

# Decent work and economic growth: the case study of the BRICS countries

VIKTORIJA SKVARCIANY, SILVIJA VIDŽIŪNAITĖ

## Abstract

The article covers the prioritisation of Brazil, Russia, India, China, and South Africa (collectively referred to as the BRICS countries) in order to find out which of them is the most successful in terms of Sustainable Development Goal 8 (SDG8). For that purpose, the Analytic Hierarchy Process (AHP) and Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS) methods were used. The AHP method was employed in order to assign suitable weights to the SDG8 indicators, and the TOPSIS and COPRAS methods were used for the prioritisation of BRICS countries. Based on the research results, China was the most progressive economy from 1991 to 2019 regarding economic growth and a decent work environment, while South Africa showed the lowest level of progress.

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**Viktorija Skvarciany**<sup>1</sup>

e-mail: viktorija.skvarciany@vilniustech.lt

**Silvija Vidžiūnaitė**

e-mail: svidziunaite@gmail.com

Vilnius Gediminas Technical  
University – VILNIUS TECH, Lithuania

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<sup>1</sup> Corresponding author

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## Introduction

Sustainable development is one of the most critical issues faced by all countries, and has been achieved through sustainable development goals (SDGs) announced by the United Nations (2015a). The SDGs were set with the ambition of “transforming the world” in line with a plan for action for “people, planet and prosperity” (United Nations, 2018). All goals are expected to be achieved by 2030. Even though all the UN member states seek to reach the goals set, it is not apparent when it will be possible to state that the goals have been achieved. In other words, there is no benchmark for which the achievement thereof could be an

inference that the country does not seek sustainability, but is in fact sustainable. The first step that should be taken in order to define a benchmark is the evaluation of the present situation. In other words, there should be a general understanding of the present situation in the respective countries. For that purpose, prioritisation procedures based on multi-criteria decision-making methods could be employed.

As mentioned above, there are 17 SDGs; however, due to the different fields to which they apply, it is not worth considering them all together, i.e. they should be evaluated separately. Hence, the current paper focus-

es on SDG8 – decent work and economic growth. After analysing all the goals, SDG8 seems to be one of the most important. Its purpose is to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (United Nations, 2015b). It could be held as one of the most vital goals because the economy and employment are the baselines for certain other goals, i.e. the development of the economy and employment leads to better performance in the context of other goals. For instance, improving the economy and the work environment could help combat poverty, reduce hunger, improve society's health, and provide better education (SDG1-4). Also, a better economy and employment could foster industry, innovation and infrastructure (SDG9). Moreover, SDG8 promotes equal employment and financial opportunities for different people, including gender, age, people with disabilities, and others (SDG5,10). Therefore, it is essential to analyse the indicators that improve decent work and economic growth (SDG8) and determine what indicators have a significant impact. This will help to distinguish focus areas and create action plans that would lead to a sustained economy and a decent work environment, as well as overall sustainability.

In other words, the current research aims to assign weights to SDG8 indicators and complete the prioritisation procedure in terms of BRICS countries. It is worth mentioning that BRICS countries were chosen because they represent 41% of the world population and 24% of global GDP.

The current study, as with almost all such studies, has several limitations. First, the results obtained may turn out to be valuable only for BRICS countries and may only be relevant to developing the sustainable development strategy for those countries. Second, the present research examines only SDG8; hence, the other 16 goals are not included in the study.

## 1. Theoretical background

In order to undertake an assessment of SDG8, it is essential to analyse its targets and indicators. There are 10 main targets and two additional ones. 17 indicators measure all these targets. The first target reflects the sustainable economic growth per capita that depends on national circumstances. The annual economic growth rate of the least developed countries should be at least 7%. This target is evaluated by annual GDP growth per capita. According to Lunacek and Smecka (2018), expenditure on R&D is the most important and significant indicator that affects economic growth. According to those authors, expenditure on R&D positively affects economic growth. According to Vo et al. (2019), income inequality is another crucial indicator as it negatively affects economic growth. It can be stated that increased expenditures on R&D, supporting micro, small and medium-sized companies and dealing with the issue of income inequality can help to reach this target.

