# ÇANKAYA UNIVERSITY GRADUATE SCHOOL OF SOCIAL SCIENCES DEPARTMENT OF ECONOMICS

MASTER'S THESIS

THE IMPACT OF GLOBALIZATION ON ECONOMIC GROWTH IN BRICS

EMİRCAN GÜLERER

SEPTEMBER 2019

# Title of the Thesis: THE IMPACT OF GLOBALIZATION ON ECONOMIC GROWTH IN BRICS

Submitted by: Emircan GÜLERER

Approval of the Graduate School of Social Sciences.

Prof. Dr. Mehroet YAZICI

Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Art.

Prof. Dr. Mahir NAKİP Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Science in Financial Economics.

Asst. Prof. Dr. Ekin Ayşe ÖZŞUCA EKENOĞLU Supervisor

Superv

Examination Date: 18/09/2019

**Examining Committee Members:** 

Prof. Dr. Güven SAYILGAN (Ankara University)

Assoc. Prof. Dr. Aytaç GÖKMEN (Çankaya University)

Asst. Prof. Dr. Ekin Ayşe ÖZŞUCA ERENOĞLU (Çankaya University)

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Name, Last Name: Emircan GÜLERER

Signature:

Date: 18/09/2018

#### ABSTRACT

# THE IMPACT OF GLOBALIZATION ON ECONOMIC GROWTH IN BRICS

#### GÜLERER, Emircan

#### **Master Thesis**

Graduate School of Social Sciences
M.A, INTERNATIONAL TRADE AND FINANCE

Supervisor: Assist. Prof. Dr. Ekin Ayşe ÖZŞUCA ERENOĞLU

September 2019, 79 Pages

Globalization, the desire to reach more people is inevitable in line with developing technology and economic conditions. People can reach each other more easily. Companies can reach their potential customers from all over the world. Countries continue to grow economically using this ease of access. The concept of globalization emerges as an extension of this.

When we look at BRICS in an institutional sense, we can say that it is an alternative globalization initiative. It is even difficult to say that BRICS is a consistent and effective international actor in terms of its current position. All BRICS members are newly industrialized or developing countries. The most important feature of these countries is their increasing global / regional activities in parallel with their high growth rates. BRICS countries cover approximately 3 billion of the world's population and they want to closely follow the decision-making process in the global economic and financial process and increase their effectiveness especially in the global financial institutions.

In the first part of the study, globalization is defined. In the second part, the relationship between economic growth and globalization is examined. In the third

part, a general introduction to BRICS countries is given. In the application section, the relationship between economic growth and globalization in BRICS countries is explained.

Keywords: Globalization, BRICS, economic growth, panel data

## ÖZET KÜRESELLEŞMENİN BRICS ÜLKELERİNDEKİ EKONOMİK BÜYÜMEYE ETKİLERİ

GÜLERER, Emircan

#### Yüksek Lisans Tezi

Sosyal Bilimler Enstitüsü

Uluslararsı Ticaret ve Finansman

Danışman: Dr. Öğr. Üyesi Ekin Ayşe ÖZŞUCA ERENOĞLU

Eylül 2019, 79 Sayfa

Küreselleşme, daha çok insana ulaşma isteği gelişen teknoloji ve ekonomik koşullar doğrultusunda kaçılmaz olmaktadır. İnsanlar birbirine daha kolay ulaşabilmektedir. Şirketler de potansiyel müşterilerine dünyanın dört bir yanından ulaşabilmektedir. Ülkeler bu erişim kolaylığını kullanarak ekonomik olarak büyümeye devam etmektedir. Bu büyüme sayesinde ülkelerin birbirlerine olan mesafeleri ortadan kalkmaktadır. Bunun bir uzantısı olarak küreselleşme kavramı ortaya çıkmaktadır.

Tüm BRICS üyeleri gelişmekte olan ülkelerdir. Bu ülkelerin en önemli özelliği yüksek büyüme oranları ile birlikte artan küresel / bölgesel faaliyetleridir. BRICS ülkeleri dünya nüfusunun yaklaşık 3 milyarını kapsamakta ve özellikle küresel finansal kurumlar arasındaki etkinliğini arttırmak istemektedir.

Çalışmanın ilk bölümünde küreselleşme tanımlanmıştır. İkinci bölümde ise ekonomik büyüme ve küreselleşme arasındaki ilişkiye bakılmıştır. Üçüncü kısımda BRICS ülkelerine genel bir giriş yapılmıştır. Bu çalışma BRICS ülkelerindeki ekonomik büyümenin küreselleşme ile olan ilişkisini açıklamayı amaçlamaktadır.

Anahtar Kelimeler: Küreselleşme, ekonomik büyüme, panel veri, BRICS

#### **ACKNOWLEDGEMENTS**

First of all, I would like to express my deepest gratitude to my thesis advisor Assist. Prof. Dr. Ekin Ayşe ÖZŞUCA ERENOĞLU who does not hesitate to share the knowledge that she had and her support too. Without her guidance, persistent help and encouragement this study would not have been possible.

I would like to thank to my committee members Prof. Dr. Güven SAYILGAN and Assoc. Prof. Dr. Aytaç GÖKMEN whose shared their valuable knowledge and criticism during my thesis defense.

Finally, I would like to thanks my dear friends especially Oğulcan ARASAN. Last but not least, thanks to my dear family for their trust and supports in my graduate education.

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#### LIST OF ABBREVIATIONS

LFPR Labor Force Participation Rate

FDI Foreign Direct Investment

EXIM Goods and Services External Balance

GFCF Gross Fixed Capital Investment

GLO KOF Globalization Index

PSE Primary and secondary school enrollment

EGLO Economic Kof Globalization index

PGLO Political Kof Globalization index

SGLO Social Kof Globalization index

GDPPC Gross Domestic Product Per Capita

 $H_0$  Series is not stationary

 $H_1$  Series is stationary

#### INTRODUCTION

Globalization has become one of the most used terms in the field of international politics and diplomacy and academic studies in the last two decades. Despite this feature, there is no generally accepted definition of globalization and this concept is used in such a way that it can have different meanings. For example, it can be seen in the literature that globalization is used synonymously with various terms such as internationalization, universalization, liberalization, westernization, interdependence and modernization.

In addition, as is commonly seen today, the concept of globalization is associated with almost every event, reflected as a major factor in the cause-effect relationship, and, due to this broad use, it becomes a stereotype that is essentially incomprehensible (İstikbal, 2018).

Countries such as Brazil, Russia, India and China, whose economies have grown rapidly in recent years and have hosted most of the foreign investments, have distinguished themselves from other countries with these economic performances and have become important players of the global economic system. Therefore, these countries were named BRICS in 2001. With the addition of South Africa to BRICS in 2010, these countries are now called BRICS. While the total area of the BRICS countries is more than a quarter of the world's total area, their total population exceeds 40 percent of the world's population (Narin and Kutluay, 2013).

