

# BRICS Countries' Increasing Role in the world economy, Including Institutional Innovation

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## Abstract

This paper seeks to determine whether the BRICS group has lived up to the expectations that their influence in international economic governance will increase. Stellar economic performance and the resulting well-being are important factors that may cause this influence to grow. However, there has been increasing recognition that welfare does not depend merely on income but on a broader set of indicators as exemplified by the Millennium Development Goals (MDGs) or the Sustainable Development Goals (SDGs). BRICS may increase their influence through their achievements on the social front and their soft power. Using simple statistical methods to examine their macroeconomic performance the paper found that only China and India had done well and lived up to the initial expectations. The social achievements of the BRICS have also been limited. The BRICS have sought to translate their dissatisfaction with the IMF and the World Bank into establishment of the New Development Bank (NDB) to provide loans for infrastructure projects and the Contingent Reserve Arrangement (CRA) to cover the needs for financing balance of payments deficits. The paper examines the working of these organizations to find out if they have been successful in meeting their objectives. The results of the analysis allows us to conclude that the NDB has been successful, unlike CRA, which proved to be ineffective.

## Keywords

BRICS, SDGs, New Development Bank, Economic Performance.

**JEL:** F14, F43, F55.

## Introduction

BRICS, a group of 5 developing countries, Brazil, China, India, Russia and South Africa, accounts for a significant proportion of the world's population and GDP. It was expected that these countries would maintain a high rate of growth and play an increasingly important role in the world economy and also in international economic governance. This paper examines the extent to which BRICS has lived up to this expectations. Economic performance is usually measured in terms of macro variables such as growth, investment, exports and others. It has been increasingly recognised, however, that rises in per capita GDP are not an adequate measure of improvement in welfare. Welfare is a multi-dimensional concept; the MDGs and SDGs are important parameters to be considered when assessing a particular country socioeconomic performance. We supplement the examination of macro performance with an analysis of the results achieved on the social and sustainable development goals because success in achieving MDGs and SDGs is likely to enhance these countries' soft power.

In Section 2, we first examine the importance of the BRICS countries' contribution to the world GDP, and assess their share in the middle income (MY) countries' GDP. In this Section we also give information on how the BRICS have fared in terms of per capita GDP. In Section 3 we analyse economic performance of the BRICS and discuss fixed capital formation in these economies and their export performance. In Section 4 we examine the behaviour of intra BRICS exports. Section 5, based on a time series analysis, outlines the prospects for economic performance of the BRICS. In Section 6 we shift attention to their success in social sectors and performance in achieving the millennium development goals, which may have crucial implications for their results in attaining the sustainable development goals. In Section 7 we explore the institutional innovations undertaken by the BRICS countries. We first examine the performance of the New Development Bank (NDB) showing that it has grown significantly and made a substantial contribution to promoting clean energy sources in the BRICS and to infrastructure development. We then discuss the contingent reserve arrangement (CRA) and note that while the NDB has been successful the CRA has been in almost deep-freeze. We end with some concluding observations in Section 8.

### **Section 2a. Importance of BRICS in the world economy: their share in world GDP**

The share of BRICS in the world GDP rose from 11.9 percent in 2000 to 25.6 percent in 2021 (Table 1). This increase, however, is misleading as the share of two of the members, Brazil and S. Africa, decreased and the share of the third, Russia, was almost constant. Only China and India substantially increased their shares, the former spectacularly from 5.7 percent to 18.2 percent; India's result was less dramatic: from 1.7 percent to 3.2.

However, this increased share in the world GDP seems to have been possible mostly because the high-income countries were growing slowly. The BRICS countries are all considered middle income countries by the World Bank's income criterion; relative to other countries in this group, their share declined from about 83 percent to 67 percent (Table 2). Again, only China and India increased their shares: the former by a substantial 87 percent, and the latter by 11 percent; the shares of the other three countries decreased.

**Table 1.** Share of GDP

	World		Middle Income Countries	
	2000	2021	2000	2021
BRICS	11.9	25.6	82.9	66.9
Brazil	2.5	2.1	10.9	5.5
China	5.7	18.2	25.4	47.6
India	1.7	3.2	7.4	8.2
Russia	1.6	1.7	7.2	4.5
S. Africa	0.5	0.4	2.0	1.1

Source: World Bank, World Development Indicators, accessed at <https://databank.worldbank.org/reports>.

## Section 2b. Per capita GDP in BRICS

Comparing per capita GDP of the BRICS countries with those of the world and middle income countries we find that per capita GDP of BRICS has increased relative to that of the world, except for Brazil and S. Africa (Table 2). Per capita GDP in BRICS has also increased relative to that in middle income countries (Table 2). But this is mainly because of the spectacular performance of China that doubled its share of the per capita GDP of middle income countries. India's per capita GDP relative to that of middle income countries increased by about 9 percent. Again, per capita GDP in Brazil, Russia and South Africa decreased relative to that in the middle income countries; the decrease is considerable, about 50 percent, in the case of Brazil and S. Africa.

