

GLOBAL COMPETITION INDEX AND TURKEY; A COMPARISON WITH THE MOST COMPETITIVE COUNTRIES

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Abstract: *The World Economic Forum periodically publishes 137 countries' international indices of competition in 12 main areas. These areas from economy to health and infrastructure to innovation are the most important dynamic indicators of a country. It is usual for the most developed countries of the world to be at the forefront of global competition. Although Turkey has shown great success in several key areas in recent years, it did not reach the desired level in the global competitiveness ranking. Since more than half of the production and trade in the world in one year is carried out by a small number of industrialized countries, to stay on the global market is so difficult and destructive for developing countries. Therefore, innovation, technology and radical reforms to be realized in social and political fields became the basic conditions of development, competition and growth. In this study, Turkey's strengths and weaknesses in 12 main areas will be investigated by using the global index report issued by the World Economic Forum. To accomplish this, Turkey will be compared with the BRICS countries and the countries which rank in the top rankings of world competition index. Finally, information is given about the sustainability of Turkey's competitiveness in international markets and suggestions are made. This research has some concrete conclusion on Turkey's competitiveness. Turkey was ranked 53rd in the area of competition in 2017 among the countries which are taken into consideration in this paper. Turkey rose to the 43rd place in 2012 which was the best performing year. Turkey's best-performing area is market size criteria which ranked 14th. The worst performance is 127th in the labor activity market. Turkey located in 60th in basic needs in the economy category. It is in the 51st place in the category of productivity boosting factors. The worst performance among the main categories is in the area of innovation and diversity enhancing factors. When BRICS countries and Turkey compared, in the overall standings Turkey is located above South Africa and Brazil and left behind China, India and Russia. It is above only Brazil in the area of innovation and diversity.*

Keywords: *Global Competition; Global Competitiveness Index; R&D; Foreign Trade.*

JEL Classification: *F1; O3; O5.*

1. Introduction

Rapidly developing technology has increased the speed of obtaining economic gains and losses. Even small firms can reach huge budget and size by following market conditions very quickly in 21st century. On the contrary, some of the global companies which fail international competition can be swept away from the market in a very short period of time. Trade and prosperity required many years when the

development of technology was limited to horse carriages or similar means of transport. The development of transport and the change of production technologies have enabled products to reach consumers quickly over the time. The momentum in production and consumption is causing too many firms to enter and exit the market. This emergence has enabled the growth of companies that produce fast, affordable, inexpensive, customized and quality production. It also leads to the rapid collapse of companies that cannot meet these requirements. The increase in technological development has increased both economic and political competition around the world.

The last quarter of the 20th century and the 21st century are the times of globalization. The change of needs has also led to the development of production and transport systems. Foreign trade has become inevitable. The world is getting smaller and production can be delivered easily to the world in a very fast way. All these developments have led countries to give up their closed economic systems and begin to fight in global markets. Foreign trade has undoubtedly been one of the crucial economic growth paths of the last fifty years. So developing globally marketable products has become more important than ever. As Turkey is a developing country, investigation of its global competitiveness is crucial to determine its path of development in foreign trade.

This study will examine the Turkey's competitiveness after the theoretical and conceptual framework of the global competitiveness index are outlined. Also in this study, Turkey will be compared with developed countries and policies will be proposed to increase competitiveness. Therefore, Turkey's infrastructure indicators, macroeconomic indicators, education and basic health indicators will be compared with most competitive countries. In the first part of this study, the concept of competition and the criterion of the measurement of competitiveness of the World Economic Forum are summarized. In the second part of the study, Turkey's existing global competitiveness ranking is determined and then a comparison is made between Turkey and developed countries.

