

The Reductionist GDP Discourse Under the Scrutiny of Amartya Sen's Capability Approach

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Abstract

The aim of this paper is to analyse the reductionist character of gross domestic product (GDP) discourse and also the naturalization of GDP metric in terms of economics, which suggests that governments and global institutions have not been focused on fomenting capabilities of human beings. The capabilities represent a sort of a bundle of functionings, which allow persons to create better conditions of income or well-being by themselves. Likewise, the complexity of capability approach is thoroughly bound with entrenched peculiarities of the reality. Currently, contemporary societies have got a huge contrast as well as intense heterogeneity in cultural, ethnical, political and other aspects. As a result, these conjuncture increases the potentiality of conflicts, reason that an integrative treatment of the issues enables us to understand the intricate differences amongst human beings. Thereby, social inclusion is sought through strategies that recognise human diversity and promote coexistence. Within this framework, the GDP reductionist index does not satisfy the complex demands of an unequal world. The capability approach, especially under the scrutiny of Amartya Sen's theory, can emerge as an adaptative alternative for public policies, insofar as include several elements of disorder and chaos that impact well-being in contemporary societies.

Keywords: GDP Discourse, Reductionism, Complexity, Capability Approach

Riassunto. *Un'analisi riduzionista al PIL attraverso l'approccio delle capability di Amartya Sen*

Lo scopo di questo saggio è quello di analizzare il carattere riduzionista del discorso sul prodotto interno lordo (PIL) e anche la naturalizzazione della metrica del PIL in termini economici, il che suggerisce che i governi e le istituzioni globali non si concentreranno solo sullo stimolo delle capacità degli esseri umani. Le *capabilities* rappresentano un complesso di *functionings*, in grado di permettere alle persone di creare condizioni di reddito o benessere migliori autonomamente. Questa complessità dell'approccio basato sui *capabilities* è strettamente legata alle peculiarità della realtà. Attualmente, le società contemporanee hanno avuto un enorme contrasto e un'intensa eterogeneità negli aspetti culturali, etnici, politici e d'altri tipi. Di conseguenza, queste congiunture aumentano la potenzialità dei conflitti, motivo per cui attraverso il trattamento integrativo dei problemi sarà possibile comprendere le intricate differenze tra gli esseri umani. Pertanto, l'inclusione sociale deve essere cercata in quelle strategie che riconoscano la diversità umana e promuovano la convivenza tra gli uomini. In questo quadro, l'indice riduzionista del prodotto interno lordo non soddisfa le complesse richieste di un mondo in cui le persone non sono uguali. L'approccio basato sui *capabilities*, specialmente sotto il controllo della teoria di Amartya Sen, emerge come alternativa per guidare le politiche pubbliche in modo più distributivo, con diversi elementi di disordine e caos che influiscano direttamente il godimento del benessere da parte degli individui nelle società contemporanee.

Parole-Chiave: Discorso sul PIL, riduzionismo, complessità, Capability Approach

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1. Introduction

The main purpose of this paper is to demonstrate how GDP metric is reductionist, at the same time that other informational basis may be better to evaluate the process of development.

The methodology that will be employed in this study concentrates on economic data

gathered from private and governmental institutions that indicate numbers in terms of development perspective and bibliography data collected from books and papers as well.

Another goal is to emphasize how complex the human development may be and also to demonstrate that one parameter is not sufficient to encompass a complete photography of growth, in general sense.

In order to accomplish these aims, it will be compared the situation amongst countries that have some economic, cultural or regional similarities. Through this strategy, the paper will search for revealing the oversimplification of the GDP discourse, which is unable to detect broader aspects of progress.

The opinions of referenced authors in sociology and economics also will contribute to analyse the insufficiency of the GDP index to evaluate human development, especially Amartya Sen's capability approach, a perspective that will be useful in the context of this work.

In the end, the target of this work is to suggest that the capability approach may be a more complex and more complete informational basis that permits to assess development accurately and that the progressive aggregation of multiple items in order to evaluate advancement might be a good tool to depict the vivid colours of reality.

