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Beyond GDP: A Multifaceted Indicator Approach

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Abstract

This paper assesses the comprehensiveness of the various economic indicators and their relevance in the current world order. It goes over the conventionally used indicators such as the Gross Domestic Product (GDP), Gross National Income (GNI), money supply, and other more diverse metrics such as the Human Development Index (HDI). Further analysis is done on their uses and disadvantages, highlighting their limited nature in indicating the true state of an economy. Finally, a suggestion is proposed in order to navigate through these limitations.
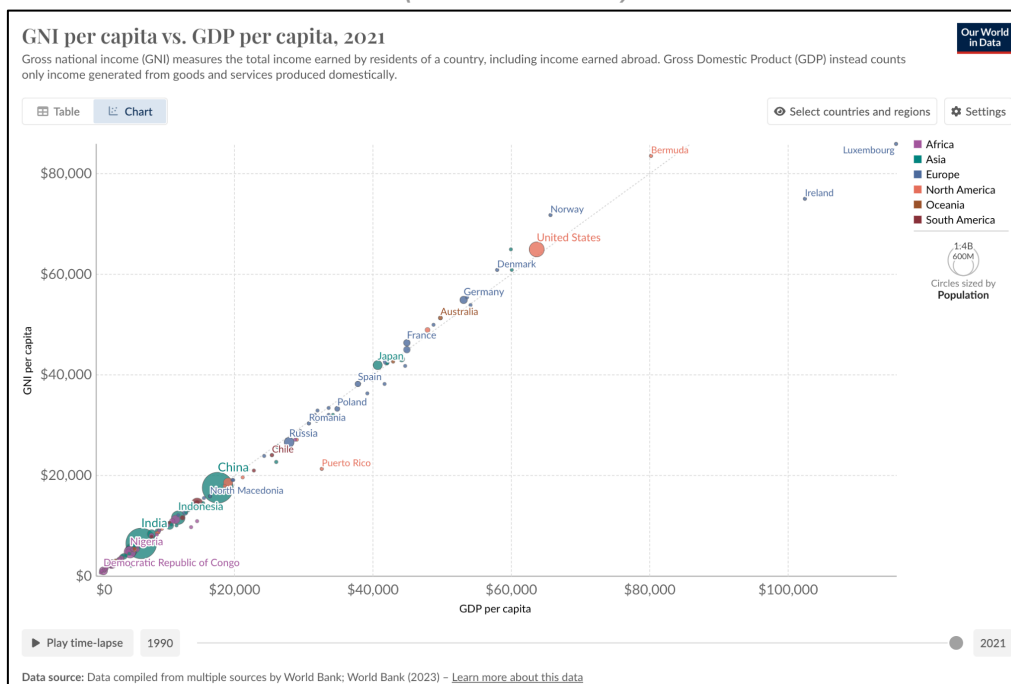
Keywords: *Economic Indicators, GDP, HDI, Limitations*

Introduction

Economic Indicators are meticulously compiled statistical data developed by globally recognized standards that provide insight into economic activity within individual countries and internationally through international trade. They offer valuable information regarding economic growth, contractions, stability, the production and consumption of various goods and services, investments, and other macroeconomic measures. These indicators may be classified as leading (forward-looking), lagging (backward-looking), or coincident (simultaneous with the economy), and are utilized by investors and policymakers alike to inform their decision-making processes (WDI - Economy). But on further analysis, it can be found that looking solely at one indicator can give us a misleading idea about a country's state relative to others. Standalone, they are not entirely accurate.

The Current Indices

The information presented in the chart pertains to the GDP and GNI indicators, commonly used to measure economic growth. However, it is essential to note that these indicators reflect total output and do not account for individual purchasing power parity (PPP).

GNI per capita vs. GDP per capita, 2021

Gross national income (GNI) measures the total income earned by residents of a country, including income earned abroad. Gross Domestic Product (GDP) instead counts only income generated from goods and services produced domestically.

As per the Central Statistical Organisation, the Gross National Product (GNP) is determined by adding the Gross Domestic Product (GDP) to the factor income received from abroad and subtracting the factor income paid abroad. Similarly, the Gross National Income (GNI) is calculated by adding subsidies from abroad to the GNP. **Gross national Income (GNI)** is an alternative to GDP to track a nation's wealth.

These measurements are standardized as part of National Accounts globally, facilitating comparisons between countries.

The question that arises here is whether any one indicator reflects all economic growth parameters or whether a merger of a few of them is required.

