

Assessment of Inclusive Growth Performance: A Comparative Analysis of the BRICS Countries

Daniel Francois Meyer¹, Natanya Meyer²

Abstract: In recent years, the concept of inclusive growth has moved to the top of the agenda for economic development policy advancement. The concept is relatively new within the field of development economics with limited research available. Some confusion also still exists regarding the definition of inclusive growth as a concept and the sub-research field is not as well established if compared to other similar concepts such as economic development and pro-poor growth. The study had the objective to clarify the concept of inclusive growth and also to apply an alternative inclusive growth index for the BRICS countries to assess their performance. The research methodology included a literature review and a comparative assessment of the inclusive growth performance of the BRICS countries from 1997 to 2017. Results indicated that all five the countries have achieved medium levels of inclusive growth, except for South Africa, which only achieved a low level of inclusive growth. China had the highest index of 70.3, while India had the highest rate of growth in the improvement of the index of approximately 2.0 percent per annum. The results of the comparative study indicate that governments are required to intervene through improved policy implementation to ensure that all citizens have the opportunity to participate and benefit from economic and social aspects. Good governance, with strong institutions, also assists in inclusive growth success.

Keywords: BRICS countries; country comparison; development economics; inclusive growth index

JEL classification: F43; O11

1. Introduction

Traditionally, economic prosperity of a country is measured by means of its gross domestic product (GDP) and the year-on-year economic growth reported for this indicator. One of the main debates regarding the measurement of GDP is that it does not incorporate critical aspects such as human development, equality and social cohesion (OECD, 2005), and therefore may not always be a true reflection of a country's growth and development. In addition, Keszi Szeremlei and Magda (2015) mention that a sustainable and inclusive economy is able to mobilise new resources,

¹ Professor PhD, Faculty of Economic and Management Sciences, North-West University, South Africa, Address: PO Box 1174, Hendrik van Eck Boulevard, Vanderbijlpark, South Africa, Tel.: (016) 910 3348; Corresponding author: danie.meyer@nwu.ac.za.

² Senior lecturer, PhD, North West University, South Africa, Address: Hendrik van Eck Boulevard Vanderbijlpark, South Africa, Tel.: (016) 910 3373, E-mail: Natanya.Meyer@nwu.ac.za.

and therefore it is possible to expand the resources and potentially improve inclusiveness. However, especially over the last decade, several additional concepts have come to light, measuring the economic prosperity of a country in different ways and in some cases providing a more realistic measure of growth and development. These measurements fall within the broader research field of development economics and include concepts such as “jobless growth”, pro-poor growth and local and regional economic development (Meyer, Masehla & Kot, 2017; Meyer, 2018a; Meyer, 2018b; Onyusheva, Thammashote & Kot, 2018).

One of the most important and recent measurement concepts to emerge over the decade is the concept of inclusive growth (IG).

The concept has been described as a solution to the debate between economic growth and redistribution (Fourie, 2014) and that it should be the predominant goal of economic development policy (George, McGahan & Prabhu, 2012). As some scholars have different definitions and explanations of exactly what inclusive growth is and how it is measured, it has been defined, and the measurement process has been improved or amended by several researchers during the past decade (McKinley, 2010; Anand, Mishra & Peiris, 2013; Ramos, Ranieri, Lammens, 2013; WEF, 2017; Meyer, 2018a; Ahmad et al., 2018; Klieštík et al., 2018; Oláh et al., 2018). As the concept of inclusive growth is more relevant to less developed and developing countries, as these countries are most affected by socio-economic challenges, the purpose of this study is to use the index developed and tested by Meyer (2018a) to analyse and compare inclusive growth achieved by the BRICS (Brazil, Russia, India, China and South Africa) countries from 1997 to 2017. Since the official establishment of the BRIC (Brazil, Russia, India and China) in 2009, when the first Summit was held, and the inclusion of South Africa in 2010, this group of emerging countries have showcased their economic power in global economic development (BRICS, 2018).

The BRICS countries account for approximately 41 percent of the world population and had a combined GDP of approximately \$18 trillion in 2017, contributing approximately 25 percent of global output. The group of countries contributed to around 50 percent of global economic growth over the last decade (Zulu, 2018). Table 1 provides a summary of a few key economic indicators for the BRICS countries. Russia has the largest geographical area, while South Africa has the smallest area. Russia also has the highest GDP per capita, the highest GNI and has the highest HDI ranking of the five countries. India has the lowest unemployment levels, while South Africa has by far the highest unemployment levels. India, on the other hand, has the lowest GDP per capita, but also lowest income inequality. The country also has the lowest HDI ranking and lowest GNI. China has the largest population, the largest GDP and also the highest economic growth levels. Of the five BRICS countries, South Africa is the smallest regarding area size, population and

total GDP. The country also has the lowest economic growth and the highest level of income inequality. In terms of the UN income classification system, Brazil, China and South Africa are upper middle income countries, while Russia is classified as a high income country and India a lower middle income country (UN, 2017).

