Proceeding of ICGPSH 2025 Symposium: The Globalization of Connection: Language, Supply Chain, Tariff, and Trade Wars
DOI: 10.54254/2753-7048/2025.LD23205

Looking Beyond Economic Metrics: How the Development in Socialist Economies Challenge the Mainstream Indicator

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Abstract: This study assesses the limitations of Gross Domestic Product (GDP) as a major indicator of the development of socialist economies through a comparative analysis of China's socialist market economy and Cuba's planned economy. The analysis showcases that China's mixed economic structure, which combines market mechanisms with state control, has achieved growth, but many public services and state assets are undervalued by traditional GDP measure. Similarly, Cuba's state-dominated economy produces extraordinary social outcomes in education and healthcare, and GDP cannot fully measure its contributions to the social development which means that the non-economic benefits brought by such governmental investments were undervalued due to statistical difficulties created by current GDP metric. Both examples uncovered the internal bias of GDP against monetized transactions, which ignores socialist economies' priorities. To reduce these gaps, the study recommends combining GDP with other multidimensional metrics, integrating social welfare indicators and collective asset valuations. This hybrid approach could better reflect the development goals of the socialist system, emphasizing collective welfare rather than market-centered growth.

Keywords: socialist economies, non-market welfare, development measurement

1. Introduction

Today's world's economic topics mainly focus on the recovery from the pandemic, geopolitical tensions between superpowers, and debates about how to achieve equitable development. Under such circumstances, Gross Domestic Product (GDP) is still a dominant metric to measure a nation's economic performance due to its simplicity and cross-country comparability, even it already had a long history in the global development assessment system [1]. GDP is the total market value of all goods and services produced by the resident units of an economy over a given period, and it is calculated by adding consumption, investment, government spending, and net exports together [1]. However, as global priorities shift towards sustainability and equity, such market-centric measures face increasing scrutiny, such as the multi-dimensional assessment advocated by the United Nations' Sustainable Development Goals [2].

For a market economy, GDP effectively captures transaction output, but it systematically underestimates the production in a socialist economy dominated by state-controlled economic activity [3]. In socialist countries such as China and Cuba, collective asset allocation such as public healthcare, education subsidies, and non-market welfare mechanisms account for more than 30% of social well-being contributions, but these are either excluded from GDP accounting or are only classified as

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government consumption [4]. This bias arises because GDP metrics prioritize monetized transactions over goods and services provided by the state, and this tends to be a key flaw when evaluating socialist systems using GDP because socialist economies prioritize fair distribution over profit maximization [5].

The need to redefine development metrics often comes from three dimensions. The first dimension is that GDP may sometimes fail to reflect the fairness of income distribution. The second dimension is that drivers of public welfare, such as the quality of universal healthcare and education, which are critical to human resource development, remain unquantified in GDP indicators [6]. The third dimension is that over-reliance on GDP metrics may stimulate short-term growth at the expense of long-term sustainability, and there may be negative externalities, such as environmental degradation caused by highly polluting industries [7].

By analyzing Cuba and China, two socialist economies with very different paths of development, and examining how GDP measures underestimate state-led welfare contributions in both economies, a new metric combined with public service accessibility, such as healthcare coverage, education equality, and collective asset valuation, such as land-use rights and infrastructure equity, is proposed to better help with analyzing the development level of a socialist economy.

2. Development of Cuba

Since the establishment of the current Cuban government, the Cuban economy has shown obvious socialist characteristics. The country maintains a traditional planned economy, with the government controlling about 70% of economic activity, including key sectors such as healthcare, education, and tourism [8]. Although Cuba currently faces economic sanctions from the United States, it has developed a dual currency system and limited market reforms in recent years while retaining its socialist economic foundations. Its GDP growth rate has been modest, averaging about 1 to 2 percent per year over the past decade, relying mainly on tourism revenues and remittances [8].

Cuba's development achievements are remarkable considering the constraints it faces. The country has achieved a 99.8% literacy rate and provides free education at all levels from primary to university [8]. Cuba also has one of the highest doctor-to-patient ratios in the world, with 8.2 doctors per 1,000 citizens, well above the regional average [9]. These social services are guaranteed and funded from the government budget.

However, GDP indicators fail to fully capture these achievements. While Cuba's per capita GDP ranks low globally, at about $9,500, its human development index is comparable to other high-income or developed countries. For example, the life expectancy of Cuban citizens is 79.1 years, which is comparable to the standards of developed countries [9]. This disparity emphasized the limitations of using GDP as a major indicator to assess the development of socialist economies, where non-monetary economic activities and non-market services account for a larger proportion of social welfare compared to a capitalist economy.

