

THE STUDY OF EVALUATION BRICS-T COUNTRIES BASED ON THE GLOBAL COMPETITIVENESS INDEX

Instructor Erkan BİL

Çanakkale Onsekiz Mart University, Gökçeada Vocational School,
Çanakkale/TURKEY, E-mail: erkan_bil@yahoo.com

Instructor Tanju GÜDÜK

Çanakkale Onsekiz Mart University, Gökçeada Vocational School
Çanakkale/TURKEY, E-mail: guduktanju@gmail.com

Instructor Gülay KESKİN

Çanakkale Onsekiz Mart University, Gökçeada Vocational School
Çanakkale/TURKEY, E-mail: gulaykeskindr@gmail.com

ARTICLE INFO	ABSTRACT
<p>Article History: Received: 5 September 2018 Accepted: 22 October 2018</p>	<p>Through globalization, countries aim to have a competitive advantage about trading and increasing financial opportunities in the global market with international collaboration and economic integration. In recent years, the emerging and expanding national economies like Brazil, Russia, India, China and South Africa have become key players and taken investors' attention globally. In addition to these countries known as BRICS, Turkey is also another expanding national economy that attracts investors with strong economic growth in the last 20 years. Therefore, recently the idea of becoming one of the members of BRICS for Turkey has been considered.</p> <p>Nowadays, the index research studies which show the global competitiveness, rankings and detailed data profiles of the international markets are published by different authorities. One of the highly trusted authorities, World Economic Forum publishes Global Competitiveness Index every year.</p> <p>The purpose of this study is to indicate similarities and differences among these 6 countries (BRICS-T) and also define comparison to each other based on the data from Global Competitiveness Index (2017-2018). In the process of analyzing the data, multidimensional scale has been used. According to the data of Global Competitiveness Index (2017-2018), the similarities are more likely to be found between Russia and Turkey while India and China also project similar features together. The most different features have been observed between Brazil and China. The similarities are based on detailed data company profiles of global competitiveness. In conclusion, the result shows that Russia and Turkey are seen as one group while China and India generate also another group together. On the other hand, Brazil and South Africa stand alone in their own groups.</p>
<p>Keywords: Global Competitiveness Index, WEF, BRICS-T, Multidimensional Scale</p>	
<p>DOI: 10.15637/jlecon.265</p>	
<p>JEL Codes: D41, D53, O12, O16, F12</p>	

1. INTRODUCTION

Since the beginning of 2000s, economies which grow rapidly, attract a high portion of direct foreign investments and has a rapidly increasing power of affecting the global economy, have been started to be grouped in a different manner. Among these groupings, four countries have attracted the attention which created high growth opportunity as a result of cheap labor and accordingly a low production cost; attracted direct foreign capital investments, rapidly increase their foreign exchange reserves and national income; and are less affected from the economic crisis experienced (Narin and Kutluay, 2013: 31-32). Countries such as Brazil, Russia, India and China eluded from other countries with this economic performance and became a significant player of the global economic system. For that reason, these countries were named as BRIC in 2001 (Güney, 2017: 31). With an agreement reached with South Africa in the October of 2010 and its invitation to the third BRIC summit organized in 2011, the BRIC countries were renamed as BRICS (Harrison, 2014: 68).

According to the report published by Goldman Sachs (2003), the future of the world is in the hands of BRICS countries. According to the report, in 2050, China will become the biggest economy of the world, and India will become the third, Brazil the fourth and Russia will be the sixth biggest economy of the world. In other words, in 2050, BRICS countries will become very powerful countries that have a word to say in the global economic system. Also according to Goldman Sachs (2003) report, in 2050, one of the countries that will have a word to say in global economy similar to BRICS countries is Turkey. With the economic performance Turkey has demonstrated in the last twenty years, it has approached to the economic level of BRICS countries. For that reason, the idea that Turkey should also be included in BRICS in addition to such countries as South Korea, South Africa, Mexico and Indonesia, which are called the “emerging markets” due to their economic performances, has been pronounced (Güney, 2017: 31).

The expressions such as “they will prevail the global economy” and “markets face with a challenge in stepping that growth” have been frequently used for BRICS economies and the 11 emerging economies which include Turkey. Together with this, the change that occurred is not only the shift of the economic power from west to east. In a world where there is multipolar growth, a more balanced distribution of the global economic power is witnessed (Şerbetçi and Yardımcıoğlu, 2017: 109).

World Economic Forum describes competitiveness as “the set of institutions, policies and factors that determine the level of productivity of a country”. In order to monitor the competitiveness status of countries over this set, Global Competition Index has been calculated at certain intervals since 1979 by World Economic Forum and updated continuously. Global Competition Index was first developed in 2004 under the leadership of Sala-i Martin in Colombia University and as finalized in 2008 by Michael Porter (Türkmen and Ayañoğlu, 2017: 264).