While GDP measures macroeconomic performance, certain other indicators, such as money supply and government budgets, shed light on economic stability. The money supply is the total currency and other liquid assets in a country's economy at a given time.

Central banks closely monitor and regulate the money supply, as it significantly impacts inflation, interest rates, and overall economic activity. Central banks aim to maintain price stability and support financial goals by controlling the money supply. This is because the money supply reflects the amount of money in circulation in the economy and indicates the speed at which money changes hands.

Some economists like Milton Friedman argue that the "money supply provides information about the short-term course of the economy and determines the level of prices and inflation in the long run, affecting GDP" (Ross).

Government budget, another relevant indicator, is a document that presents a governing body's anticipated revenues and proposed spending for a fiscal year (Definition of Government Budget). A budget surplus indicates government savings, while a deficit may stimulate economic growth through increased spending. Analyzing budget allocations provides insights into policy priorities, economic health, and potential impacts on inflation, debt levels, and overall financial stability.

The Empirical relevance of such indicators reflects how effective they are as tools of economic policies. "GNI and GDP of a country may not have a significant difference as in the case of the U.S. where the GNI for 2021 was about $23.6 trillion and the GDP was $23.3 trillion. It, however, may vary greatly as in the case of Bangladesh, which recorded a 2021 GNI of $438 billion compared to a GDP of $416 billion" (Rathburn). GNI has thus, come to be preferred to GDP by organizations such as the World Bank given today's mobile population and global commerce.

Then comes the question of optimizing the economic production of the economy. Since the essence of economics is primarily the transformation of natural resources into goods and services for the well-being of society, the aspect of allocation of these resources among individuals in a manner that is best for the overall society becomes important.

These aspects are brought together in the concept of Welfare Economics, which measures the overall well-being of a society. It uses microeconomic techniques to maximize what is called the 'Social Welfare Function' (SWF) which introduces the important dimension of cost-benefit analysis into the deployment of these resources towards maximizing social value.

A social welfare function essentially aggregates the values of an economic utility across individuals, giving an output value of the collective welfare for the society. If we take per capita income as the economic utility in question then the utilitarian social welfare function measures social welfare as the total or sum of individual utilities.

This simple social welfare function maximizes the total income of the society irrespective of how that income may be distributed within the society. This of course is not ideal, as while it may be the most efficient use of the resources available, it isn't the most effective in the overall social well-being.

Amartya Sen therefore proposed a welfare function in 1973 (Stark, 2024) to adjust the economic indices for inequality. The average per capita income of a measured group (e.g. nation) is multiplied by (1-G), where G is the Gini index, a relative inequality measure, to adjust the average income for the inequality in the distribution of the income between people.

