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Evolving Conceptual Framework for Measuring Wellbeing for Decision and Policy Making

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Evolving Conceptual Framework for Measuring Wellbeing for Decision and Policy Making

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Abstract: Measuring wellbeing of the people has occupied much attention of statisticians, policy makers and decision makers alike, in pursuit of a comprehensive metric. It was felt necessary to develop an indicator set which complements the conventional measure of economic growth, i.e. Gross Domestic Product (GDP) and internalises factors like economic crisis, pandemic, conflicts, disasters, climate change, etc. for making transformative policies with common societal goals and more equitable economic development. Such recourse needs a complementary set of indicator framework called as wellbeing measurement framework. The Sustainable Development Goal (SDG) Target 17.19 also stipulates evolving a measure of progress on sustainable development that complements GDP. The UN Secretary General's Report on 'Our Common Agenda'; the G7 Canada Presidency Summit Communique of 2018; the RIS steered Bhopal Declaration of January 2023; and the Think7 (T7) Communique under Japan Presidency of 2023; all advocate for going ahead with the wellbeing approach of development. Accordingly, this discussion paper suggests pathways to fructify these aspirations into concrete action and evolve a comprehensive measurement framework for complimenting GDP.

Keywords: Wellbeing, Gross Domestic Product, transformative policies

Introduction

There has been a long debate on the appropriateness of Gross Domestic Product (GDP) as an indicator to assess the wellbeing of people. The basic question has remained whether there can be a better indicator or set of indicators for measuring wellbeing. GDP, as we know, is a measure of output of an economy computed as total value of goods and services produced in a year. It has been used as a measure of wellbeing with the strong assumption that increased GDP will result in improved wellbeing through trickle down effect. However, the experience does not confirm the

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assumption and therefore GDP alone is not appropriate for measurement of wellbeing. Apart from limitation of its construct, this measure also does not take into account effects externalities like biodiversity loss, carbon emissions, pollution, environmental degradation, climate change, sudden catastrophe including COVID19 and conflicts which have critical impact on wellbeing. Similarly, GDP also does not take into account distributional aspects, including inequality in income and wealth. GDP also overlooks the value of unpaid work, like household work, care for children and elderly people, etc. and also psychological, mental, emotional conditions of the people of society. In recent times technology, especially digital technology, has been touching everyone's life, however, GDP in its current form does not capture digital services provided free as they are not explicitly accounted in household consumption. GDP also overlooks many aspects like quality of life, satisfaction from life, etc. which are important from the point of view of a society's wellbeing. Many of the deficiencies of GDP have been very well documented in the Stiglitz, Sen and Fitoussi report[1] released in 2009.

Despite various shortcomings, GDP is still seen as an important indicator of economic progress. Its computation is based on well established methodology that allows for cross-country comparisons and therefore serves as a standard measure of economic prosperity. However, a set of indicators complementary to GDP is needed to capture the multidimensional nature of development that should focus on the wellbeing of the people of society as well as on sustainability. These concerns have been discussed and deliberated upon at various global fora. The UN Secretary General's Report on 'Our Common Agenda'[2] ; the G7 Canada Presidency Summit Communique of 2018[3]; the RIS steered Bhopal Declaration of January 2023[4]; the Think7 (T7) Communique under Japan Presidency of 2023[5]; all advocate for going ahead with the wellbeing approach of development. The time has now certainly come to fructify these aspirations into concrete action.

Some Important Existing Frameworks

Post- 2009, global debate pointed towards development of a measure alternative to GDP or measures which may complement it. There are already a number of statistical indicators to complement GDP. UNDP's Human Development Index (HDI) comprising of indicators on income,

health and education emerged as widely recognized complementary indicator. But this does not cover all the aspects of wellbeing. There are other indicators like the World Happiness Index, Inclusive Wealth Index, the Genuine Progress Indicator, the Multi-dimensional poverty index, Inequality adjusted human development index, South Asia Green Energy (SAGE) wellbeing dashboard developed by Global Solution Initiative (GSI), but none of these indicators fully addresses the need for an sought for alternative. BRICS Wellness Index evolved by RIS, focuses on four dimensions namely, material wellbeing, human proficiency, human health, and sustainability. Details of above mentioned indicators are covered in Appendix.