**Table 2.** Per capita GDP (% of per capita GDP of)

	World		Middle Income Countries	
	2000	2021	2000	2021
BRICS	27.2	62.3	90.4	121.7
Brazil	86.0	77.3	286.2	151.1
China	27.8	101.2	92.5	197.6
India	7.6	17.1	31.9	34.6
Russia	67.5	94.8	224.5	183.6
S. Africa	62.5	53.2	209.8	103.6

Source: World Bank, World Development Indicators, accessed at <https://databank.worldbank.org/reports.aspx?source=world-development-indicators#> <https://databank.worldbank.org/reports.aspx?source=world-development-indicators#>

### Section 3. Economic Performance of the BRICS

We now analyse in somewhat greater detail the performance of the BRICS countries. Growth of per capita GDP has been declining ever since the global financial crisis (GFC) of 2008. Growth first declined after the 2008 crisis and took a further hit during and after the Covid pandemic (Table 3). Two of the countries, Russia and South Africa, saw a fall in per capita income after the pandemic, and for the third, Brazil, the growth was close to zero. India also saw a severe fall in its growth rate, but only after the pandemic as its growth rate actually increased after the GFC. Only China managed to maintain a growth rate substantially higher than the average for middle income countries. In three of the BRICS, growth rates were lower than the average for middle income countries.

**Table 3.** Growth of per capita GDP (Annual average)

	2000-07	2008-10	2011-18	2019-21
Brazil	3.6	4.2	0.7	0.7
China	9.9	9.3	6.9	5.2
India.	4.8	5.0	5.5	1.0
Russia	7.6	0.6	1.4	-0.3
S. Africa	3.0	0.2	0.2	-0.7

Source: World Bank, World Development Indicators, accessed at <https://databank.worldbank.org/reports.aspx?source=world-development-indicators#>

The BRICS countries had maintained their investment levels after the GFC; in Brazil, China, Russia, and S. Africa they were higher during 2011-18 than in 2000-07, and for India it was almost the same (Table 4).

**Table 4.** Gross Fixed Capital Formation (percentage of GDP)

	2000-07	2008-10	2011-18	2019-21
Brazil	17.6	19.7	18.1	17.1
China	36.9	42.3	43.1	42.7
India	30.7	34.0	30.5	27.8
Russia	18.5	22.0	21.4	20.8
S. Africa	15.6	19.6	17.5	14.0
MY	25.3	29.5	31.0	32.1

Source: World Bank, World Development Indicators, accessed at <https://databank.worldbank.org/reports.aspx?source=world-development-indicators#>

However, investment levels fell in all the BRICS after the pandemic (Table 4). Lockdowns that accompanied the pandemic disrupted production, resulting in lower investment. The behaviour of the BRICS countries is generally in contrast to that of MY countries. In the MY countries investment increased as a percentage of GDP after the pandemic; earlier it had increased after the GFC.

While in growth and investment there is considerable uniformity in the behaviour of the BRICS there is no uniformity in their exports. Exports of goods and services made up a smaller share of GDP after the GFC in three of the BRICS, Brazil, China and Russia, but the share of exports was larger in the other two (Table 5). This varied response was also exhibited after the pandemic with the exports' share increasing in three of the BRICS. Comparing the share of exports in 2019-21 to that in 2000-07, the two economies with the highest shares saw a decline in the share of exports in GDP, while the others experienced a rise.

**Table 5.** Exports of goods and services (percentage of GDP)

	2000-07	2008-10	2011-18	2019-21
Brazil	13.9	11.8	12.3	17.0
China	28.4	28.2	22.5	19.0
India	16.8	22.3	21.9	19.4
Russia	35.6	29.5	27.4	28.3
S.Africa	25.4	27.7	27.9	28.7
MY	29.2	28.6	25.2	23.2

*Source:* World Bank, World Development Indicators, accessed at <https://databank.worldbank.org/reports.aspx?source=world-development-indicators#>

The two crises adversely affected MY countries' exports of goods and services, which declined after the GFC and fell again after the pandemic. However, this decline was less than that in China and Russia.

The external balance (EB) again showed a uniformity in behaviour: it had worsened after the GFC in the BRICS countries: in 2011-18 the EB was worse than in 2000-7 for all of them (Table 6). The expansionary monetary and fiscal policies adopted to compensate for the decline in foreign demand resulted in deterioration of the EB. In contrast to that, however, the EB improved after the pandemic. A possible explanation is that the restrictions on movements resulted in lower consumption and higher savings.

**Table 6.** External Balance (percentage of GDP)

	2000-07	2008-10	2011-18	2019-21
Brazil	1.2	0.5	-0.8	0.4
China	4.2	5.2	2.2	2.0
India	-1.9	-5.0	-3.8	-1.7
Russia	12.8	8.3	6.9	7.4
S.Africa	1.1	0	-0.4	3.7
MY	2.3	1.9	0.4	0.6

*Source:* World Bank, World Development Indicators, accessed at <https://databank.worldbank.org/reports.aspx?source=world-development-indicators#>

The MY countries showed a similar pattern: deterioration of the EB after the GFC but improvement after the pandemic. In brief, the growth rate of GDP declined for most BRICS countries in 2000-07 and 2011-18, and for all of them during 2019-21. GFCF was also down in all except China. In the MY countries, in contrast, investment increased as a percentage of GDP after both the GFC and the pandemic. The behaviour of exports of goods and services is more varied. As a share of GDP, it was up in Brazil and South Africa, but down in the other three countries. It went up in the two countries that grew most slowly between 2011-21. MY countries' exports of goods and services were adversely affected by the crises. They declined after the GFC and fell again after the pandemic. The external balance worsened after the GFC for all the countries except India. In contrast, it improved after the pandemic in all the countries except China. The MY countries showed a similar pattern, i.e. deterioration of the EB after the GFC but improvement after the pandemic. The limited increase in their share of the global GDP and that of MY countries together with stagnation in investment and poor export performance mean that the expectations of the BRICS group's increasing importance have not been fulfilled.