2. Global Competition Concept and the Measurement of Competitiveness of the World Economic Forum

One of the most important consequences of the globalization process is the need for "interdependence". With the development of the industry and the rise of technology, the condition of innovation has revealed the importance of countries' competition power (Turkish Ministry of Science Industry and Technology, (Gümrük ve Ticaret Bakanlığı) 2018). The outward-closed economic system is considered to be one of the obstacles against development and competition so the concept of competition, which is the most popular concept in recent years, is becoming more important (Eşiyok, 2001: 2). Competitiveness refers to the ability to meet total demand and needs in free market economies. When the world is regarded as a whole economy, international competitiveness is the ability to respond quickly and customized to the international demand. Competition is a fairly wide process, ranging from personal competition to firms and from states to economic integrations, resulting in increased prosperity and income (Turkish Ministry of Customs and Trade (Gümrük ve Ticaret Bakanlığı), 2015:1). The 21st century's understanding of competitiveness includes concepts of innovation, technological innovation and total factor productivity. Added value and production efficiency are very high in the competitive countries. The

innovation from the human capital to the production method similarly creates a situation where the gains are multiplied and therefore international competition is strong (Çivi et al., 2008: 3-4). Another definition of global competition is the ability to make free economic decisions in the trade of goods and services in an economy. Therefore the competition is the power of the entrepreneurs operating in the economy to act ethically in free market conditions and to maintain their existence and profitability (Competition Authority, (Rekabet Kurumu). 2014: 164).

The World Economic Forum publishes the global competition index report, which covers approximately 140 countries, over 30 years. The report includes countries' 12 core areas and 119 sub areas. The index is calculated as follows; at first, the basic components are added consecutively and then the arithmetic mean of the subcomponents is calculated. There are three main headings determined in the report when competitiveness ranking is calculated.

Table 1: Global Competitiveness Index Classification of WEF Report

Factor Based Economies	Productivity Based Economies	Innovation Based Economies
Basic Requirements	Productivity Boosting Factors	Innovation and Diversity Factors
Institutions	Higher Education and Vocational Education	Business Market Development
Infrastructure	Commodity Market Efficiency	Innovation
Macro-Economic Environment	Labor Market Efficiency	
Health and Basic Education	Development of Financial Markets	
	Technological Preparation	
	The size of the market	

Source: WEF, The Global Competitiveness Report 2017-2018

Table 1 shows the key factors which creates world competition index prepared by World Economic Forum. The heading of basic requirements covers the essential needs of each country. This section contains the status of the existing institutions of the country, macroeconomic indicators and finally the basic health and basic education sub-items. The second main component, the productivity boosting factors consists of the main six sub-areas. These are the titles that show countries' detailed competitive analysis and increase competitive power. The sub-areas which are higher education and vocational training, the effectiveness of goods and labor markets, the development of financial markets, the size of technological preparation and the market are the areas that increase the efficiency of countries. Finally, innovation and diversity factors consist development of the labor market and innovation sub-titles. The report is divided into categories according to the development and economic growth status of the countries.

- First Stage: Factor-Driven Economies Category
- Transition from First to Second Stage Economies
- Second Stage: Activity-Driven Economies Category
- Transition from Second to Third Stage Economies
- Third Stage: Innovation-Driven Economies Category

As long as the countries' level of development increase their competitiveness will increase so the countries first move from factor-driven economies category to activity-driven economies category and then to innovation driven category. Economic classification and categorization of countries in the WEF report was made by using the gross domestic product value per capita. Countries in the first stage can compete on a factor-based basis due to unskilled labor and natural resources. Production consists of low added value and simple products. Underdeveloped countries take place in this category. The economy and social structure in the second stage are better than the first stage. The wages and profits have increased and the productivity-based activity has taken place. The added value of higher education has increased, labor and commodity markets have strengthened and financial markets have improved. In the final stage, modern and high-tech products are produced and competed by using the production processes that are realized by innovation. The final phase involves more global companies in developed countries. Global competition is concentrated in this area thanks to products and outputs that are both high value-added and highly competitive.

Table 2: Determination of Development Level and Weighted Average of Main Factors

	Factor-Driven Economies Phase (1st stage)	Transition from First to Second Stage	Activity-Driven Economies Phase (2nd stage)	Transition from Second to Third Stage	Innovation Driven Economies Phase (3rd stage)
GDP per Capita (US Dollars)	0-1999	2000-2999	3000-8999	9000-17000	17000 Üstü
Weight of Basic Requirement Factors	%60	%40-%60	%40	%20-%40	%20
Weight of Productivity Boosting Factors	%35	%35-%50	%50	%50	%50
Weight of Innovation and Diversity Factors	%5	%5-%10	%10	%10-%30	%30