OECD has developed a framework for the measurement of wellbeing in the context of prevailing circumstances in its member states. The OECD framework, encompasses of 'current well-being' and 'future well-being'. Under current well-being, it has 11 key dimensions namely, income and wealth, housing, work and job quality, health, knowledge and skills, environment quality, subjective well-being, safety, work-life balance, social connection, and civic engagement. Under the future well-being there are four key dimensions namely, natural capital, human capital, economic capital and social capital. These dimensions in turn are computed from related indicators. Incidentally, some of the indicators are objectively and statistically measurable, however, a few are subjective, and therefore have difficulty in consistent measurement. OECD has also worked with eleven LAC and Caribbean countries to suitably adapt the framework in the developing country context, by including features like informality in the measurement of wellbeing. There are still a number of issues which are not addressed in the OECD framework of wellbeing. Moving further, some of the aspects of wellbeing especially relevant from the point of view of India are inequality in wealth, prevalence of poverty, underemployment, prevalence of various kinds of diseases and aspect of quality of education. In addition, issues like biodiversity conservation are of immense importance in the present context. Increasing digitalisation in almost all spheres of life has also become very important for such a framework.

Another important development has been acceptance of UN Sustainable Development Goals (SDGs) and targets by all the member states. Multiple SDG targets incorporate the broader concerns associated

with well-being and sustainability, like protecting natural ecosystems, life on land, life below water, ending poverty, ending hunger, decent employment, etc. Moreover, the goals and targets under SDGs have been set to achieve sustainable development. Member states of the United Nations, which included almost all developing countries, adopted the agenda to achieve seventeen goals and 169 targets by 2030. These goals and targets are being monitored with the help of 248 UN Global indicators (number of unique indicators are 231). In addition, the UN has also adopted the principle of "no one will be left behind" in the process of development. To measure better, one of the targets of SDG, viz. SDG target 17.19, tasked member states to develop measure of progress on sustainable development to complement GDP. Therefore, there is recognition of the need to develop a set of indicators complementary to GDP, among the members of UN.

This Paper also computes Spearman rank correlation coefficient between ranks of countries on implementing SDGs and ranks of countries as assigned in the World Happiness Report 2023. The rank correlation coefficient comes at 0.79 which shows a strong positive correlation between SDG implementation and Happiness. Hence, one may conclude that successful implementation of SDGs, *ceteris paribus,* increases Happiness/wellbeing of the society.

Development of a framework to measure wellbeing acceptable and useful for all the countries would require review of OECD framework and UNSDG monitoring framework. Further, there is a need to have a measure of wellbeing, especially in the current context, where multiple factors affect lives of people. Such a measure of wellbeing should be expanded and take into account factors like post-pandemic impact, climate change, geo-political-conflicts, people getting affected by new set of diseases such as dengue, chicken guinea, and also factors like supply-chain disruptions. The humanity today is facing multidimensional shocks and therefore needs an appropriate measurement of wellbeing.

A good reliable, representative and comprehensive set of wellbeing indicators would be of immense use for policy making. These indicators can be effectively used in allocation of resources, both by subject domains and at different geographic levels. Such allocation processes based on scientific measurement will bring the policies close to the expectations of the citizens and hence would help in realization of better wellbeing

of citizens. Various ministries in the Government at national and sub-national levels have been using some basic indicators for the purpose of policy formulation and monitoring implementation. However, many a times critical indicators, which would directly result in improved wellbeing of citizens get ignored because of non-availability of such measures and also due to lack of a desired framework. A few countries like Bhutan, Canada, Australia, UK evolved wellbeing measures and have started using them for policy making with some success. Some other countries like Ecuador, France, Italy, New Zealand, and Sweden have also taken initiatives in this direction.

Royal Government of Bhutan has developed Gross National Happiness Index (GNH) to measure the happiness and wellbeing of the people of the country. It includes nine domains and 33 indicators. GNH guides the policy making process in Bhutan. Canadian Index of Wellbeing (CIW) developed by the University of Waterloo is comprised of eight Domains and 64 Indicators. Measure of Australia's Progress (MAP) is based on Comprises of three domains and 17 elements. UK has developed "Measures of National Well-being Dashboard: Quality of Life in the UK" which is organised into ten domains and 44 indicators.