#### **Section 4. Intra BRICS trade**

Participation of individual countries in intra-BRICS trade is varied, reflecting mostly the relative sizes of their economies. During 2000-07 (average) and 2019-21 (average), intra-BRICS trade increased nearly sevenfold, supported by expansion of intra-regional trade by all member nations; China played a major role, accounting for more than fifty per cent of its volume. Next came Brazil and then Russia, India, and South Africa. Over the past two decades, there were different patterns in export interdependence of the BRICS nations. In 2000-2007, China dominated the intra-BRICS exports with a 45.26 per cent share, followed by Russia (22.58 per cent of intra-BRICS exports in 2000-2007), Brazil, India, and South Africa. By 2019-21 (average) China remained the largest supplier to the other BRICS nations with an increased share of 50.02 per cent in intra-BRICS exports, Brazil became the second largest intra-BRICS exporter, with a share of 20.36 per cent, followed by Russia (17.82 per cent), India (8.19 per cent), and South Africa (3.61 per cent). The country most dependent on exports to BRICS is Brazil, with 33.4 per cent of its exports going to BRICS.

Intra-BRICS trade has expanded over the years and even the GFC or the pandemic did not adversely affect its dynamics. The share of intra-BRICS exports in the BRICS countries' total exports grew from an average of 5.6 per cent during 2000-07 to 8.6 per cent during 2008-18 and further to 10.0 per cent during 2019-21 (Table 7).

All the BRICS members contributed to this expansion. Brazil saw the largest increase, from an average of 9.3 per cent during 2000-07 to 22.3 per cent during 2008-18 to 33.4 per cent during 2019-21. The country least dependent on the BRICS market was China whose share was only 4.2 per cent during 2000-07 and increased slowly to 6.6 per cent during 2008-18 and to 6.9 per cent during 2019-21.

**Table 7.** Intra-BRICS exports and share of their world exports

Reporter Partner	Year	Brazil		China		India		Russia		South Africa		BRICS (total)		World (USD billion)
		USD billion	(%) of total	USD billion	(%) of total	USD billion	(%) of total	USD billion	(%) of total	USD billion	(%) of total	USD billion	(%) of total	
Brazil	2000-07			5.2	5.5	0.7	0.7	2.0	2.1	0.9	1	8.8	9.3	94.6
	2008-18			38.4	18.3	3.6	1.7	3.2	1.5	1.5	0.7	46.7	22.2	209.8
	2019-21			73.0	30.8	3.5	1.5	1.6	0.7	1.1	0.5	79.2	33.4	237.0
China	2000-07	4.2	0.7			7.9	1.3	10.1	1.7	3.2	0.5	25.4	4.2	602.9
	2008-18	27.8	1.4			51.3	2.6	39.0	2	13.4	0.7	131.5	6.6	1984.5
	2019-21	41.4	1.5			79.7	2.8	55.9	2	17.6	0.6	194.6	6.9	2816.9
India	2000-07	0.8	1	4.3	5.4			0.8	1	1.0	1.3	6.9	8.6	79.9
	2008-18	4.1	1.5	13.3	4.9			1.8	0.7	4.0	1.5	23.3	8.6	269.6
	2019-21	4.7	1.4	19.8	6			2.9	0.9	4.5	1.4	31.9	9.6	331.2
Russia	2000-07	0.5	0.2	10.0	5.3	2.2	1.1			0.0	0	12.7	6.7	190.0
	2008-18	2.1	0.5	32.5	7.6	5.9	1.4			0.2	0	40.7	9.5	428.2
	2019-21	3.2	0.8	58.4	13.9	7.4	1.8			0.3	0.1	69.4	16.6	418.7
South Africa	2000-07	0.3	0.7	1.4	3.5	0.7	1.7	0.1	0.2	0.0		2.4	6.2	38.9
	2008-18	0.6	0.7	8.5	9.9	3.3	3.9	0.3	0.4	0.0		12.7	14.9	85.2
	2019-21	0.4	0.4	9.7	11.2	3.6	4.2	0.4	0.4	0.0		14.1	16.3	86.1
BRICS (Total)	2000-07	5.7		20.8		11.4		13.0		5.1		56.1	5.6	1006.3
	2008-18	34.6		92.6		64.2		44.3		19.1		254.9	8.6	2977.4
	2019-21	49.6		160.9		94.2		60.8		23.5		389.1	10	3889.9

Source: Author's calculation and data from WITS. Data is average for the period

## Section 5. Prospects for economic performance

Time series analysis in an earlier paper (Agarwal, Azim and Kumar, 2022) found that China is a case of traditional growth dynamics, where investment leads to growth and neither domestic savings nor the external balance are constraints. This is to be expected as China has very high rates of savings and runs current account surpluses. Since the GFC its dependence on exports and hence the surplus have been coming down. But the share of GFCF in GDP has increased. It seems that its growth is investment driven.<sup>1</sup> Russia has an internal demand constraint so investment leads to more exports. South Africa shows a bi-direction relation between GFCF and growth of per capita income, a typical multiplier-accelerator relationship. In India, because of a dominant external constraint, increased imports lead to growth, substantiating the result of Maitra, 2020, Agarwal and Ghosh, 2017.<sup>2</sup> Brazil has basically performed poorly since the 1982 debt crisis despite different policy regimes and this is reflected in that there is no causality leading to growth.