2. BRICS-T COUNTRIES

The expression BRICS was first used in a report published in 2003 by Goldman Sachs, an international investment bank, referring to the first letters of Brazil, Russia, India, China and South Africa (Hüseyni, 2017: 82). These countries are considered as the most rapidly developing markets of the global economy. These countries bear many common characteristics such as wide surface area, high population, high economic growth, high number of consumers and opportunity to cooperate in many fields (Ağır and Yıldırım, 2015: 41).

What lies behind the growth of China are export and labour force, which is internal demand and services for the growth of India, agricultural product and commodity export for the

growth of Brazil, rapid increase in global markets of the prices of energy and natural resources that Russia has, and the raw material resources in the case of the growth of South Africa. The fact that these five countries are the ones that are leading both in their regions and in the world in various areas increases the importance of this group more (Kaya and Yalçınkaya, 2016: 92). In this regard, although BRICS countries are dependent upon different sectors, their economic structures mainly rely on the primary sectors and foreign investments (Ersungur et al., 2017: 396).

Despite being in geographies that are far away from each other, BRICS countries and Turkey are becoming closer to each other every day in the economic and political arena. Globalization and technological developments lead the countries that are far away from each other to engage in interaction with each other in economic, political and social terms. The economic condition of any country, crisis, increase and decrease of financial markets, the value of foreign exchange or domestic money increasing or decreasing, which seemingly relate solely to the economy of that specific country, could affect other countries which are geographically remote (Kılıç and Dilber, 2017: 333).

2.1. Brazil

Brazil, which is included in the BRICS Countries representing one fourth of the GDP, has the biggest surface area in South America and is the fifth biggest country of the world in terms of population, is a country with comparative superiority with its agricultural products (coffee, sugar, Portugal, cacao, tobacco) as a result of its abundant natural resources, livestock products (meat, poultry meat), tree products (paper, paper pulp), minerals and metal products (iron, steel and aluminum). (www.spk.gov.tr). Brazil, which is among the top 20 exporting countries, is considered among countries that have high potential such as Brazil, Russia, India and China. Together with this, it could not be said that Brazil reached to its current status in the global economy quite easily. Brazil, which has overcome two years of crisis and political uncertainty in its history, has come across various economic problems such as high inflation and inequality of income, however, it has managed to overcome this period with the sound macroeconomic policies that have been adopted in 1990s. Today it is included among the biggest economies of the world (Ağır and Yıldırım, 2015: 42).

2.2. Russia

Russia, which is included in BRICS countries that represent one fourth of the global GDP, is the widest country of the world with a surface area of 17 million km², and the 8th most crowded country of the world with a population of 145 million people, has tried to adopt the free market economy rapidly with its comprehensive reform programs implemented in the field of privatization in particular despite being established in 1991 after the disintegration of the Soviet Union as it left the rooted tradition of central planning and met the economic and cultural structure of the western world (www.spk.gov.tr). Privatizations have taken place in Russian industry and agriculture in the field of defense and with important exceptions in privatizations in energy sector (www.wikiwand.com).

Russia has been continuing to strengthen its economy in recent years with the increase of its influence in foreign policy, trade agreements it has concluded and the contribution of the international unions of which it is a member. Russia, which is among the few countries of the world in terms of oil and natural gas export, performs high amount of arms sales, which are led by missile systems that reach to quite high numbers in total. The country, which is one of the leading economies of the world, is the second oil producers of the world after Saudi Arabia. Russia also possesses half of the coal reserves of the world. While trying to strengthen the operation of its market economy on one hand, Russia follows protective policies on the other hand (Ağır and Yıldırım, 2015: 42).

2.3. India

Indian economy has undertaken an outward economic policy after 1991, and has become an important player in the global markets by following liberal investment and economic policy. In particular it has decreased its maximum legal tariff rates from 400% to 50%, and abolished the amount restrictions in 714 import products. Towards increasing the export, it has implemented export incentives (Ersungur et al., 2017: 398). In addition to the economic reforms of India, there are innovations it has accomplished in the field of financial and technological services particularly in the field of software as it made use of its English speaking and well-educated human resources. Accomplishing to create profitable niche areas in IT sector, India progresses on the way of becoming an important global supplier of software services (eaf.ku.edu.tr). Despite having a great economic potential, India also bears certain problems arising from hosting a giant population. On the other hand, a significant part of Indian population still fail to access basic services such as water and electricity. Besides, parallel to rapid economic growth, its foreign debt has been increasing and there is a boost in the foreign debt and current transactions gap (Ağır and Yıldırım, 2015: 43).

2.4. China

Since 1949 when the People's Republic of China was established, the sector structure in China has undergone a total of three stages. As the first stage, in the period between the beginning of 1950s and end of 70s, the characteristics of semi-colonial economy have been rapidly cleaned in China, and the first foundations of industrialization have been constructed. In the second stage, from 1979 to early 1990, reforms and foreign expansion policies were implemented in China, by means of which the sectoral structure was continuously adjusted and the industrialization of China entered its intermediate period. As the third stage, following the establishment and development of socialist market economy in China in early 1990, it is expected to complete the industrialization by 2020 and to transit to information society (www.ekodialog.com).