Challenges

There are several challenges in evolving a set of indicators complementary to a well-established economic indicator like GDP. There are also issues relating to adoption of wellbeing indicators in policy/decision making. Some of the challenges are discussed below:

- **Definition:** Wellbeing is a multidimensional concept. It has been used in various contexts in different nomenclatures. For example, there is a happiness index which is produced by SDSN, there is a framework of wellbeing developed by OECD, and there is wellness index developed by the World Health Organisation. For want of a standard nomenclature, the words "wellbeing" and "wellness" and "happiness" have been used inter-changeably in the literature. Therefore, there is a need to evolve a universally acceptable definition and framework which may comprehensively address the citizen's economic, social or environmental wellbeing. Further, the framework needs to take into account differing perceptions emerging due to demographic (age, gender), social (backwardness), economic

(low, medium and high income and wealth) and geographic (rural and urban) stratification of society. A consensus on the definition and framework of wellbeing, acceptable to both developing and developed countries thus needs to be evolved.

- **Choice of Indicators**: The well-being framework should include well-defined and measurable set of indicators. These indicators should be selected in such a manner that they capture both objective and subjective indicators like citizens' perception of wellbeing and help in policy making in a meaningful way. The indicators need to be robust and compiled using an internationally accepted methodology. There may be some data which is available for compilation of these indicators from the existing statistical systems in the countries, but a significant portion in varying degrees would require fresh collection of data. The challenge would be to collect such data regularly and timely for compilation of required indicators.
- **Data Availability, Accessibility and Timeliness**: National governments collect data generally from conventional sources like administrative records and through scientifically designed sample surveys. Data from non-conventional sources like big data, geo-spatial data is yet to find much acceptability in official systems of data collection. The concept of wellbeing, apart from the hard measurable data, needs a lot of information relating to perceptions of different sections of the society. Such data is not normally collected through the official statistical systems due to apprehensions of lack of consistency in the results of such surveys over a period of time. Further, reliable disaggregated data set by age, gender, place of residence, income, is also an essential requirement from the point of view of leaving no one behind which is an underlying principle of the 2030 Agenda. Moreover, disaggregated data would support policy makers for identifying the persons or society groups that need assistance. Identification of data gaps along with evolving methodology for addressing these is also equally important. There is also lack of an acceptable methodology for such surveys. Further, there are also issues relating to accessibility of administrative data within the countries according to the requirements of such wellbeing indictors due to the data confidentiality and privacy issues.

- **Methodology for aggregation of Indicators**: Standard Methodology for aggregation for subject-domain indicator lacks acceptability by the stakeholders, especially by the government agencies. A careful consideration is also needed for deciding weights for each identified indicator in the wellbeing matrix. The applicability of statistical techniques available for this purpose like Principal Component Analysis (PCA), need to be tested for using them. Transparency and inclusiveness are important aspects to be given due consideration for evolving methodology for such computations.
- **Lack of statistical capacity**: The statistical capacity is low in many developing countries which need to be suitably addressed. Developing Countries do not find enough resources for investment for strengthening national statistical systems due to commitments for other development programmes. International development cooperation can play an effective role in improving institutional capacity, technological capacity and skill of statistical personnel for collection of reliable data at desired disaggregation level, its processing and dissemination.
- **Acceptability of Wellbeing Indicators for Policy:** The ultimate objective of creation of the wellbeing indicator framework is to help in policy making. However, the acceptability of these indicators is low among the stakeholders including policy-makers. The methodology for aggregation of these indicators also faces similar challenges. Breaking these barriers is challenging but not impossible, and can surely be overcome.

Identification of Indicators for Wellbeing Matrices

Principles

While selecting measurement indicators, care needs to be taken that these are relevant to policy making, cover various dimensions of well being, and are aligned to SDG framework. Efforts have also been made to include such indicators in the proposed wellbeing framework that are conceptually clear, for which regular quality data is available and which have established standard statistical methodology for compilation. Availability of standard methodology allows for cross-

country comparison of results. Further, as wellbeing is an outcome of policies, outcome indicators have been preferred over input indicator. Better indicators not only support evidence based policy making, but also facilitate to evaluate response of the policy interventions and encourage discussions among stakeholders.