The second target suggests the achievement of a higher level of economic productivity by increasing diversity, technology and innovations, and paying more attention to high value-added and labour-intensive sectors. This target is measured by the annual growth rate of real GDP per employed person and is similar to the first target. As previously mentioned, one of the indicators that can affect this target is expenditures on R&D (Lunacek and Smecka, 2018). Moreover, it can also be affected by education, as it has a positive and significant effect (Awad, 2020). This target can also be affected by foreign direct investments (FDI) and trade openness (TO), as it has a positive impact (Saleem et al., 2020).

The third target states that the promotion of development-oriented policies that mostly support small companies is a required field for the development of decent work and economic growth. This target is mea-

sured by the proportion of informal employment in non-agriculture employment. The economic crisis is one of the indicators that can affect this target (Kivalov and Kibik, 2019). Moreover, globalisation and openness to trade affect this target negatively, as it becomes harder for small companies to grow (Khmeleva and Egorova, 2016).

The fourth target indicates that countries must improve progressively until 2030 by making consumption and production more efficient and by separating economic growth and environmental degradation. This target is measured by two indicators: material footprint and domestic material consumption. Ali et al. (2020) state that “gross domestic product has a U-shape and significant relationship with environmental degradation”, and it shows that there is a significant relationship between economic growth and economic degradation. According to Rahman (2020), “globalisation has a significant negative impact on the CO<sub>2</sub> emissions” that increase environmental degradation. The increase in income also has a positive effect on this target (Ongan et al., 2020). Income inequality can also have a significant negative impact as “the richest 85 people have as much as the bottom three-and-a-half billion” (Peterson, 2018). Most incomes affect this target.

The fifth target emphasises the issue of unemployment, stating that by 2030 full and productive employment and decent work will be available to all and that salaries across different groups of society will be equal. This target is measured by average hourly earnings and the unemployment rate. One of the indicators that can affect this target is improvements in technology (Zhou, 2020). Also, there are some indicators or global disasters that cannot be predicted; for example, COVID-19, which greatly increased the unemployment rate (Kawohl and Nordt, 2020). Moreover, an economic crisis increases the unemployment rate (Zemtsov, 2020). These are only some of the indicators that can have a positive or negative impact on this target.

The sixth target is also related to employment, but it concentrates on young people. This target is measured by the proportion of youth not in education, employment or training. All indicators mentioned in the context of the fifth target can also affect this one. According to Hoskins et al. (2020), “volunteering has a positive relationship to paid employment”, but it must be a career-related experience. Moreover, some policy programmes can have a significant positive effect on youth employment (Park et al., 2020). Castillo et al. (2020) state that education is one of the most important indicators for this target.

The seventh target indicates the reduction of forced labour, slavery, human trafficking, and child labour. It is measured by the proportion and number of children aged from five to 17 years engaged in child labour. One of the indicators that can help to reduce forced labour, slavery, human trafficking and child labour are policy changes (Hodkinson et al., 2020). According to Uduji et al. (2019), economic growth can help to reach this goal.

The eighth target reflects the problem of unequal labour rights and the working environment and is measured by the frequency rates of fatal and non-fatal occupational injuries and the improvement in national compliance with labour rights based on International Labour Organisation (ILO) textual sources and national legislation. According to Mustchin and Martínez Lucio (2020), governments have immense power to affect this target by changing the law and relevant legal acts. Another indicator that can affect this target is migration (Bertram, 2019).

The ninth target is sustainable tourism, which creates jobs and promotes local culture and products. This target is measured by direct tourism GDP as a proportion of total GDP and the growth rate thereof, as well as by the number of jobs in tourism industries as a proportion of total jobs and the growth rate of jobs. According to Jiménez-Medina et

al. (2020), the economic crisis can have a significant effect on tourism overall. The health crisis arising from the COVID-19 pandemic is another issue that affects this target (Romagosa, 2020).

The 10th target promotes banking, insurance and financial services for all and is measured by the number of commercial bank branches and automated teller machines (ATMs) and the proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile money service provider. One of the indicators that affect this target is a banking crisis, which can lead to an economic crisis (Shen et al., 2020). Moreover, technological changes have a significant impact on the banking, insurance and financial sectors (Mallick et al., 2020). Also, policy changes can affect this target as much as other targets (Dinçer et al., 2020).