Table 1. BRICS country economic indicators summary

Indicators	Brazil	Russia	India	China	South Africa
Area in sq km	8 516 000	17 125 000	3 287 000	9 600 000	1 221 000
Population	206 million	147 million	1 269 million	1 379 million	56 million
Unemployment	9.6%	5.5%	2.2%	4.0%	26.7%
GDP in US\$	1 796 billion	1 286 billion	2 273 billion	11 203 billion	295 billion
GDP growth	0.7%	1.8%	6.7%	6.8%	0.7%
GDP per capita	8 713 US\$	8 768 US\$	1 750 US\$	8 127 US\$	5 279 US\$
Gini coefficient	0.49	0.41	0.36	0.46	0.64
HDI (ranking)	0.759 (79)	0.816 (49)	0.640 (130)	0.752 (86)	0.699 (113)
GNI in US\$	13 755	24 233	6 353	15 270	11 923
UN income classification	Upper middle	High	Lower middle	Upper middle	Upper middle

Sources: CIA (2016); IEconomics (2016); Trading Economics (2016) World Bank (2016); CIA (2018); United Nations, 2017; World Bank, 2017

2. Literature Review

Measuring the economic performance of countries has taken place for centuries. The most well-known and mostly used measure of economic growth and performance is the economic measure referred to as gross domestic product (GDP) and likewise measuring the wealth or prosperity level of a country's residents is done through calculating the GDP per capita (Bate, 2009). GDP calculates the value of all goods in the country's economy consumed by governments, private households and business industries and is, therefore, considered by most economists as a useful single measurement of a country's well-being (Masoud, 2014). The concept of economic growth is to a large extent based on models developed by traditional economists such as Solow (1956), Myrdal (1957) and Rostow (1959), and can further be explained as a cumulative increase of output, or the accumulation of production factors reflecting a quantitative measurement of a country's progress or growth (Meyer, 2018c).

Although still considered as one of the most useful measurements, GDP is not without its criticism. Bate (2009) lists some of the shortcomings linked to the calculation of GDP as the lack of existing prices, subjective evaluations and not providing a true reflection of the actual prosperity of a country. For example, if a country provides free healthcare services, there will not be a price for this service so statisticians have to impute prices, which could lead to subjective evaluation. In addition, the OECD (2005) states that GDP does not incorporate aspects such as human development, equality and social cohesion. Ali and Son (2007) mention that

growth alone does not guarantee improved and equal living conditions for all and in many cases bypasses marginalised and poor communities, increasing the inequality gap. Iyer, Kitson and Toh (2005) and Todaro and Smith (2011) suggest that following a multidimensional measuring approach could provide a more comprehensive impression of a country's prosperity and progress, especially considering and including social development aspects. This outlook has led to many economists and academics re-looking the way a country's growth, development and prosperity are measured. From this, a new concept, namely economic development was coined. While an increase in the traditional way growth is measured is clearly necessary to reduce poverty and other related social issues, the evidence is strong that growth alone is not an adequate condition for sustained and all-inclusive growth (Ali & Son, 2007).

Economic development involves an all-inclusive improvement of people's living standards through the growth of all sectors (e.g. education, health, technology and infrastructure) within the economy, impacting the overall reduction of poverty and unemployment (Carlson, 1999; Magda, 2013). In essence, economic development is the balance between the economic and social measurements of a country (Huq, Clunies-Ross & Forsyth, 2009; Toma, Grigore & Marinescu, 2014). However, as a multidimensional process, the development progress that societies have made has proven challenging to measure (Stiglitz, Sen & Fitoussi, 2009; Meyer, de Jongh & Meyer, 2016). Nonetheless, in the development of its conceptualisation from narrow to broader views, the concept of economic development (versus that of economic growth) has been refined by the introduction of various composite indices attempting to measure progress in a more holistic manner (Meyer *et al.*, 2016). Well-known indexes such as the Human Development Index (HDI), the Weighted Index of Social Indicators (WISP), the South African Development Index (SADI) and the Composite Regional Development Index (CRDI) have all contributed to measuring the development progress in a more rounded manner (Greyling, 2013; Naudé, Rossouw & Krugell, 2009; Meyer *et al.*, 2016). These measurements fall within the broader research field of development economics and include additional concepts such as "jobless growth", pro-poor growth and one of the more recent measurement methods to emerge is the concept of inclusive growth (Meyer, 2018a; Meyer 2018b).

Inclusive growth has drawn much attention in recent years as it is considered a more comprehensive way to reduce inequality compared to only focusing on economic growth (Ali & Son, 2007). While no precise definition or measurement of inclusive growth has been developed and adopted within the literature, it can simplistically be defined as providing similar or equal opportunities for all of the population to prosper (Ali & Son, 2017; WEF, 2017a), and the measurement thereof is by means of an index including several indicators or variables (Meyer, 2018a). The United Nations Development Programme (UNDP) describes inclusive growth as both an outcome and a process. Firstly, it guarantees that all members of society can participate in the

growth process (decision-making and participating in growth itself), and secondly, it shares economic benefits fairly. Inclusive growth therefore implies participation and benefit-sharing (Boarini, Murin & Schreyer, 2015). Ramos *et al.* (2013) define inclusive growth as an economic progression that fairly distributes benefits and provides opportunity to all of society. Ngepah (2017) adds by stating that inclusive growth is more focused on the actual outcome of economic growth versus the levels of growth. This implies that only actual reduction in unemployment, poverty and inequality will lead to inclusive growth. Vellala, Madala and Chhattopadhyay (2014) define inclusive growth as being broad-based, including the poorer section of society to also benefit through economic opportunities. However, Klasen (2010) defines inclusive growth as more than broad-based growth and that it should add value and benefits to all sectors of society, from very poor to rich, and should include non-discriminatory participation, including benefits to women, children and other minority or disadvantaged groups. Veneri and Murin (2016) state that inclusive growth can be explained as a situation where economic growth produces opportunities for all groups of society and leads to an overall improved standard of living not only in materialistic terms, but also quality of life. When inclusive growth is achieved, a variety of overall improvements within a country and its society should be visible. These include, for example, lower occurrence of poverty, broad-based and significant improvement in healthcare services, access to basic education and higher education, improved skills development, increased opportunities for wage employment and improved basic services such as water, electricity, roads, sanitation and housing (Government of India, 2011). In summary, inclusive growth can be defined as a broad-based economic process including all sectors of society to benefit while ensuring non-discriminatory participation and redistribution of economic opportunities.