2. The gross domestic production reductionist discourse

In terms of development, the GDP (Gross Domestic Product) index is the most common used by nations in order to evaluate development and, repeatedly, it is introduced as an important reference in order to compare growth among countries, above all in the strict economic point of view.

Theoretically, the criteria that are evaluated to measure GDP, according to IMF (International Monetary Fund), can be viewed in three different ways, to wit:

a) the production approach sums the "value-added" at each stage of production, where value-added is

defined as total sales less the value of intermediate inputs into the production process. For example, flour would be an intermediate input and bread the final product; or an architect's services would be an intermediate input and the building the final product; b) the expenditure approach adds up the value of purchases made by final users—for example, the consumption of food, televisions, and medical services by households; the investments in machinery by companies; and the purchases of goods and services by the government and foreigners; c) the income approach sums the incomes generated by production—for example, the compensation employees receive and the operating surplus of companies (roughly sales less costs) (Callen, 2018).

However, as Joseph Stiglitz (2012) advertises, people in countries around the world know that GDP per capita does not provide a good picture of what is happening to most citizens in society and also, in a fundamental sense, how well the economy is doing. And as IMF (Callen, 2018) itself admits, it is also important to understand what GDP cannot tell us. In other words, the GDP is not a measure of the overall country's standard of living or well-being. The quality of life may also depend on the distribution of GDP among the residents of a country, not just in terms of overall level.

The IMF recognizes too that the use of GDP index in order to evaluate the growth of countries ignores several important aspects of development. Among them, it is possible to quote education, sanitation, health, exposure to violence, income distribution, habitation, employment, environmental conditions, infrastructure, and multiple other points that should be regarded.

The centralization only in the economic features of development cannot assess the real context of the distribution of resources, quality of life and achievement of well-being, especially if it leaves out necessities that are demanded for a specific country or community, for example excluding education and the access to health services.

A good example of the oversimplification of the GDP evaluation is the case of Brazil. According to the IMF (Callen, 2018), Brazil is the 9th economy of the planet (2018, GDP nominal - billions US\$). On the other hand, the World Bank reveals that Brazil belongs to the group of countries that is defined in terms of inequality income distribution and poverty.

Comparing Brazil and Croatia, for instance, although the bottom 40 in Croatia are

consistently doing better than the bottom 40 in Brazil, the rich in Brazil are much richer than the top earners in Croatia. Brazil is much more unequal than Croatia. The average daily income of the richest decile in Brazilian society is more than 30 times higher than the average daily income of the poorest decile, whereas the equivalent ratio in Croatia the proportion is 8 times (World Bank, 2018).

Besides, Brazil has registered tragic numbers lately. One of them is the violence against women. In accordance with data provided by Human Rights Department of Brazil's government, from January to July, 2018, there were 37.396 cases of assault that were denounced. Several other crimes were reported against women: 26.527 cases of psychological violence, 6.471 of sexual violence (including rape), 3.710 of moral violence, 2.828 of false imprisonment and 994 homicides.

In terms of education, Brazil fails too. According to PISA results (OECD, 2016), the average performance of students in Brazil is significantly below the OECD average in science (401 points, compared to the average of 493 points), reading (407 points, compared to the average of 493 points), mathematics (377 points, compared to the average of 490 points). Despite the increment in spending of education, this still needs to translate into better learning outcomes, since other low-spending countries, such as Colombia, Mexico and Uruguay, spend less per student than Brazil does, but perform better in science, for example.

In other words, Brazil occupies a privileged position in GDP ranking, albeit the unacceptable number in terms of education and women development approach, that is, the country does not present satisfactory social results. The policies for education and against violence, for instance, are not top-rated. For this reason, the data indicate that Brazil does not develop as good as in the case of GDP index.

Another Latin American country that has a high GDP ranking is Mexico, which take the fifteenth place in GDP ranking, according to International Monetary Fund (2018). In last decades, Mexico adopted an incarceration policy in order to fight against organized drug dealers and a response to reduce poverty and crime in general as well.

However, Cirenia Villegas (2018) affirms that the comparison of income deprivation

across the delinquent and non-delinquent samples reveals that delinquents are less income deprived than non-delinquents, suggesting that participation in organized crime is reducing income poverty (72% of delinquents were poor by income standards, whereas the nondelinquent sample, the figure was 86.9%).