There are two additional targets for this goal. The first such target states that support for trade in developing countries must be improved and is indicated by aid for trade commitments and disbursements. The second additional target pertains to developing and operationalising a global strategy for youth employment and is measured by total government spending on social protection and employment programmes as a proportion

of the national budget and GDP. These two additional targets concentrate on trade and youth, two things that will help to achieve standards relating to decent work and economic growth.

## 2. Methodology

In order to create a priority line, the multi-criteria decision-making methods TOPSIS and COPRAS were used. Recently, MCDM methods have been increasingly used to solve both theoretical and practical research problems. Such methods are widely used in various fields such as economics (Mousavi and Lin, 2020), human resources (Ozcan et al., 2020), medicine (Das and Chakraborty, 2020), and geology (Ghobadi et al., 2021), among others. These methods are widely applied because of their versatility, as they can be used to quantify any complex phenomenon expressed in terms of numerous indicators. They also have the advantage of combining both maximising and minimising indicators expressed in various dimensions into one summative indicator. This coupling is possible due to normalisation when all indicators are converted to dimensionless, comparable ones (Ginevicius and Podvezko, 2008). The stages of multi-criteria decision-making are presented in Table 1.

**Table 1.** Stages of multi-criteria decision-making of BRICS countries

Steps	Description
1	Establishment of evaluation indicators
2	Determination of the significance of evaluation indicators and the consistency of expert opinions
3	Selection of multi-criteria decision-making analysis methods
4	Normalisation of data and aggregation of evaluation indicators into an aggregate
5	Assessment of the compatibility of individual methods
6	Creation of a priority line of BRICS countries

**Source:** own elaboration based on: Das and Chakraborty, 2020; Ghobadi et al., 2021; Ginevicius and Podvezko, 2008; Mousavi and Lin, 2020; Ozcan et al., 2020

MCDM methods are based on the matrix  $R = \|r_{ij}\|$  of the indicators characterising the compared objects and the values of the significance (weights) of the indicators (Ginevicius and Podvezko, 2008).

In the first step of MCDM analysis, indicators affecting the object or phenomenon under study are identified. They are usually determined based on an analysis of the literature as well as an expert survey. The evaluation criteria (indicators) for the assessment of the BRICS countries are set out in the first part of the paper, based on an analysis of the scientific literature.

In the second step, the significance or weights of the evaluation indicators are determined by using an expert evaluation procedure. Firstly, it is essential to calculate the appropriate number of experts in order to obtain reliable results. The number of experts is based on a theory developed by Libby and Blashfield (1978), which assumes that when starting with three experts, the reliability of the results exceeds 75 per cent. After, the analytic hierarchy process (AHP) is used in order to assign weights to the determined

indicators. The AHP method is based “on prioritising a set of alternatives according to their contribution to a set of indicators and sub-indicators whose final contribution to the model must add up to one” (Rodríguez Sousa et al., 2020). A survey questionnaire has been developed to help assess the opinion of experts. According to Arabameri et al. (2019), the weights of the indicators are normalised values, which means that the sum of the weights must be equal to one.

A nine-point scale was offered to the experts to complete the individual matrices (see Table 2). The experts have to evaluate criteria using a five-point system, and if it is impossible to decide, an expert can also use the intermediate values 2, 4, 6, or 8. When the weight of the assessed criteria is the same, the expert assessment is 1. When the weights of the criteria under consideration are completely different, the expert assessment is 9. If the factor is less important than the one being compared, the estimates’ inverse values are used (Saaty, 2008). A detailed explanation of the interpretation of pairwise comparison values is provided in Table 2.

**Table 2.** Pairwise comparison values

Intensity of Value	Interpretation
1	Two activities contribute equally to the objective
3	Experience and judgement slightly favour one activity over another
5	Experience and judgement strongly favour one activity over another
7	An activity is strongly favoured over another
9	The evidence for one activity over another is of the highest possible order of affirmation
2, 4, 6, 8	Sometimes one needs to interpolate a compromise judgement numerically because there is no right word to describe it

Source: Saaty, 2008

It is known that the maximum true value of the inverse symmetric  $m$  row matrix is  $\lambda_{max} \geq m$ . Ideally, when the matrix is harmonised and the column elements are propor-

tional,  $\lambda_{max} \geq m$  and the harmonisation of the matrix is described by the difference  $\lambda_{max} - m$  and the  $P$  row of the matrix. The consistency index (CI) is calculated as follows:

$$CI = \frac{\lambda_{max} - m}{m - 1} \quad (1)$$

The lower the value of  $CI$ , the better the matrix consistency is. Ideally,  $CI = 0$ .