In the recent period, although the labor intense sectors are not totally ignored in order to create employment for rapidly increasing labor force in China, the primary target of Chinese industry policy today is to establish and develop high value added, technology-intense industry. After all, they were the economic and administrative reforms that enabled China to be included among the biggest economies of the world (eaf.ku.edu.tr).

China is important for BRICS countries for the liberalization of the commercial activities and ensuring economic growth and development. These countries engage in different practices in foreign trade according to their economic growth models and try to increase their export volumes. The increase in the export of China among these countries relies on incentives provided to companies producing for foreign markets, and the policies of liberalization in import (Ersungur et al., 2017: 398).

2.5. South Africa

Considering the change that South Africa economy has undergone since 1970s, it could be seen that one of the most important problems faced by people was unemployment. In South Africa, which has the most powerful and disciplined trade union movements in Africa continent, trade unions play an efficient role in the labor market and employment policies in the country. There are representative unions in negotiations to be held on labor life with the employers in almost all sectors of the economy, including the public sector.

The minority of the population comprises a mass that prefer products of high quality and standard. The majority live their lives at the limits of poverty. This issue has been started to be handled at global scale in recent years. It is well known that the efforts towards mitigating

poverty in South Africa constitutes a model for the whole Africa continent and these developments are being closely observed by other African countries (www.deik.org.tr).

2.6. Turkey

Turkey has accomplished a significant development in the field of economy in the Republic period. In particular, following 1990, globalization has increased and countries have become more integrated, and thus the shift of positive and negative developments among the countries has become faster (www.ebso.org.tr). Turkey has a cultural structure and experiences to become the catalyst of cooperation and development on East, West, South and North axis. However, Turkey has been struggling with crisis since 1989. Turkey cannot use its potential, and deals with problems that it has created or that were induced by foreigners. Turkey could play a very important role in the creation of new world order. The active role to be played by Turkey in the creation of new world order is not only an opportunity but also a responsibility. While creating visions, targets and strategies towards 2023, Turkey has been struggling for using its own power and potential and be a candidate for one of the architects of the new world order.

BRICS countries which constitute 42 percent of global population and 23 percent of the global economy, are the ones that have a wide market and a giant potential (Global Competitiveness Index Report, 2017-2018: 15).

Table 1. Global Competitive Index Ranking of BRICS-T Countries for Five Years Under Research Scope

<u>YEAR</u>	2013- 2014	2014-2015	2015-2016	2016-2017	2017-2018
<i>COUNTRIES</i>					
<i>Brazil</i>	56	57	75	81	80
<i>Russia</i>	64	53	45	43	38
<i>India</i>	60	71	55	39	40
<i>China</i>	29	28	28	28	27
<i>South Africa</i>	53	56	49	47	61
<i>Turkey</i>	44	45	51	55	53
<i>Country Number (Index)</i>	145	142	137	138	137

Source: Turkish Statistics Institution (TUIK)

http://www.tuik.gov.tr/menu/ist_endeks_tem.jsp?metod=istendeks&d=5442-p=1, Date Accessed 19.07.2018.

As it could be seen from Table 1, China is the country which is located at higher ranks in the index compared to other countries constituting the sample of the research in the last five years, with a higher competitive power. While Brazil and Turkey could not protect their existing positions in the index between 2013 – 2017, they have started to rise according to the data of the index that has been published recently (2017-2018). Russia caught a great acceleration, and increased to 38th between 2017-2018 while it was 64th between 2013 – 2014. Thus, it has approached more to China, which is 27th. If we ignore the fall incurred by India between 2014 – 2015, it has increased to 40th by jumping twenty steps when it was 60th in 2014. Despite its small scaled periodic increase, South Africa could not catch a stability and declined to 61st between 2017 – 2018. Positions of BRICS-T countries between 2017-2018 in terms of dimensions / sub-dimensions in the index are handled in detail in Table 2.

Table 2 – Scores and Ranks of BRICS-T Countries According to Global Competition Index Dimensions (2017-2018)