In fact, Mexico is the second biggest country in terms of gross domestic product in Latin America. Notwithstanding, Mexico has not been successful in decreasing poverty through social programs. The political option that was chosen is simplistic as well, insofar as it was chosen the option to increase the number of persons in prison instead of facing the problem of the drug dealer's organizations and structural poverty through inclusive public policies.

These two examples of high GDP ranking, although from Latin America, indicate that development, in a broad sense, is not necessarily related with income or commodities. In some situations, the increase of GDP number might be associated with a significant percentage of income concentration and a worst scenario of poverty and deprivation.

Martha Nussbaum (2011, p. 50) also critiques the GDP measurement. For her, the GDP approach distracts attention from other urgent matters, suggesting that when a nation has improved its average GDP, it is "developing" well. GDP, then, fails to make salient the issue of distribution, the importance of political freedom, the possible subordination of minorities, and the separate aspects of lives that deserve attention.

It cannot be denied the relevance of GDP index, although. This form of evaluating development contributes to verify the economic outcome generated by the domestic production of a country. Nevertheless, the GDP discourse is reductionist. It is not compounded by multiple complex elements of development evaluation, disregarding other items that are crucial to do it, such as education, health, income distribution, well-being and so on.

As Pitasi and Dominici (2012, pp. 33-52) emphasize, «the social and economic turmoil of our time calls for new paradigms to manage complexity». The GDP index is not sufficient to depict the complexity of the actual world, which is not reduced to strictly economic results at the extent that it is needed to aggregate social data in order to identify the true photography of the reality.

John Holland (1998, p. 14) asserts that «there is a common misconception about reduction: to understand the whole, you analyze a process into atomic parts, and then study these parts in isolation». Such analysis, explains Holland (1998, p. 14), works when if you comprehend the whole as the sum of its parts, but it does not work when the parts interact in less simple ways.

M. Mitchell Waldrop (1992) wrote that the edge of chaos is a constant «shifting battle zone between stagnation and anarchy, a place where a complex system can be spontaneous, adaptative and alive». Economy is one of these examples of adaptative complex systems:

Because the individual parts of a complex adaptive system are continually revising their ("conditioned") rules for interaction, each part is embedded in perpetually novel surroundings (the changing behavior of the other parts). As a result, the aggregate behavior of the system is usually far from optimal, if indeed optimality can even be defined for the system as a whole. For this reason, standard theories in physics, economics, and elsewhere, are of little help because they concentrate on optimal end-points, whereas complex adaptive systems "never get there". They continue to evolve, and they steadily exhibit new forms of emergent behavior (Holland, 1992, pp. 17-30).

Therefore, in the context of an economic complex adaptative system, the evaluation of development must consider multiple factors and also the interaction amongst them in order to better assess public policies that are adopted by governments. When only one aspect of development is chosen, it might hinder the deficiencies of governmental politics or it might corroborate obscurantist or ideological perspectives that legitimate the keeping of power as well.

3. A critique of gross domestic production from human development

The GDP index has been scrutinized by its reductionist or simplistic approach, which concentrates the discourse only on an isolated aspect of growth, at the same time that it ignores the vast and complex dimensions that comprehends the process of development.

However, the HDI (Human Development Approach), which was the result of efforts from the Pakistani economist Mahbub ul Haq, together with a group of scholars that included Amartya Sen, has also not been unanimously embraced among academics. At one extreme, some have described it as an overly simplistic representation which has little, if any, conceptual or theoretical basis (Klugman, Rodríguez and Choi, 2011, pp. 249-288).

Some critiques assert that HDI uses the wrong variables that don't reflect the human development idea accurately (Lind, 2004; Dasgupta and Weale, 1992; Srinivasan, 1994; Sagar and Najam, 1998; Chibber and Laajaj, 2007), whereas Sagar and Najam (1998) claim that «the HDI presents a distorted picture of the world» and others argued that the HDI depicts an oversimplified view of human development by relying on only a few indicators often derived from data of low quality (Murray, 1993; Srinivasan, 1994) (Kovacevic, 2010, pp. 1-44).