But in the long run we find that GFCF has a positive effect on per capita GDP in Brazil, India and China. Also, exports have a positive effect on per capita GDP in these three countries, whereas imports have a negative, typical trade multiplier effect. This implies poorer growth prospects in the future as both exports and GFCF have declined as a share of GDP per capita. GDP in turn has a positive and significant effect on exports in Brazil. The external balance adversely affects GDP and positively affects the GFCF in Brazil, while its impact on GDP and GFCF in China and India is insignificant. Causal arrows go from imports to exports in Brazil and India whereas in China they go in the opposite direction: exports generate imports. GFCF has a negative effect on exports in Brazil and India owing to the existence of the supply constraint. Domestic output does not respond rapidly to the GFCF demand; it is diverted to meet the investment demand and GFCF crowds out exports.

There is divergence from the short run towards the long run position as the coefficient of the error correction term is negative in the time series analysis. Thus, a long run relationship exists between per capita GDP and other variables in these countries. However, for Russia and South Africa, there is no long run relationship.<sup>3</sup> The summary of the long run results is shown in Table 8.<sup>4</sup>

<sup>1</sup> Rodrik (1995) had argued that growth in Korea was investment determined rather than export driven. Exports needed to increase so that investment could be financed without a large current account deficit.

<sup>2</sup> Even though India has not experienced any BOP crises since the reforms of 1991, in contrast to earlier years when it faced a BOP crisis almost every decade (Agarwal and Ghosh) the trade deficit has remained high.

<sup>3</sup> In Russia, the lack of long run relationship are probably caused by the high and rising dependence of the Russian economy on oil prices and the negative oil price shocks (Beck et al, 2007).

<sup>4</sup> This table is taken from Agarwal, Azim and Kumar (2022). This paper has a more detailed analysis.



**Table 8.** Summary of long run relation

	Brazil	China	India
Model 1	GFCF <--> PCI (+,+)	GFCF --> PCI (+)	GFCF --> PCI (+)
	EB --> PCI (-)	PCI --> EB (-)	
	EB --> GFCF (+)	GFCF --> EB (+)	
Model 2	GFCF <--> PCI (+,+)	GFCF --> PCI (+)	GFCF --> PCI (+)
	X <--> PCI (+,+)	X --> PCI (+)	X <--> PCI (+)
	M --> PCI (-)	M <--> PCI (-,-)	M --> PCI (-)
	X <--> GFCF (-,-)		GFCF --> X (-)
	M --> GFCF (+)	GFCF --> M (+)	
	M --> X (+)	X --> M (+)	M --> X (+)

\* The relationships in the above table are significant as per the Wald test.

In the long run, Brazil, China and India all show a classical relationship between GFCF and growth. Besides, in Brazil we find that the external balance adversely affects GDP but positively affects GFCF as the government seeks to re-ignite growth when the external balance is favourable. Exports also have a positive effect on per capita GDP as the external constraint is relaxed. In China, investment has a positive effect both on growth and the external balance reflecting its export-oriented development strategy. In India, investment has a positive effect on GDP. Exports have a positive effect on per capita GDP, but imports have a negative effect on per capita GDP; for almost the entire period the country ran an external deficit, and it has a long history of external crises, 1967, 1966-68, 1973, 1981 and 1991. Imports positively affect exports, which indicates the importance of imported content in exports.

## Section 6. Achievement of the Millennium Development Goals and prospects for the Sustainable Development Goals

### Section 6a. Millennium Development Goals

The MDGs were first accepted at the start of the new millennium (UN, 2000). At a meeting of the UN, 147 heads of states and 189 member-states committed to certain global targets to be achieved by 2015. The goals had a conceptual clarity; they were all prescriptive and socially-oriented: reducing poverty and malnutrition, achieving gender parity in school enrolment, reducing mortality rates. The declaration of MDGs resulted from a number of various factors including the failure of structural adjustment policies to generate growth, particularly their unfavourable effects on social conditions; elaboration of new concepts of welfare; the work of UN conferences to provide concepts, targets and policies for achieving social objectives, and bureaucratic interests at the national and international levels.

The previous attempt of global adjustment was made in response to the debt crisis that started in 1982 and persisted throughout the 1980s. It resulted in the adoption

of structural adjustment programmes (SAP) aiming to restore growth championed by the International Monetary Fund (IMF) and the World Bank (WB). Yet, during the 1980s and 1990s, the economies of Latin America (LA) and Sub-Saharan Africa (SSA) stagnated: per capita income grew by only 0.7 per cent a year between 1982 and 2000 in LA, and declined by 0.8 per cent a year in SSA. The SAP policies were believed to have resulted in deterioration of public services, and there were calls for adjustment “with a human face” (Cornia, Jolly and Stewart, 1988). It was thought necessary to shift attention back from macro-stabilisation to policies to improve human conditions (Desai, 2007).