INDEX DIMENSIONS	Sub Dimensions	SCORES AND RANKS OF COUNTRIES BY DIMENSIONS											
		Brazil		Russia		India		China		South Africa		Turkey	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
Basic Requirements	1.Institutions	3.4	109	3.7	83	4.4	39	4.4	41	3.8	76	3.8	71
	2.Infrastructure	4.1	73	4.9	35	4.2	66	4.7	46	4.3	61	4.5	53
	3.Macroeconomic Environment	3.4	124	5	53	4.5	80	6	17	4.5	82	5.1	50
	4.Healt and Primary Education	5.4	96	6	54	5.5	91	6.2	40	4.5	121	5.6	84
	5.Higher Education and Training	4.2	79	5.1	32	4.3	75	4.8	47	4.1	85	4.8	48
Efficiency Enhancers	6.Goods Market Efficiency	3.8	122	4.2	80	4.5	56	4.5	46	4.5	54	4.5	53
	7.Labor Market Efficiency	3.7	114	4.3	60	4.1	75	4.5	38	4.5	93	3.4	127
	8.Financial Market Development	3.7	92	3.4	107	4.4	42	4.2	48	4.4	44	3.8	80
	9. Technological Readliness	4.6	55	4.5	57	3.1	107	4.2	73	4.6	54	4.4	62
	10.Market Size	5.7	10	5.9	6	6.4	3	7	1	4.9	30	5.5	14
Innovation & Sophistication Factors	11.Business Sophistication	4.1	56	4	71	4.5	39	4.5	33	4.5	37	4	67
	12.Innovation	3.2	85	3.5	49	4.1	29	4.1	28	3.8	39	3.3	69
Overall Index Score*		4.14		4.64		4.59		5		4.32		4.42	
2017-2018 Overall Index Rank (137 Countries)		80		38		40		27		61		53	

* Index scores are evaluated with 7 scales (1=lowest value, 7=highest value).

Source: World Economic Forum (WEF),

<https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018>, Date Accessed: 19.07.2018.

3. GLOBAL COMPETITION INDEX

Competitiveness could be defined as a series of institutions, policies and factors that are used for determining the productivity level of a country. Global Competition Index reflects the elements that determine competitiveness and efficiency by demonstrating different weighted averages. The objective of Global Competition Index is to demonstrate the factors that determine the level of efficiency of the countries, reveal the strengths and weaknesses of that country and show a path for the policy makers (www.tuik.gov.tr)

Measuring of the competitive power is a highly difficult and disputed issue. The hardness of the issue arises from the hardness of measuring certain qualitative factors that determine the competitive power, and its disputed nature arises from the fact that the evaluations are not devoid of being subjective. Different institutions may produce certain indexes according to different definitions of the competitive power (Adıgüzel, 2013: 2-3).

There are numerous institutions that conduct researches on determining the level of competitiveness. Each institution has focused on different parameters that determine the

competitiveness level of a country. Together with this, the common objectives of these institutions is to determine the quality of the socio-economic environment which the countries present to their citizens and improve these environments, and present a guide toward taking measures for improving the wealth of people (Gökmenoğlu et al, 2012: 26).

Today, index studies have been carried out by various institutions in order to identify the competitive powers of economic regions at international scale, and to produce an inter-regional ranking. World Economic Forum (WEF) publishes a Global Competitiveness Index (GCI) every year at the level of countries (Alkın et al., 2007: 222).

WEF has been publishing the Global Competitiveness Report in which the countries are ranked by their competitive powers, since 1979 (Ovalı, 2014: 19). The purpose is to demonstrate the factors that determine the efficiency level of the countries, reveal the strengths and weaknesses of that country and to guide the policy makers in their plans for sustainability and development (Becerem and Kumcular, 2016: 66).

The report evaluates the countries in terms of providing high wealth levels to their existing citizens and elaborates on how a country could use its existing resources in an efficient manner. For that reason, the Global Competition Index measures the institutions, measures and sustainable up to date and middle term economic wealth levels (www.wikiyours.com).

WEF, divides countries into three categories according to levels of development, namely economies with focus on production factors, economies focused on efficiency and economies focused on innovation. Depending on this, the index comprises 12 components collected under three sub-index headings (www.tuik.gov.tr). The first basic factor is the “Fundamental Requirements”, and is created by bringing together the data related to Infrastructure, Macroeconomic Environment and Health and Basic Education. The second is “Factors Improving Efficiency”, and calculated as the combination of Higher Education and Professional Education, Efficiency of Commodity Market, Efficiency of Labor Market, Development of Financial Market, Technologic Preparedness and Size of Market. The final factor is the “Innovation and Diversity Factors” that cover the Development Level of Labor Market and Innovation. (Ovalı, 2014: 20). Although all of these components are singly important for competitiveness, countries could reach to higher levels of competition if these are organized together (Türkmen and Aynaoglu, 2017: 265). Figure 1 shows the determining elements of global competition.

Figure 1. Determinants of Global Competition Index

Basic Requirements	Efficiency Increasing Factors	Innovation and Diversity Factors
1. Institutions 2. Infrastructure 3. Macroeconomic Framework 4. Health and Basic Education	1. Higher Education and Vocational Training. 2. Efficiency of the Commodity Market 3. Efficiency of the Labor Market 4. Development of the Financial Market 5. Technological Preparedness 6. Size of the Market	1. Development of Labor Market 2. Innovation

Source: The Global Competitiveness Report 2017–2018: 12, Date Accessed: 19.07.2018

What these 12 components used in the calculation of the index express and their importance could be summarized as follows:

1. Institutions: The institutional structure is the legal and managerial framework which the companies and the public are in relation with in order to create revenue and wealth in an economy. The existence of a well structure institutional environment has emphasized more the need felt in the crisis period that we are in, and reminded of the regulatory role of the state (www.tmb.org.tr).