The indicator set thus evolved has been grouped into three tiers in line with the classification adopted by the UN Inter-agency and Expert Group for SDG indicator framework as follows:

Tier I: Indicator is conceptually clear, has an internationally established methodology and standards are available, and data is regularly produced by countries for at least 50 per cent of countries and of the population in every region where the indicator is relevant.

Tier II: Indicator is conceptually clear, has an internationally established methodology and standards are available, but data is not regularly produced by countries.

Tier III: No internationally established methodology or standards are yet available for the indicator, but methodology/standards are being (or will be) developed or tested

An indicator list is suggested at the Annexure. It may be noted that this list is not exhaustive. The national governments may prioritize the indicators which are relevant to country's policy and local circumstances. Moreover these indicators are flexible in the sense that these can be adjusted as and when a new policy intervention comes in at national or global level, or a new statistical methodology is developed.

Conclusions and Recommendations

There is a need to have a measure of wellbeing capturing various social, economic and environmental aspects affecting lives of people and coming generations. Such a measure of wellbeing should be expanded and should take into account factors like post pandemic impact, climate change, geo-political-conflicts, people getting affected by new set of diseases such as dengue, chicken guinea. The humanity today is facing multidimensional shocks and therefore needs an appropriate comprehensive measurement of wellbeing.

A good reliable, representative and comprehensive set of wellbeing indicators would be of immense use for policy making. These indicators

can be effectively used in allocation of resources both by subject domains and at geographic levels. Such an allocation processes based on scientific measurement will bring the policies closer to the expectations of the citizens and hence would help in realisation of better wellbeing of citizens. National governments have been using some basic indicators for the purpose of policy formulation and monitoring implementation. However, many a time critical indicators, which would directly result in improved wellbeing of citizens, get overlooked because of non-availability of such measures and also due to lack of the desired framework.

In this endeavor, this paper evolves a set indicators under three pillars namely, economic wellbeing, quality of life and sustainability, with associated 16 domains and 66 indicators attached at Annexure. Countries in the world are at different levels of development and face different local issues and circumstances needing flexibility. The suggested indicator set may therefore be adopted by countries meeting local circumstances and priorities.

National governments need to find resources for adequately investing in the official statistical systems for improving the capacity of the systems for collecting data of good quality for compilation of identified indicators and to support policy makers for designing good policies for upliftment of deprived sections of the society and improving wellbeing.

A senstisation and advocacy roadmap also needs to be prepared for stakeholders including governments, institutions, think-tanks, academia and civil society.

Statisticians need to shoulder greater responsibility for successful compilation of wellbeing index and its proper use for policy making. They should thus work in collaboration for evolving robust methodology for constructing the Index. It would include capacity improvement for Tier II and methodology for tier III indicators.

G20 can take a lead in international collaboration to evolve the measurement framework on the lines suggested in this paper, while ensuring flexibility to harness the benefits of localisation meeting ground realities and diverse aspirations.

Appendix

Some Global level Initiatives

Sl. No.	Global level Initiative	Agency	Description	Framework/ Factors Taken Under
1.	Human Development Index (HDI)	UNDP	The HDI focuses on the people and their capabilities for assessing the country's development. It does not rely alone on the economic growth and calculated based on geometric mean of normalized indices of three key dimensions of human development namely, healthy life, knowledge and standard of living.	HDI takes into account the following four indicators: -Life expectancy at birth -Expected years of schooling -Mean years of schooling -Gross national income (GNI)
2.	World Happiness Index (WHI)	Sustainable Development Solutions Network (SDSN)	WHI places greater emphasis on the social dimension of development.	WHI uses six variables to explain the variation across countries. The variables are: GDP per capita, healthy life expectancy, social support, freedom, corruption and generosity.

2.	Inclusive Wealth Index (IWI)	UNEP	IWI takes into account resilience of capital assets like manufactured capital, natural capital and human capital.	Indicators for IWI are as under: Manufactured capitals- investments in buildings, roads, machines and equipment , and other physical infrastructure. Human capital- education, health, skills, and aptitude. Natural capital- fossil fuels, agricultural land, forests, , fisheries, sub-soil resources, oceans, rivers and estuaries, the atmosphere and ecosystems.
3.	Genuine Progress Indicator (GPI)	US	The GPI incorporates environmental degradation into measures of economic production and it serves to adjust changes in social and natural capital and income distribution when measuring economic activity.	GPI is calculated based on 26 indicators.