In the meantime, the UN had developed a framework for social goals. The UNDP had published the first Human Development Report in 1990 in which countries were ranked according to the level of social development (Hulme, 2009). Throughout the 1990s, the UN had also organised many international conferences to analyse different aspects of social achievement and recommend policies to improve the situation in that particular area (Hulme, 2009). These recommendations were accepted after refinement by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) as the International Development Goals. Later, they became the MDGs (Hulme and Fukuda-Parr, 2009). The compromises necessary for reaching agreement on the MDGs often disappointed certain groups, particularly NGOs, whose issues were either dropped or were not given enough prominence (Hulme and Fukuda-Parr, 2009).

Another strand was bureaucratic competition. It was hoped that adoption of MDGs would reverse the decline in the importance of ministers and bureaucrats in the international development and cooperation (Hulme, 2009). It would also enable the UN to reclaim the prominent role it had played earlier in debates about development.<sup>5</sup> The achievement of the MDGs would require greater involvement of UN agencies, such as those dealing with education, health, children’s welfare, and other socially-related issues. The components of the MDG declaration and their indicators were the result of the analytical recognition of the fact that poverty was a multi-dimensional phenomenon and not merely an issue of insufficient income (Hulme and Fukuda-Parr, 2009); they were determined through negotiations on which of the recommendations of the various UN conferences should be included (Hulme and Fukuda-Parr, 2009, Sen, 1985 and 1989). It was necessary that the dimensions chosen as the indicators of the social condition were monitorable.<sup>6</sup> They shared a common vision of material well-being, freedom and equity and were also an instrument for mobilising support and resources (Desai, 2007). The United Nations accepted the SDGs in 2015.<sup>7</sup> These

<sup>5</sup> The 1960s had been declared by the UN as the First Development Decade and the 1970s the Second Development Decade.

<sup>6</sup> Attaran (2005) discusses the difficulties of measurement for some of the MDGs.

<sup>7</sup> A high level panel co-chaired by Indonesian President Susilo Bambang Yudhoyono, Liberian President Ellen Johnson Sirleaf and United Kingdom Prime Minister David Cameron prepared a report *A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development*, that formed the basis for the SDGs.

are the goals for 2030. They were the outcome of much wider consultations than the MDGs as developing countries were more involved in formulating the SDGs to command greater acceptability. The MDGs had only 8 goals and 63 indicators; the SDGs are more ambitious with 17 goals with 169 indicators. However, this multiplicity of goals and indicators means that there is a mixture of input and output indicators. Also a country may do well on one indicator of a goal and worse in another making judgement of its performance more difficult.

Before analysing the prospects for achieving the SDGs, we examine how the BRICS have fared in achieving the MDGs. In this we stress the relationship between growth of per capita income and progress in achieving the goals. We then study what needs to be done to achieve the SDG since the end of MDGs project. To analyse whether they can achieve the SDGs we assume the existence of the same relationship between progress on a goal and income as had been prevalent during the period of the MDGs. This enables us to calculate the rate of growth of per capita GDP that will be needed to achieve the SDGs; and we examine the feasibility of achieving such a growth rate given the growth rates that have been achieved in recent years.

### A) Poverty

**Table 9.** Poverty Rates (% of population)

	1990	2000	2015	MDG target	Difference
Brazil	20.60	9.60	4.30	10.30	6.00
China	66.60	18.80	1.85	33.30	31.45
India	45.91	-	21.23	22.96	1.73
Russia	2.37	2.30	0.00	1.18	1.18
S.Africa	33.81	25.44	16.56	16.9	0.35

Source: World Bank Data Bank

All these countries reduced their poverty by at least half and attained their MDG target (Table 9). Russia achieved a zero poverty level by 2015. Brazil experienced a steady decline in the poverty rate since 1990, halving the rate between 1990 and 2000 and then reducing it by more than fifty per cent between 2000 and 2015. The experience of Brazil corresponded with the experience of the LAC region as a whole (Agarwal, Azim, Kumar, 2022). China started with very high rates of poverty, but experienced its drastic reduction. Like the success of the EAP region, China's success in reducing poverty can be largely ascribed to its high growth led by exports of labour intensive manufacturing. India shows a steady decline. Russia had a low rate to begin with and was the only country to achieve a zero poverty rate in 2015 with a decline rate as high as 27 per cent. South Africa almost achieved the target by 2010; but then it became clear that it was able to reduced poverty by only a little more than half. Other countries of the Sub-Saharan Africa did not present information about their experience in achieving the poverty targets. Brazil and Russia showed highly elastic relationship between decline in poverty rates and growth of per capita income.