2. Infrastructure: A comprehensive and efficiency infrastructure has a critical important for the efficient processing of the economy. It is vitally important that the economies also supply electricity without any interruption and scarcity to as to ensure that the workplaces and factories work without any hindrance (Global Competitiveness Index Report, 2017- 2018: 3).

3. Macroeconomic Environment: Macroeconomic environment conditions are important both in terms of ensuring that the economy grows sustainably and increasing the competitiveness of the country (Ovalı, 2014: 21).

4. Health and Basic Education: A healthy labor force is an important input in the competitiveness and productivity of a country. Health problems could impose costs on the business world. On the other hand, basic education increases the efficiency of the workers. It is necessary to avoid any restrictions on the transfer of resources to these two areas in particular. In the period of crisis experienced, it is observed that public administrations prefer budget restrictions in these areas (www.tmb.org.tr).

5. Higher Education and Vocational Education: Quality higher education and teaching are very important for the economies that want to increase production performance and quality. Today's globalizing world requires workers that rapidly adapt to the changing conditions and the increasing needs of the production system (Global Competitiveness Index Report, 2017 - 2018: 5).

6. Efficiency of Commodity Market: This component covers the characteristics of competition and demand conditions. Healthy processing of the commodity market is important in terms of ensuring a healthy competition and market efficiency in internal and external markets, and creating a structure that follows the demands of the market (Ovalı, 2014: 21).

7. Efficiency of Labor Market: The effectiveness and flexibility of the labor market is important in terms of shifting the workers to the areas where they are most efficient. In a successful labor market, factors such as the relationship between worker and employer being healthy, people being employed in areas that are suitable for their abilities, and ensuring equality of men and women in the work environment are important (Global Competitiveness Index Report, 2017 – 2018: 6).

8. Development of Financial Markets: Healthy operation of financial markets ensures that the resources are directed to the most efficient areas rather than areas that are determined with political concerns and the highest revenue expected could be obtained (Ovalı, 2014: 21).

9. Technological Preparedness: This criteria takes into account the extent to which an economy internalizes technology in order to improve productivity of all its industries. In particular, the information technologies are converted into general purpose technologies. For that reason, the existence of information technologies and accessibility of these technologies is an important element considered on the extent to which a country is ready for technology in its competitive power (www.tmb.org.tr).

10. Size of the Market: Big markets permit the companies to benefit from the advantages of the scale economy and effect productivity in a positive way (Ovalı, 2014: 21).

11. Development of Labor Market: Development of the business world relates to two interrelated concepts: (a) quality of all business networks of the country, (b) activities and

strategies of companies single by single. These factors are important in particular in highly advanced developed countries (Global Competitiveness Index Report, 2017-2018: 9).

12. Innovation: The last index focuses on innovation. Important acquirements could be achieved thanks to the improvement of institutions, construction of infrastructures, reduction of macroeconomic instability or improvement of the human capital, however, all these factors will eventually ensure a decreasing efficiency. In the long run, life quality could only be increased by means of technological innovation (Republic of Turkey, Ministry of Customs and Trade, 2017).

4. METHOD

In this research, Global Competition Index data in 2017 -2018 of 6 countries (BRICS-T) selected were considered to determine their positions related to one another under these indicators and demonstrate the similarities or differences that could exist between them. Multidimensional scaling analysis has been used in the analysis of the research data. The multidimensional scaling analysis used in the study is a multivariable statistical analysis method that enables showing the units in a space with k dimensions using n number of units or their distance values determined according to p variables between the observations ($k < p$). In multidimensional scaling analysis, the matrix of distances is taken as the matrix of differences. If the data is proportional or collected with distance scale, the distances values could be calculated in the form of Euclid Distance, Square Euclid Distance, Chebychef, CityBlock, Minkowski distances. Multidimensional scaling analysis relies on the principle of similarity of objects or units to one another.

In the research, first the data of 2017 -2018 Global Competition Index were entered by means of Excel and SPSS package programs. After the data is entered, the multidimensional scaling analysis was made suitable for application. Stress value was used in order to determine whether the number of dimensions under in the graphical arrangement obtained was suitable (İşler, 2017: 384). The stress value obtained under the scope of the research was found as, 06029. This value obtained expresses that the dimensions used are “good” for the analysis of the compliance level. The RSQ value, which was obtained as a result of the analysis and which is considered as the indicator of the extent to which the change in the data is explained, was calculated as 0,95616.