The Government of India (2011) opines that the progress towards achieving inclusive growth is more complicated to measure due to its multidimensional character. As a result of the complicate nature of measuring inclusive growth, several economists and academics have over the years attempted to develop an all-inclusive index measuring this phenomenon. These indexes typically include an array of different indicators such as GDP growth per capita, inequality, poverty ratio and employment to population ratio (EPR). In some indexes, the selected indicators were used equally weighted and some attempted to provide weights to prioritise the importance of them (McKinley, 2010). Some inclusive growth indexes developed over the last decade include:

- The “*Inclusive Growth Criteria and Indicators*”, which were developed by the Asian Development Bank (ADB), are a composite country-level index. This index is equally weighted, comprising clusters of variables, which include employment, GDP growth, poverty, inequality, infrastructure, health, education services and social protection. Criticism surrounding this index is that some

indicators are not easily quantifiable and are equally weighted (McKinley, 2010).

- The “*Mapping Inclusive Growth*” index, developed by the International Policy Centre for Inclusive Growth, is based on benefit-sharing. It comprises 43 countries and includes indicators such as Gini coefficient, EPR and poverty headcount ratio. Major critique around this index is also the use of limited indicators that are equally weighted and that it is not a combined index (Ramos et al., 2013).
- The “*Inclusive Growth Measurement and Determinants*” was developed by the International Monetary Fund (IMF) and includes a combined index using time series regression. The index is only applied to developing countries and includes economic growth and distribution of income as its indicators. Once again, the critique includes that indicators are equally weighted (Anand et al., 2013).
- The “*Multidimensional Living Standards*” (MDLS) index, developed by the OECD, provides a summary measure of welfare, which is conveyed in monetary terms. It is calculated by combining the disposable income for various household clusters in a region (for example income quintiles) to the monetised prices of health and employment outcomes. This index makes it possible to identify differences in prosperity levels among areas within a specific country or broader region (Veneri & Murtin, 2016). This index builds on previous measurements designed and work done by the OECD on, for example, well-being, income equality and economic growth (OECD, 2011; 2014; 2015a; 2015b).
- The “*Inclusive Development Index (IDI)*”, developed by the World Economic Forum (WEF), reports on inclusive growth on a global scale and identifies 15 areas of institutional strength and structural economic policy that can contribute to not only higher growth but also greater social participation. Indicators incorporated in this index include employment, productivity, income, savings, dependency ratio, health, GDP per capita, poverty, inequality and carbon intensity (WEF, 2017b).
- The “*Alternative Inclusive Growth Index (AIGI)*”, developed by Meyer (2018a), includes eight indicators that are weighted according to importance and significance. These indicators are EPR, GDP per capita, poverty, income equality, infrastructure, education, health and dependency ratio.

The IDI 2018 rankings place the BRICS countries among various development stages resulting in mixed performance levels. Russia (ranked 19th) received the highest ranking in the emerging economy section with an overall IDI score of 4.20

and a 0.48 percent overall 5-year trend. China ranked 26th with a 4.09 score for 2018 and 2.94 percent overall 5-year trend. Brazil stood at 37th place with a 3.93 IDI score and -3.26 percent overall 5-year trend. India and South Africa ranked 62th and 69th respectively and can therefore be considered some of the worst performing countries in this index. What is interesting is that India ranked first among emerging economies regarding GDP per capita growth (6.8%) and labour productivity growth (6.7%) for the past five years, but achieved a ranking in the bottom 15 countries of the IDI rankings (WEF, 2018a). This is a clear indication that measuring growth, development and prosperity by only using economic growth (GDP) or even GDP per capita as an indicator is not sufficient. To achieve inclusiveness in all dimensions of society, a multidimensional approach is required, which can ultimately lead to the development and introduction of new and improved government intervention policies.

Several other researchers listed empirical results, testing some of the relationships between inclusive growth indicators. According to Stuart (2011), requirements for inclusive growth include a redistributive agenda, for example, cash transfers and a progressive tax system; macro-economic policy, for example, moderate levels of inflation and debt with continued spending on pro-poor components; and incentives for pro-poor investment in labour-intensive sectors and small business development (De Jongh, Meyer & Meyer, 2016; Stefko & Steffek, 2017). Anyanwu (2013) established that relative increased levels of income inequality could lead to high levels of poverty, while high levels of education can assist in poverty reduction. Ulriksen (2012), in his final results, found that GDP per capita has a positive impact on poverty. Vellala *et al.* (2014) list some guidelines for comprehensive inclusive growth strategies: rapid economic growth is required to create employment opportunities and leading to inclusive growth. Economic growth also needs to be pro-poor; poverty reduction leads to improved income inequality and policies need to ensure access to economic and social opportunities. Human development is required to improve IG; basic needs must be provided, including safe water, electricity, housing and transport; and lastly, good governance with effective policy management and implementation.

3. Methodology

This study made use of a quantitative research design, including a literature review with a focus on definitions, concepts and an assessment of some of the most important inclusive growth indexes. Secondly, an alternative inclusive growth index, developed by Meyer (2018a), was applied in a comparative analysis of the BRICS countries. Data for all countries were obtained from the World Bank database (World Bank, 2017). The time frame used in the analysis is from 1997 to 2017, allowing for 21 years of assessment.