The GDP indicator might exclude non-market welfare's contribution to the development, which may underestimate Cuba's social development eventually. For example, Cuba's universal healthcare and free education, which contributed for the majority of its social developments, are only simply being classified as government consumption in the GDP measurement [8]. The contribution to the overall development of Cuba of collective assets and public services provided by the state is also underestimated because of the lack of market valuations in conventional market-oriented economic indicators such as per capita GDP.

Conventional economic indicators like GDP are not able to measure the value of public goods and services that are essential to the development of a socialist economy precisely [10]. This explains why Cuba's human development indicators, such as life expectancy and literacy rates, usually

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outperform its conventional economic indexes. Cuba's socialist system caused the formation of an unusual mismatch between its GDP per capita and other human development indicators.

3. Development of China

China's socialist market economy is a unique type of mixed economic system that combines state planning in socialist countries with market mechanisms. Since the imposition of reform and opening-up policy in 1978, China has transformed itself from a backward agrarian economy into the world's second-largest economy, with a speedy average annual GDP growth rate of 6.5% between 2010 and 2025 [11]. The socialist market economy has maintained state control over strategic industries, such as energy, heavy industries, and finance. It also encourages private enterprises to produce most consumer goods, invest in light industries, and inspire the activeness of the whole economy, creating a unique model that differs from the Western capitalist market and the Soviet-style command economy. The "One Country, Two Systems" framework embodies this duality, allowing special administrative regions like Hong Kong to pursue market-oriented policies while retaining central planning for infrastructure projects in the mainland. State-owned enterprises dominate strategic industries which account for 40% of industrial output, while private firms create innovative ideas and provide 80% of urban employment [11].

China's development strategy emphasizes social welfare as well as economic growth. The education system has achieved a 97% literacy rate through free and compulsory education, and higher education enrolment has tripled since 2000 [12]. However, the urban-rural disparity persists as elite urban universities receive three times more funding per student. In the area of healthcare, 95% coverage was achieved through the three-tier insurance system, which increased life expectancy to 78.3 years. However, privatization reforms have created a gap – urban residents spend 30% of their income on healthcare compared with 45% in rural areas. The National Happiness Index (NHI) reveals a contradiction, when per capita GDP reaches $14,000, the NHI ranges from 75 in Shanghai to 55 in Gansu province [12]. Environmental quality and job security also significantly affect happiness.

The efficiency and cost advantages in China also could not be counted in GDP. For instance, a regular out-patient visit in China costs approximately $4 without insurance, while the same quality service in the United States averages $300, and the National Healthcare Security Administration's 2023 Statistical Bulletin highlights $32 billion in annual savings from negotiated drug prices and insurance reimbursements in China [13]. Another example is China's infrastructure. China's high-speed railway network, which is 45,000 km long in total, reduces intercity travel times by 60%, while public transportation costs in Chinese first-tier cities, such as Beijing, are only 1/10 of that in first-tier cities in the United States, such as New York. These investments potentially enhanced productivity and leisure time [14].

As a result, GDP fundamentally misrepresents China's socialist market economy, underestimates $1.2 trillion in annual public services as consumption, excludes $52 trillion in state assets from the calculation, and masks regional inequalities [15]. Another development indicator, the Genuine Progress Indicator (GPI), suggests that China's real level of development is 20 to 25 percent higher than measured by GDP [15].

4. Comparative analysis

China's socialist market economy has achieved remarkable development while maintaining socialist characteristics. Since 2015, China's GDP has grown at an average annual rate of 6.2%, but due to China's mixed economic structure, traditional GDP measurement methods cannot fully reflect China's development. GDP could only measure monetarized economic activities, which is more suitable for measuring a market-oriented economy instead of a socialist mixed economy which both

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contain monetarized economic activities and government-directed economic activities [16]. While market mechanisms drive innovation in areas such as technology and manufacturing, heavy state involvement in key industries and extensive social welfare programs present measurement challenges. For example, China's universal health insurance covers more than 95% of the population, it is a welfare achievement that GDP cannot reflect on [14].

Cuba's planned economy presents even greater measurement difficulties. With about 75% of economic activities under state control, GDP systematically underestimates Cuba's economic output and welfare contributions [17]. The country's healthcare system achieves health targets comparable to those of developed countries through non-market mechanisms, which GDP fails to properly account for. Cuba's system of agricultural collectives and workers' cooperatives creates tremendous economic value that could not be seen in conventional national accounts [17].