Against this background, the aim of this thesis is to provide empirical evidence for the impact of globalization has had on the economic growth in BRICS countries. Using panel data estimation methods, this study examines the relationship between globalization and economic growth during the period 2000-2018. In order to elucidate different components of globalization, empirical analyses includes four models in itself. Accordingly, in the first model, the comprehensive globalization index is used, while the second model uses the economic index of globalization. The

third model utilizes the social index of globalization and the fourth model includes the politic index of globalization. Empirical results of the study reveals that globalization has no statistically significant impact on economic growth in BRICS countries between the years 2000 and 2018. The empirical findings further suggest that different components the globalization, namely economic globalization, social globalization, political globalization exert no significant impact on economic growth during the period under investigation.

In the first chapter of the study, globalization is defined. In the second part, the relationship between economic growth and globalization is examined. In the third chapter, a general introduction to BRICS countries is given. In the empirical analyses section, the relationship between economic growth and globalization in BRICS countries is investigated, while the estimation results are presented and discussed.

#### **CHAPTER 1**

Globalization is an international integration process that arises from the exchange of products, ideas, cultures and worldviews. One of the most striking features of the concept of globalization is that it gives the impression that its possible effects are numerous and varied.

There are many empirical studies examining the effects of globalization on economic growth. In line with the developments in foreign direct investment, technological transfers and capital flows, globalization is considered as one of the most important concepts for economic development. It is a widely discussed and agreed issue that capital inflows in the form of direct capital inflows positively affect growth, but indirect capital inflows in the form of borrowing may adversely affect growth. These are subjective due to cultural background, geographical location, social and international status, individual personality data, political stance and historical momentum that encompasses them all.

#### 1.1.Globalization

Since the 1980s, economic and financial globalization has gained momentum in the world, many countries have switched to a free market economy and have started to remove the restrictions on the movements of goods, services and capital between countries. As a result, countries have become integrated with each other and there have been significant increases in global trade and capital volume (Umutlu, 2010).

Today, increasing international trade is the result of the increase in direct foreign capital inflows and technological developments. Economists, politicians, sociologists and other researchers from different disciplines explain this development in the last half century with the concept of globalization. Globalization, which became popular especially in the 1990s, has been the source of problems in many areas, from environmental degradation to economic crises and social disintegration,

while for some it is seen as the basis of all opportunities. Although it is thought that globalization, which has a certain paradoxical situation in itself, first affects economic structures, it is known that it has socio-political, cultural and geographical effects (Steger, 2013).

Despite all the uncertainties such as its emergence, definition, spread, measurement, effects, and consequences, the borders between globalization and countries disappear. In fact, to stand against globalization is to stand against gravity. Globalization is expressed in terms such as internationalization, liberalization, universalization or westernization. In fact, it is quite complex to make sense of globalization and explain its importance. With the developments in the telecommunication and transport network, there is a strong international merger from tastes and preferences to production, from labor markets to cultural features and even to taste. For example; While Coca Cola has more than 40 percent of the US market and a third of the world's soft drink market, it is possible to buy a McDonald's burger in many cities around the world. Similarly, the list of global products is growing rapidly and is expected to become a global market in the future (Sever, 2010).

Globalization is a widely used term, but it is not a completely new concept. In fact, the existence of globalization can be dated from the moment foreign trade emerged a few thousand years ago. From a historical perspective, the first development process of globalization coincided with the rise of capitalism in the 1870-1930 period. The second phase of globalization is thought to coincide with the 1945-1973 period. During this period, the macroeconomic order regime established through Bretton Woods institutions was fragmented, the first oil crisis was experienced, the increase in the mobility of private capital and the golden age of the growth of industrialized countries ended, while post-colonial independent economies emerged. Today, in its third phase, globalization is combined with the abolition of economic regulations and the revolution in information and communication technologies. In fact, it will not be wrong to say that the globalization of large scale has taken place within 30 years. Globalization is a phenomenon with different definitions with many aspects and social, political and economic consequences.

Although it is one of the most important issues discussed over the past century, it is difficult to speak of a common definition that has been agreed on globalization.

Many authors and institutions / organizations have worked on the definition of globalization. According to Brittan (1998), globalization is one of the most important forces shaping the modern world and is a brutal destructive change that can lead to economic, social, cultural and environmental problems that make administrations helpless. The increase in asymmetric interdependence and organic integration around the world in economy, technology, politics, culture and social events with the narrowing of distance, space and time is defined as globalization (Adıgüzel, 2011).

The United Nations defines globalization as the spread of ties between societies. More specifically, globalization is the integration of a country's local economic system into international markets and institutions through international liberalization, foreign investment and capital flows, technological exchanges and information flows, and the use of factors of production on a global scale rather than individual state economies (Beck, 2012).

To sum up, globalization is an increasing integration of world economies and societies that cross borders, through the transfer of ideas and people, culture and technology, and the creation and development of transnational arrangements, as well as the flow of international goods and capital. Globalization, as can be understood from its definitions, is an extremely broad concept and has many different dimensions.

With its economic dimension, there are three economic indicators of globalization such as international trade, international investment and international finance. But there is much more to globalization. More specifically, economic globalization is a process associated with increasing economic openness, increasing economic dependence and deepening economic integration into the world economy. The term economic globalization also refers to the flow of goods, capital, information / technology and the flow of people at national borders and the impact of

such movements on the economies of the nations concerned (Faustino and Vali, 2013).

#### 1.1.1. What is Globalization?

According to the majority, there has been a qualitative shift in the structure of social integration over the last few decades that defines the current period or phase of globalization, and for the first time it is seen that truly global patterns have developed in economic, social, political and global organization. Globalization requires reinterpretation of the world, as recent and ongoing changes are not entirely unpredictable.

#### 1.1.2. Definition of Globalization

Globalization, which represents the new and ambitious source of change in the early 21st century world society, has become increasingly important in the social sciences in recent years. While most of the attention is focused on the economic dimension of globalization, the concept of globalization in the academic world has initiated many other debates. Almost all sciences work on globalization theoretically in research, explanation and theorization of a wide range of contexts The interest in globalization as a concept is increasing day by day in all social sciences, whether in sociology, economics, management or international relations.

The term globalization was first used in the 1980s in the prestigious American universities of Harvard, Stanford and Columbia, and was spread by these environments.

Simple defined globalization involves the universal exchange of people, knowledge, ideas, capital and goods. This definition often goes beyond the simple economic concept in which it returns. According to Dreher (2006), globalization is the share of international trade in world production, the share of international investment in world investment, and the share of the total number of people living and working outside their hometown.

According to Fischer (2000), integration into the world economy is the best way for countries to grow. Citizens of one country are more likely to receive goods

from another country, invest and make money in another country, communicate with different citizens over the phone, travel to other continents and know more about other nations than fifty years ago.