4.	SAGE wellbeing dashboard	Global Solution Initiative (GSI)	GSI has developed a dashboard for measuring wellbeing for selected countries.	SAGE dashboard covers four dimensions namely, solidarity (S) which covers Giving Behaviour, Trust in other people and Social support; agency (A) covers Vulnerable employment, Life expectancy, Years in Education and Confidence in Empowering Institutions. ; material gain (G) covers Gross Domestic Product per capita; and environmental sustainability (E) measured by the Environmental Performance Index.
5.	Happy Planet Index (HPI)	Happy Planet Index	HPI measures sustainable well-being, i.e, how do the nations pay in achieving a long happy and sustainable life for its citizens	The HPI covers four elements viz. Well-being, Life Expectancy, Inequality of Outcomes, and Ecological Footprint.

6.	Social Progress Index (SPI)	Economic Advisory Council to Prime Minister (EAC-PM) along with Institute for Competitiveness and Social Progress Imperative	SPI is a holistic measure of a India's social progress at the national and State/UT levels.	The SPI covers three dimension- **Basic Human Needs, Foundations of Wellbeing, and Opportunity**; and twelve components- Nutrition and Basic Medical Care, Water and Sanitation, Shelter, Personal Safety, Access to Basic Knowledge, Access to Information and Communications, Health and Wellness, Environmental Quality, Personal Rights, Personal Freedom and Choice, Tolerance and Inclusion, Access to Advanced Education. SPI uses 89 indicators for the state level calculations and 49 for the district level calculations.

Source: Authors' compilation.

Annexure

Wellbeing Indicator Framework

Pillar	Dimension	Indicator	Tier Classification	Data Source	Definition
Economic Wellbeing	Income and Wealth	GNI Per Capita (Constant prices)	Tier I	National Accounts Statistics and projected population by national population census authority	Gross National Income divided by Mid-year population
		Final Consumption expenditure per capita (constant prices)	Tier I	National Accounts Statistics and projected population by national population census authority	Final Consumption expenditure divided by Mid-year population
		Gini coefficient	Tier I	World Bank Development Indicators	Gini coefficient measures income inequality within a nation. The value ranges between 0 and 1. Value 0 represents perfect equality while value 1 reflects maximum inequality of income.
		Food Price Index	Tier I	Consumer Price Index data	Food Price Index (FFPI) measures the monthly change in national prices of a basket of food items.
	Basic facilities and Infrastructure	Proportion of population with access to electricity	Tier I	Concerned administrative Department in the National Government/World Bank Development Indicator	Share of the population have access to electicity.

Annexure Continued...

		Proportion of the rural population who live within 2 km of an all-season road	Tier II	Data is not currently compiled by many countries.	
		Proportion of population that has convenient access to public transport.	Tier II	Data is not currently compiled by many countries.	
		Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities	Tier II	Data is not currently compiled by many countries.	
		Percentage of population getting safe and adequate drinking water within premises through Pipe Water Supply (PWS)	Tier I	Concerned administrative department of the national government.	Population getting safe and adequate drinking water within their premises through pipe water supply divided by mid-year population multiplied by 100.

Annexure Continued...

		Percentage of households having access to toilet facility	Tier I	Household Survey conducted by the national government.	Number of households with toilet facility divided by total households multiplied by 100.
	Housing	Proportion of Urban Population Living in Slum Households by Country (%)	Tier II	Data is not currently compiled by many countries.	
	Work & Job Quality	Unemployment rate	Tier I	Employment and unemployment household survey conducted by the national government	Unemployment rate is defined as the percentage of persons unemployed among the persons in the labour force (which includes both the employed and unemployed) .
		Proportion of informal employment (ILO harmonized estimates) (%)	Tier I	Household Labour Force survey conducted by the national governments/ ILO	Employment in the informal sector includes all jobs in informal sector enterprises or all persons who, during a given reference period, were employed in at least one informal sector enterprise, irrespective of their status in employment and whether it was their main or a secondary job.

Annexure Continued...