Table 2 is a summary of the indicators included in the index. All negative indicators (such as the Gini-coefficient, poverty head count and dependency ratio) were reverse scored or inverted to represent a positive score for the indicator.

Table 2. Summary of indicators of the alternative inclusive growth index

Component/ indicator	Description of indicator	Weight allocation
Employment to population ratio (EPR)	Measures employment environment improvements in relation to population changes. As a ratio, the data is from 0 to 100. The higher the ratio, the higher the contribution to inclusive growth. A ratio below 60 indicates a malfunctioning labour market (ILO, 2015).	25.0
GDP per capita annual growth (GDPC)	Measures economic growth and labour productivity (McKinley, 2010). The higher the growth, the higher the contribution to inclusive growth.	15.0
Poverty (POV)	Measures the percentage of the population above the poverty line based on \$2 per day income. The higher the percentage, the higher the contribution to inclusive growth.	15.0
Income equality (GINI)	Measured by the Gini coefficient. The data are inverted (100 minus the original value) to indicate an increasing value as improved income equality. The higher the ratio, the higher the contribution to inclusive growth.	10.0
Infrastructure (INFRA)	Measures percentage of population with access to electricity and percentage of population with access to the internet. The final indication is an equal combination of the two indicators as a ratio. The higher the ratio, the higher the contribution to inclusive growth.	10.0
Education (EDU)	The indicator is represented by the percentage of total government budget spend on education as percentage of GDP. The higher the ratio, the higher the contribution to inclusive growth.	10.0
Health (HEALTH)	The indicator is represented by the percentage of total government budget spent on health as a percentage of GDP. The higher the ratio, the higher the contribution to inclusive growth.	10.0
Dependency ratio (DEPEN)	Measured by the number of dependents as percentage of the working population. The raw data are inverted as the percentage of the population that is not dependent to indicate a higher value as a decrease in dependency. The higher the ratio, the higher the contribution to inclusive growth.	5.0

Source: Meyer, (2018a)

The alternative index, as utilised, is user-friendly, as data are available for most countries over a period of time from the World Bank database, allowing for diagnostic analysis of problematic components and to assess progress (improvements or stagnation) over time. The results of the index could also be used for policy formulation purposes. The index also has a weighting system, as indicated in Table 2. As with the original study (Meyer, 2018a), a two-step weighting system

is used in the assessment of inclusive growth for all of the BRICS countries. Firstly, all indicators were allocated equal weights, while in the second step, indicators were allocated different weights as indicated in Table 2. The final result of the analysis therefore provide two overall indexes per country. In this study, an amended index classification system was added based on previous work by Meyer (2018a), Ramos *et al.* (2013) and McKinley (2010). The amended classification system is listed in Table 3. The main change in this classification system is that more classification categories were added to allow for improved classification of countries.

Table 3. Inclusive growth index classification system

Index score	Index classification	Description
0-10	Very poor	Very low level of inclusive growth, unacceptable index.
11-20	Poor	Low level of inclusive growth, unsatisfactory index.
21-30	Low-low	Low level of inclusive growth, unsatisfactory low index.
31-40	Low-medium	Low level of inclusive growth, still not satisfactory but improving.
41-50	Low-high	Low level of inclusive growth, below average.
51-60	Medium-low	Lower medium inclusive growth index, above average.
61-70	Medium-medium	Medium inclusive growth index, satisfactory index.
71-80	Medium-high	Medium high inclusive growth index, moving towards the ideal situation.
81-90	High-medium	High levels of inclusive growth, highly satisfactory index.
91-100	High	Very high level of inclusive growth, close to the ideal situation, superior index.

Source: Amended from Meyer (2018a)

4. Results and discussion

In this section, the BRICS countries are compared and discussed regarding their performance in achieving inclusive growth. An attempt was also made to compile a world inclusive growth index, as indicated in Table 4.1. The world index is used as a base line in the assessment of the countries. The global index, as calculated, is between 55.7 and 57.7 in 2017, indicating a medium-low inclusive growth index. On an annual basis, the global index has improved by between 0.78 and 1.04 percent since 1997. It should also be mentioned that, since 2007, the global inclusive growth index has stagnated. A major concern from a global point of view is that EPR has declined over time, an indication of the difficulty to create employment.

Table 4.1. World overall: Inclusive growth index

Year	EPR	GDP per cap growth %	POV index	GINI index	INFRA	EDU	HEALTH	DEPEN RATIO	Equal weighted score	Weighted score
1997	61.1	2.2	29.2	70	38.9	4.0	4.6	62.4	46.1	49.9
2002	60.5	0.9	25.6	68	44.7	4.0	5.1	58.6	45.3	47.8
2007	60.4	3.0	18.1	63	51.1	4.2	5.4	55.3	53.9	57.0
2012	58.9	1.3	12.8	62	59.7	4.6	5.8	54.1	52.5	54.2
2017	58.5	2.0	11.5	61	67.2	4.9	5.8	54.4	55.7	57.5

Source: Own compilation from World Bank, 2017

Table 4.2 contains the results of the inclusive growth analysis for Brazil. In the Brazil case, there is a difference in the results of the equally weighted and individually weighted index. The index for the equally weighted index has increased from 49.0 in 1997 to 54.6 in 2017, with an annual average growth rate of 0.57 percent, while the individually weighted index also had a final score of 54 in 2017, but with a low annual growth of only 0.19 percent. The components of the index that have improved are poverty, GINI index, infrastructure, education, health, and dependency ratio, while EPR and GDP per capita growth have shown negative growth since 1997. The overall index of approximately 54 in 2017 indicates low medium levels of inclusive growth. The index has been declining since the financial crises in 2007 up to 2017. Of the five BRICS countries, Brazil is ranked fourth in terms of the inclusive growth index and annual growth of between 0.19 percent and 0.57 percent.

