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**METRICS THAT MATTER: FIGURES THAT
FOSTER MULTILATERAL PROSPERITY**

METRICS THAT MATTER: FIGURES THAT FOSTER MULTILATERAL PROSPERITY

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In a data-driven world, we call on G20 policymakers to champion Metrics that Matter, i.e.: metrics that are cost-effective, fit for purpose, and account for externalities. Metrics with integrity are transparently collected, published, and consolidated in an integrated open-source interoperable data set, shared globally. This chapter recommends key philosophies and technologies that can simplify and streamline these efforts. We envision a measured and balanced Prosperity that supports both People and Planet.

Global Challenge

As the worldwide community faces more significant, interconnected, and challenging problems, the need to synthesize existing and new data, research, and insights is imperative. The G20 identified its three main priority areas as People, Planet, and Prosperity with a significant policy emphasis on eradicating poverty, addressing climate change, and improving global infrastructure, including capacity building to prevent future health-related shocks (Priorities G20 2021).

Traditional metrics fail to address the complexity of global challenges we face today. While at one time, these metrics were valuable in creating a greater understanding, focus on macro levels of information ignored important micro factors buried in the aggregates and averages.

For example, Gross Domestic Production (GDP), a traditional measure of a country's economic

prosperity, has been critical to improving living standards and has lifted more than a billion people out of poverty (World Bank 2018). However, studies show that economic growth can drive inequality within and between countries (Ravallion 2001; Stiglitz 2019). Moreover, GDP does not address the impact on the natural environment, our planet. As a result, other metrics evolved to account for additional factors of prosperity: quality of life indicators, non-monetary indices, and subjective wellbeing indicators (see Figure 1).

GDP	Quality of life indicator sets or dashboards (wide range of physical or socio-economic factors)	Aggregate non-monetary indices (a set of 'objective' contributors to quality of life)	Aggregate monetary indices (set of alternative indicators contributing to wellbeing in monetary terms)	Subjective wellbeing indicators (individual's subjective measure as wellbeing aggregated at national level)
as a measure of wellbeing	UN's Sustainable Development Goal Indicators	Human Development Index (HDI)	Adjusted Net Savings/ Inclusive Wealth Index	NEF's National Accounts of Wellbeing
	OECD Better Life Index	Bhutan's Gross National Happiness (GNH) Index		Global Wellbeing Index (GWI)
	System of Environmental-Economic Accounting (SEEA)	Canadian Index of Wellbeing (CIW)	Index of Sustainable Economic Welfare (ISEW)/ Genuine Progress Indicator (GPI)	The Legatum Prosperity Index™ (LPI)
as a measure of economic welfare	Eurostat Quality of Life Indicators	Happy Planet Index (HPI)		Gallup World Poll Centrality Ladder
	Social Progress Index (SPI)			
	New Zealand's Living Standards Framework (NZLSF)			

Figure 1. Different Indices & Metrics Used Globally [Source: Authors Dr. Asif Chowdhury, Iqra Shaikh, Niko Stampfl]

Even up-to-date measures of prosperity, such as the Legatum Prosperity Index (LPI), fail to account for a few hidden costs. The LPI is an effective framework that identifies 'Green to Yellow to Red' zone countries but fails to consider how the externalities of a prosperous country can lead to uncompensated costs. These negative externalities may increase inequality for other countries and negatively impact the global scale. The fact that society today annually produces over 1021 digital bits of data and information from which metrics can be derived (Vopson 2020) is yet another challenge and opportunity. However, some regions may not have equal capacities to produce and measure data due to various political, technological, and economic factors. Metrics must be localized and account for past socioeconomic, geopolitical facts, factors, and trends.

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Finding meaningful metrics remains a crucial challenge for global leaders. Prosperity is forward-looking, to effectively measure where we as a global community will go, we must account for where we are today. Metrics matter.

Global Solution

Fostering human-centered policy involves understanding and mobilizing the G20, its constituents, and its stakeholders to collaboratively decrease disparities and increase prosperity for all. The discovery of climate change is a prime example of what this chapter aims to promote. Climate change was discovered by chance, through collaboration, and by the sharing of data from individual scientists, research institutions, companies, and governments (Weart 2008). This chapter takes the best practices that enabled this discovery and aims to institutionalize it in a manner that transcends borders.

