Study of Economic SDG Status for BRICS Nations

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Rationale

For this report, the focus lies on the "Economic SDGs" - SDGs 8, 9, 10 and 12. These SDGs are called so because out of the 17 SDGs, they are the ones that almost entirely focus on economic growth and well-being, from a national, social and environmental perspective as well. SDG 8 promotes sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all; SDG 9 aims to build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation; SDG 10 seeks to reduce inequality within and among countries and SDG 12 ensures sustainable consumption and production patterns.(Krauss et al., 2022) The reason for selecting these SDGs is because they are the SDGs that primarily focus on economic sustainability. This ties in with my choice of country group – BRICS. BRICS, comprising of Brazil, Russia, India, China and South Africa, was established in 2009[1] as an organization of nations because these countries were predicted to become global economic superpowers by the year 2050.

Since these countries are some of the emerging (in case of China and Russia, emerged) superpowers, it is crucial for these countries to know and understand just how well they fare in terms of economic sustainability. Hence, an examination of SDG 8, 9, 10 and 12 information allows us to understand where each country lies in the bigger picture, with regards to sustainability of the economy and workforce. It is important for the mission statement of BRICS to align with the mission statement of the UNSDGs, to ensure better development of the countries in the long run.

[1] South Africa joined BRIC in 2011, making it BRICS. As of 1st January, 2024, Egypt, Ethiopia, Iran and United Arab Emirates have also joined the organization.

Methodology

Before calculating index scores, first we need to analyse each indicator for every target. We can classify the indicators into those having clearly defined bounds (upper or lower), and those whose bounds are not clearly defined. The raw SDG score for every indicator can be calculated using the formula:

*(Country's performance – Lower Bound)/(Upper Bound - Lower Bound)*100*

For indicators of targets with clearly defined bounds, the values of lower or upper bound are fixed. For example, in the case of target 3.1 - By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births, the indicator, which in this case is a country's Maternal Mortality Rate(MMR), the upper bound is clearly defined – MMR should be less than 70. The meaning of this is that any country having MMR less than 70 will get a 100 score for target 3.1. However, the lower bound for this target is not clearly defined. In this case, we take the bottom 2.5th percentile performance as the lower bound, with countries performing worse than this getting a score of 0. For targets whose upper bound is not clearly defined, we take the average of the top 5 performing countries as the upper bound. Similar to the lower bound, countries performing better than the upper bound have their scores capped at 100.

With that being said, the data that has been chosen for this report is the official United Nations Sustainable Development Report (SDR) 2023 data. Within that dataset, scores for these SDGs for the past decade (2013 – 2022) have been selected for analysis. To avoid conflicts of absence of variables in data as compared to indicator list, or missing/unreported data for indicators, the official SDG score itself has been taken into account for these countries, instead of the calculated index-wise scores. Thus, the final analysis is done on officially calculated and reported SDG 8, 9, 10 and 12 scores for the BRICS countries, from 2013 to 2022 as found in the SDR 2023 dataset. [2]

Microsoft Excel and PowerBI were the primary tools used for making the dashboard presented below.[3]

[2] Link to download the dataset - *https://dashboards.sdgindex.org/static/downloads/files/SDR2023-data.xlsx*
[3] The dashboard is best viewed in Full-Screen Mode at 85% zoom.