The American Institute of Defense defines globalization as the rapid and continuous cross-border flux of goods, services, capital (or money), technology, ideas, knowledge, culture and nations. According to the Institute, globalization leads to integration between economies, the continuation of information reform and the internationalization of markets, businesses, organizations and governance. In 2000, the International Monetary Fund identified four key elements of globalization: trade and transactions, capital movements and investment, migration and circulation of people, and dissemination of knowledge.

Globalization is the growth of economic activity at the national and regional political boundaries, or rather the accelerated growth. In other words, the increasing movement of tangible and intangible goods and services, including property rights, through trade and through investment and mostly through immigration. The individual actions of economic actors, companies, banks and individuals pursue profits, which are often affected by competitive pressures. Thus, globalization is a centrifugal process, an economic diffusion process, and a microeconomic phenomenon. As a microeconomic phenomenon and centrifugal process, which operates with the actions of individual economic actors, globalization reduces the economic distance not only between countries and regions, but also between the economic actors themselves (Yüksel and Sarıdoğan, 2011).

The concept of globalization seems to justify the spread of Western culture and capitalist society by suggesting that there are forces that transform the world beyond human control. Globalization is the direct result of the expansion of European culture on the planet through settlement, colonization and cultural replication. Despite the increasing integration of countries in economic, social, political and environmental spheres, there is no universally accepted and indisputable definition of globalization (Steger, 2013). For this reason, the term globalization can be interpreted in different ways by different people.

Giddens (1999) sees globalization as a result of modernity. In this sense, globalization is the expansion of the economic, political and cultural developments on which modernity is based. With its structurally globalizing nature, globalization creates a transformation in modernity in the context of time and space. In the premodern era, while modernity shattered the union of time and space, distancing time and space away from each other, the distance from time and space increased in the modern period compared to previous periods, and consequently, the relations between local and distant social structures and events were stretched (Beck, 2012). Globalization has emerged as a product of this stretching process and the forms of connection between different social spaces have been networked on a world scale. According to Giddens (1999), today's global developments are an indication that modernity is spreading worldwide.

Globalization not only changes economic, cultural, political and social relations, but also adds new dimensions to the concepts we use. While the economic, social and political ties that cross the borders between countries significantly affect people, an increasing interdependence has emerged in the world society. Globalization is the increase of goods and human mobility on the one hand and a rapid change and differentiation in the cultural process. On the one hand, it is the similarity of world societies, and consequently the emergence of a single global culture. On the other hand, globalization, which is used as the process of identifying and differentiating the differences of each community or society, incorporates a simultaneous and collective manner of action (McMillan and Rodrik, 2011).

Therefore, in its broadest sense, globalization is a self-organized process of building a socio-economic world society with increasing dependence among its members. In its narrowest sense, it can be seen as the process of increasing the expansion of local environments to world society, in other words, as a process of increasing commitment between local environments.

#### 1.1.3.Definition of KOF Globalization

It is the acronym of German word "Konjunkturforschungsstelle" which means that Economic cycle research institute. That concept was planned by Axel Dreher at the Konjunkturforschungsstelle of ETH Zurich, Switzerland.

Index includes 24 variables and covering three areas. These areas are political globalization, social globalization and political globalization.

The strengths of the Index lies in the number of countries included over a long period of time and the pragmatic approach in respect to data used and data gaps filled, still avoiding distortions. However, some question the relevance and weighting of certain factors and think as well that smaller countries are overrated.

#### 1.1.4. Stages of globalization

Many studies have been conducted to determine how globalization is born and spread and which factors are effective in this development process. The stages that the concept of globalization goes through to its present meaning constitute the developmental stages of the concept. The common belief about how globalization develops is that globalization develops in waves. The main meaning of its development in waves is that globalization does not always develop in the same way. Globalization continues to develop and change forms in the process.

According to Aizenman (2011), there are three waves about the beginning and development of globalization;

The first wave is based on the geographical discoveries that Europe started to spread goods trade to other continents. The need for raw materials brought about by the capitalist mode of production and consumption, the necessity of selling the final products to new markets and the attempts of European nation-states to establish overseas empires for the functioning of this system can be accepted as the beginning of globalization in the sense understood today. This has accelerated urbanization, communication, economic relations and religion. This also marks the beginning of globalization.

The second wave emerged in the 16th century with the development of capitalism in Western Europe. According to this view, important technological innovations accompanying the changes in the relations between labor and capital have enabled capitalism to spread all over the world. Globalization developed at this stage. In this period, the undesirable consequences of nationalism practices accelerated internationalism and led governments to cooperate to reduce the trade

barriers they had previously built in line with the same ideas that led to the establishment of the United Nations. Until 1980, the barriers to trade in manufacturing industry goods between developed countries were largely removed. However, the situation has not been the same for developing countries. Developing countries have faced serious barriers to trade in manufacturing industry products and agricultural products. The trade barriers lifted for developing countries were limited only to primary goods that could not compete with developed countries (Steger, 2013). However, the partial reduction of trade barriers has been strengthened by the continued decline in transport costs. Trade between developed countries has enabled the selection of manufacturers from different countries by removing barriers and thus the geographical division of production processes has been paved. International specialization in production was realized for the first time and economies of scale were realized. This has helped to increase the income of developed countries compared to the rest of the world. In the second wave of globalization, most developing countries have failed to play a role in this growth of global production and services trade. The second wave of globalization has brought about policies to reduce social inequality and income inequality. Inequalities not only decreased among countries, but also inequalities within the country itself. While the effects of globalization in developing countries such as poverty reduction, income equality, and economic growth rates have been limited, these effects have been experienced in a wider scale and more effectively in developed countries (McMillan and Rodrik, 2011).

In this period, the unwanted consequences of nationalism practices accelerated internationalism and led governments to cooperate to reduce the trade barriers they had previously built in line with the same ideas that led to the establishment of the United Nations. Until 1980, the barriers to trade in manufacturing industry goods between developed countries were largely removed. However, the situation has not been the same for developing countries (Steger, 2013). Developing countries have faced serious barriers to trade in manufacturing industry products and agricultural products, and the trade barriers that have been abolished for developing countries have been limited only to primary goods that cannot compete with developed countries. Trade between developed countries has

enabled the selection of manufacturers from different countries by removing barriers and thus the geographical division of production processes has been paved. International specialization in production was realized for the first time and economies of scale were realized. This has helped to increase the income of developed countries compared to the rest of the world. In the second wave of globalization, most developing countries have failed to play a role in this growth of global production and services trade.

The persistent trade barriers imposed by developed countries on developing countries, weak investments in developing countries and anti-trade policies have made these countries dependent on exporting only primary goods. While it is a correct approach to speak of the effect of globalization in reducing inequality between countries, it would be a reasonable option to say that the social policies implemented in eliminating inequality within the country have a greater effect. However, it should be noted that these developments are not the same for developed and developing countries. While the effects of globalization in developing countries such as poverty reduction, income equality, and economic growth rates have been limited, these effects have been experienced in a wider scale and more effectively in developed countries. Even though the economic growth for developing economies meets the growth slowdown experienced during the war period, it remained at relatively low levels compared to the developed countries (Taban, 2014).