Source: WEF, *The Global Competitiveness Report 2017-2018*

Table 2 shows the weighted average of the three main factors in the countries classified by GDP per capita. Accordingly, countries with income per capita below \$ 2,000 are the first-stage factor-driven economies. The basic essential factors in countries in this category are 60% on weighted average. Productivity enhancing factors weigh 35% and innovation and diversity factors weigh only 5%. The competitiveness of these countries is very low and production is far from high technology and innovation. It is more labor intensive production activity. The weight of essential factors is reduced and is between 40% and 60% in countries with income per capita ranging from \$ 2,000 to \$ 2,999. The productivity enhancing factors and the weight of the innovation-diversity factors in the transition from the first stage to

the second stage were slightly higher than in the first stage. Countries with income ranging from \$ 3,000 to \$ 8,999 per capita are included in the second phase of the activity-driven economy category. In this second phase, the weight of essential factors decreased to 40% on average. The weight of the productivity enhancing factors has increased to 50%. The weight of innovation and diversity factors has increased to 10%. The transition category from the second stage to the third stage consists of countries with GDP per capita ranging from \$ 9,000 to \$ 17,000. While the weight of the essential factors decreases, the weight of the other factors increases at this stage. Countries with a GDP per capita valued at more than \$ 17,000 dollars represent third-stage countries. In the third stage, investment in technology-innovation and production is quite high, so labour-intensive production is low. At this level, more capital intensive production is being made and the weight of the essential factors is reduced to 20%, the productivity-enhancing factors increased to 50% while the innovation-diversity factors increased to 30%.

3. Turkey's Global Competitiveness

According to the report of World Economic Forum, the international classification of Turkey is located in the transition from second stage to third stage and is located between Activity-Driven Economies Phase and Innovation Driven Economies Phase. Turkey's growth rate in recent years shows a fairly good performance compared to the world average. But this situation is not reflected adequately in the growth rate of Turkey's global competitiveness rankings.

Table 3: Turkey's Global Competitiveness Ranking

Years	World Ranking
2001	54
2002	69
2003	65
2004	66
2005	66
2006	59
2007	53
2008	63
2009	61
2010	61
2011	59
2012	43
2013	44
2014	45
2015	51
2016	55
2017	53

Source: World Economic Forum, "The Global Competitiveness Report".

Table 3 shows Turkey's competitiveness ranking. Before the 2001 crisis, Turkey's competitiveness ranking was 54th in the world, and immediately after the crisis in 2002 it decreased to 69th. Turkey's competitiveness ranking has started to increase after the effects of the crisis began to disappear. In 2007, it rose to the 53rd place, but in 2008 it fell to 63rd place due to the global crisis. After the end of the crisis,

Turkey has given the best performance in 2012. The ranking among 140 countries has increased to 43 within this year. After 2013, because of both global and national political and economic shocks Turkey's global competitiveness ranking has declined by down to 55.

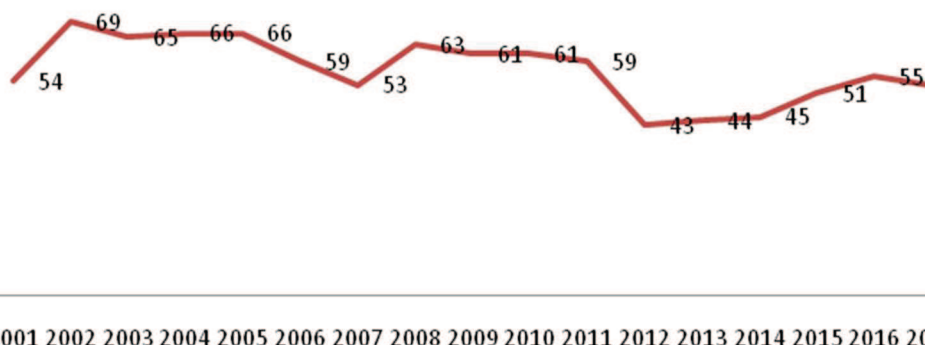


Figure 1: Change in Turkey's Global Competitiveness Ranking
Source: World Economic Forum, "The Global Competitiveness Report".