Table 4.2. Brazil: Inclusive growth index

Year	EPR	GDP per cap growth %	POV index	GINI index	INFRA	EDU	HEALTH	DEPEN RATIO	Equal weighted score	Weighted score
1997	59.2	1.8	14.0	59.8	47.1	4.6	3.5	57.7	49.0	52.0
2002	60.0	1.7	10.3	58.1	52.9	3.8	3.7	52.6	50.1	52.9
2007	61.4	4.9	6.8	54.9	64.5	5.0	3.5	48.4	62.4	66.1
2012	59.7	1.0	3.8	50.9	74.1	5.9	3.4	45.1	55.9	56.7
2017	55.2	0.2	6.8	51.3	81.0	6.0	3.8	43.5	54.6	54.0

Source: Own compilation from World Bank, 2017

Table 4.3 contains the results of the inclusive growth index analysis for Russia. The equal and individually weighted indexes had similar results. The individually weighted index has increased from 52.3 in 1997 to 59.0 in 2017 with an annual average growth rate of 0.64 percent, while the equal weighted index had a score of 57.9 in 2017 with an annual growth rate of 0.73. The components of the index that have improved are EPR and infrastructure, while most other indicators have been stagnant. The overall index of approximately 59.0 indicates low-medium levels of inclusive growth. The index peaked in 2007 at 77.9, but has been declining since

then. Of the five BRICS countries, Russia is ranked second in terms of the inclusive growth index and annual growth of between 0.64 percent and 0.73 percent.

Table 4.3. Russia: Inclusive growth index

Year	EPR	GDP per cap growth %	POV index	GINI index	INFRA	EDU	HEALTH	DEPEN RATIO	Equal weighted score	Weighted score
1997	52.7	1.6	1.1	38.4	50.2	2.5	3.2	48.1	50.5	52.3
2002	56.4	5.2	0.7	37.3	52.0	3.8	3.5	43.0	63.1	66.2
2007	58.8	8.7	0.1	42.3	62.4	3.9	3.2	39.7	73.0	77.9
2012	60.0	3.5	0.5	40.7	81.9	3.8	3.4	40.1	62.8	64.7
2017	60.2	1.4	0.7	37.7	88.0	3.8	3.4	46.6	57.9	59.0

Source: Own compilation from World Bank, 2017

Table 4.4 contains the results of the inclusive growth analysis for India. The equal and individual weighted indexes had similar results. The individually weighted index has increased from 43.0 in 1997 to 58.9 in 2017 with an annual average growth rate of 1.81 percent. The components of the index that have improved are GDP per capita growth, poverty, infrastructure and the dependency ratio, while EPR and income inequality have shown negative growth since 1997. The overall index of between 55.1 and 58.6 indicates low-medium levels of inclusive growth. The index peaked in 2007, but has since declined and is on a negative trend. Of the five BRICS countries, India is ranked third in terms of the inclusive growth index and annual growth of between 1.80 percent and 2.0 percent.

Table 4.4. India: Inclusive growth index

Year	EPR	GDP per cap growth %	POV index	GINI index	INFRA	EDU	HEALTH	DEPEN RATIO	Equal weighted score	Weighted score
1997	57.7	2.1	45	47	27.4	3.4	0.9	67.1	38.9	43.0
2002	57.0	2.1	39	48	31.9	3.7	0.8	62.8	40.8	44.5
2007	56.0	8.2	33	49	37.0	3.2	0.7	58.7	56.9	63.4
2012	52.0	4.1	22	52	46.3	3.9	0.9	54.7	50.0	53.5
2017	51.9	5.4	23	51	57.5	3.8	1.0	51.0	55.1	58.6

Source: Own compilation from World Bank, 2017

Table 4.5 contains the results of the inclusive growth analysis for China. The equal versus individually weighted indexes for China have resulted in differentiated results. The individually weighted index has increased from 67.5 in 1997 to 70.3 in 2017 with an annual average growth rate of 0.21 percent, while the equally weighted index had a 2017 score of 65.4 at an annual growth of 0.48 percent. The components of the index that improved over time are poverty, infrastructure, health spending and the dependency ratio, while the EPR, GDP per capita, Gini index have shown negative growth since 1997. The overall index of between 65.4 and 70.3 indicates

medium levels of inclusive growth. The index peaked in 2007, but has since steadily declined up to 2017. Of the five BRICS countries, China is ranked highest in terms of the inclusive growth index and annual growth of between 0.21 percent and 0.48 percent.

Table 4.5. China: Inclusive growth index

Year	EPR	GDP per cap growth %	POV index	GINI index	INFRA	EDU	HEALTH	DEPEN RATIO	Equal weighted score	Weighted score
1997	74.7	8.1	41.0	46	47.6	1.9	1.0	48.7	59.7	67.5
2002	72.3	8.4	31.9	53	50.8	1.9	1.3	43.1	61.9	69.3
2007	69.6	13.6	15.6	54	57.3	1.9	1.7	36.4	78.6	88.0
2012	67.4	7.3	6.5	52	71.1	1.9	2.7	35.9	67.0	72.5
2017	65.7	6.3	2.5	55	77.2	1.9	3.2	39.5	65.4	70.3

Source: Own compilation from World Bank, 2017

Table 4.6 contains the results of the inclusive growth analysis for South Africa. A significant difference was revealed between the equal and individually weighted indexes. The individually weighted index has increased from 40.5 in 1997 to 41.8 in 2017 with an annual average growth rate of 0.16 percent, while the equally weighted index had a 2017 score of 44.2 with an annual growth rate of 0.54 percent. The components of the index that have improved over time are infrastructure and health spending, while EPR, GDP per capita growth, poverty and the dependence ratio have shown negative growth since 1997. The overall index of between 41.8 and 44.2 indicates low levels of inclusive growth. The index has been relatively stagnant with a peak in 2007 before the financial crises, but since then has shown a sharp decline. Of the five BRICS countries, South Africa is ranked last (fifth) in terms of the inclusive growth index and annual growth of between 0.16 percent and 0.54 percent.

