', 2018 https://techcrunch.com/2018/04/04/facebook-gdpr-wont-be-universal/.

261 Morozov, Evgeny, 'After the Facebook scandal it's time to base the digital economy on public v private ownership of data', The Guardian, 31 March 2018, https://www.theguardian.com/technology/2018/mar/31/big-data-lie-exposed-simply-blaming-facebook-wont-fix-reclaim-private-information.

262 Rescher Nicholas, 'Choice Without Preference: A Study of the History and of the Logic of the Problem of 'Buridan's Ass', *The Journal of Symbolic Logic*, Vol. 32, No. 4, 1967.

263 Shah Shvetank, Horne Andrew and Capella Jaime, 'Good Data Won't Guarantee Good Decisions', *Harvard Business Review*, April 2012.

FIGURE 1. PUBLIC SERVICES EVALUATION TOOL: PROCESS MAPPING, MOLDOVA INNOVATION LAB
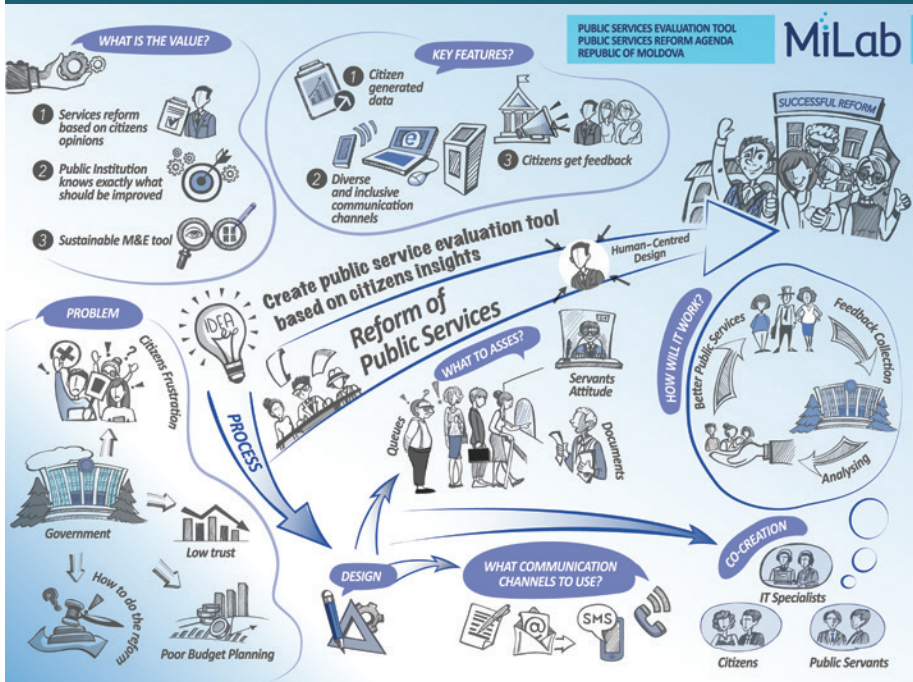
tool could generate data for measuring SDG indicator 16.6.2, proportion of the population satisfied with their last experience of public services.

Collecting data together with citizens is one of the most prominent ways to engage with them on the identification of the solutions to wicked development issues, or the quality of public services in our case. And the best experts on the quality of public services are the final clients of these services—citizens. Thus, MiLab carried out in-depth ethnographic research with the engagement of citizens and service providers, aimed to achieve deep and nuanced understandings of various aspects of user experience, needs and expectations from the evaluation of public services. So, we asked people what to assess, how to assess and where to assess. As a result, we created a mechanism for the evaluation of the quality of public services based on citizens' insights. The main advantage of the tool is a possibility to get actual real-time and citizen-generated data, measuring SDG indicator 16.6.2 by the real clients of development programmes—the citizens.

The ethnographic research, coupled with real-time citizen-generated data, provided the political context and an in-depth understanding of the motivations and key reform processes. Through a collaborative exercise, MiLab was able to design a useful and usable tool. The tool addresses the main "pain points" of service delivery and evaluation processes and has a data flow tailored to the needs and capacities of civil servants on data analysis and

process. It can "diagnose and treat a disease; while conventional government evaluation is more likely an autopsy and thus of limited value to the patient".[264] The design process enabled the development of a tool that shortens the trajectory from data to decisions and enables a real-time response.

SHIFTING BEHAVIOURS

Data do not exist in a vacuum: it is a resource that has the potential to transform our lives, if utilized well. From day to day, we seamlessly adapt our behaviour based on insights from data. One of the key ways to achieve transformational change within our societies is to capitalize on the unprecedented volume of data to understand complexity and be able to nudge behaviour towards that change. In Republic of Moldova, Tajikistan and the former Yugoslav Republic of Macedonia, data are the catalyst in shifting behaviours across society.

In the case of the public services evaluation tool, MiLab created a mechanism to show people what they are reporting and how other people evaluate the quality of public services, and more importantly, the information about the actions taken by public institutions. So, potential public pressure would stimulate public institutions not only to collect the data based on people's feedback, but to translate the data collected into policy actions. The increased accountability is expected to stimulate civil servants to act in more impartial ways, including by integrating data in their decision-making.

In Skopje, one of the most polluted cities in Europe in recent winters, research found that while heating was the main source of pollution, only 1 percent of the population made decisions on their heating system based on information about pollution. These insights have informed a set of actions required to shift towards more environmentally friendly behaviours. In Tajikistan, where about 20 percent of births are not registered on time, leading to higher fees for those families, triangulation of health and civil registry data will enable the development of "nudges" for diverse groups, taking into consideration their demographics and geography.

Popularization of behavioural economics has brought about a range of experiments on how we can use small tweaks to nudge behaviour. According to Richard H. Thaler, "decision-makers do not make choices in a vacuum. They make them in an environment where many features, noticed and unnoticed, can influence their decisions."[265] Conventionally, decision makers are mostly guided by their beliefs, habits and emotions,[266] so that, for instance, elected policymakers often translate their values, interests and principles into policy actions.[267]

264 Gunthert, Marc, 'The disruptive potential of feedback', 2015, https://nonprofitchronicles.com/2015/10/18/the-disruptive-potential-of-feedback/.

265 Thaler, Richard, Sunstein, Cass and Balz, John, 'Choice Architecture', 2008, https://www.sas.upenn.edu/~baron/475/choice.architecture.pdf.

266 Cairney, Paul and Kwiatkowski, Richard, 'How to communicate effectively with policymakers: combine insights from psychology and policy studies', Palgrave Communications, Volume 3, Article number: 37 2017, https://www.nature.com/articles/s41599-017-0046-8.

267 Cairney, Paul, 'Why don't policymakers listen to your evidence?', *Paul Cairney: Politics & Public Policy*, 2018, https://paulcairney.wordpress.com/2018/03/26/why-dont-policymakers-listen-to-your-evidence/.

Behavioural insights, combined with the growth of the volume of data and computational power to analyse it, have the potential to unlock development outcomes and bridge the gap between insights and decisions.

SOME CONCLUSIONS

With all its shortcomings, alternative data constitutes a powerful tool for measuring and achieving development goals and can bring certain benefits for public policy and public administration. Firstly, alternative data sources require further tapping into to understand their application. Secondly, new insights gleaned from new data sources, like user-generated or big data, could become a valuable complementary part of conventional survey data or official statistical data. Combining new and classical statistical data could help us to better evaluate the effects of potential intervention. These data can provide a good ground for customization of public policies or services. Thirdly, a combination of insights with tools stemming from behavioural economics will be much more impactful and shaping a data-driven culture in the organization.