The ratio of the consistency index  $CI$  and random consistency index  $RI$  that can be

found in the table is called consistency ratio  $CR$ , which shows the degree of matrix consistency:

$$CR = \frac{CI}{RI} \quad (2)$$

The matrix is harmonised when the  $CR$  value is less or equal to 0.2.

In the third step, MCDM methods are selected. MCDM analysis is a decision-making analysis that evaluates multiple criteria as part of the decision-making process. By structuring complex problems and analysing multiple sets of criteria, more justifiable decisions can be made. It has been observed that different results are obtained when solving the same task while using different MCDM analysis methods. This allows one to state that each of them has its advantages and disadvantages, internal logic, and examines or highlights a different aspect of the phenomenon or situation that is evaluated. Therefore, the ranking results of the examined options differ to varying degrees (Zavadskas and Turskis, 2011). To reduce the influence of the individual MCDM method on the calculated results, the same phenomenon was evaluated in several ways, and then the average of these evaluations was determined. In this case, the disadvantages of one MCDM method are considered to be offset by the advantages of other methods (Ginevicius and Podvezko, 2008). Two MCDA methods were selected to rank BRICS countries in the development of SDG8, namely TOPSIS and COPRAS.

In the fourth step, the data are normalised, and the evaluation methods are applied. Furthermore, the nature of the identified criteria is determined at this stage, which means

that they are maximising or minimising indicators.

The technique for order of preference by similarity to ideal solution (TOPSIS) method will be applied. According to Shih et al. (2007), "TOPSIS (technique for order preference by similarity to ideal solution) is a useful technique in dealing with multi-attribute or multi-criteria decision-making (MADM/MCDM) problems in the real world." Yalcin et al. (2020) explain that this is a method of prioritising options, where the optimal alternative has the shortest distance from the ideal solution and the largest distance from the ideal to the worst solution.

Suppose the values of each indicator are constantly increasing or decreasing. One may then determine the ideal best solution that consists of the best indicator values and the ideal worst solution that consists of the worst indicator values.

Vector normalisation is applied to the values of the indicators. This step transforms various criteria dimensions into non-dimensional criteria, which allow for comparisons across criteria. Because various criteria are usually measured in various units, the scores in the evaluation matrix have to be transformed to a normalised scale. The normalisation of values can be carried out by one of the several known standardised formulas. The normalised value  $n_{ij}$  is calculated as follows:

$$n_{ij} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^m x_{ij}^2}} \quad (3)$$

The ideal positive ( $V^+$ ) solution is the solution that maximises the benefit criteria and minimises the cost criteria, whereas the negative ideal ( $V^-$ ) solution maximises the cost criteria and minimises the benefit criteria. It is calculated as follows:

$$V^+ = (v_1^+, v_2^+, \dots, v_n^+) = \left( \left( \max_i v_{ij} \mid j \in I \right), \left( \min_i v_{ij} \mid j \in J \right) \right) \quad (4)$$

$$V^- = (v_1^-, v_2^-, \dots, v_n^-) = \left( \left( \min_i v_{ij} \mid j \in I \right), \left( \max_i v_{ij} \mid j \in J \right) \right) \quad (5)$$

where:

$I$  is associated with benefit criteria and  $J$  with the cost criteria,  $i = 1, \dots, m; j = 1, \dots, n$ .

Then the Euclidean distance from the ideal best ( $V^+$ ) solution and the anti-ideal best ( $V^-$ ) solution is calculated. The separation measures of each alternative from the ideal best ( $V^+$ ) solution and the anti-ideal ( $V^-$ ) solution, respectively, are as follows:

$$S_i^+ = \sqrt{\sum_{j=1}^n (v_{ij} - v_i^+)^2}, \quad i = 1, 2, \dots, m, \quad (6)$$

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_i^-)^2}, \quad i = 1, 2, \dots, m, \quad (7)$$