Table 3. Stimulus Coordinates

No	Countries	Dimension 1	Dimension 2
1	Brazil	1,6956	-,2224
2	Russia	,2284	1,3545
3	India	-1,1224	-,9129
4	China	-1,6137	,5437
5	South Africa	,2191	-1,2490
6	Turkey	,5930	,4861

In the first dimension, Brazil, Turkey, Russia and South Africa are the countries which have positively loaded values. India and China are the countries with negatively loaded values in this dimension. Brazil, which received the highest positive load in this dimension, should be considered as a different group from Russia, Turkey and South Africa, which received positive values. Similarly, India and China, which received negative value under the scope of this dimension, should be considered as a separate group. Another important issue is that countries which received negative value in the first dimension according to the result of the analysis are not important from the point of this dimension.

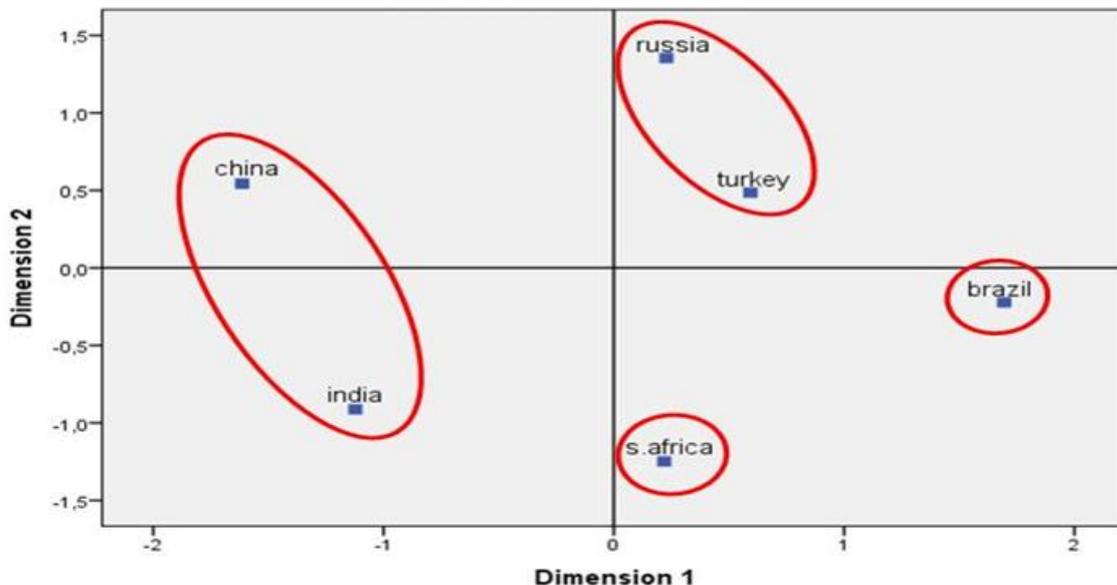
In the second dimension, it could be seen that Russia is the only country that takes positive value over 1. For that reason, Russia is the most important separator in the second dimension and should be considered as a separate group. Another important issue is that China and Turkey, which are the two countries that are highly remote from each other in the first dimension, are two close countries when considered from the point of view of the second dimension. While Russia, China and Turkey receive positive values in the second dimension, Brazil, India and South Africa received negative values and this does not have an importance from the point of this dimension.

Table 4: Matrix of Differences

	BRA	RUS	IND	CHI	SAFR	TUR
BRA	,000					
RUS	2,043	,000				
IND	2,751	2,732	,000			
CHI	3,439	1,811	1,390	,000		
SAFR	1,927	2,590	1,643	2,517	,000	
TUR	1,539	1,027	2,227	2,267	1,707	,000

When we examine table x which includes the matrix of differences, we could say that the countries which are close to 0, namely to the origin are the countries which are most similar to each other according to global competition index data. In line with this data, it could be seen that Russia and Turkey are the two countries that are most similar to each other. When other values are analyzed, it could be said that India and China are the countries that are similar to each other. When we look at the countries that are the most different, (3,439), Brazil and China could be seen. According to Euclid Distance Model given in Figure 2 it could be seen that countries constitute four different clusters. Countries which are close to each other according to the model are similar to each other in terms of global competitiveness profile. While Russia and Turkey constitute a group and China and India another group; Brazil and South Africa constitute two separate groups on their own.

Figure 2. Drived Stimulus Configuration Euclidean Distnce Model



4. CONCLUSION AND RECOMMENDATIONS

According to 2017 – 2018 Global Competition Index data, China (27th) has increased one step and became the highest of BRICS country economies. Russia has risen by five steps and Brazil one step to 38th and 80th respectively, and South Africa has fallen four steps to 61st.

Although incremental, China had a stable place in the general competitive power score. Since last year, China accomplished a progress in all columns other than macroeconomic environment and infrastructure. The biggest acquisitions arise from the high innovation and technological preparedness as direct foreign investments bring new technologies to China. The extraordinary progress accomplished in this area will accelerate the growth of developing digital industries and create the conditions required for the entrepreneurs.

India has acquired stability this year following the big breakthrough two years ago. The score reflects the last public investments in his area, and in particular the infrastructure, higher education, training and technological preparedness support the competitive power. In particular, the quality of the institutions has increased more in terms of the efficiency of public expenditures, however, the private sector thinks that fraud is still the most problematic factor for doing business in India.