Figure 1 shows the change of Turkey's global competitiveness ranking in the period of 2001-2017. The figure shows that the average of Turkey's ranking remained quite stable in long term. Turkey's competitiveness ranking is highly sensitive to the crisis, political and economic cyclical fluctuations. Turkey's competitiveness ranking is followed by a bumpy course because of being a developing country, its current account deficit and high interest rates and the effects of fluctuations in foreign exchange rates on imports.

Table 4: Global Competitiveness Ranking of Top 10 Countries and Turkey

Countries	2017-2018 Competitiveness Index		2016-2017 Competitiveness Index	
	Rank in 137 Countries	Score (1-7)	Rank in 137 Countries	Score (1-7)
Sweden	1	5.86	1	5.81
USA	2	5.85	3	5.70
Singapore	3	5.71	2	5.72
Netherlands	4	5.66	4	5.57
Germany	5	5.65	5	5.57
Hong Kong	6	5.53	9	5.48
Swedish	7	5.52	6	5.53
Britain	8	5.51	7	5.49
Japan	9	5.49	8	5.48
Finland	10	5.49	10	5.44
Turkey	53	4.42	55	4.39

Source: World Economic Forum, "2017-2018 The Global Competitiveness Report".

Table 4 shows the ranks of the top ten countries and Turkey according to global World Competitiveness Report- WEF. The report sets a score by subtracting an

average by scoring between 1 and 7 in 12 basic areas. Global competitiveness ranking is determined by this scorecard. The countries in the top 10 in the last two years didn't change. World's most developed and highest purchasing power countries have a high ranking of global competition. As seen in Table 4, Asian countries such as Japan, Singapore and Hong Kong competing with Western societies in terms of income per capita, have a high ranking of global competition. Switzerland ranks first in the world as the strongest country in terms of competition. Turkey, as stated above, due to both economic and political reasons, geographical location and regional issues was at 53rd ranks with 4.42 points in 2017.

Table 5: Turkey's Global Competitiveness Index in 12 Key Areas

Main Categories	Rank in 2017-2018	12 Key Areas	Rank in 2017-2018	Score
Basic Requirements	60	Institutions	71	3.5
		Infrastructure	53	4.5
		Macroeconomic Environment	50	5.1
		Health and Basic Education	84	5.6
Productivity Boosting Factors	51	Higher Education and Work Education	48	4.8
		Efficiency in Commodity Markets	53	4.5
		Efficiency in Labor Markets	127	3.4
		Development of Financial Markets	80	3.8
		Technological Preparation	62	4.4
		Market Size	14	5.5
Innovation and Diversity Factors	66	Business Development	67	4.0
		Innovation	69	3.3

Source: World Economic Forum, "2017-2018 The Global Competitiveness Report"

Table 5 shows Turkey's competitiveness index in main categories and 12 key areas. When the rank of major categories investigated, Turkey ranks at 60th place in the basic requirements. Turkey ranks 51st in productivity-enhancing factors, 66th place in innovation and diversity factors. When examining Table 5, Turkey's competitiveness index score in 12 key areas vary considerably. Turkey ranks 71 of 137 countries with its 3,5 points in Institutions Area. When the table is examined, it is understood that the worst case is the 127th row in the Efficiency in Labor Markets. Turkey's best score is in Market Size Category with 5,5 points and 12th row. Turkey has carried out best performance in terms of competitiveness index in 2012. In particular, 12 basic areas in Turkey cannot be improved sufficiently due to the facts that the R&D expenditures are below the world average, the current deficit is high, and the exchange rates are continuously rising. Turkey is an advantageous country in the labor market with its young population. However, the unemployment rate is not sufficiently reduced and the quality of the workforce is not enough to compete with the competitive advantage of the labor market.

Table 6 shows the proportional distribution of Turkey's main problem. Among the most important factors adversely affecting the competitiveness of Turkey is political

instability with 13,7%. Political instability is affecting the continuation and proportion of investments in the negative direction.