The third wave is an important turning point in the 1970s in the fundamental change of capitalism since the beginning of capitalism, and globalization has accelerated with the acceleration in the late 1970s (Wrigley and Lowe, 2010).

The third wave of globalization represents the period of globalization since 1980 and does not resemble the two waves before it. This aspect is distinctive. The first and most striking feature is the entry of a large group of developing countries into global markets. Secondly, other developing countries, except for the developing countries entering the global markets, have become increasingly insignificant in the world economy and have experienced increasing poverty as their income declines. Third, international migration and capital movements, which can be ignored during the second wave of globalization, have become important again.

These countries have been successful in increasing the labor intensive production of these goods in order to compete in the manufacturing industry goods. As mentioned before, these developing countries, which were able to export only natural resource intensive goods in the second globalization wave, were able to become exporters in manufacturing industry goods during the third globalization wave (Taban, 2014).

Perhaps the main reason why globalization is such a controversial concept is that it can result in losses as well as the benefits it brings and whether the benefit or harm will outweigh this scale is not clearly defined. In this context, although globalization does not mean that it is imposed on it, its aim is to create an opportunity for advanced states and multinational companies to expand their market shares on less developed states and thus represent a situation in which developed states can have an impact on these less developed states. There is also a view that the concept of the world order in which the economic, social and political boundaries disappear and the period of integration accelerates. However, globalization eliminates the ability of nation-states to establish regulatory and redistribution institutions, but the need for strong national institutions continues to grow. In this context, globalization becomes more difficult to manage for developing countries that do not yet have strong institutions (Yüksel and Sarıdoğan, 2011).

#### 1.2.Dimensions of Globalization in Economic Terms

There are three economic aspects of the globalization process: economic globalization, globalization of production and financial globalization. Although globalization in economic terms has different expansions, it could be stated that it consists of three sub-dimensions in general. These are namely; commercial globalization, financial globalization and globalization of production (Seyidoğlu, 2015). Commercial globalization, in the flow of goods and services between countries; financial globalization refers to the increase and intensity of financial capital movements in the international arena. Globalization of production can be explained as the realization of different sub-units of production process in different countries through multinational enterprises.

In chronological terms, although the beginning of the globalization process dates back to the 16th century, the concept of globalization in academic circles was first used in the fields of business and finance as a result of developments in information and communication technologies in the 1980s. After the 1990s, it was observed that many disciplines such as sociology, culture and media studies, international relations and political science joined this caravan. At this point, technology is the main actor of the globalization process (Steger, 2013). However, technological innovation, which is the central element of social development and change; economic, social, political and cultural areas are reflected in a certain time delay. This is due to the flexibility of change in these areas. After a technological innovation, invention and R & D processes, after being made more effective and superior than the old technologies and methods, it is used in the economic field in the production process. The first area where technological innovation is reflected stands out as the economic area. The use of new production technologies leads to new division of labor and specialization. This means the emergence of new professions. Therefore, it is seen that technological innovations are reflected in the social field after the economic field.

The political struggle of the newly developing social groups comes to the agenda with the new occupations and social strata emerging in the social field and the effort to organize and make their own weight within the society. Within each social group, there is an effort to organize and realize its economic goals in order to gain weight in its own goals. When the economic, social and political structures enter into a certain process of change and adaptation with the effects of technological renewal, the cultural field is the last participant involved in this process.

#### 1.2.1. Economic Globalization

One common view of today's world economy is that it is a global marketplace where goods, services and assets flow across national borders without friction (Rodrik, 2009). Economic globalization constitutes the basic dynamic of the globalization movement. As mentioned above, globalization can no longer be considered separate from any economic phenomenon. It can be said that capital gains the ability to change hands and countries easily and without limitation, as

technological developments can be realized, but technological developments feed economic globalization. Although the debate on economic globalization has produced a wide-ranging literature covering all the major traditions of economic and social analysis, the critical points of the discussion are centered around four key questions:

- The extent to which evidence proving that economic activities are globalizing,
- Whether a new form of global capitalism carried out by the third industrial revolution has influenced the entire world,
- The extent to which economic globalization is subject to full and effective international governance,
- Whether global competition means the end of the national economic strategy and welfare state. (Held and McGrew, 2008:29).

But the globalization of capital is not a natural consequence of globalization in communication, and even according to the internalized technology conception of capital goods now accepted by economic theory, the globalization pressure of capital must be the creator of the revolution in communication, because in order to increase its profits, communication needs to accelerate the expansion of foreign markets (Kazgan, 2015).

This dimension, which can also be called economic globalization, is in fact nothing more than the economic definition of globalization. In the strategy of neoliberalism regarding globalization, it can be assumed that the main purpose is to create a global economic order. Already, the disappearance of political, cultural and geographical boundaries maximizes the utility of capital.

The rise in the mobilization momentum of capital in the international arena has increased the interdependencies and activities between communities and countries. Therefore, cultural and political integrations can be considered as a tool for economic globalization. On the contrary, it does not seem logical to think that the main objective is cultural or political globalization and economic globalization is a tool for them.

Economic globalization, then, implies that the world is entering a process of economic integration by making goods and services move faster and more easily between countries, with barriers such as customs walls, tariffs, quotas and capital constraints that separate national economies and limit their economic relations.

In the globalizing world, companies are producing not only for the domestic market but also for the world market; it carries various stages of production to cost advantage regions; reorganize production, distribution and marketing functions on the basis of new methods such as flexible production, flexible time working, zero defective production, just-in-time delivery, customer satisfaction, after-sales services, longer warranty period, right of return, assistance in virtual environment and participation from home production.

Economic globalization refers to the increasing integration of economies around the world by reducing trade, integration, capital flows, technology transfers and barriers to direct investment. Daouas (2007) states that economic globalization is characterized by the intensity of international marketing, cross-border trade, advertising and distribution, and that financial and foreign direct investment flows supported by liberalization and advanced information technology are increasing.

According to many of the global integration in economic terms, the most important pillar is increasing economic relations. It is claimed that the world is gradually becoming a single market and that labor and capital are moving rapidly and flexibly over the world. In this sense, a significant part of the discussions of globalization and this literature refers to economic globalization from globalization. The thinkers claiming that the economic relations in terms of quality and quantity point to an unexplored state in human history say that an integrated world economy will dominate its logic in many fields from politics to law. Debates about the history and the beginning of globalization also reveal this economic emphasis. Almost all of the historical proposals for the beginning of globalization are based on a transformation or break in economic relations.

#### 1.2.2. Financial Globalization

By definition, global finance refers to the international dimension of capital transactions. In other words, when international capital movements are mentioned, all financial resources transferred by individuals or institutions belonging to a country to other countries by means of physical investments in different countries or financial instruments such as foreign bonds and stocks are understood. (Kaymakci, 2007). Therefore, the mobilization of all financial funds that cross in and out of national borders can be called as international capital movements.