Climate change is a multifaceted issue that includes: land degradation, biodiversity loss, urbanization, energy, modern mobility, and more. As the G20 prepares for the COP26 (26th UN Climate Change Conference of the Parties), working to solve climate change, it is critical that we develop globally agreed upon metrics and a process for taking stock globally. This was mentioned in the UN's Intergovernmental Panel on Climate Change (IPCC) Chair's Vision Paper presented at the Sixth Assessment Report (AR6) Scoping Meeting in Ethiopia (Lee 2017). With net-zero commitments being made across the globe, we need effective metrics to ensure that we measure up to our ambitions.

While generating solutions through policies and guidelines, global leaders need to accept that one size does not fit all. Similarly, achievements need to be compared with improvement capabilities.

Case Study: Montreal Protocol

One successful example of how metric-driven policies have made an impact is the Montreal Protocol of 1987. This treaty, ratified by every country in the United Nations, aimed to protect the stratospheric ozone layer. The ozone layer prevents ultraviolet radiation from reaching the earth's surface, which is well-known for increasing the risk of sunburns, skin cancer, and cataract damage to the eyes.

Collective actions across countries by individuals, communities, companies, and organizations from all around the world have effectively limited the number of particles destroying ozone in the atmosphere. To date, the hole in the ozone layer is the smallest it has ever been. If no action had been taken, the damage to the ozone layer was projected to have been ten times worse, with the hole potentially extending to the tropics (Newman et al 2009).

The Montreal Protocol represents genuine multilateralism and collective action at its finest. As organizations, such as the Organization for Economic Cooperation & Development (OECD), World Economic Forum (WEF), and the Intergovernmental Panel on Climate Change, work to accommodate similar goals in scope, it is crucial to consider how the Montreal Protocol achieved its success.

Therefore, while generating metrics-based solutions, we need to consider:

- . Hidden costs
- . Defining a Metric that Matters
- . Cost of measuring metrics
- . Potential of using metrics
- . Manipulating metrics
- . G20 Priorities
- . Metrics that could matter

Hidden Costs

The cost of acquiring and achieving prosperity needs to adequately consider the implications of hidden costs. A good starting point is the nexus approach, which maps positive and negative interactions between economic activities and their respective metrics (Weitz et al 2014). By uncovering synergies and detecting trade-offs among sectors, nexus approaches can reduce negative externalities and promote integrated planning, management, and governance. This mapping encourages policymakers to address the interactions between individual Sustainable

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Development Goals (SDGs), achieving co-benefits, and reducing the risk of trade-offs (Liu et al 2018). Furthermore, the nexus approach unlocks the potential of different metrics, creates a better understanding of complex systems, and can be used to identify better metrics that account for hidden costs.

Defining a Metric that Matters

Aside from accounting for externalities, a metric that matters is a Key Performance Indicator tied to SMART Goals: Specific, Measurable, Actionable, Realistic, and Time-Bound (Shahin and Mahbod 2007). Furthermore, these metrics must account for the various stakeholders and political differences between countries. To accomplish this, the Montreal Protocol, for instance, developed implementation strategies and support systems unique to each country that allowed its success. Depending on the individual country, some changes are more likely to be driven by business, governments, or other individual and collective actions; policy must account for these differences (Stephan et al 2016).

Cost of Measuring Metrics

In addition, instances may exist where the cost of measuring metrics is comparable to the cost of implementing solutions. One such example is the 17 SDGs, which have 169 defined targets and 232 key performance indicators. Implementing the SDG agenda could cost somewhere between 3.5 and 5 trillion USD per year (Deen 2016). However, these indicators are not currently being measured and are not measurable by most countries, which raises the question of whether these indicators are fit for purpose (MacFeely 2018).

Potential of Utilizing Metrics

Depending on which metrics are used, it would take approximately 7 to 265 billion USD per year to end world hunger, with the costliest approach addressing the poverty gap (Fan et al 2018). Assuming the average of the two extremes is enough, it would take 136 billion USD annually to end world hunger. Global philanthropy expenditures per year are over 150 billion USD,

and there are over 1.5 trillion USD in assets under the management of international philanthropic organizations (Johnson 2018). Meaning that, in theory, world hunger could be ended by philanthropy alone. However, these charitable organizations operate in different geographies, and resource distribution may not align well with actual needs. Additionally, these philanthropic organizations have several competing priorities, meaning their funds are not focused on a single cause. Having more transparent insights into allocating funds could help the G20 encourage a more effective and equitable distribution of funds across regions.

Manipulating Metrics

Anything that is measured, can be massaged to fit certain goals. The United States developed the No Child Left Behind policy measuring students' performance in a school. While the rate was reportedly going up, an audit by the Inspector General of the Department of Education found that certain states and certain schools were artificially inflating graduation rates through misreporting and deceptive data practices (Dynarski 2018). However, a report two years later from the Brookings Institute suggests that the actual graduation rate still increased (Harris et al. 2020). We can see similar reporting issues in environmental, social, and governance (ESG) disclosures when companies get accused of greenwashing their reports (Yu et al 2020). Overall, the push for reporting, transparency, and accountability is a step in the right direction and can lead to larger gains not only in human capital, but in prosperity for all.