The relative closeness to the positive ideal solution is calculated as follows:

$$P_i = \frac{S_i^-}{S_i^- + S_i^+} \quad (8)$$

where:

$$0 \leq P_i \leq 1, \quad i = 1, 2, \dots, m.$$

Another MCDA method that is used is the complex proportional assessment (COPRAS) method, in which the relative significance of objects (alternatives) is determined based on the positive and negative properties that characterise them and acquires a mathematical expression (Ginevicius and Podvezko, 2008):

$$Q_j = S_{+j} + \frac{S_{-min} \times \sum_{j=1}^n S_{-j}}{S_{-j} \times \sum_{j=1}^n \frac{S_{-min}}{S_{-j}}} \quad (9)$$

where:

$S_{+j}$  and  $S_{-j}$  are the sum of the maximised and minimised normalised indicators, respectively, calculated according to the following formulas:

$$S_{+j} = \sum_{i=1}^m d_{+ij} \quad (10)$$

$$S_{-j} = \sum_{i=1}^m d_{-ij} \quad (11)$$

where:

$m$  – the number of criteria;

$d_{+ij}$  and  $d_{-ij}$  – normalised values of the maximising and minimising criteria, respectively.

The formula used to calculate them is:

$$d_{ij} = \frac{r_{ij}w_i}{\sum_{j=1}^n r_{ij}} \quad (12)$$

The fifth step assesses the compatibility of each method. The degree of consistency of evaluations of each method in the scientific literature is determined based on the correlation coefficient (Ginevicius and Podvezko, 2008). MCDM analysis includes those methods whose results correlate with each other. As only two methods will be used in the research, both will be included if the correlation level is significant.

### 3. Research results and Discussion

The business, trade and economic cooperation of Brazil, Russia, India, China and South Africa led to the association of BRICS countries, which is developing rapidly. In 2001, the term BRIC was first used in a Goldman Sachs paper in which it was projected that Brazil, Russia, India, and China would be among the largest economies in the world in the next 50 years. A formal gathering of the countries took place in 2006, and in 2009, South Africa joined the group. According to Kilic and Cankaya (2020), “BRICS represent 43% of world population, 30% of world GDP, and 17% of world trade”. This shows that it is important to analyse some aspects of these countries.

In the first part of the research, the evaluation criteria or indicators are established. Data from 1991 to 2019 and indicators such as value added per worker in agriculture, forestry, and fishing, employment in agriculture, employment in industry, employment in services, GDP growth, GDP per capita

growth, GDP per person employed, value added per worker in the industry (including construction), value added per worker in services, youth unemployment (ages 15-24), total unemployment, and the total income of wage earners and salaried workers' were used to assess SD8 in BRICS countries (Eurostat, 2020). Some missing data from 2019 were forecasted according to the moving average method to obtain more accurate research results.

Secondly, the significance of evaluation indicators and the consistency of expert opinions must be determined. AHP has been chosen for the research of SDG8 assessment in BRICS countries as it is one of the most popular and commonly used methods of pairwise comparison of indicators. The calculated weights of the criteria may be seen In Table 3. The number of experts amounted to three. According to Chernov and Vovk (2010), the calculated weights should depend on “the effect instead of the nominal number of experts”, which means that having fewer experts is acceptable if they are sufficiently qualified in the field of research. Shapira and Simcha (2009) agree that it is sufficient to have a small group of experts if they are qualified in a research field. All three experts had higher university degrees in the economic field, as well as doctoral degrees and more than eight years of experience in the sustainable economic field. This could be taken to confirm that said experts were highly educated and eminently qualified people.

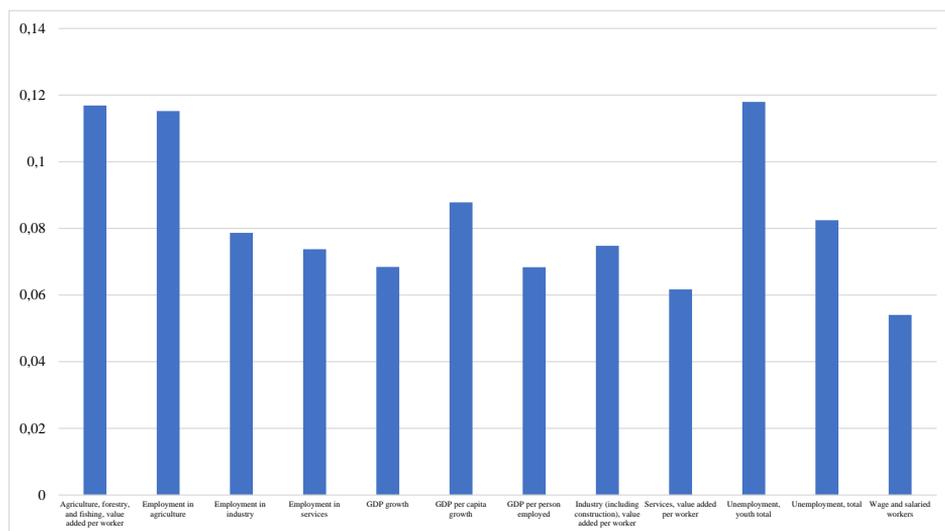
**Table 3.** Results of AHP experts with consistent opinions