**Table 10.** Required growth in GDP

	2000-2015		2030	
	Poverty reduction	% Increase in Per capita GDP.	Required decrease In poverty*	Required annual rise in per capita GDP
GDP				
Brazil	5.30	129.3	4.30	4.9
China	16.95	365.4	1.85	2.1
India	24.68**	301.4	21.23	8.9
Russia	2.30	174.9	0	0
S.Africa	8.88	127.0	16.56	8.4

\* the goal is to eliminate poverty, namely to reduce it to zero.

\*\* this is the poverty reduction between 1990 and 2015.

Source: World Bank World Development Indicators.

Russia has already eliminated poverty. China's economy, over the past more than four decades since the start of reforms in 1979, has been growing at over 2.1 percent for any period. China is very well placed to eliminate poverty. The other three countries have not achieved the required growth rates of 4.9, 8.9 and 8.4 percent for any extended period (table 10). These three countries are, consequently, unlikely to achieve the goal of eliminating poverty.

### B) Malnutrition

The MDG goal was to halve the proportion of people suffering from hunger between 1990 and 2015. There was no data on malnutrition for the 1990s, it became available only from 2000 but not on a regular basis: it continues to be missing. More recent data is for stunting which is caused by malnutrition but it is not the same. So we do not discuss the question of malnutrition further.

### C) Mortality Rates

We now examine the situation regarding the mortality rates, maternal mortality, under 5 age mortality, and infant mortality. Maternal mortality rates were expected to decrease by three-fourths and under 5 mortality, also known as child mortality, and infant mortality were expected to be reduced by two-thirds. The goals for these mortality rates are noted in Table 11.

**Table 11.** MDGs regarding mortality rates

	Maternal		Child.		Infant	
	1990	2015	1990	2015	1990	2015
Brazil	104	44	64.2	15.7	53.4	14.0
China	97	27	53.9	10.7	42.2	9.2
India	556	174	125.9	45.2	88.4	36.2
Russia	63	25	21.6	8.0	18.4	6.8
S.Africa	108	138	57.4	44.1	64.6	35.5

Source: the data for 1990s from the World Bank's development indicators. The 2015 figure was calculated by applying the targeted reduction to the 1990 figure.

**Table 12.** Mortality rates below target for 2030 and required growth of per capita GDP

	Maternal	growth of per capita GDP.	child	growth of per capita GDP.	infant.	growth of per capita GDP.
India	143	5.1	32.8	2.7	20.3	4.1
S.Africa	78	4.1	32.6	2.1		

*Note:* The child and infant mortality rates are for 2020. The maternal mortality rate is for 2017 for India and 2015 for S. Africa.

The target to be reached by 2030 for maternal mortality is 70.<sup>8</sup> Only India and S. Africa have maternal mortality rates higher than this. The other three have already reached the goal. Only Brazil and China reached the targets for child and infant mortality.

The mortality rates for India and S. Africa where they are short of the target for 2030 are given in the table below. We also calculate the necessary growth rates of per capita GDP needed to achieve the goals given the past relation between growth of per capita GDP and decline in mortality rates.

India achieved 3.5% growth rate of per capita GDP in the period 2016-21.<sup>9</sup> With such a growth rate India may be able to achieve only the target for child mortality but not for maternal and infant mortality (Table 12). As far as S. Africa is concerned it has not achieved the annual growth rate of 2.1 since the GFC. It is therefore unlikely to achieve the goals for maternal and child mortality.

Most of the BRICS are unlikely to achieve the poverty goal of the SDGs and their success in achieving the mortality goals has been mainly because the target did not require any improvement in most of them. The two countries that were behind the target are unlikely to achieve most of them.

## Section 7. BRICS and institutional Innovation

One of the reasons for the establishment of BRICS was dissatisfaction with the international order after the Second World War (SWW), particularly with the working of the Bretton Woods twins, the International Monetary Fund (IMF) and the World Bank (WB). The BRICS established the Contingency Reserve Arrangement (CRA) and the New Development Bank (NDB).

<sup>8</sup> The numbers for targets under the SDGs are from [https://www.gatesfoundation.org/goalkeepers/downloads/2022-report/2022-goalkeepers-report\\_en.pdf](https://www.gatesfoundation.org/goalkeepers/downloads/2022-report/2022-goalkeepers-report_en.pdf) Accessed on September 24, 2022.

<sup>9</sup> We take this growth rate as an average of growth rates which otherwise fluctuates considerably. Many commentators argue that the demonetisation policy adopted by the government in 2016 had permanent effects and that it would not be appropriate to take an average over a period which included the pre-demonetisation period.

## Section 7a. The New Development Bank

At the 5<sup>th</sup> BRICS summit held in Durban, South Africa on 27 March 2013, the BRICS leaders agreed to the Indian proposal made at the previous, 4th BRICS summit in 2012 held in Delhi, of setting up a bank.

On the first day of the 6<sup>th</sup> BRICS summit held in Fortaleza, Brazil, 15 July 2014, the BRICS states signed the Agreement on the New Development Bank, which provided the legal basis for the conceived bank. In a separate agreement, a currency pool worth \$100 billion was set up by BRICS nations. The 7th BRICS summit in July 2015 marked the entry into force of the Agreement on the New Development Bank. The NDB started its operations in 2016.

The operations of the Bank have expanded gradually (Table 13). The commitments of the World Bank in fiscal 2019 were US\$59.5 billions. So already by the fifth year of its operation the NDB was committing over 20 percent of the amounts allocated by the WB and that for only five of its founding members.