To address these measurement challenges, the scholars suggest combining GDP with other indicators. The Comprehensive National Strength (CNP) Index is an indicator that combines economic factors and social welfare's contribution. It could possibly provide a more holistic assessment of socialist economies' development status [18]. This measure could better estimate all aspects of the development of the socialist system, from China's special socialist mixed economy to Cuba's conventional planned economy. Research on China's transition shows that traditional economic indicators like GDP systematically underestimate the significant contribution of non-market activities to socialist economies' development [18]. Therefore, while assessing socialist or non-market-oriented economies, the GDP metric could be integrated with the CNP index together to get a more holistic understanding of these economies' real level of development.

5. Conclusion

By using the socialist market economy of China and the planned economy of Cuba as examples, this paper examines the limitations of using GDP as a main indicator of development under the socialist system. The analysis shows that GDP metrics fail to account for the special features of the socialist development model, in particular their emphasis on non-market welfare systems and collective assets. Even though China has achieved notable economic growth through its mixed economic system, and it could be reflected by the conventional indicators, the traditional measures such as GDP significantly underestimate its vast series of public services and public-owned assets. Cuba's achievements in healthcare and education are also being undervalued in traditional economic assessments because of its largely state-controlled economic activities. Their contribution could not be fully measured by GDP alone.

The study highlights the demand for a more comprehensive indicator that could take the distinctive features of the socialist system into account. Alternative approaches that combine traditional economic indicators with measures of social welfare and the provision of public goods will provide a more accurate assessment of developments in these situations. The experiences of China and Cuba show that development strategies that prioritize equitable distribution and collective well-being require measurement tools that are different from those designed for market economies.

Although this study provided some valuable insights, there are still a few limitations. The analysis relies primarily on national data, which may ignore important regional differences within these countries. Also, the alternative indicators suggested need to be further calibrated and tested in different socialist systems. Future research should focus on developing standardized methods for quantifying non-market welfare contributions and collective assets. Longitudinal studies are also needed to track how measurement methods evolve with economic reforms in these socialist countries. In addition, future research could study how the emerging digital economy under socialism affects traditional measurement frameworks. Finally, more work is required to understand the political and policy implications of different measures of development in a socialist environment.

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References

[1] *World Bank. (2023) Beyond Market Metrics: Evaluating Non-Market Welfare in National Accounts. In Global Development Report 2023: Migrants, Refugees, and Societies. Washington, DC: World Bank Publications.*

[2] *United Nations. (2015) Transforming our world: The 2030 Agenda for Sustainable Development. General Assembly Resolution, A/RES/70/1.*

[3] *Stiglitz, J. E., Sen, A. and Fitoussi, J. P. (2010) Mismeasuring our lives: Why GDP doesn't add up (1st ed.). New York: The New Press.*

[4] *CEIC Database. (2023) Global Economic Indicators: Cuba and China. Retrieved from https://www.ceicdata.com*

[5] *Kornai, J. (2016) The system paradigm revisited. Acta Oeconomica, 66(2), 147–182.*

[6] *Sen, A. (1999) Development as freedom. Oxford: Oxford University Press.*

[7] *Chang, H. J. (2014) Economics: The User's Guide. London: Pelican Books.*

[8] *Mesa-Lago, C. and Pérez-López, J. F. (2013) Cuba under Raúl Castro: Assessing the reforms. Boulder: Lynne Rienner Publishers.*

[9] *Domínguez, J. I., Pérez Villanueva, O. E. and Barberia, L. (2018) The Cuban economy in a new era: An agenda for change toward durable development. Cambridge, MA: Harvard University Press.*

[10] *Fleurbaey, M. and Blanchet, D. (2013) Beyond GDP: Measuring welfare and assessing sustainability. New York: Oxford University Press USA.*

[11] *Liu, S. (2025) China's Economic Transformation: The Socialist Market Economy in Practice. Beijing: People's Press.*

[12] *World Bank. (2024) China Social Welfare and Development Report. Washington: World Bank Publications.*

[13] *National Healthcare Security Administration. (2024). 2023 Statistical Bulletin on National Healthcare Security Development. Retrieved from https://www.nhsa.gov.cn/art/2024/7/25/art_7_13340.html*

[14] *World Bank. (2022) China's High-Speed Rail Development. Washington: World Bank Publications.*

[15] *Cheng, C. (2004) Measuring development in hybrid economies. Socialist Studies, 6(3), 45–60.*

[16] *Brandt, L. and Rawski, T. G. (2019) Policy, regulation and innovation in China's electricity and telecom industries. Cambridge: Cambridge University Press.*

[17] *Ritter, A. R. M. (2018) Cuba's economic transformation and the emerging market economy. Latin American Perspectives, 45(4), 36–54.*

[18] *Hu, A. and Men, H. (2016) The rise of modern China: Comprehensive national power and strategic assets. Beijing: China Economic Publishing House.*