Countries have been ranked on their Gini Coefficient as a measure of the economic disparity. A Gini coefficient of 0 implies perfect equality and a value of 1 or 100% implies maximum inequality i.e. one individual has all the income of the country.
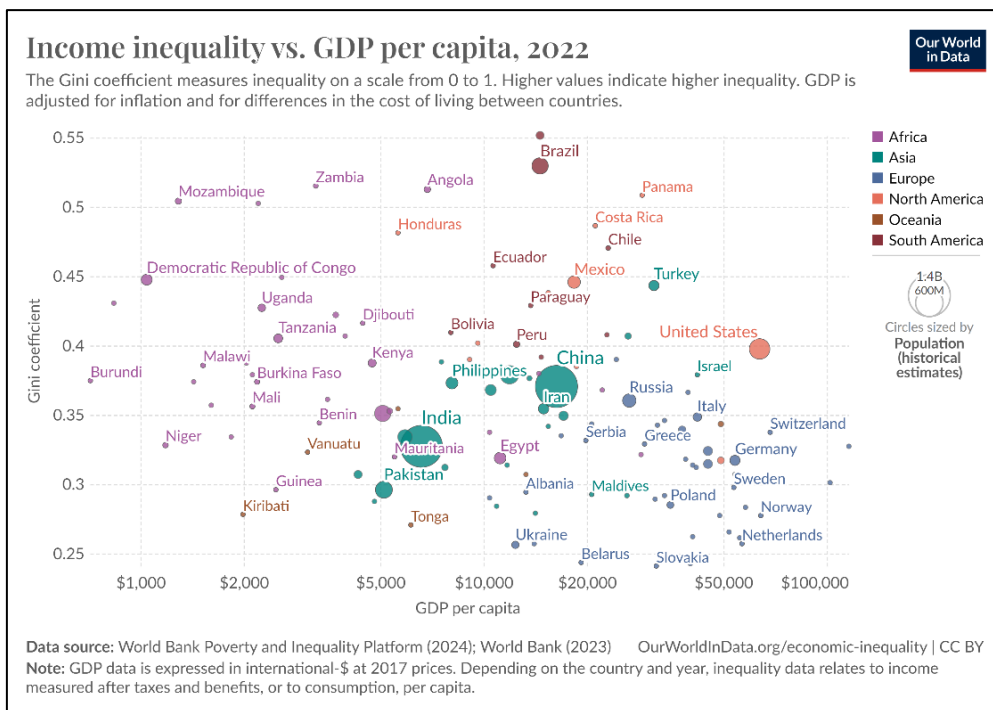
As the hypothesis may be, there is a negative correlation between the Gini coefficient and the (log of) GDP per capita as depicted in the below analysis (Smith). This relationship, however, is not one of perfect negative correlation and has varied over time.
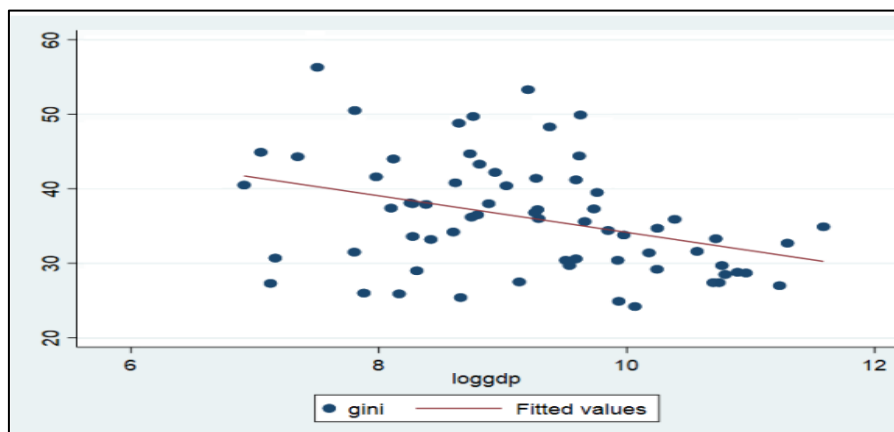
It is evident that when it comes to overall economic well-being, income distribution matters just as much as total income. Through healthier living, improved education, and other means, the disposable portion of income contributes to the total development of human capital.

This thinking evolved with time, and with the view that development cannot be assessed solely on the basis of economic growth, that is, quantitative analysis, numerous other indicators were introduced, such as The Human Development Index. "HDI is a measure of the average achievement in key dimensions of human development: a long and healthy life, knowledge and understanding, and having a decent standard of living" (Human Development Index | Human Development Reports). The HDI is the geometric mean of normalized indices for each of the three dimensions.

Limitations

It has been noted that each of these indicators has its restrictions in terms of applicability and may differ from one economy to another. It is crucial to assess whether each indicator can be effectively utilized in all economies. It is common knowledge that every economy has unique characteristics and resources, which raises the question of whether a single indicator can be relied upon and if so, which one.

The interpretation of data varies depending on one's access to additional data sets and points of view. Unemployment, for example, is influenced by numerous variables, including macroeconomic conditions and weather patterns affecting farming jobs, making it difficult to predict accurately.

An interesting study can be reflected by analyzing data from Norway. Norway holds the 26th position by nominal GDP. Its national debt in 2021 was 209,371 million dollars, (42.7% debt-to-GDP ratio), and its public debt per capita is 38,592 dollars per inhabitant. In terms of the human development index (HDI) of Norway, which is the index used by the United Nations to measure the progress of a country, was 0.961 points in 2021, leaving it in 2nd place in the table of 191 countries published (Norway 2024).

Therefore, GDP here fails to showcase the relatively higher standard of living in Norway as compared to other countries. In such cases, GDP per capita is better to look at, having a much higher correlation with HDI.