Financial globalization, another economic dimension of globalization, emerges as a result of the abolition of the restrictions imposed by countries on financial capital flows and the integration of domestic financial markets with world markets(Steger, 2013). These developments have led to major increases in the international circulation of financial capital and led to the transformation of world financial markets into almost a single market. Financial globalization is a concept that expresses the elimination of national financial markets and the advanced dimension of international capital flow.

Recently, while an extraordinary globalization has been experienced in the world capital markets, the share of cross-border transactions has been increasing rapidly, so that firms and government agencies have been relieved of being dependent on domestic financial markets to meet their funding needs.

The most striking situation among the determinants of economic globalization is the spread of finance on a global scale and the rapid increase in the mobility of capital. In the aftermath of the Cold War, when the financial markets became globalized, large-scale capital flows started to take place. Together with the advantages of the information revolution, the meaning of national borders for international capital has decreased and there have been developments that can be called the end of physical space. The volatility of the exchange rate system and the growth of electronic commerce in the early 1970s led to the expansion of foreign exchange markets.

As a concept, financial globalization encompasses international capital movements, but it is more than mentioned. Accordingly, financial globalization indicates that the capital is free to circulate in the financial markets in different countries, looking for profit opportunities and looking for new and reliable markets in case of any negative weather in the market in which it is involved. The event of financial globalization developed in the post-1980 period, and the concept of globalization became widespread especially with financial liberalization (Seyidoğlu, 2003).

Historically, this process can be examined in three different periods (Öztürk, 2007):

The event of financial globalization developed in the post-1980 period, and the concept of globalization became widespread especially with financial liberalization (Seyidoğlu, 2003). The phenomenon of financial globalization emerges in the form of foreign portfolio investments internationally and other foreign investments covering short and long term financial capital. The rapidly integrating financial markets have caused the source, channels and volume of international capital movements to change. Financial globalization refers to the process of capital exchange liberalization in which it operates unhindered and uncontrolled worldwide, leading to a capital market today.

Second is the period between the First and Second World Wars. In this process, capital movements have actually ceased circulation due to the tight capital controls.

Third is the period from the Second World War to the present day. Although there has been recessions from time to time, the ongoing US-led period has led to the formation of a global financial network based on information technologies.

The main factors that make up financial globalization are liberalization of interest rates, loosening of credit controls, and privatization of various state-owned financial institutions. The resulting less constrained and expanded freedom of movement also enabled the company to increase its liquidity both in different areas of the financial sector and among the distant geographies of the world by gaining

more investment opportunities with all these positive factors. Capital and securities markets were liberalized with the efforts of Europe, East Asia, Australia and New Zealand, especially the USA, which benefited the best from these new opportunities since the 1980s, resulting in a new financial network. In the 1990s, satellite systems and the internet came into play and financial globalization gained another momentum (Steger, 2013).

There are many different criteria for measuring financial globalization. Some

of these are as follows (Günsoy, 2006):

☐ Official restrictions and the ratio of foreign assets to GDP.

☐ Ratio of financial assets to GDP.

☐ Ratio of current account balance to GDP.

☐ Interpretation of interdependence relationships in current account balances.

☐ Interpretation of differences in interest rates.

☐ Looking at the volume of total foreign exchange purchases in the world.

☐ The volume of foreign direct investments.

☐ Volume of international portfolio investments.

As it is known, the international mobility of financial capital has increased day by day throughout the history. However, while financial capital movements gain momentum, on the one hand, it increases its globalization and on the other hand, it seeks to remove all the obstacles to its globalization. Perhaps the most important obstacle of this cycle is the nation-state. Because the mechanism that allows capital to enter and exit a country is in the hands of the state, and since states want to maximize their own benefit, they can limit the freedom of movement of capital. It can be said that the current goal of financial capital is to erode the nation-state in order to eliminate this problem.

The most important of the negative effects of the globalization of financial markets are the increase in the infectiousness of the economic crises, the ability of these crises to easily jump from one country to another, and serious loss of value in

the world stock markets in a very short time. These developments are indicative of the fact that financial markets were affected by this crisis together during a crisis. These globalized markets are the primary factors that play a role in the magnitude of the severity and impact of the economic crises. An example of this is the recent 2008 crisis. The 2008 crisis began as a crisis in the United States real estate market, but later turned into a crisis that had an impact on all world markets. In this context it is known as mortgage crisis. The principle of the mortgage system is based on the borrower's use of the amount and type of credit that the borrower can pay with the current income level, and that the lender accurately measures the solvency of the borrower. In addition, financial institutions transferred the risks of loans to financial markets by creating complex derivative products and increased fragility by spreading the risk (Roubini and Mihm, 2012).

In this case, it comes to mind whether the benefits or costs of financial globalization will outweigh. A hint can be obtained by comparing the volume of net and gross capital transfers. Although developing countries benefit from capital inflows, the investments that enable them to grow are mainly due to their own savings. It is only net capital inflows that bear and represent the economic benefits of globalization. In it, speculative transactions are gross transactions that have effects that cause financial crises and severe real economic collapse(Steger, 2013). Therefore, due to the globalization of financial markets, it should be decided whether the effects of a crisis will follow an expansionist trend or how severe it will follow a diffusive trend by considering the difference between net capital transfers and gross foreign capital.

Financial ties of developing economies with the global economy have increased significantly in recent years. However, a small group of these countries gathered the lion's share of private capital inflows to industry-sourced and developing countries, which has grown rapidly since the 1990s. Theoretical models suggest that international financial integration is a set of mechanisms by which economic growth in developing countries can be stimulated. However, a systematic review of evidence reveals that it is difficult to establish a strong causal relationship between financial globalization and economic growth. Financial integration has a

positive impact on growth(Steger, 2013). However, if fiscal integration positively affects growth, there is no clear and robust empirical evidence that the impact is quantitatively significant.

As a result, the globalized financial capital, which has never been seen in history before today, tries to overcome the obstacles to its growth and as a result accelerates the economic dimension of globalization. This process is mostly against the developing / underdeveloped countries and results in the erosion of the developing nation-state(Roubini and Mihm, 2012). It can be argued that this tragic situation arises from the weaknesses of the environment, such as the need for advanced technologies and financial capital in the hands of the developed countries, resulting in dependence on developed countries.

#### 1.2.3. Globalization of Production

As a concept, globalization in production is the transfer of some of the production activities across the border by companies such as making transnational fixed capital investment, becoming a partner to a transnational company or making contract manufacturing agreements. In this context, many companies today both sell goods and services to foreign countries and buy raw materials and semi-finished goods from them. Consequently, companies are expanding their production areas by engaging in international activities, while increasing foreign trade, while shifting their production to low-cost countries. In addition, established sub-employer-type enterprises produced by the purchase of some parts in different countries by contributing to foreign trade (Ipcioglu and Uysal, 2007).