When the results of the analysis are examined, it could be observed that China and India are in the same group. The reason for this is that while in China economy investments are at the front since they are based on low labor force and low resource costs, India has engaged in a process of growth based on export as it benefited from outsources with lower labor force costs. Besides, the rapid increase in the importance of China and India as being centers of innovation, infrastructure investments of China and India in the fields of technology, R&D and education, and other actions demonstrate that these two countries will rise up further in the coming couple of years.

According to 2017 – 2018 Global Competitiveness Index calculations, Turkey increased to 53rd rank among 137 countries. Turkey was 55th among 138 countries in the preceding year and 51st among 140 countries in the year preceding that. As in the case of the last two years, the best performance among the elements in Global Competitiveness Index, was demonstrated in the Market Size item, which preserved its place in 14th rank.

In the last two years, the heaviest fall was in Health, Elementary Education and Infrastructure indexes. The most significant increase compared to last years was in Macroeconomic Environment and Technologic Preparedness indexes, and there was an increase of 1-2 steps in other indexes.

According to the report, in the future Turkey should improve its institutional framework, overcome important rigidities that exist in the labor markets and strengthen the efficiency and stability of financial markets.

Russia was 6th in terms of market size, 35th in terms of infrastructure, 60th in terms of efficiency of labor force and 54th in terms of health and education. The lowest rank was recorded in the fields of competitive power of companies (71st), efficiency of commodity and service sector (80th), social institutions (83rd) and development of financial sector (107th). Russia has enacted new laws for increasing the minimum wage (2015) and protecting the provisional employment that mitigates the flexibility of the labor force market (2016). Together with this, the most important factor that increased the competitive power of Russia in recent years was the mobility of ruble – USD rate that increased from 30s to 60s.

According to the results of the analysis, Turkey and Russia are in the same group. The reason that the country is in the country groups that are similar to each other is that they have

similar values in the fields of institutions, macroeconomic environment, technology, development of internal market and innovation from among the sub-indexes of Global Competition Index Report.

Brazil has increased its level after falling for a couple of years. Following the two-year GSYIH growth and derogating macroeconomic conditions within the institutional borders of Brazil's constitution, it has improved for some amount this year and managed to control inflation and public gaps. Efficiency boosters walk together with improvements in the efficiency of commodity market this year. The biggest progress of Brazil has taken place in the field of innovation.

South Africa is among the most innovative countries of the region and is one of the most competitive countries of Africa, however, it has incurred a fall in the general ranking this year. South African economy has almost reached to a stopping point. Its GDP growth was only 1,0 in 2017, and 1.2 in 2018. Despite the continuing lower demand in commodity prices, the unemployment rate is currently above 25 percent and is in an increase trend. The political uncertainty in 2017 decreased the trust in the leaders of business world in South Africa. Despite being good in African context, the institutional environment of the country, and its financial markets and commodity market efficiency is weaker than all.

According to another result obtained from the analysis, Brazil and South Africa constitute two separate groups on their own independent from each other. The economic structure of Brazil and South Africa mainly relies on energy export and the price fluctuations and international demand could significantly affect the national income. The economically high data possessed by Brazil, its development in the field of innovation and macroeconomy, and, on the contrary, the political uncertainty and decrease in financial and commodity prices in South Africa, lead to decrease in the global competition index data. For that reason, these two countries are included in different groups.