When we examine the data on a global scale, it becomes clear that having a high rate of GDP per capita does not necessarily equate to a more well-rounded and economically sustainable way of life in terms of HDI. This observation is consistent with the chart presented below
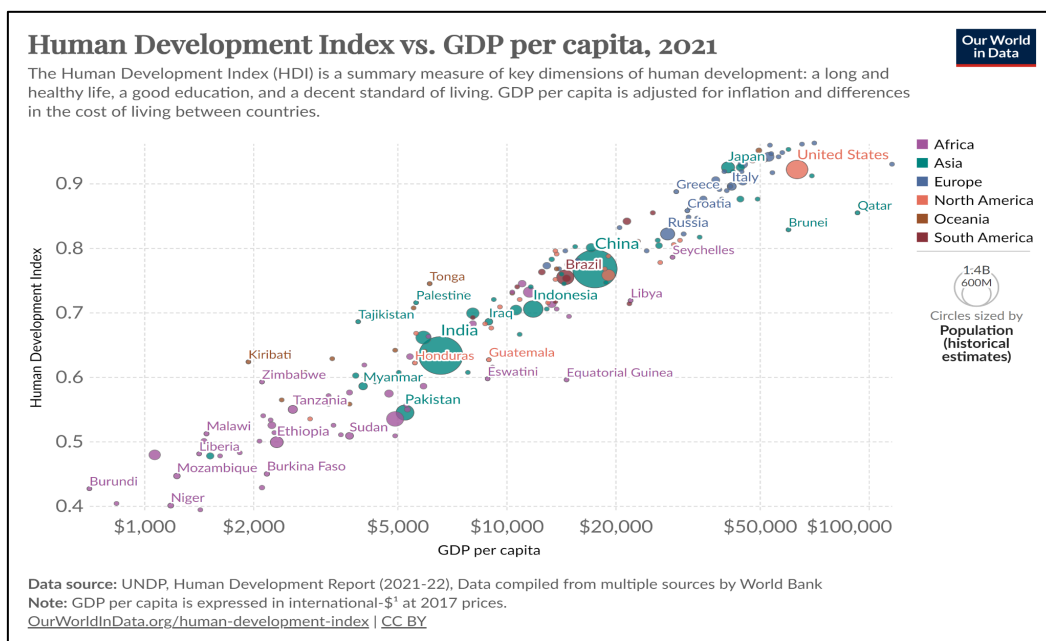
It also ignores several components that do not involve monetary transactions (Kubiszewski et al., 2013), excluding almost all non-monetary production, such as childcare or volunteerism, and the work done at home. Although nonmarket production such as government defense, emergency housing, and healthcare expenditures are partially integrated into GDP, many economic activities

such as donations, many of the determinants of well-being such as the value of economic security, social relations and personal safety, health, and longevity are excluded from its measures (Anheier and Stares, 2002, Michaelson et al., 2009).

Further, GDP counts every expenditure as positive and does not discriminate welfare-enhancing activity from welfare-reducing activity (Cobb et al., 1995). Defensive expenditures, for example, involve both crime-related costs, such as police, and security, and non-crime-related costs, such as insurance. These expenditures do not constitute a net increase in progress because they only prevent or repair social and environmental costs (Leipert, 1989);

Since GDP often hides social and economic inequities instead of addressing them, it does not properly provide societal insights into economic welfare due to escalating crime, reducing worker productivity and investment (Bernasek, 2006). When the growth is concentrated in only one portion of the society, it does not contribute to improving global economic prosperity because the social benefits of increases in consumption by the rich are less positive than increases in spending by the whole community (Talberth et al., 2007);

GDP fails to assess changes in human capital (both social and organizational), and does not account for the circulation of income among individuals, which can enhance personal and social well-being (Wilkinson and Pickett, 2009);

Simon Kuznets, the founder of GDP himself, cautioned half a century ago that it is useful mainly in tracking income. *"The welfare of a nation can scarcely be inferred from a measure of national income,"* he said (Vanham, 2021).

This assessment proved prescient. GDP tells us about aggregate consumption, but it does not tell us about personal well-being. It tells us about production, but not about the pollution that comes with it, or the depletion of natural resources it requires.

It leaves out the environment, disregards the costs associated with it, the rate at which natural resources are being depleted, and, paradoxically, counts the expenses associated with environmental rehabilitation as useful output. Furthermore, it ignores the detrimental long-term effects of short-term exploitation of the ecosystem and its services, which limit the ecosystem's ability to perform in a variety of ways. Further environmental issues caused by economic activity (production, exchange, and consumption) question the sustainability of economic profits from the exploitation of natural resources and the depletion of finite natural resources, both renewable and non-renewable.