This concept refers to the spread of cross-border production and the realization of a significant part of world production by multinational companies and outside the borders of the mother country. The globalization of production means that companies operating on a country basis spread their production activities to different countries and even to different continents. Production activities are carried to the international arena in a variety of ways through multinational companies, such as cross-border fixed capital investments, cross-border subsidiaries and contract manufacturing agreements (Yüksel, 2011). Such investments made by multinational

companies outside their home countries are considered within the scope of foreign direct investments.

New production processes have been adopted in the globalizing world in order to provide tax advantages, which are the basic conditions for the continuity of foreign investments, and to provide low labor costs. In short, globalization has created new opportunities and competitive challenges that push manufacturers to look for more efficient methods to produce their products. Manufacturers have traditionally avoided applying vertically integrated production models, allowing manufacturers to outsource part of the production process, and thus seeking more efficient production tools to divide production into stages or tasks. Thus, not all production stages have to be carried out in the same place and some production processes can be performed in different countries. This is the globalization of production. For example, most global production chains consist of separate companies that specialize in producing specific components of a particular end product. Most of the time in global production there are a number of affiliates, subsidiaries and branches from the same multinational companies that are linked together in a global production chain.

#### 1.2.4. Social Dimension of Globalization

Consumption habits, clothing, traditions and customs have started to be similar in the universal dimension. With the effect of global culture, local cultures have given themselves to the sphere of influence of this global culture (Internet, television, cinema etc.). Language, religion, race and unity of interest are effective in turning similarity into conflict after a certain point. Culture and cultural identities shape patterns of reconciliation, separation and conflict. However, most of these conflicts stem from the lack of information. In this sense, the sharing of information in the globalization process, the community being participatory and pluralistic, cultural diversity, tolerance and participation will spread and will lead to the transformation of conflicts into consensus.

The realization of this change between individuals, social groups and societies and the emergence of social exchange relations, human values, human rights and democracy created by all kinds of business relations bring socio-cultural

globalization to the forefront. In fact, the increase in the marital relations between different countries from the global working opportunities of the expert-based labor force emerges as parts of the socio-cultural globalization process.

#### 1.2.5. Technological Dimension of Globalization

Since the 1980s, the renewal of information and communication technologies and the widespread use of these innovations in all areas have abolished the old meaning of space and distance in the world. Although this may have made its first impact in the financial markets in the context of globalization, it has spread from politics to culture, from trade to the environment. Technology is not a sufficient condition in the process of globalization; it is a mandatory, essential condition.

It can be said that the most prominent feature of the globalization process of production systems is the emergence of new production organizations equipped with programmable automation technologies, depending on the developments in micro electronics (integrated circuits, semiconductors, etc.) (Ipcioglu and Uysal, 2007). The place of technology in the formation of this new understanding is undeniably important (H. Erkan, 1998, Bozkurt, 2000: 82).

Technological globalization significantly affects industrialization strategies and reveals that the restructuring that changes the technology base of production is linked to this rapid globalization in the world.

Technology is being internalized in new growth models. The importance of education (investment in human) and the role of human capital are emphasized on the basis of the fact that efficient use of advanced technologies is possible with high quality manpower. Even reports of international organizations that have imposed restrictive monetary and fiscal policies in the past are linked to the accumulation of human capital and long-term growth.

In general, it is true that we are turning to a world with less protectionism from a commercial point of view and that there is a rapid globalization in the field of production. Production is rapidly internationalizing, trade and financial markets are becoming liberalized and globalized. However, economic and social development as a whole does not globalize at the same rate. Today, in many developing countries,

the lack of capital accumulation, hunger, malnutrition and low level of education, which slow down economic growth and social development, remain a problem. The IMF and World Bank-based stabilization and structural adjustment programs implemented in these countries prevent the increase in savings and investments that enable rapid growth and dynamics of industrialization. It is becoming increasingly difficult for these countries to participate in the race to produce technology. Countries that have participated in the process of technological globalization and have come to the brink of technological production seem to have learned to be more cautious in this process.

In the extreme globalist view, the main source of power and authority is now in the hands of global capital. The basic motive of global capital is profit. Taking advantage of technological advances and the communications revolution, global capital considers the entire earth as a sphere of influence in order to maximize profits, disregarding the boundaries of the nation-state (Ipcioglu and Uysal, 2007).

Globalization, which has intense technological breakthroughs and communication in its ambition and still under the influence of socio-economic structure, has become a concept used in many disciplines ranging from economy to business administration and social science. Consequently; global market, global strategy, global company, global product, global manager, global workforce, global competition, global culture and so on. concepts are commonly used in society today.

The concept of global strategy can be defined as the identification of common denominators between different national or geographic markets and the implementation of common strategies for all audiences united in this common denominator. In this respect, globalization, which lifts the walls between national markets, is a situation that can create great threats and opportunities for businesses as it brings many companies belonging to different nations in a common market.

Countries must grow in the long run in order to maintain their assets and profitability. Therefore, they have to choose and follow the sectors in which they operate very well. Therefore, not every sector has the characteristics of applying global strategies for every company (Roubini and Mihm, 2012).

Accordingly, not every sector can be a global sector. A global sector is a sector in which the strategic positions of competitors in major geographical or national markets are fundamentally influenced by their overall global position. Basically, a sector has become a global sector because there are economic or other advantages in many national markets for a competitively competing company.

As mentioned before; The terms globalization and global managers are popular idioms in international activity. They show universal interest in efforts to operate worldwide. But these terms do not have the same meaning as international activities. Today, an extraordinary number of companies are engaged in international trade and investment, but relatively few are global enterprises. The distinction is important - even though companies have traded internationally for centuries, the transition to true globalization is more a new phenomenon.

#### **CHAPTER 2**

In this section, in order to provide a background for the study, the concept of economic growth, theories of economic growth, and especially due to its interest in the study will be given information about external growth theories. In addition, methods to determine the need for external financing during the growth process and globalization will be briefly explained.

The dramatic transformative role of contemporary globalization and its impact on people's lives is now well known. Consecutive results in globalization are neither flat nor parametric. There are various studies in the economic literature to determine whether globalization has any impact on economic growth.

Explanation of the factors on which economic growth is based has always played an important role in econometric analysis studies. Traditional growth models explain growth differences between countries with differences in the capital accumulation of countries. However, new growth theories try to explain these differences with new factors(Erdinç, 2013). Countries' terms of trade, geographical location, social capital, cultural wealth and the influence of institutions are some of the factors used in explaining economic growth.

Since the 1980s, economic and financial globalization has gained momentum in the world, many countries have switched to a free market economy and have started to remove the restrictions on the movements of goods, services and capital between countries. As a result, countries have become integrated with each other and there have been significant increases in global trade and capital volume (Umutlu, 2010). On the other hand, the risk sources facing countries have increased and the number of financial crises in the world has increased significantly compared to the past. It is difficult for countries to achieve macroeconomic and financial stability. The deterioration in the macroeconomic and financial environment causes serious damage to the economies of the country, especially economic growth.