Table 4.6. South Africa: Inclusive growth index

Year	EPR	GDP per cap growth %	POV index	GINI index	INFRA	EDU	HEALTH	DEPEN RATIO	Equal weighted score	Weighted score
1997	41.0	0.9	33.8	63.0	37.8	5.6	2.7	64.1	39.9	40.5
2002	38.5	2.3	34.7	66.0	41.9	5.1	2.3	58.8	42.6	43.4
2007	42.2	4.3	44.1	65.0	45.1	5.0	3.2	55.3	48.9	50.3
2012	39.6	0.8	46.4	64.0	63.2	6.4	4.3	53.4	45.3	43.3
2017	39.8	0.1	46.2	63.0	69.8	5.9	4.5	52.8	44.2	41.8

Source: Own compilation from World Bank, 2017

Figure 1 is a graphical presentation of the changes in the inclusive growth indexes for the five BRICS countries as well as for the global index. A clear trend is seen with strong improvement in inclusive growth towards 2007, but since the financial crises all of the countries have struggled to create positive inclusive growth except for India. This is mostly due to factors such as declining EPR or employment

creation, declining income inequality and slow economic growth. Some convergence is experienced between the five countries under investigation with India for example having improved its inclusive growth index at a rapid rate if compared to the other countries.

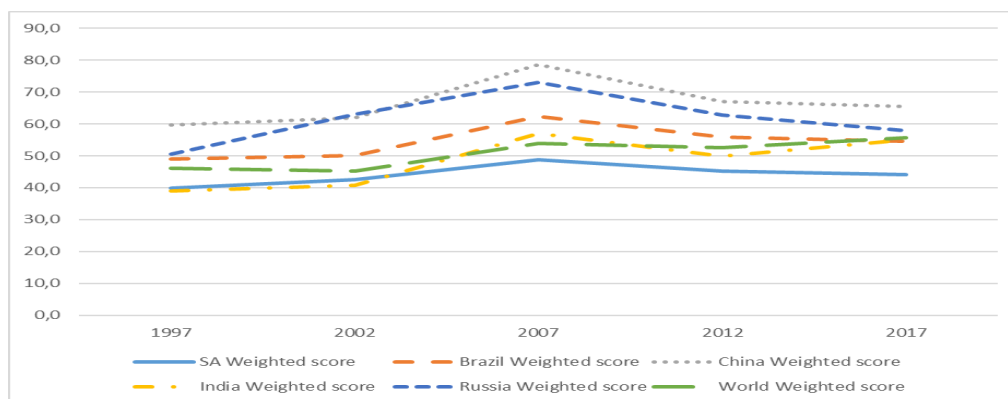


Figure 1. BRICS country comparison from 1997 to 2017

5. Conclusion

The study had the objective to analyse current definitions of the concept of inclusive growth and to assess inclusive growth performance of the BRICS countries. The “*Alternative Inclusive Growth Index*” (Meyer, 2018a) was used in the assessment and comparison of the countries. In terms of this study, inclusive growth could be defined as the process to aspire facilitation and improved participation and benefit-sharing through the gains of economic growth for all citizens. Other outcomes from the study include an improved inclusive growth classification index and a comprehensive comparative analysis of the progress of the BRICS countries in achieving inclusive growth. The overall results of the index indicated that all of the countries have shown rapidly improving inclusive growth indexes up to 2007, before the global financial crises. But since the crises, none of the countries have managed to turn the situation around and all of the countries have experienced a declining index. India is the only country that has been able to improve its index since 2007 to some degree. China has achieved the highest index in 2017 of 70.3, followed by Russia with 59, India with an index of 58.9, Brazil with 54 and South Africa the lowest index of 41.8. Of the five countries, India had the highest average per annum growth regarding improvements in the index from 1997 to 2017 with an average annual growth of just below 2 percent, while South Africa had the lowest annual improvements in the index. What is interesting to note is that the countries with high levels of economic growth such as China and India have increased their inclusive

growth index successfully, but in recent years, even China, with its high growth levels, has seen a decline in inclusive growth.

The strength of the index, as utilised in this paper, is that it is multidimensional and data are available for most countries. Future research on the topic of inclusive growth could include more country and regional comparisons, the testing and inclusion of other indicators in the index and econometric analysis of trust series data. This study contributed to the body of knowledge by adding more clarity on the definition of inclusive growth, adding an improved classification system to the index and also the assessment of inclusive growth for the BRICS countries. The results of the index are of a strategic nature and provide economic development policy practitioners with an analysis of strengths and weaknesses of factors that can contribute to improved inclusive growth of countries and regions. Government development policy should have a strong focus on inclusive growth and the following recommendations are listed: a balanced development approach with a strong pro-poor implementation plan such as cash transfers and spending on infrastructure, health and education; macro-economic policy that promotes stable inflation with high levels of economic growth; incentives for small business development and labour intensive investment; ensure equal access to social and economic opportunities for all citizens; and lastly good governance with effective institutions.