Criteria	Expert	1	2	3	Weight
Agriculture, forestry, and fishing, value added per worker		0.021662	0.115220	0.213764	<b>0.116882</b>
Employment in agriculture		0.020691	0.077951	0.247005	<b>0.115216</b>
Employment in industry		0.044369	0.077951	0.113661	<b>0.07866</b>
Employment in services		0.072602	0.077951	0.070681	<b>0.073745</b>
GDP growth		0.163758	0.013728	0.027833	<b>0.06844</b>
GDP per capita growth		0.227345	0.013728	0.022301	<b>0.087791</b>
GDP per person employed		0.126035	0.056823	0.022208	<b>0.068356</b>
Industry (including construction), value added per worker		0.080954	0.075764	0.067591	<b>0.07477</b>
Services, value added per worker		0.060635	0.075764	0.048653	<b>0.061684</b>
Unemployment, youth total		0.030712	0.203881	0.119266	<b>0.117953</b>
Unemployment, total		0.049891	0.166060	0.031449	<b>0.082467</b>
Wage and salaried workers		0.101347	0.045177	0.015587	<b>0.054037</b>
<b>CR (consistency ratio)</b>		0.12531	0.125198	0.098621	<b>0.116376</b>

Source: own elaboration

Figure 1 shows that the most critical indicators are youth unemployment, value added per worker in agriculture, forestry, and fishing and employment in agriculture, and the

least essential indicators are wage and salaried workers, value added per worker in services and GDP per person employed.

**Figure 1.** Importance of criteria

Source: own elaboration

Thirdly, MCDM methods are selected. As there is no clear determination of which methods are the best, two methods widely used in the scientific literature have been chosen, namely TOPSIS and COPRAS.

When applying multi-criteria evaluation methods, it is necessary to assess the nature of the analysed indicators; Table 4 provides a summary of the nature of the analysed indicators.

**Table 4.** Description of the nature of the SDG8 assessment indicators

Criteria	Nature	Description
Agriculture, forestry, and fishing, value added per worker (constant 2010 US\$)		
Employment in agriculture (% of total employment)		
Employment in industry (% of total employment)		
Employment in services (% of total employment)		
GDP growth (annual %)	Maximising criteria	The assessment of SDG8 is better when these indicators are higher.
GDP per capita growth (annual %)		
GDP per person employed (constant 2011 PPP \$)		
Industry (including construction), value added per worker (constant 2010 US\$)		
Services, value added per worker (constant 2010 US\$)		
Wage and salaried workers, total (% of total employment)		
Unemployment, youth total (% of total labour force aged 15-24)	Minimising criteria	The assessment of SDG8 is better when these indicators are lower.
Unemployment, total (% of the total labour force)		

Source: own elaboration

Fourth, MCDA methods are applied to the analysed objects. The MCDA methods were carried out separately from 1991 to 2019.

After the calculations, the BRICS countries are ranked from highest to lowest, thus forming a hierarchy of BRICS countries (Table 5).

**Table 5.** Ranking of BRICS countries based on TOPSIS

	Country	Score
1	China	0.626
2	India	0.582
3	Russian Federation	0.541
4	Brazil	0.536
5	South Africa	0.395