		Proportion of youth aged 15 to 24 who are not in employment, education or training (NEET)	Tier I	Household-based labour force survey conducted by the national government	This indicator defined as the youth (aged 15-24 years) not in education, employment or training divided by total youth multiplied by 100
		Average monthly earning per employed person	Tier I	World Bank	The income of a person is the sum of all of their earnings.
		Labour force participation rate	Tier I	Household labour force survey conducted by the national government	The labour force participation rate is the number of persons in the labour force as a percentage of the working-age population.
Quality of Life	Health including Mental Health	Prevalence of undernourishment	Tier I	World Bank Development Indicator	The prevalence of undernourishment (PoU) is an estimate of the proportion of the population whose habitual food consumption is insufficient to provide the dietary energy levels that are required to maintain a normal active and healthy life. It is expressed as a percentage.
		Prevalence of malnutrition	Tier I	Health/Nutrition Survey conducted by national governments/UNICEF	Prevalence of overweight (weight for height >+2 standard deviation from the median of the World Health Organization (WHO) Child Growth Standards) among children under 5 years of age.

Annexure Continued...

		Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease	Tier I	Death registration systems with complete coverage and medical certification of cause of death/ World Health Organization (WHO)	Probability of dying between the ages of 30 and 70 years from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases, defined as the per cent of 30-year-old-people who would die before their 70th birthday from cardiovascular disease, cancer, diabetes, or chronic respiratory disease, assuming that s/he would experience current mortality rates at every age and s/he would not die from any other cause of death (e.g., injuries or HIV/AIDS).
		Number of people requiring interventions against neglected tropical diseases	Tier I	Concerned administrative department of the national government/WHO	Treatment and care is broadly defined to allow for preventive, curative, surgical or rehabilitative treatment and care. In particular, it includes both: 1) Average annual number of people requiring mass treatment known as preventive chemotherapy (PC) for at least one PC-NTD; and 2) Number of new cases requiring individual treatment and care for other NTDs.

Annexure Continued...

		Coverage of essential health service	Tier I	Concerned administrative department of the national government/WHO	Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)
		Life expectancy at birth, total (years)	Tier I	Population Census/WHO	The average number of years that a newborn could expect to live.
		Total alcohol consumption per capita (liters of pure alcohol, projected estimates, 15+ years of age)	Tier I	Concerned administrative department of the national government/WHO	Total alcohol per capita (15+ years) consumption (APC) is defined as the total (sum of three-year average recorded APC and unrecorded APC adjusted for tourist consumption) amount of pure alcohol consumed per adult (15+ years), in a calendar year, in litres of pure alcohol.
		Percentage of adults 15 years and above with use of any kind of tobacco (smoking and smokeless)	Tier I	Household survey conducted by the national government/WHO	The indicator is defined as percentage of men and women aged 15 years and above who are currently using tobacco.

Annexure Continued...

		Suicide mortality Rate	Tier I	Concerned administrative department of the national government/WHO	The Suicide mortality rate as defined as the number of suicide deaths in a year, divided by the population, and multiplied by 100,000.
		Death rate due to road traffic injuries	Tier I	Concerned administrative department of the national government/WHO	Death rate due to road traffic injuries as defined as the number of road traffic fatal injury deaths per 100,000 population.
		Number of victims of intentional homicide per 100,000 population, by sex and age	Tier I	Concerned administrative department of the national government/ United Nations Office on Drugs and Crime (UNODC)	The indicator is defined as the total count of victims of intentional homicide divided by the total population, expressed per 100,000 population.
	Knowledge and skills	Completion rate (primary education, lower secondary education, upper secondary education)	Tier I	Concerned administrative department of the national government/ UNESCO Institute for Statistics (UIS)	Percentage of a cohort of children or young people aged 3-5 years above the intended age for the last grade of each level of education who have completed that grade.

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		Proportion of children aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being,	Tier II	Data is not currently compiled by many countries.	
		Proportion of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship	Tier III		
		Adult literacy rate	Tier II	Data is not currently compiled by many countries.	
	Deprivation	Multidimensional poverty Index Headcount Ratio	Tier II	Data is not currently compiled by many countries.	

Annexure Continued...