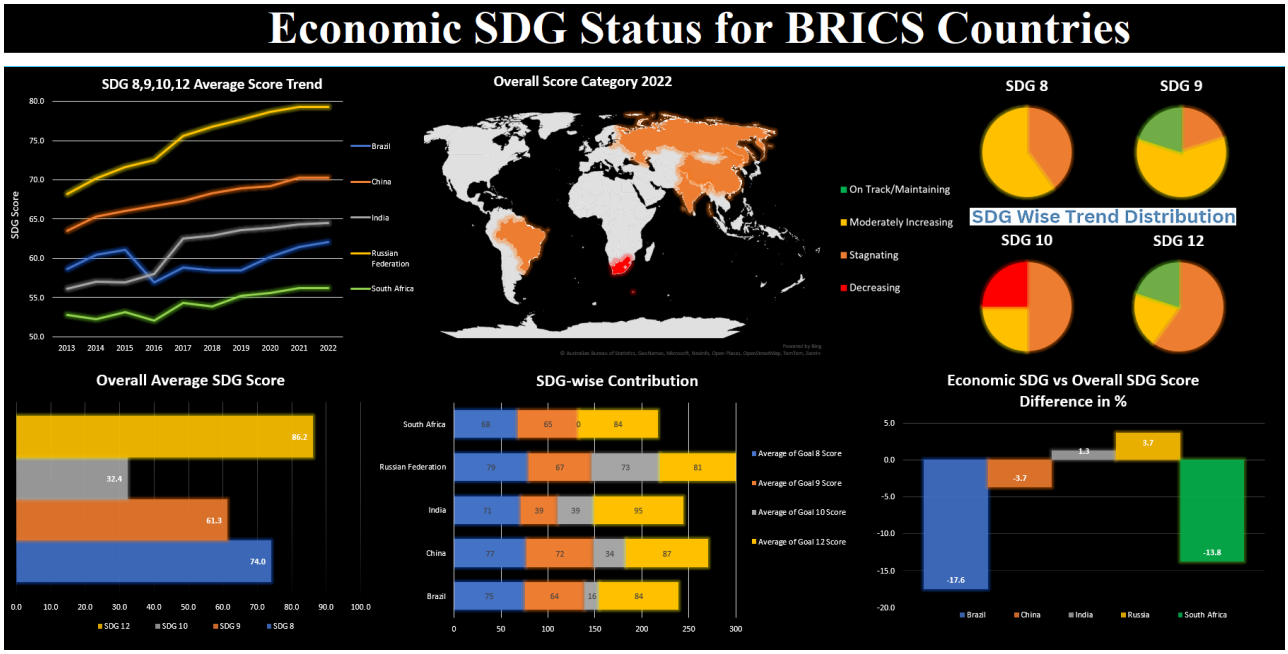

Figure 1. Economic SDG Dashboard for BRICS Countries

Analysis

The findings from the dashboard and the analysis show rather poor performance of the BRICS countries with regards to these SDGs. While the overall scores do show an upward trend, the rate is rather slow – as categorized by the predominance of the "Moderately Increasing" category of SDG Trend (pie charts).

SDG wise, SDG 10 fares the worst; South Africa reports an average SDG 10 score of 0.0 for the past decade. Its overall average for all the countries across the years is also significantly lower than the other SDGs (32.4 vs 61.3 for SDG 9, the next lowest). India also reports poor SDG 9 performance as compared to the other countries.

If we look at the Economic SDGs (SDG 8, 9, 10 and 12 clubbed together) vs the Overall SDG score difference, we see that Brazil and South Africa report a -17.6% and -13.8% difference respectively. This indicates that these nations are underperforming in these SDGs as compared to their performance in the other (social and environmental) SDGs. While this may not necessarily be a 'bad' thing, since all countries have different socio-economic and environmental backgrounds, it does point out an area of concern where work can be done by their respective governments.

Inferences

Understanding the significance of these Economic SDGs is crucial because they are the main drivers behind the other SDGs as well. A study by Pradhan et al. in 2017 found that SDG 8, 9, 12 and 15 are the ones which are associated with the highest amount of trade-offs – with their goals conflicting with the goals of other SDGs in some form or another. This indicates two things – one, that the foundations behind these SDGs are deep rooted institutionally, socially and environmentally, and two, that countries might have to make a preference when it comes to deciding which goals to strive towards. (Pradhan et al., 2017)

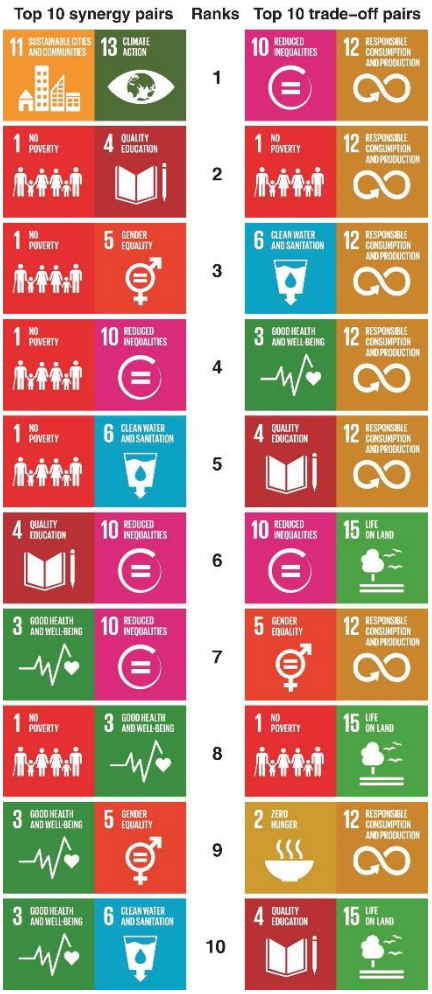

Figure 2. Top 10 Synergy and Trade-Off Pairs (Pradhan et al., 2017)

At the same time, SDG 10 forms a high synergy pairing with other goals; this shows the opposite – that achieving SDG 10 can help in achieving other SDGs as well. However, if we

look back at the data and the analysis we see that SDG 10 is the worst performing goal out of the four. This points towards potential missed opportunities for governments and institutions to 'kill two birds with one stone', so to say. Advantage must be taken of the nature of the goals and appropriate measures should be taken to assist in fulfilment of multiple goals simultaneously.

References

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