Source: elaboration

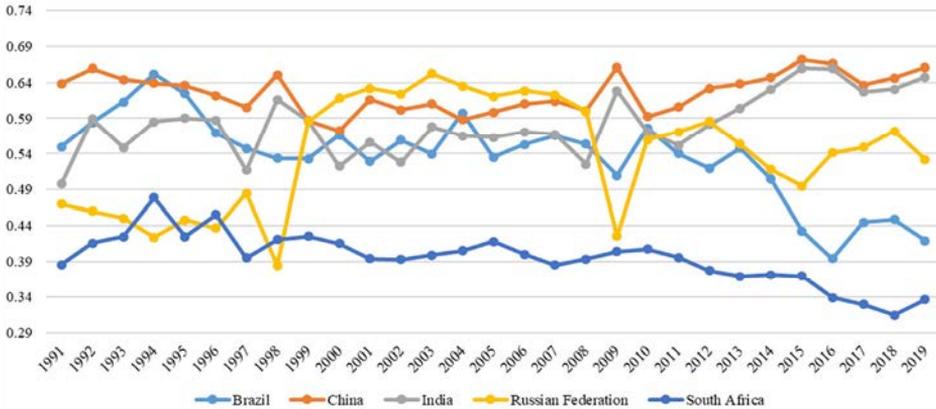
According to the TOPSIS method, China developed the most from 1991 to 2019 in

terms of improving its economic growth and a decent work environment, while South

Africa showed the lowest level of progress (Table 5). In Figure 2, we can see that the progress of China was relatively steady and increasing. However, South Africa's devel-

opment is steadily declining. Moreover, we can see that economic growth and the development of a decent work environment in the Russian Federation fluctuates (Figure 2).

**Figure 2.** The ranking of BRICS countries in 1991-2019 based on TOPSIS



Source: own elaboration

According to the COPRAS method, China developed the most from 1991 to 2019 in terms of improving its economic growth and creating a decent work environment, and Brazil showed the lowest level of progress (Table 6). In Figure 3, we can see quite a similar fluctuation to that in the TOPSIS calcu-

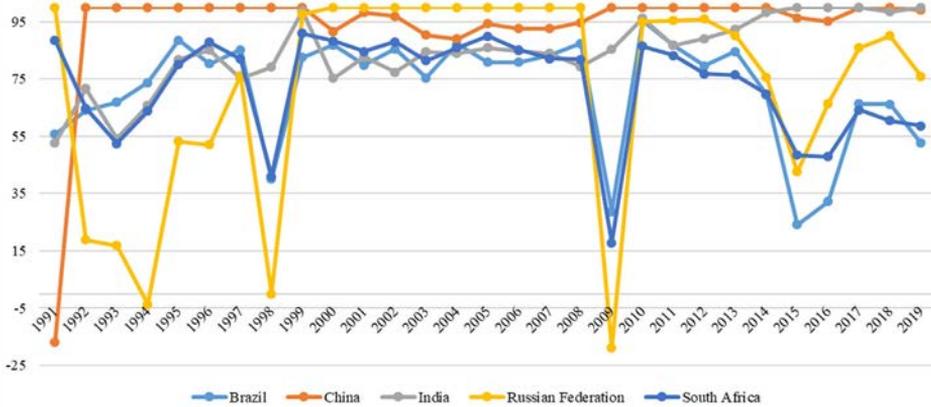
lations, revealing that the progress of China was relatively steady. Moreover, we can see that progress towards economic growth and the creation of a decent work environment of the Russian Federation, South Africa and Brazil fluctuates (Figure 3).

**Table 6.** Ranking of BRICS countries based on COPRAS

	Country	Score
1	China	93.56487
2	India	84.40133
3	South Africa	72.71232
4	Russian Federation	72.57741
5	Brazil	71.38347

Source: own elaboration

**Figure 3.** The ranking of BRICS countries in 1991-2019 based on COPRAS



Source: own elaboration

As the results given by the TOPSIS and COPRAS methods differ slightly, the fifth step was to assess the compatibility of both methods. Correlation analysis was therefore used. There is a strong positive correlation

between methods as the correlation coefficient is 0.71 (Table 7). It means that the results of both methods can be combined into a single assessment to create a hierarchy of BRICS countries.

**Table 7.** Correlation analysis of TOPSIS and COPRAS

	TOPSIS	COPRAS
TOPSIS	1	
COPRAS	0.713682	1

Source: own elaboration

The sixth step is to create a hierarchy of BRICS countries. According to the results of the selected MCDM methods, the BRICS countries are ranked according to their

scores, with the lowest scores being given to the best-performing countries (see Table 8).