According to the traditional version, the heavy debt burden requires the state to increase taxes in the future in order to finance high debt payments. This increase in taxes means a decrease in investments after taxation and thus a slowdown in growth. According to the broader approach, even the state needs to postpone debt due to its high external debt burden and therefore high external debt service costs, even to finance general public expenditures. At the same time, uncertainties about the future debt profile reduce investment incentives, leading to low investment and low growth.

In this context, determining the relationship between economic growth and tax revenues will give important signals in terms of shaping tax policy.

We can summarize the distinctive features of growth as follows (Taban, 2014):

- Economic growth is a quantitative phenomenon with a predominant quantitative aspect.
- Macro is a phenomenon.
- An effect such as economic revival or instability can be seen with the growth.
- It is not related to substitution investments.
- It is not the nominal increase in GDP, but the real increase.
- It has no direct positive effect on income distribution.
- It is about long term.

As is known, economic growth does not take place in one type. It can occur in positive ways, but also with negative economic effects. In this context, some examples can be porvided to some of the different types of prominent (Erdinç, 2013):

Open Growth: It is the type of growth that occurs in countries that have adopted the free market economy and is the result of effective utilization of transnational labor-capital movements.

Closed Growth: It is a type of growth that is based on intensive state interventionism in order to minimize the dependence on foreign countries and is the result of the country trying to employ its own resources in production.

Spontaneous Growth: The type of growth that is achieved by minimizing the impact of the state on the economy and generating spontaneous action of production factors within market conditions.

Planned Growth: It is the growth that occurs as a result of making a decision within the framework of the state mechanism on how to use the resources in order to increase efficiency by ensuring efficiency in all economic sectors.

Balanced Growth: The theory is based on the dependency relationship between sectors. Accordingly, in order to achieve a balanced growth, a mutual balance between the external demand and the domestic demand is necessary. In other words, each output at the end of the production process is a type of growth based on the logic that it has to find a market for consumption.

Unbalanced Growth: It is a type of growth based on the fiction that there are inequalities, imbalances and hierarchies within the economic system, but it is possible to obtain economic benefits from these differences by assuring the impossibility of a balanced growth in every aspect.

As it is understood, economic growth is related to many different variables. Therefore, such a complex structure has been evaluated in different ways by various economists.

### 2.1. International Trade Theories

The fact that there are many countries with different characteristics on a world scale and an uncountable variety of goods show that it is not possible to explain all these complex structures with a single theory. When the fact that the saving in developing economies is insufficient, the fact that the current savings are not directed to the areas that will provide growth and especially the investments emerges as to whether the money and capital markets operate effectively. Certainly, it is expected that financial markets, which operate effectively, will contribute to the

achievement of the main macroeconomic targets, in particular the increase in employment in parallel with the growth rate. In this context, the increase in tax burden on the financial sector is considered as taxation of savings in a way. This may lead to fund fluctuations from the financial sector and draws the savings that should take place in financial markets to burial areas such as gold, foreign exchange and real estate. Thus, the size and functionality of the financial markets are reduced and the role of growth as a financier is weakened. This process, which manifests itself with the contraction of the supply of funds in the money and capital markets, puts pressure on investments by raising interest rates, thus adversely affecting growth dynamics and increases the borrowing cost of the public sector. The classical school has made major contributions in the field of international trade theory as a pioneer of international trade theories. Adam Smith (Yüksel and Sarıdoğan, 2011) was the first to make a concrete analysis of the subject's absolute superiority. Adam Smith's theory of explaining the causes of foreign trade is the Theory of Absolute Advantages. However, Theory of Absolute Advantages (and the free trade and international division of labor it promotes) shows that both countries will benefit from foreign trade and that the world's resources will be utilized in the most appropriate way. According to the Theory of Absolute Advantages, each country is interested in exporting products that it produces more efficiently than other neighboring countries and imports other goods.

Smith argues that a country whose production costs are higher than that of all of its partners cannot export profitably. This theory does not allow us to understand why a country that would be more productive in the production of all products would be interested in maintaining trade relations with neighboring countries (Taban, 2014).

David Ricardo shows that trade between the two countries can be advantageous, even if one of them has lower production costs for all goods: Comparative advantage theory. Accordingly, whatever production factor a country possesses is rich, it gains comparative advantage in goods that use that factor more intensively. In other words, it produces goods at a cheaper price, so it must specialize in these areas (Yüksel and Sarıdoğan, 2011).

Although Leontief's critique of methodology has come to the fore, the common point of the subsequent discussions is that the Heckscher-Ohlin Theory has succeeded in explaining trade between more unskilled labor-rich developed countries and capital-rich developed countries. After these explanations, the increase in the trade between the capital rich and developed countries with the 1960s has prepared the ground for the emergence of new international trade theories.

The new theories of international trade have made significant progress in this area in terms of revealing the causes of trade between countries of different structures and sizes and goods of different qualities. In addition to the cost advantage created by economies of scale, firms' differentiation of products makes it possible for consumers to choose between different types of a particular commodity from different countries, thanks to the increasing product variety and falling costs, allowing the increase of consumer welfare. These are the differentiated products that are subject to international trade, which are different types of certain goods, analyzed by the theory of monopoly competition (Yüksel and Sarıdoğan, 2011).

## 2.2. Theories of Economic Growth

As stated above, globalization is a multidimensional concept and is shaped by the interaction of all these dimensions. Therefore, when analyzing the phenomenon of globalization, it is important to consider these different dimensions.

## Smith's Growth Theory

The concept of economic growth was discussed for the first time in the Classical Economic School. Adam Smith can be regarded as a pioneer of growth theorists with his theory that allows growth to be increased, although not as comprehensive as modern growth theories. As it is known, the theory is mainly based on the thesis that division of labor and specialization positively affect growth. Accordingly, he argued that the fact that different firms undertake only the production of certain goods and / or the division of labor of workers working in a firm by producing certain parts of a good leads to specialization and increases productivity (Yılmaz and Akıncı, 2012).

In the development of their models, Smith and Ricardo explain the economic development in terms of land stability and income distribution. Smith (1776) shows that the division of labor allows for increased productivity, and thus increases the likelihood of a virtuous growth cycle. In general, the Classics see economic growth as a result of capital accumulation.

## *Malthus's Growth Theory*

Malthus draws attention to the imbalance between population growth rate and agricultural output rate. Accordingly, while the population follows a geometric increase, the output in agricultural products is followed only by an arithmetic increase (Ying et al. 2014). Therefore, the output amount of agricultural products cannot keep up with the rate of population growth and lags behind it causes the problem of scarcity. Therefore, the fact that it enables the production of foodstuffs necessary for the new population that emerges with the increase in the population will cause the population growth rate to slow down.