**Table 13.** First five years of the operations of the NDB

	Number of projects approved.	Amount sanctioned (Billions of USD)
2016	8	1.6
2017	6	1.8
2018	17	4.7
2019	22	7.2
2020	19	10.3
Total	72	25.6

Source: NDB Annual Reports

The NDB's funds used to finance BRICS projects were allocated as follows: 30 % went to Brazil, 14% to Russia, 28% to India, 20% to China, and 18% to South Africa. The projects mostly involved infrastructure and clean energy facilities; a third important area was urban development.

The year 2021 saw two momentous developments. As the NDB constitution allows for new members to join the Bank, the membership of Bangladesh, Egypt, UAE and Uruguay was approved and Bangladesh and UAE deposited their instruments of accession. With increased membership, particularly of developing countries who would want financing for their projects, the Bank may have to seek new sources of funding. Till now it has depended on its dollar-terms borrowings on international markets and renminbi loans raised in China. Before the end of 2021, NDB raised US\$44.25 billion and 8.2 billion in renminbi respectively.

## Section 7b. Contingent Reserve Arrangement

The other institutional innovation was the establishment of the contingent reserve arrangement (CRA). This was an arrangement to provide the member countries with another financing option if they had a balance of payments (BOP) deficit without having to approach the IMF. The idea was to forestall the short term BOP pressures, provide mutual support and strengthen financial stability. The creation of the CRA followed the establishment of the Chiang Mai Initiative (CMI) by East Asian countries which later became multilateral. The rules of the CRA were very similar to those of the CMI. Both of these initiatives expressed the developing countries' dissatisfaction with the operation of the IMF dominated by Western countries. For instance, the developed country members of the IMF obstructed the reforms agreed by the G20 and aiming at changes in the governance structure that would give developing countries greater say in the operations of the IMF.

However, the rules of the two initiatives were designed so that nobody would borrow from them. For a request by a country to be considered it must not be in arrears to any BRICS country or their public financial institutions. Furthermore, it must not be in arrears to any other regional or multilateral financial institution. But the major constraint on the work of these initiatives is that any drawing of more than 30 percent of the eligible amount requires the country to have an IMF arrangement. Since recent BOP difficulties of developing countries have involved sums larger than 30 percent of the eligible amount and any crisis will thus require the country to approach the IMF, the CMI or CRA do not seem to make much sense. Without an IMF programme, South Africa would be able to borrow US\$ 3 billion, and Brazil and India US\$ 5 billion. The current account deficits that these three countries are running are times higher than these amounts. The irrelevance of such initiatives has been proved by experience. During the 2008 financial crisis, Korea, Singapore and Indonesia did not approach the CMI. Instead Korea and Singapore chose to activate their bilateral swap arrangement with the Federal Reserve of the US, while Indonesia approached the WB.

These three countries had difficulties that rendered them unable to design an alternative to the IMF's model of BOP adjustment.

Firstly, there is the problem of moral hazard. Governments are usually reluctant to adopt measures to adjust their BOP unless forced to do so. Conditionality is a method to force them to adjust. But, more importantly, the second question is what should be the model of adjustment when the BOP is in deficit. We know that reducing demand is one way of cutting the deficit. But this is not a way that appeals to developing countries as they want to grow fast. The IMF conditionality had combined expenditure switching and expenditure reducing policies to manage the BOP without generating reduced demand. Devaluation would increase demand for domestically produced goods. Combined with expenditure reducing policies, devaluation would allow production factors to shift to production of tradeables to meet the increased demand for them created by devaluation. No better set of policies to manage the BOP without



generating unemployment has as yet been devised. In this context, the need for the CRA and the CMI remains questionable.

## Section 8. Conclusions

The increase in the share of BRICS in the world GDP from 11.9 percent in 2000 to 25.6 percent in 2021 is misleading as the share of two of the members, Brazil and S. Africa, decreased and the share of a third, Russia, was almost constant. Only China and India increased their shares, the former spectacularly from 5.7 percent to 18.2 percent; India increased its share less substantially from 1.7 percent to 3.2.

Moreover, this increased share in the world GDP can be explained by slow growth in the high income countries, as the share of the BRICS countries' in the GDP of MY countries declined from about 83 percent to 67 percent of the GDP of MY countries. Only the shares of China and India have grown; China's by a substantial 87 percent, and India's by 11 percent; the shares of the other three countries decreased.

Also, the increase in per capita GDP in BRICS relative to that in middle income countries mainly occurred because of China's spectacular performance: the country doubled its share of per capita GDP in middle income countries. India's per capita GDP relative to that of middle income countries increased by about 9 percent. Again, per capita GDP in Brazil, Russia and South Africa decreased relative to that in the middle income countries; for Brazil and S. Africa the decrease was considerable, about 50 percent.

The BRICS countries had maintained their investment levels after the GFC; after the pandemic, however, these have fallen in all the BRICS because of the disruptive effects of lockdowns that accompanied the pandemic. In this respect, the BRICS countries are in stark contrast with MY countries where investment amounts have risen.