According to Martha Nussbaum (2011, pp. 59-60), the critique of HDI is too an oversimplification that misunderstood the strategic role of HDI because, as Mahbub ul Haq stressed, nations are accustomed to seeing a single ranking would not accept to large ranking. It is natural to wonder whether, and how, capabilities can be measured. People tend to succumb to what might be called “the fallacy of measurement”; that is, noting that a certain thing (let's say GDP) is easy to measure, some persons become convinced to adopt it without hesitation.

Although the HDI is insufficient too, this index consubstantiates a progress in the measurement of development, insofar as it overcomes an oversimplification of GDP or GNP index that concentrates exclusively on economic parameters the judgement of progress and ignoring other areas that are crucial to assess social and human advancement, such as education, health, income distribution, sanitation, housing, etc.

Amartya Sen's and Sudhir Anand (1994) highlight the human development approach, according to which the capabilities are related to nutrition, health, education as *ends* in themselves, whereas the mainstream economic view sees these capabilities as an extra income or an output the investment generates, judging it to be worthwhile only if the rate of return exceeds the capital cost.

In particular, the Human Development Index (HDI) and the Human Poverty Index (HPI) portrait some aggregated indices and they tend to draw much more public attention than the detailed and diverse empirical pictures emerging from tables and other empirical presentations (Sen, 2000, p. 318), what is a notorious advantage in comparison to the overconcentration on the simple measure of GNP or GDP per head.

In this context, the capability approach has been used to motivate improved aggregate measures of well-being and poverty, which is undertaken, for example, the Human Development Index (HDI), produced by the United Nations Development Programme (UNDP), indicator that combines data on a country's income, life expectancy, literacy and school enrollment to obtain an overall measure for ranking countries (Basu and Kanbur, 2008, p. 365).

The aggregation of other informational basis in order to assess development may be considered a pivotal advance in terms of evaluating inequality as well. The evaluation only through the reductionist GDP discourse sometimes permitted to conceal the real disparities among social groups inside a country or a community.

As a matter of fact, when the items of evaluation is amplified, it makes possible to verify whether one society or a group of people is experiencing an effective process of growth or not. Despite it is not yet complete, the small aggregation of few elements in the HDI index establishes a broader perspective than GDP metric in order to evaluate development.

Given these points, the capability approach may be considered a more complex and complete informational basis in order to assess human progress, since it refers to broader elements of evaluation (capabilities and functionings), which avoid the oversimplification in terms of development analysis.

For this reason, the capability approach reflects freedom to pursue those things that are valuable for each person and it differs crucially from other traditional discourses to individual and social evaluation – for example, primary goods (Rawls), resources (Dworkin) and real income (GNP or GDP) – at the extent that all these variables concern with the instruments of achieving well-being and other objectives and can be seen also as the means to freedom (Sen, 1992, p. 42).

Therefore, the Human Development Index, notwithstanding its incompleteness, is clearly a better form of assess development than GDP or even GNP metric, because HDI adds other components – education and life expectancy, together with income – that permit to see more precisely the process of human capability expansion or, on the contrary, it may suggest that a specific country or community is experiencing a process of underdevelopment.

Even though the undeniable importance of HDI index, the capability approach demands a more complex way to evaluate progress and improvement of well-being. It is crucial to amplify the coverage of human development analysis, that is, it must be aggregated multiple elements when development is analysed. Therefore, the expansion of these evaluative items is really fundamental to assess development.

The idea is that the list of elements is not rigid, but several items definitely could be added beyond health and education, such as income distribution, women freedom, gender equality, religious freedom (including the right to do not profess anything), the access to digital education, to be free of hunger, sanitation, housing, clothing, access of electricity and clean water, minimum income, to live in a sustainable environment, to be free to express political ideas (including against the government), to participate in community decisions, and so on.

In sum, the GDP and GNP are not sufficient indexes in order to evaluate development and, as will be emphasized in the next part of this essay, the capability approach, on the other hand, permits to include in this sort of evaluation an extensive catalogue of rights that could expand the freedom of people to live according to what they themselves value. At the same way, it might centralize the assessment in human well-being instead of commodities and other market parameters.