Table 6: The Basic Share of the Most Problematic Factors in Doing Business in Turkey (%)

Factors	Basic Share (%)
Political instability	13.7
Financing Access	11.8
Inadequate Educated Workforce	11.7
Exchange	9.1
Inefficient Government Bureaucracy	8.9
Inflation	7.9
Tax Rates	7.4
The instability of the state	7.3
Inadequacy of Infrastructure	6.2
Inability to Innovate	5.3
Tax Regulations	4.0
Weak Business Ethics in the National Workforce	2.9
Restrictive Labor Law	2.4
Weak Public Health	0.8
Crime and Theft	0.3
Malpractice	0.3

Source: World Economic Forum, "2017-2018 The Global Competitiveness Report"

Another important issue is Turkey's foundation in finance. One of the main problems of Turkey is inadequately educated workforce with 11,7% share. Other main problems of Turkey are inflation, imbalance in exchange rates, distribution in tax rates, bureaucratic obstacles in state administration.

Table 7: Comparison of BRICS countries and Turkey in Global Competitiveness Perspective

	Brazil		Russia		India		China		South Africa		Turkey	
	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score
Total	80	4.1	38	4.6	40	4.6	27	5.0	61	4.3	53	4.4
Key Factors	104	4.1	48	4.9	63	4.7	31	5.3	92	4.3	60	4.8
Productivity Boosting Factors	60	4.3	38	4.6	42	4.5	28	4.9	52	4.4	51	4.4
Innovation and Diversity Factors	65	3.7	57	3.8	30	4.3	29	4.3	39	4.1	66	3.7

Source: World Economic Forum, "2017-2018 The Global Competitiveness Report"

Table 7 shows BRICS countries' and Turkey's global competitiveness index in main categories in 2017. China is the best performing among 6 countries. China has made very big changes and economic revolutions and become second largest economy in the world in 21st century. China has entered all the markets, from the financial sector

to the real sector, from technology to R & D, from industrial to agricultural. As a result, many countries around the world are experiencing serious difficulties in terms of competition with China. According to the global competition report of 2017-2018, China has a score of 5.0 and ranked 27th in 137 countries. In terms of global competition, the second place after China among the 6 countries belongs to Russia with a rank of 38th, and a score of 4.62. Russia's best performance is in productivity enhancing factors. Russia's major investments in arms and space technology bring this country to a strong position in the world in economic mean. On the other hand, Russia has some difficulties in adapting to the global market due to its socialist past. India's competition index is 4.6 and the overall ranking is 40. In recent years, India has increased its investments in information and R & D activities. India's best performance is in innovation and diversity factors. More over 1 billion inhabitants, a social structure in which income distribution is highly distorted, millions of populations who are still unable to meet their basic needs weaken India's performance in key areas.

The best performance of South Africa is in innovation and diversity factors. South Africa takes over Turkey with its 39th rank. Brazil is in the 80th place with 4.1 points. Brazil, one of the countries with the highest growth rates in the developing countries in recent years, faces major problems in terms of economic and technological investments as well as social and institutional problems.

Turkey is at the 4th place among the six countries. Turkey's weakest performance is in innovation and diversity factors. The technology and R & D development efforts in Turkey have increased in recent years but it is not enough. Turkey is ahead of India and South Africa and Brazil in the main factors category. India is ahead of Turkey in Productivity Boosting Factors. Turkey remaining behind BRICS countries in innovation and diversity factors with 66th rank and 3,7 points.

The most important problem in doing business in BRICS countries is corruption. For example, the first and the biggest problem in doing business is corruption and bribe in South Africa, India and Russia. This situation complicates countries to sufficiently improve their management and social structures, institutions and business life. The biggest problems in Brazil are tax rates and corruption. The problem of corruption has become the 5th problem with an 8% rate in China. Financial difficulties are one of the main problems in doing business in China. Due to the political problems in local and international area in Turkey in recent years, political instability is one of the main problems in doing business. Although there is a corruption problem in Turkey, according to the WEF's latest report, corruption took place at the end of the problems encountered in Turkey.

4. Conclusion

Since more than half of the production and trade in the world in one year is carried out by a small number of industrialized countries, global competition to stay on the market is so difficult and destructive for developing countries. Therefore, innovation, technology and radical reforms to be realized in social and political fields became the basic conditions of development, competition and growth.