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		Multidimensional severity rate (percentage of population deprived of more than 50 % of MPI Indicators)	Tier II	Data is not currently compiled by many countries.	
		Proportion of population covered by social protection floors/systems, distinguishing children, mothers with newborns, retirees, unemployed persons, persons with disabilities and the vulnerable	Tier I	Concerned administrative department of the national government/ International Labour Organization (ILO)	The indicator reflects the proportion of persons effectively covered by a social protection system, including social protection floors. It also reflects the main components of social protection: child and maternity benefits, support for persons without a job, persons with disabilities, victims of work injuries and older persons.
	Gender Inequality	Proportion of women in managerial positions (%)	Tier I	Concerned administrative department of the national government/ International Labour Organization (ILO)	This indicator refers to the proportion of females in the total number of persons employed in managerial positions.

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		Proportion of seats held by women in national parliaments (%)	Tier I	Concerned administrative department of the national government/ Inter-Parliamentary Union (IPU)	The proportion of seats held by women in national parliaments, currently as of 1 January of reporting year, is currently measured as the number of seats held by women members in single or lower chambers of national parliaments, expressed as a percentage of all occupied seats.
		Gender Parity Index in primary education	Tier II	Data is not currently compiled by many countries.	
		Adolescent birth rate (births per 1000 women ages) (ages 15-19)	Tier I	Concerned administrative department of the national government/ United Nations, Department of Economic and Social Affairs, Population Division	This indicator is calculated as number of births to women aged 15-19 years per 1,000 women in that age group.
	Climate and Environmental Quality	Direct economic loss attributed to disasters relative to GDP (%)	Tier II	Data is not currently compiled by many countries. However, at global level data is reported by United Nations Office for Disaster Reduction (UNISDR)	This indicator measures the ratio of direct economic loss attributed to disasters in relation to GDP.

Annexure Continued...

		Fertilizer consumption (kilograms per hectare of arable land)	Tier I	Concerned administrative department of the national government/ World Bank	Fertilizer consumption measures the quantity of plant nutrients used per unit of arable land.
		Renewable energy consumption (% of total final energy consumption)	Tier I	Concerned administrative department of the national government/ IRENA	Renewable energy consumption as percentage of total final energy consumption)
		Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities	Tier I	Concerned administrative department of the national government/ WHO	The mean annual concentration of fine suspended particles of less than 2.5 microns in diameters (PM2.5) is a common measure of air pollution. The mean is a population-weighted average for urban population in a country, and is expressed in micrograms per cubic meter [µg/m3].
	Civic Engagement	Voter turnout (%)	Tier I	Concerned department/ agency of the national government	Eligible voters participating in election divided by total eligible voters multiplied by 100.
		Volunteer rate	Tier I	International Labour Organization (ILO)	The volunteer rate represents the share of working-age persons classified as volunteers as a per cent of the working-age population.

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	Digital Wellbeing	Mobile cellular telephone subscriptions (postpaid + prepaid) (% age 15+)	Tier I	Concerned department/ agency of the national government/ ITU	It is defined as subscriptions to a public mobile telephone service and provides access to Public Switched Telephone Network (PSTN)
		Internet users as percent of total population (% age 15+)	Tier I	Concerned department/ agency of the national government	Number of Internet users by the total population and multiplied by 100
		Technology Penetration rate	Tier III		
		Proportion of youth and adults with information and communications technology (ICT) skills	Tier II	Data is not currently compiled by many countries.	
		Debit cards per 1,000 adults	Tier I	Concerned department/ agency of the national government/World Bank	Number of debit cards per 1,000 adults

Annexure Continued...

Annexure Continued...

		Made or received digital payments in the past year (% age 15+)	Tier I	Concerned department/ agency of the national government/World Bank	Digital payments are defined as the payments which take place through the electronic medium
	Subjective Wellbeing	Percentage of people enjoy life	Tier III		
		How do people rate the quality of life on 0-10 scale	Tier III		
		Percentage of people feel satisfied with standard of living	Tier III		
		Percentage of people satisfied with the governance system in the country	Tier III		
		Percentage of people feel safe while walking alone during night	Tier III		

Annexure Continued...