6. References

- Ahmad, I.; Oláh, J.; Popp, J. & Domicián Máté, D. (2018). Does Business Group Affiliation Matter for Superior Performance? Evidence from Pakistan. *Sustainability*, Vol. 10, no. 9, 3060, pp. 1-19.
- Ali, I. & Son, H.H. (2007). *Defining and measuring inclusive growth: application to the Philippines*. Retrieved from <https://www.think-asia.org/handle/11540/1857>, date: 15.03.2018.
- Ali, I. & Son, H.H. (2007). Measuring inclusive growth. *Asian Development Review*, Vol. 24, No.1, pp. 11-31.
- Anand, R.; Mishra, M.S. & Peiris, S.J. (2013). *Inclusive growth: Measurement and determinants*. No. 13-135. International Monetary Fund.
- Anyanwu, J.C. (2013). *Determining the correlates of poverty for inclusive growth in Africa*. African Development Bank. Retrieved from <https://www.afdb.org/Publications.pdf>, date: 17.03.2018.
- Bate, R. (2009). *What is Prosperity and How Do We Measure it?* AEI Development Policy Outlook, No. 3. Retrieved from <https://ssrn.com/abstract=2342844>, date: 28.09.2018.
- Boarini, R.; F. Murtin, & Schreyer, P. (2015). *Inclusive Growth: The OECD Measurement Framework*. OECD Statistics Working Papers, 2015/06, OECD Publishing, Paris. Retrieved from <http://dx.doi.org/10.1787/5jrqqpxjqhg4-en>, date: 28.09.2018.
- BRICS (2018). History of BRICS. Retrieved from <http://infobrics.org/page/history-of-brics/>, date: 10.01.2019.

Central Intelligence Agency (CIA). (2018). *The World Fact Book*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/wa.html>, date: 21.05.2018.

Central Intelligence Agency (CIA). (2016). *The World Fact Book*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook>, date: 29.11.2018.

De Jongh, J.J.; Meyer, N. & Meyer, D.F. (2016). Perceptions of local businesses on the Employment Tax Incentive Act: The case of the Vaal Triangle Region. *Journal of Contemporary Management*, 13(1), pp. 409-432.

Fourie, F. (2014). *How inclusive is economic growth in South Africa?* Econ3x3. Retrieved from <http://www.econ3x3.org/article/how-inclusive-economic-growth-south-africa>, date: 11.10.2018.

George, G.; McGahan, A.M. & Prabhu, J. (2012). Innovation for Inclusive Growth: Towards a Theoretical Framework and a Research Agenda. *Journal of Management Studies*, Vol. 49, pp. 661–683.

Government of India (2011). *Faster, Sustainable and More Inclusive Growth: An Approach to the Twelfth Five Year Plan (2012-17)*. Government of India www.planningcommission.nic.in.

Greyling, C.T. (2013). *A composite index of quality of life for the Gauteng city-region: a principal component analysis approach*. Occasional Paper 07. Johannesburg: GCRO.

Huq, M.M.; Clunies-Ross, A. & Forsyth, D. (2009). *Development economics*. London: McGraw Hill Education.

IEconomics (2016). *Unemployment and inflation rate forecasts*. Retrieved from <http://ieconomics.com/>, date: 9.12.2018.

ILO (2015). *Key indicators of the labour market*. Retrieved from <https://www.ilo.org/wcmsp5/groups>, date: 18.12.2018.

Iyer, S.; Kitson, M. & Toh, B. (2005). Social capital, economic growth and regional development. *Regional Studies*, Vol. 39, no. 8, pp. 1015-1040.

Keszi Szeremlei, A. & Magda, R. (2015). Sustainable production and consumption. *Visegrad Journal on Bioeconomy and Sustainable Development*, Vol. 4, no. 2, pp. 57-61.

Klasen, S. (2010). *Measuring and monitoring inclusive growth*. Sustainable Development Working Paper 12. Asian Development Bank.

Klieštík, T.; Klieštíková, J.; Kováčová, M.; Švábová, L.; Valášková, K.; Vochozka, M. & Oláh, J. (2018). *Prediction of financial health of business entities in transition economies*. American Association for Economic Research, Addleton Academic Publishers: New York City.

Magda, R. (2013). Difficulties in sustainability and land utilisation. *Visegrad Journal on Bioeconomy and Sustainable Development*, Vol. 2, no. 1, pp. 15-18.

Masoud, N. (2014). A contribution to the theory of economic growth: Old and new. *Journal of Economics and International Finance*, Vol. 6, no.3, pp. 47-61.

McKinley, T. (2010). *Inclusive Growth Criteria and Indicators: An inclusive growth index for diagnosis of country progress*. Asian Development Bank. Working paper series no 14. Manila.

McKinley, T. (2010). *Inclusive Growth Criteria and Indicators: An inclusive growth index for diagnosis of country progress*. Asian Development Bank. Retrieved from <https://www.adb.org/sites/default/files.pdf>, date: 12.11.2018.

Meyer, D. (2018a). Formulation and application of an alternative inclusive growth index: The case of Poland and South Africa. Paper presented at CITPM, Czestochowa, Poland from 19 to 20 April 2018.

Meyer, D.F. (2018b). An analysis of inclusive growth progress in the Visegrad Countries using an alternative index. Paper to be presented at 7th International conference scientific conference, Management 2018. University of Prešov in Prešov, Faculty of Management, Konštantínova 16, Prešov 08001, Slovak Republic. 26 - 29 September 2018.