4. The reductionist GDP discourse under the scrutiny of Amartya Sen's Capability Approach

In line with Amartya Sen, Sabina Alkire (2007, pp. 89-119) explains that the capability

approach is a normative framework for assessing alternative policies or states of affairs or options, which proposes that social arrangements should be primarily evaluated according to the extent of freedom people have to promote or achieve plural functionings they value.

Sen (1992, preface) also underlines that human beings are deeply diverse in internal characteristics (such as age, gender, general abilities, particular talents, proneness to illnesses, and so on) as well as in external circumstances (such as ownership of assets, social backgrounds, environmental predicaments, and so on).

As a result of these human heterogeneities, it is not possible to reduce to only one element (real income) the evaluation of the whole process of development, because progress should not be understood just under the economic perspective. This process involves a larger perspective that encompasses the sustainable development in the sense that includes, among other values, human development, environmental preservation, the promotion of freedom and the eradication of poverty.

This idea was corroborated by Amartya Sen's and Sudhir Anand (1994) who think that human beings are the centre of all development activity and enhancing their capability to function is what lies at the core of human development. In this context, the achievements of people and the freedom to achieve are valued as ends in themselves, whereas, on the contrary, the mainstream economic approach focus on human beings as a resource, a mere input into production activities.

To emphasize the evaluation on the capabilities and functionings is the core of Sen's capability approach, which focuses on the human development and not exclusively on economic features of growth. As it was reported formerly, a society that has a huge GNP or GDP might present bad numbers in terms of education, health, sanitation, income distribution, habitation, violence, women rights and so on.

In 2017, India, for example, had a GDP Annual Growth Rate of 6,7%, according to the World Bank data¹. However, the average of both sexes in terms of life expectancy at birth, in the case of India, was unsatisfactory (68,8 years), especially if we compare this statistic with the numbers of China – another country that has above 1 billion of inhabitants – that had a

1 <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=IN> (26/09/2019).

superior average of life expectancy at birth to both sexes (China registered 76,4 years of life expectancy in 2018) (WHO, 2018).

Even though the much-used economic criteria of advancement, to focus specifically on the enhancement of inanimate objects of convenience (for example, GNP or GDP), which have been a fetish of a myriad of economic studies of progress, in fact, that concentration only could be justified if these objects have some influence in terms of human well-being (Sen, 2009, p. 225).

An interesting datum was quoted by Amartya Sen (2000, pp. 50-51) at the book *Development as Freedom*. During Second World War, British GDP decreased, although the mortality rates went down sharply (except of course for war mortality itself), which happened by virtue of the changes in the extent of social sharing in the war decades, and because of the increasing public support for social services (including nutritional support and health care).

This datum illustrates that the GDP metric, which has been underpinned in terms of real income and general wealth, disregards the variations of well-being among persons. It cannot be denied that the raise of GDP index eventually stimulates the improvement of general well-being. Yet this relation is not necessary.

Indeed, inequality determines how far growth benefits poor people, since a 1% increase in per capita GDP can reduce income poverty by as much as 4% or as little as 1%, whereas the redistribution of wealth by means of land reform or progressive taxation can proportionate a better condition for poor people, even in a shrinking economy, although in practice redistribution alone has never reduced poverty for more than brief interludes (Green, 2012, pp. 179-180).

The case of China and India, as well as Brazil's data, both reveal the insufficiency of GDP discourse in virtue of its extreme oversimplification. As Amartya Sen (2003) advertises, a country can be very rich in conventional economic terms (for example, in terms of the value of commodities produced per capita), and it still be very poor in the achieved quality of human life.

Thus, the GDP index cannot be the end-point of a theory in economics, since it does not

encompass the well-being of human beings, which cannot be ignored for economic scientists. Economics, as an end in itself, without considerations related to persons, it is not useful to evaluate development. Given the complexity that characterizes economic world, which may not be reduced to income or commodities, the analysis of progress, in a broader and complex sense, demands another approach.

Considering that human beings matter, we cannot disdain some crucial elements that contribute to become the economic analysis more complex. One of these complexities is the diversity of human beings. It emerges from personal heterogeneities, environmental diversities (climate), variations in social conditions (education, violence, epidemiology), differences in relational perspectives (to be poor in a rich country) and distribution within the family (2000, pp. 70-71).