**Table 8.** Ranking of BRICS countries based on MCDM methods

	TOPSIS	Score	COPRAS	Score	Total
Brazil	0.535983818	4	71.3834736	4	8
China	0.625912129	1	93.56486836	1	2
India	0.582326826	2	84.40132586	2	4
Russian Federation	0.540771824	3	72.57741245	3	6
South Africa	0.394897602	5	72.7123219	5	10

Source: own elaboration

After determining the sum of the scores of each BRICS country according to both MCDM methods, the BRICS countries are

further ranked according to the scores from the lowest to the highest score, thus creating a hierarchy of BRICS countries (Table 9).

**Table 9.** Hierarchy of BRICS countries

Rank	Country
1	China
2	India
3	Russian Federation
4	Brazil
5	South Africa

Source: own elaboration

According to the calculations, China made the most significant progress in economic growth and the creation of a decent work environment during 1991-2019. “Guided by the vision of innovative, coordinated, green, open and shared development, China has worked vigorously to promote all-round economic, political, cultural, social and ecological progress through alignment of strategies, institutional guarantee, social mobilisation, resource input, risk management, international cooperation, and oversight and review” (Sustainable Development, 2017). Rapid export-oriented industrialisation is one of the key factors that has helped China to grow faster (Scherrer, 2020). Also, according to Scherrer (2020), “China has increased land and labour productivity”, which was another factor that has helped China to make better progress in SDG8. “As the largest user of primary materials globally, China has made a commitment to rebuild its economy to a circular model and to enhance the efficiency of material use” (Wang et al., 2020), and the country has done well to increase its circularity and waste recycling. Moreover, according to Jingyu et al. (2020), “the total amount of inclusive wealth has increased by 300.4% in the past 15 years” in China. China’s economy is growing, stable and healthy because of certain changes in macroeconomic regula-

tions. One can see that in 2019, China’s GDP reached 99.08 trillion RMB yuan, which represents a rise of 6.1%. These changes include “reform and innovation, promoted structural adjustments, guarded against risks and exercised targeted and well-timed regulation on the basis of range-based regulation” (Sustainable Development, 2017).

## Conclusions

Economic, environmental and social fields are the main fields of sustainability. In the present study, sustainable development is defined as the improvement of overall well-being and not harming future generations. To seek sustainable development, the United Nations created sustainable development goals (SDGs) as a tool to overcome the most significant challenges faced by the global population. All goals are set logically: “the goal outlines the change you want to affect, the target defines – practically – what this will be, and the indicator states how it will be measured” (Smith, 2020). This will help to improve the environment, the global economy and society as a whole. One of the most important goals for the economy is SDG8 – economic growth and a decent work environment. There are few indicators for each target of this goal; however, the most important are GDP and unemployment.

Moreover, many factors affect SDG8, but the most significant ones that have a negative or positive impact are policy changes, technological improvement, globalisation, and economic crises.

In order to prioritise the BRICS countries, MCDM methods were used, which made it easier to assess the progress of the BRICS countries towards SDG8, as all assessment criteria are combined into one aggregate indicator. Other advantages of the MCDM methods used are rational and comprehensible logic, and the concept is based on a simple mathematical formula. Two methods were used – TOPSIS and COPRAS – in order to obtain better results. A combination of both methods provides more accurate results.

The BRICS countries can be described as the business, trade and economic cooperation of Brazil, Russia, India, China and South Africa, which are developing rapidly. BRICS countries represent 43% of the world's population, 30% of world GDP, and 17% of world trade. Moreover, it is projected that these countries will become the strongest countries in the world within 50 years. According to our calculations, China made the most significant progress in economic growth and developing a decent work environment during 1991-2019. The results could assist the BRICS countries in developing a strategy for achieving sustainable development goals by 2030, as knowing where the countries are currently positioned could help to determine the steps for reaching sustainable development benchmarks.

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**Viktorija Skvarciany** holds a PhD in Economics and works as an Associate Professor at the Department of Economics Engineering and Vice-Dean for Research and Innovation at the Faculty of Business Management at VILNIUS TECH. Her research interests include decision-making processes, the digital economy, and sustainable development. ORCID no.: 0000-0001-8022-4124

**Silvija Vidžiūnaitė** holds a master's degree in Economics and works in the banking sector. Her research interests include decision-making processes, behavioural economics, and continuous improvement processes. ORCID no.: 0000-0002-2211-117X