Unlike comparatively uniform dynamics of the BRICS countries' growth and investment, the behaviour of their exports differs across the group members. Export of goods and services made up a smaller share of GDP after the GFC in three of the BRICS, Brazil, China and Russia, but was greater in the other two. This varied response was also exhibited after the pandemic when the share of exports increased in three of the BRICS. Comparing the share in 2019-21 to that in 2000-07, the two economies with the highest shares saw a decline in the share of exports in GDP, while the others experienced a rise.

Except for China the share of XGS in GDP was higher in the other 4 countries. The behaviour of the BRICS contrasts with that of MY countries generally, where the share of XGS in GDP declined after the GFC and again after the pandemic.

In contrast to the behaviour of XGS, the EB showed a uniformity in behaviour: it had worsened after the GFC in the BRICS countries: the EB was worse in 2011-18 than in 2000-7 for all of them because of the expansionary monetary and fiscal policies adopted to compensate for the decline in foreign demand. In contrast, the EB improved after the pandemic possibly because the restrictions on movements led to a decline



in consumption and rise in savings. The MY countries showed a similar pattern, a worsening of the EB after the GFC but improvement after the pandemic.

Intra-BRICS trade has expanded over the years and even the GFC or the pandemic did not adversely affect this growth. The share of intra-BRICS exports grew as a share of their exports to the world from an average of 5.6 percent during 2000-07 to 8.6 percent during 2008-18 and further to 10.0 percent during 2019-21. All the BRICS members participated in this increase. Brazil saw the largest increase, with the share of its exports to the BRICS countries expanding from an average of 9.3 percent during 2000-07 to 22.3 percent during 2008-18 and to 33.4 percent during 2019-21. The least dependent on the BRICS market was China whose share was only 4.2 percent during 2000-07 and then increased slowly to 6.6 percent during 2008-18 and to 6.9 percent during 2019-21.

Time series analysis reveals that China is a case of traditional growth dynamics, when investment leads to growth. Neither domestic savings nor the external balance are constraints, a result to be expected as China has very high rates of savings and runs current account surpluses. Since the GFC, its dependence on exports together with surplus amounts has been coming down, but investment has increased, which means that China's growth is more investment driven than export driven. In Russia, there is an obvious internal demand constraint as investment leads to more exports rather than growth, despite its export surplus. South Africa depicts a bi-direction relation between GFCF and growth of per capita income, a typical multiplier accelerator relation. India's economy has a dominant external constraint as increased imports lead to growth, substantiating the result of Maitra (2020).<sup>10</sup> Brazil has basically performed poorly since the 1982 debt crisis despite different policy regimes; no causality leading to growth has been so far observed.

Nevertheless, in the long run, GFCF has a positive effect on per capita GDP in Brazil, India and China. Exports are also beneficial for the per capita GDP in these three countries although in Brazil domestic demand is still lacking. Imports cause exports in Brazil and India whereas in China, exports cause imports. GFCF has a negative effect on exports in Brazil and India due to a supply constraint. Domestic output does not respond rapidly to the GFCF demand and output is diverted to meet the investment demand. GFCF crowds out exports. The shrinking share of GDP of both GFCF and XGS implies that future growth prospects are poor for the BRICS countries.

The BRICS were broadly unsuccessful in achieving the MDGs. All the BRICS achieved the MDG goal of reducing poverty by half. But none of them reached the goal for maternal mortality and only Brazil and China reached the targets for child and infant mortality.

The target for poverty for 2030 is that it should be eliminated. Russia has already eliminated poverty and China is likely to maintain the growth rate required to eliminate poverty. However, the other three have not achieved the required growth rates for any

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<sup>10</sup> Even though India has not experienced any BOP crises since the reforms of 1991, in contrast to earlier years when it faced a BOP crisis almost every decade (Agarwal and Ghosh) the trade deficit has remained high.

extended period and so are unlikely to achieve the poverty elimination SD goal unless they attain a growth rate that has a greater impact on poverty.

The mortality goals for the SDGs are presented in absolute numbers instead of giving percentage reduction from their 2015 figures. Accordingly, Brazil, China and Russia have already achieved these goals. Although India has achieved the 2.7% growth of per capita income needed to reach the goal of child mortality its growth rates are insufficient for attaining the targets for maternal and infant mortality. S. Africa has not been growing at a pace necessary to meet any of the mortality goals.

BRICS have established two new institutions, the New Development Bank (NDB) and the contingent Reserve Arrangement (CRA). The NDB has been quite successful. Yet, in its first five years of its operation, 2016-2020, it financed projects only worth US\$ 25.6 billion in the 5 BRICS countries while in 2019 alone the WB approved projects worth US\$59.5. The projects have been mainly in the area of clean energy and infrastructure. 2020 saw a shift in its investment strategy towards projects to deal directly with the Covid epidemic and its macro effects. It has also raised both dollar loans and Chinese renminbi loans. Furthermore, 4 new members were admitted. So NDB seems set to become an important multilateral financial institution. The CRA has not been approached for financing, and, given its constitution, it is unlikely that any country will use its services.

The slowdown in growth in most of the BRICS countries and the limited success in achieving the SDGs places constraints on the influence of BRICS at the international level. It is also obvious that, while the NDB has been successful and might increase the influence of the BRICS, the CRA is ineffective.

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