REFERENCES

- ADIGÜZEL, M. (2012), “Küresel Rekabet Gücünün Ölçülmesi ve Türkiye Bağlamında Bir Değerlendirme”, *Akademik Bakış Dergisi*, 37, 1-21.
- AĞIR, H., YILDIRIM, S. (2015), “Türkiye ile BRICS Ekonomilerinin Makroekonomik Performans Karşılaştırması Betimsel Bir Analiz”, *KSÜ Sosyal Bilimler Dergisi*, 12(2), 39-66.
- ALKİN, K.Y, BULU, M., KAYA, H. (2007), “İller Arası Rekabet Endeksi Türkiye’deki İllerin Rekabetçilik Seviyelerinin Göreceli Olarak Ölçülebilmesi için bir Yaklaşım” *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi*, 6(11), 221-235.
- BECEREN, E., KUYUMCULAR, Y. (2016), “Türkiye’nin Rusya Karşısındaki Rekabet Gücü Analizi Rekabet İndeksi Bileşenleri Açısından Bir Değerlendirme”, *Yüzyüncü Yıl Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 1(1), 61-82.
- ERSUNGUR, Ş., M., BOZ, Ç. F., ÇINAR, Ö. (2017), “Türkiye İle BRICS Ülkeleri Arasındaki Dış Ticaret İlişkileri Girdi-Çıktı Yöntemi İle Bir Analiz”, *Business and Economics Research Journal*, 8(3), 395-412.
- HARRISON, P. (2014), “South Africa in the BRICS”, *OASIS*, 19.
- HÜSEYİNİ, İ. (2017), “Doğrudan Yabancı Yatırımların İhracatın Sofistike Değeri Üzerindeki Etkisi BRICS Ülkeleri ve Türkiye”, *Hacettepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 35 (4), 79-95.
- GÖKMENOĞLU, S., M., AKAL, M., ALTUNIŞIK, R. (2012), “Ulusal Rekabet Gücünü Belirleyen Faktörler Üzerine Değerlendirmeler”, *Rekabet Dergisi*, 33-43.
- GÜNEY, T. (2017), “Türkiye ve BRICS Ülkelerinde Ekonomik Özgürlüğün Ekonomik Büyüme Üzerindeki Etkisi”, *International Review of Economics and Management*, 5(2), 30-47.
- GOLDMAN, S. (2003), “Dreaming With BRICs The Path to 2050”, written by Dominic Wilson and Roopa Purushothaman, *Global Economics Paper* No: 99, brics/brics-reports-pdfs/brics-dream.pdf.
- KAYA, V., YALÇINKAYA, Ö. (2016), “İmalat Sanayinin Gelişimi, Ekonomik ve Cari Açık İlişkisi BRICS+ Seçilmiş Yükselen Piyasa Ekonomileri (1992-2012) ”, *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 30 (1), 91-119.
- KILIÇ, R., DİLBER, C. (2017), “Türkiye ve BRICS Ülkelerinin Finansal Piyasaları Arasındaki İlişkinin Kantil Regresyon Yöntemi ile İncelenmesi”, *Akademik Sosyal Araştırmalar Dergisi*, 5(48), 331-342.
- Küresel Rekabetçilik Raporu, 2016-2017.
http://risk.gtb.gov.tr/data/52c58a61487c8eca94a7c696/Kuresel%20Rekabet%20C3%A7ililik%20Raporu%202016-2017%2025_05_2017.pdf (Date Accessed: 20.07.2018)
- NARİN, M., KUTLUAY, D. (2013), “Değişen Küresel Ekonomik Düzen BRIC, 3G ve N-11 Ülkeleri”, *ASO Dosya*, Ocak/ Şubat, 31-50.
- OVALI, S. (2014), “Küresel Rekabet Gücü Açısından Türkiye’nin Konumu Üzerine Bir Değerlendirme”, *International Journal of Economic and Administrative Studies*, 7(13),17-36.

ŞERBETÇİ, A., YARDIMCIOĞLU, M. (2017), “Yükselen Piyasa Ekonomileri ve BRICS, MIST, Kırılgan Beşli Ülke Gruplarının Değerlendirilmesi”, *Journal of Social and Humanities Sciences Research*, 4(2), 105-122.

T.C. Gümrük ve Ticaret Bakanlığı, 2017, <https://www.gtb.gov.tr/> Date Accessed: 19.07. 2018

TÜRKMEN, M., AYNAOĞLU, Y., (2017), Küresel Rekabet Endeksi Göstergelerinin Küresel İnovasyon Endeksi Üzerindeki Etkisi, *BMIJ*, 5(4), 257-282.

World Economic Forum (WEF).

Internet References

<https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018>,

Date Accessed: 19.07.2018.

https://eaf.ku.edu.tr/sites/eaf.ku.edu.tr/files/eaf_pn1015.pdf

Date Accessed 19.07.2018

<http://www.ebso.org.tr/ebsomedia/documents/2017-yilinda-dunya-ve-turkiye-ekonomisi-&-2018-yilindan-beklentiler- 8425612.pdf>

Date Accessed: 26.08.2018.

http://www.ekodialog.com/Konular/cin_ekonomi_sektor.html

Date Accessed 19.07.2018.

<https://www.deik.org.tr/uploads/guney-afrika-cumhuriyeti-ulke-raporu.pdf>

Date Accessed: 19.07.2018.

<http://www.spk.gov.tr/SiteApps/Yayin/YayinGoster/956>

Date Accessed: 19.07.2018

https://www.tmb.org.tr/arastirma_yayinlar/RK_2010_Raporlar_Turkiyenin_Kuresel_Rekabet_Duzeyi_Raporu_2010.pdf

Date Accessed 26.07.2018.

http://www.tuik.gov.tr/menu/ist_endeks_tem.jsp?metod=istendeks&d-5442-p=1

Date Accessed: 19.07.2018.

<http://journal.mufad.org.tr/attachments/article/74/1.pdf>

Date Accessed 26.07.2018

<https://www.weforum.org/reports/the-global-competitiveness-report-2017-2018>

Date Accessed: 19.07.2018.

<http://www.wikiyours.com/makale/kuresel-rekabet-endeksi#2017-2018-siralamasi>

Date Accessed: 25.07.2018.

http://www.wikiwand.com/tr/Rusya_ekonomisi

Date Accessed: 19.07.2018.