Amartya Sen highlights that living may be seen as consisting of a set of interrelated “functionings”, consisting of beings and doings, both elementary (being nourished, avoiding escapable morbidity) and very complex achievements (as being happy, self-respect, participation in society). In this context, if the achieved functionings constitute a person's well-being, then the capability to achieve functionings (in other words, all the alternative combinations of functionings that a person can choose to have) will constitute the person's freedom, that is, the real opportunities to have well-being (1992, pp. 39-40).

Furthermore, it cannot be forgotten the importance of the conversion factors in the human development analysis. All conversion factors, says Ingrid Robeyns (2016), influence how a person can be or is free to convert the characteristics of the resources into a functioning. Nonetheless, the sources of these factors may differ in terms of personal, social and environmental conversion factors.

The temptation of an aggregated commodity-based measures as the GNP or the GDP is strong, partly because these measures seem nicely aggregated and conveniently complete. However, the crucial point is that the successes and failures in the standard of living are matters of living conditions and, then, the gross picture of relative opulence that the GNP tries to capture (Sen and Muellbauer, 1988, pp. 33-35) does not reveal the reality of poverty and deprivation.

As Jean Drèze and Amartya Sen (1989, p. 181) emphasize, it is an oversimplification of the problem to understand that only the GDP increase provides well-being. In the process of transforming opportunities into a tangible achievement, the public support in various forms (and influencing both the distribution of income and the relationship between income and basic capabilities) often plays an important role, since improvements in the quality of life are sometimes seen simply as the result of increases in overall affluence per se. Nonetheless, the expansion of public support policies may have been the crucial intermediary of these improvements.

For these reasons, there is no doubt that the GDP per capita or another variation of this index both are a poor indicator of the level of development, especially in comparison to a broader and consistent perspective such as capabilities approach (Arrow, Sen and Suzumura, 2010, p. 180), which is a more complex and extensive informational basis in order to identify advancement in relation to human welfare.

The Human Development Index is a better development metric than GDP, at the extent that it improves the evaluation of well-being. Notwithstanding, the concentration only on per capita income, life expectancy and education implies that HDI is an insufficient index as well, insofar as it does not aggregate other pivotal elements that are extremely important in order to estimate human development, such as the level of poverty and deprivation, sanitation, housing, women rights, violence, digital inclusion, for example.

In conclusion, the evaluation of human development demands an ongoing aggregation of other elements that would permit to judge whether the public policies implemented by governments are accurately efficient or not. Despite the complexity that would emerge from the addition of multiple items for evaluation, the more elements compound the platform of assessment, the more the index could depict the reality.

5. Conclusion

The human heterogeneities do not permit that we reduce all of development discourse in

one narrow informational basis, such as GDP index, which points out only income or commodities to evaluate advancement.

Especially in terms of human emancipation, the complexity of the process of development cannot be restricted to one exclusively reference to income or commodities at the extent that this analysis must integrate other crucial elements.

Several data reveal that the GDP metric conceals the true reality of some nations, such as Brazil and Mexico, which show a high gross domestic product in comparison to the most countries around the world, but they are not advanced in terms of human development.

When GDP ignores well-being, education, health, sanitation, housing, women rights, policies against violence, income distribution and a myriad of items that influence in the evaluation of real development, the metric becomes inadequate and it implies that other references may be more important because they are more complete.

The Human Development Index aggregated life expectancy and education, as well as income, what amplified the spectrum of the development evaluation. Nonetheless, even the HDI may be considered incomplete, although it constitutes a notorious advancement if we compare to the GDP index.

In this context, the enlargement of items together with the capability approach could aid in the task of development assessment, since it may allow us to depict whether a society or a community is progressing or not in terms of human development, insofar as it focuses on capabilities and functionings and also the freedom that human beings have to live the life that they value.

This evaluation may be employed through the aggregation of multiple items that would amplify the analysis and, in the end, we could concentrate the evaluation of development on what effectively matters to individuals, that is, on the scrutiny of the public policies, especially whether governments have accomplished their roles and whether the human lives are being taken seriously.

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