Meyer, D.F.; De Jongh, J.J. & Meyer, N. (2016). The formulation of a composite regional development index. *International Journal of Business and Management Studies*, Vol. 8, no. 1, pp. 100 – 116.

Meyer, D.F.; Masehla, T.M. & Kot, S. (2017). The relationship between economic growth and economic development: A regional assessment in South Africa. *Journal of Advanced Research in Law and Economics*, 8 4), pp. 1377-1385.

Meyer, N. (2018c). South African female entrepreneurs' intention to remain in business. *Unpublished Doctoral thesis*. North-West University: Vanderbijlpark, South Africa.

Myrdal, G. (1957). *Rich lands and poor*. New York: Harper and Row.

Naudé, W.; Rossouw, S. & Krugell, W. (2009). The non-monetary quality of city life in South Africa. *Habitat International*, Vol. 33, no.4, pp. 319-326.

Ngepah, N. (2017). A review of theories and evidence of inclusive growth: An economic perspective for Africa. *Current Opinion in Environmental Sustainability*, Vol. 24, pp. 52-57.

OECD *see* Organisation for Economic Cooperation and Development.

OECD (2005). *Is GDP a satisfactory measure of growth?* Retrieved from <http://oecdobserver.org/news/>, date: 16.11.2018.

OECD (2011). *How's Life — Measuring Well-being*. Paris: OECD Publishing.

OECD (2014). *All on Board. Making Inclusive Growth Happen*. Paris: OECD Publishing.

OECD (2015a). *In It Together: Why Less Inequality Benefits All*. Paris: OECD Publishing. Retrieved from <http://dx.doi.org/10.1787/9789264235120-en>, date: 09.12.2018.

OECD (2015b). *Economic Policy Reforms 2015: Going for Growth*. Paris: OECD Publishing. Retrieved from <http://dx.doi.org/10.1787/growth-2015-en>, date: 09.12.2018.

Oláh, J.; Sadaf, R.; Máté, D. & Popp, J. (2018). The influence of the management success factors of logistics service providers on firms' competitiveness. *Polish Journal of Management Studies*, Vol. 17, no. 1, pp. 175-193.

Onyusheva, I.; Thammashote, L. & Kot, S. (2018). ASEAN: Problems of regional integration. *Espacios*, 39(36), p. 5.

Ramos, R.A.; Ranieri, R. & Lammens, J. (2013). *Mapping inclusive growth*. International Policy Centre for Inclusive Growth. Retrieved from <https://www.econstor.eu/obitstream/10419/71778/1/73672866X.pdf>, date: 16.08.2018.

Rostow, W.W. (1959). The stages of economic growth. *The Economic History Review*, Vol. 12, no.1, pp. 1-16.

Solow, R.M. (1956). A contribution to the theory of economic growth. *The Quarterly Journal of Economics*, Vol. 70, no. 1, pp. 65-94.

- Stefko, R. & Steffek, V. (2017). A study of creative industry entrepreneurship incubation. *Polish Journal of Management Studies*, Vol. 15, no. 2, pp. 250-261.
- Stiglitz, J.; Sen, A.K. & Fitoussi, J.P. (2009). *The measurement of economic performance and social progress revisited: reflections and overview*. OFCE Working Paper. New York, NY: Columbia University.
- Stuart, E. (2011). Making Growth Inclusive: Some lessons from countries and the literature. *Oxfam Policy and Practice: Private Sector*, Vol. 8, No. 1, pp. 89-131.
- Todaro, M.P. & Smith, S.C. (2011). *Economic development*. 11th ed. Essex: Pearson Education Limited.
- Toma, S.G.; Grigore, A.M. & Marinescu, P. (2014). Economic development and entrepreneurship. *Procedia, Economics and Finance*, Vol. 8, pp. 436-443.
- Trading Economics (2016). *Unemployment rates*. Retrieved from <http://www.tradingeconomics.com/>, date: 9.12.2018.
- Ulriksen, M.S. (2012). Questioning the Pro-Poor Agenda: Examining the Links between Social Protection and Poverty. *Development Policy Review*, Vol. 30, No. 3, pp. 261-281.
- United Nations (2017). *Country classifications*. Retrieved from http://www.un.org/en/development/country_classification.pdf, date: 12.09.2018.
- Vellala, P.S.; Madala, M. & Chhattopadhyay, U. (2014). A theoretical model for inclusive economic growth in Indian context. *International Journal of Humanities and Social Sciences*, Vol. 4, no. 13, pp. 229-235.
- Veneri, P. & Murtin, F. (2016). *Where is inclusive growth happening? Mapping multi-dimensional living standards in OECD regions*, OECD Statistics Working Papers, 2016/01, OECD Publishing, Retrieved from <http://dx.doi.org/10.1787/5jm3nptzwsxq-en>, date: 18.12.2018.
- WEF (2017a). *World Economic Forum on Africa*. Retrieved from <https://www.weforum.org/events/world-economic-forum-on-africa-2017/speakers>, date: 16.11.2018.
- WEF (2017b). *The Inclusive Growth and Development report, 2017*. Geneva. Retrieved from <https://www.weforum.org/reports/the-inclusive-growth-and-development-report-2017>, date: 16.11.2018.
- WEF (2018). *The Inclusive Development Index 2018*. Geneva.
- World Bank (2017). *Data Bank*. Washington, DC. Retrieved from <http://databank.worldbank.org/data/home.aspx>, date: 12.11.2018.
- World Bank (2016). *World development indicators*. Retrieved from <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>, date: 13.11.2018.
- Zulu, L. (2018). *BRICS MSME Roundtable*. Retrieved from <http://www.brics2018.org.za/remarks-1>, date: 10.01.2019.