		Average time spent by type of activity like work, leisure, care and Sleep.	Tier II	Many countries do not conduct Time Use Survey (TUS) which is main data source for the indicator.	TUS aims to collect data on how, on average, people spend their time. Standard methodology for conducting TUS is in place.
Sustainability	Economic Capital	Gross fixed capital formation (GFCF) (% of GDP)	Tier I	National Accounts Statistics/ World Bank	GFCF is *a measure of gross net investment (acquisitions less disposals) in fixed capital assets by enterprises*, government and households within the country
		Research and development expenditure (% of GDP)	Tier I	Concerned department/ agency of the national government/ World Bank	Expenditures for research and development are current and capital expenditures on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications.
		Central government debt-to-GDP ratio (%)	Tier I	Concerned department/ agency of the national government/ World Bank/ IMF	Central government debt-to-GDP ratio *measures the gross debt of the general government as a percentage of GDP*.
	Natural Capital	Forest area as a proportion of total land area	Tier I	Concerned department/ agency of the national government/ FAO	Forest area divided by land area of the country multiplied by 100
		CO_2 emissions per capita (metric tons per capita)	Tier I	Concerned department/ agency of the national government/World Bank	CO_2 emissions divided by total population of the country

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		Greenhouse Gas emission per capita (tonnes per Capita)	Tier I	Concerned department/ agency of the national government/International Energy Agency	Greenhouse Gas emission divided by total population of the country
		Domestic material consumption per capita (Total)	Tier I	Concerned department/ agency of the national government/ UNECE	Domestic material consumption is defined as the annual quantity of raw materials extracted from the domestic territory, plus all physical imports minus all physical exports.
		Level of water stress	Tier I	Concerned department/ agency of the national government/ FAO	Freshwater withdrawal as a proportion of available freshwater resources (Total)(%)
		Average proportion of Freshwater Key Biodiversity Areas (KBAs) covered by protected areas (%)	Tier I	Concerned department/ agency of the national government/ UN Environment World Conservation Monitoring Centre (UNEP-WCMC)	The indicator Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type shows temporal trends in the mean percentage of each important site for terrestrial and freshwater biodiversity (i.e., those that contribute significantly to the global persistence of biodiversity) that is covered by designated protected areas and Other Effective Area-based Conservation Measures (OECMs).

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		Red List Index (threatened species)	Tier I	Concerned department/ agency of the national government/ IUCN	The Red List Index measures change in aggregate extinction risk across groups of species
	LiFE	Food loss and waste index	Tier II	Data is not currently compiled by many countries.	
		National recycling rate, tons of material recycled	Tier II	Data is not currently compiled by many countries.	
	Human Capital	Healthy life expectancy (HALE) at birth (years) (both Sexes)	Tier I	Concerned department of the national government/ WHO	Average number of years that a person can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury.
		Proportion of schools offering basic services	Tier I	Concerned department of the national government/ UNESCO Institute for Statistics (UIS)	The percentage of schools by level of education (primary, lower secondary and upper secondary education) with access to the given facility or service like Electricity, Internet, Computer etc.
		Immunization coverage by antigen	Tier I	Concerned department of the national government/ UNICEF	Number of children immunised divided by total number of children multiplied by 100.

Source: Authors' compilation.

Endnotes

[1] Stiglitz Joseph E., Sen Amartya, Fitoussi Jean-Paul (2009), Report by the Commission on the Measurement of Economic Performance and Social Progress. The Commission was appointed by the French President, in 2008, to identify issues associated with GDP and to produce more relevant indicators that measure social progress.

[2] United Nations, "Our Common Agenda – Report of the Secretary-General," 2021 at page 4 states that " … As currently measured, gross domestic product (GDP) fails to capture the human and environmental destruction of some business activities. I call for new measures to complement GDP, so that people can gain a full understanding of the impacts of business activities and how we can and must do better to support people and our planet."

[3] The G7 Canada Presidency Summit Communique,[4] 2018, recognized that "… economic output alone is insufficient for measuring success and acknowledge the importance of monitoring other societal and economic indicators that measure prosperity and well-being."

[4] The Bhopal Declaration of January 2023 has also realised that "It is an opportune time for G20 countries to engage in discussions with a view to evolve a comprehensive measure of Wellbeing, based on sustainability principles.

[5] The Think7 (T7) Communique under the Japan Presidency in April 2023 states that "Another priority is to realize new measurements of economic, social, and environmental prosperity that consider people's well-being globally".

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