In this study, Turkey's competitiveness and general issues related on competition were discussed based on the global competition index report, which includes approximately 140 countries published annually by the World Economic Forum. Turkey was ranked 53 in the area of competition in 2017. Turkey rose to the 43rd

place in 2012 which was the best performing year. On the other side, due to the national and international political and economic problems, the ascension has settled down after this year. Basic issues considering the Turkish economy could be count as follows; the political issues, high inflation, lack of funding and the negative impact of foreign exchange rates on the TL. So, it is essential to dissolve the political and social conflict in Turkey rapidly, to focus especially on the key issues and to resolve inflation, interest rates and current account deficit problems in the economy.

Countries ranked in the top 10 in the global competition index are generally composed of western societies. In addition, developed countries such as Japan and Singapore which are two of the most developed Asian countries always ranks in top 10 in terms of global competition. These countries which continue to develop in industrial and technological terms, are able to produce easier, faster and lasting solutions compared to developing countries in social and political matters. However, political conflicts of interest, insufficient sectoral specialization, corruption and social problems are major obstacles against development in developing countries. Turkey has become the focus for world companies because of being a developing country, increased consumption and investments, being a gate opens from Europe to Asia, and its young and educated population and market size. Thus, according to the global competitiveness index report Turkey's best-performing area is market size criteria which ranked 14th. The worst performance is 127th in the labor activity market. Turkey located in 60th in basic needs in the economy category. It is in the 51st place in the category of productivity boosting factors. The worst performance among the main categories is in the area of innovation and diversity enhancing factors. When BRICS countries and Turkey compared, in the overall standings Turkey is located above South Africa and Brazil and left behind China, India and Russia. It is above only Brazil in the area of innovation and diversity.

According to the findings, first of all Turkey must focus on the main problems in order to achieve a global competitive advantage. Later, in order to extract brands on a global scale, it is necessary to develop the manufacturing industry which carries out advanced technology and innovative production. Increasing Turkey's market share in the globalizing world depends on the development of information and technology infrastructure. The ability to produce high value added products, to increase the number of national firms operating globally which can withstand international competition will affect Turkey's competitiveness index in a positive way. The share of R&D expenditure in GDP in Turkey remains far below the world average. Therefore, it is necessary to increase the investment in innovation and R&D in order to produce technological and high value added products.

References

1. Bilim Sanayi ve Teknoloji Bakanlığı (2018) *Küresel Rekabet Raporu (2016-2017) İnovasyon bileşeni Kapsamında Türkiye Değerlendirmesi*. <http://anahtar.sanayi.gov.tr/tr/news/kuresel-rekabet-raporu-2016-2017-inovasyon-bileseni-kapsaminda-turkiye-degerlendirmesi/9446>
2. Çivi, E. Erol, İ. İnanlı, T. Erol, D.C. (2008) Uluslararası Rekabet Gücüne Farklı Bakışlar. *Ekonomi ve Sosyal Araştırmalar Dergisi*, 4(1), 1-22.
3. Eşiyok, B. A. (2001) *Dünya Rekabet Gücü İçerisinde Türkiye'nin Yeri. Türkiye Kalkınma Bankası Araştırma müdürlüğü, İktisadi Araştırmalar*. http://www.kalkinma.com.tr/data/file/raporlar/ESA/GA/2001-GA/GA-01-04-07_Dunya_Rekabet_Gucu_ve_Turkiye.pdf

4. Gümrük ve Ticaret Bakanlığı (2015) *Küresel Rekabetçilik Raporu 2014-2015. RYKGM-Ekonomik Analiz ve Değerlendirme Dairesi.* <http://risk.gtb.gov.tr/data/52c58a61487c8eca94a7c696/K%C3%BCresel%20Rekabet%C3%A7ilik%20Endeksi%20Raporu%202014-2015.pdf>
5. Rekabet Kurumu, (2014) *Rekabet Terimleri Sözlüğü*, <http://www.rekabet.gov.tr>
6. TÜİK, (2018) <http://www.tuik.gov.tr/UstMenu.do?metod=temelist>
7. World Bank, <https://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS?view=chart>
8. World Economic Forum, (2018) *The Global Competitiveness Report 2017-2018.* <http://www3.weforum.org/docs/GCR2017-a2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>