Considering the G20 Priorities

- People - Metrics must account for the basic needs of people: food, shelter, and water. For example, there are 2 million Palestinians trapped in Gaza; 80% of the population depends on humanitarian aid, and 96% of the groundwater is unfit for human consumption (Human Rights Watch 2021). These issues are well-known, yet acting on these metrics has proven to be a challenge.
- Planet - Metrics must account for the wellbeing of Earth's environment. Human life is dependent

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on the global ecosystem services and things such as air quality, biodiversity, and land-use practices. While there is an urge to nurture and protect the planet, lack of definitive global political commitments seems fruitless in protecting the Amazon rainforest.

. Prosperity - Metrics must account for subjective and objective well-being. There are several things included under prosperity, such as quality of life, education, and digital infrastructure. We must utilize metrics that allow and enable individuals across the globe to improve their quality of life and recognize the inherent cost of certain luxuries.

While accounting for these factors can prove to be complex, it is valuable that these conversations happen, so that we may work together creating meaningful policy solutions that are truly actionable.

Metrics That Could Matter

The United Nations SDGs and the Genuine Prosperity Index (GPI) are examples of metrics that any country and government could use. While the SDG indicators are widely accepted and have been adopted by 193 countries worldwide, they are challenging to measure. Likewise, the GPI faces similar implementation challenges; however, it successfully addresses the hidden cost challenges found with GDP. As the capacity and the capabilities of National Statistics Offices improve, new technology and data collection advances may make these metrics easier to implement.

When evaluating business impacts, the Global Reporting Initiative (GRI) and Sustainability Accounting Standards Board (SASB) provide practical Environmental, Social, and Governance (ESG) frameworks that businesses can report on. These reports could provide a comprehensive stakeholder driven perspective considering both upstream and downstream effects. Mandating these disclosures could provide another rich data set, and new technologies like natural language processing, which would make searching these databases more feasible.

Final Thoughts

As the G20 looks to create sustainable prosperity

for all, it is imperative that the G20 measures up to its ambitions. A key concern when adopting metrics is that of integrity. Adopting blockchain technologies can address key security concerns, and having an open network of global interoperable databases can address key integrity concerns. We strongly recommend the G20 use this data, as well as predictive analytics, to inform future policy decisions. Additionally, we propose that the G20 have a special Leaders Session focused solely on addressing the challenges mentioned with implementing Metrics that Matter.

Policy Recommendations

V20 recognizes the power of human-centered policies and the critical roles that shared metrics play. To measure up to our global ambitions, we recommend the G20 organize a special session dedicated to Metrics that Matter and furthermore recommend the G20:

1. Expand the use of Metrics that Matter, specifically the SDGs, GPI, and ESG Disclosures to:
 - a. Effectively implement the SDG indicators across nations using nexus-based mapping to simplify the indicators by identifying connections between individual goals;
 - b. Consider using the GPI as a new index; and,
 - i. Further invest in research to understand its implications
 - ii. Initially implement GPI at the regional levels, while working to reach feasibility at the national levels
 - c. Encourage the use of ESG reporting, which the GRI & SASB are working collaboratively to simplify and standardize by incentivizing businesses, organizations, and companies to adopt ESG frameworks, especially multinational entities.
2. Improve data collection practices by:
 - a. Collaborating with NGOs and philanthropic organizations; and,
 - i. Consolidating existing data regarding People, Planet, and Prosperity into an open-source interoperable database

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- ii. Testing methods to calculate metrics and publishing reports that analyze, use, and improve the data collection process
 - b. Considering the World Bank's Statistical Performance Indicators (SPI) to assess differences in data use, data services, data products, data sources, and data infrastructure among countries.
3. Consider the use of new technologies that address data collection challenges by observing and implementing technological trends such as:
 - a. Data Collection & Storage: increased internet access and improved data storage capabilities means the potential for global interoperable databases;
 - b. Natural Language Processing (NLP): allows for more efficient data processing by streamlining raw data;
 - c. Blockchain Technology: a platform that safely verifies and confirms transactions for both the sender and receiver;
 - d. Predictive Analytics: the use of artificial intelligence and machine learning to forecast trends based on data inputs and outputs; and,
 - e. Geospatial Mapping: tracks present changes, and changes over time, using location intelligence.

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