"Natural resources have a double-edged effect on economic growth, in that the intensity of its use raises output, but increases its depletion rate. Their depleting character, coupled with diminishing returns of factor input implies that dependence on natural resource utilization is not an optimal strategy for sustainable growth. By extension, intensive utilization of natural resources undermines sustainable development." (Ibrahim, 2017)

It's worth noting that the correlation between income and environmental damage is not very strong. Although economic development and a better environment can coexist, it necessitates a set of well-planned policies and a commitment to producing energy and products in the most eco-friendly manner possible.

According to the Environmental Kuznets Curve theory, as economies grow, there is an initial increase in environmental pollution. However, once a certain income level is reached, economic growth can actually lead to environmental improvement and remediation (Pettinger, 2019). The same is being indicated in the graph below.
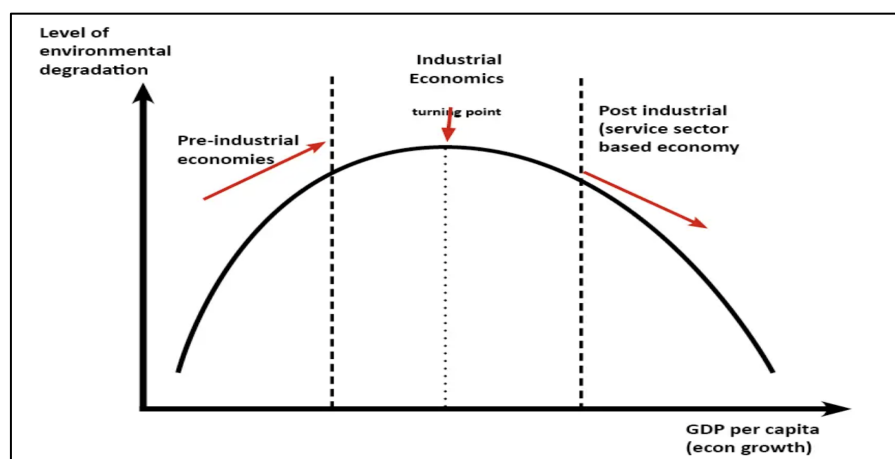
In this regard, therefore, GDP does not measure a standard of living at all – it should be seen as a measure of economic activity. The HDI criteria are designed to be broad enough to include countries' social, political, and economic diversity while indicating a country's quality of life.

Money supply and government budgets have limitations as economic indicators and need to be seen in conjunction with other indices. Money supply may overlook changes in the velocity of money, and government budgets may not reflect dynamic factors influencing economic health.

The aforementioned facts make it evident that the current indices do not offer a comprehensive and trustworthy assessment of a nation's economic health for the foreseeable future. Moreover, they do not take into account important socioeconomic factors like wellness, happiness, and quality of life.

Incorporating the 'X' Factor

The limitations above make it evident that no 'one' indicator alone can be used to measure a country's progress. It is unrealistic to expect any index to accommodate all the diverse aspects and give accurate results. Changes can be made, however.

"On a micro level, it would be more useful if we looked at the "median disposable income" of a household rather than a "per capita production" number. It does a better job of indicating how citizens in a country are faring economically. In the past few decades, it would have warned us, much sooner than GDP growth did, that the average family was no longer experiencing economic gains. On a macro level, it may be better to account for the "spring" of our wealth, not just its "flow" each year, Girol Karacaoglu, the former chief economist at the New Zealand Treasury, said. To do so, we need to value not just financial capital but also an economy's natural, social, and human capital: indeed, they are the true source of our wealth." (Vanham, 2021)

Inequality Adjusted HDI, therefore, is a much better indicator of factors in the micro and macro level aspects. It considers the variance in the three dimensions of income, health, and education to arrive at the relative ranking of countries.

However, this still leaves us with the question of the sustainability of the economic state of a particular society.

A comprehensive metric for measuring a country's progress can be obtained by amalgamating the GDP and inequality-adjusted HDI scores with a third variable that accounts for the nation's natural resource base and its efficient and effective allocation. The natural resources could include factors such as land, labor, or capital. If resources and income are distributed in the most efficient way possible, the socially optimal index can be obtained that reflects higher rates of productivity and growth.

Conclusion

Economic Indicators are necessary in order to track the growth and economic state of countries individually, as well as relative to each other. The use of indicators like GDP has grown in the last century, and for good reason. They have helped developing economies measure progress towards different goals. In today's world, however, just measuring the production and consumption of goods and services is not enough. Other factors must be included to create a composite index that helps bring to light economic growth, social well-being of the citizens as well as the conditions and sustainable distribution of the natural resources.

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