## Ricardo's Theory of Growth

Although Smith was the first economist to examine the concept of growth in the classical school, it can be said that David Ricardo was the economist who developed the most detailed growth theory and contributed the most to the law of growth. Having provided a more detailed interpretation of the relationship between Malthus and the land-population ratio, Ricardo proposed the theory of declining yields and functional income distribution theories, which are an important explanation tool in traditional growth theories (Ying et al. 2015). He also tried to explain the effect of the profit motive of the investor and entrepreneur on growth. Even if the capital accumulation is realized and productivity increases with the developments in technology, it is assumed that the economic growth will be stable again after following a positive course. The reason for this is the fact that the law of decreasing yields in capital is valid and the insufficiency of the increases in technological developments (Günsoy, 2013).

# Marx's Theory of Growth

Another model that can be evaluated within traditional growth models is the socialist growth model. It is possible to say that the most important representative of the socialist movement was Karl Marx because of the socialist thought-centered theory that he developed, which had a wide impact on the world and reached large masses. Marx's ideas about growth are more of a general critique of capitalist growth In this context, to understand this theory developed by Marx, three basic concepts need to be known: labor value theory, value theory and profit theory (Üzümcü, 2015).

In Marx's growth model, these three concepts are interrelated. Accordingly, the rate of profit is inversely related to the organic composition of capital; is in the same direction with the surplus value. In this context, in order to increase the rates of profit in the capitalist system, it is necessary to increase labor productivity, in other words, to use fixed capital at higher levels. Increasing the organic composition of the capital will lead to lower profit rates. Therefore, the decrease in profit rates due to the increasing competition in the capitalist system will cause the liquidation of small enterprises from the market. In addition, with the growth of the organic composition of capital over time, labor will have to be supported by more capital. As a result, less labor will be equipped with capital to increase productivity and increase total profit. This would naturally lead to an increase in the number of unemployed Marx referred to as the reserve industrial army. Therefore, due to the decrease in the share of labor in production, the insufficiency of demand will be seen due to the increase in the share of capital, and the increase in stocks, unemployment and bankruptcies will cause the collapse of the capitalist system after growth (Taban, 2014).

# Schumpeter's Growth Theory

Another theory of economic growth belongs to Schumpeter. According to Schumpeter, growth is not necessarily a framework that can be framed by quantitative data. Education, health, welfare, etc. such qualitative factors should be considered (Schumpeter, 2010). Therefore, it can be said that Schumpeter evaluates economic growth together with the concept of economic development.

What he defines as innovations are combinations of production factors in different forms. Entrepreneurs are those who implement and apply these combinations. According to him, the main reason for the growth is not the increase in population or financial capital, but innovations and entrepreneurs. The profit generated by the entrepreneur in a particular industry provides the basis for other entrepreneurs to follow it and to create different areas of profit by using this innovation in different industries (Yılmaz and Akıncı, 2012).

Thus, innovations emerge in different industries to form a cluster. These new investments, mostly supported by loans, are a growth that leads to the demolition process, according to Schumpeter.

## Keynes's Growth Theory

Although it is not a direct growth model, one of the important explanations about growth has been put forward by Keynes. According to him, effective demand from consumption and investment expenditures is the main factor determining the course of economic growth. Therefore, in order to overcome the economic recession, the demand must first expand. Because expanding demand will melt stocks and melt stocks will trigger investments and increase the amount of existing investment. As can be expected, as a result of this, the economy will be shifted from underemployment to full employment and growth will be achieved (Yılmaz and Akıncı, 2012). It is remarkable in Keynes's theory that he ignores technological innovations and the quality of labor. It can be said that the main reason for this is that it is studying the short term. In other words, it can be argued that the main purpose of the study is not to examine the growth in the long run, but to try to show how the economy can reach full employment from underemployment in the short run.

## Harrod - Domar Growth Model

It can be said that Harrod made two important contributions to the theories of growth. The first is that the market mechanism assumes whether full employment can be tested not only in a static or static growth, but also in a dynamic economy. The second is that in the free market conditions where the state does not exist,

Keynes has proved that full employment cannot be achieved in the same dynamic state as in the static situation (İnal, 2013).

In the model, the necessary and actual growth rates are compared and comments are made on three different situations. The first is the equilibrium state that occurs when the required growth rate is equal to the actual growth rate. Such equality shows that planned savings and investments are realized at the end of the period. The second is the fact that the actual growth rate, which is called the inflationary situation, is higher than the required growth rate. In other words, the growth trend at the end of the period is higher than planned at the beginning of the period. In this case, demand increases and entrepreneurs try to raise their production levels in order to meet increasing demand. As a result, demand transcends supply and moves away from the equilibrium point.

Harrod tries to bring his model closer to the real life situation by stating that the natural growth rate and the required growth rate depend on the low likelihood of an accidental realization in an economy (Taban, 2014).

In the Domar model, it is argued that the capacity-building and incomeincreasing effects of investments should be equalized in order to talk about a balanced growth in the economy. Accordingly, the main effect that increases total demand is the increase of the income of the investments. However, in order to increase the income of the investments, the total amount of investment realized at the end of the period must have reached a higher level than the previous period. This is because it is only possible to increase the income of the investments and thus the demand and income level may increase.

## Rostow's growth theory

By evaluating the experiences of developed countries, Rostow divided the process of industrialization into various stages and states that developing countries should also pass these stages.

According to Rostow, the stages of growth are:

- Traditional society stage
- Preparation phase
- Transition phase
- Economic maturity stage
- Mass consumption stage

According to Rostow, the traditional stage of society is dominated by the agricultural sector and growth is stagnant due to lack of technological change. At this stage, the economy has settled on a low income balance and therefore savings are negligible. The stagnation in the economy gains continuity as the savings made in very small amounts are made in areas where social productivity is very low.

The preparatory phase is where the determinants of growth begin to dominate the country. At this stage, the necessary conditions for the start of growth are prepared. Although the basis of the economy is based on the agricultural sector, now the process of modernization has started. When it comes to action, savings have a certain share in the GNP of the country. The rate of money investment and savings has been able to increase to 10 percent of national income and more (Taban, 2014).

The stage of economic maturity is the stage where savings are now invested. At this stage, income growth is higher than population growth. A significant portion of the income is continuously invested. The stage of mass consumption is the stage in which the country provides continuity in growth. The condition of passing all these stages is that the country produces capital goods, not consumption goods (Taban, 2014).

*Neo-Classical (Solow) growth theory* 

Solow is the pioneer of the neoclassical growth model. Unlike the Keynesians who see balanced growth as an exceptional case, this model demonstrates the possibility of balanced growth (Taban, 2014).

Solow examined the effects of savings, population growth and technological development on the growth and the effects of these variables on each other. Solow's model is an important touchstone in understanding why some countries are poor and others are very rich.

The main reason why the Solow model is called a neo-classical growth model is that it is based on neo-classical thinking. The assumptions on which the neoclassical growth model is based can be listed as follows (Webb and Martin, 2017):

- The model considers an economy that produces and consumes homogeneous single goods. This single commodity also constitutes the country's GDP.
- Assumption of single goods means that there is no foreign trade and a closed economy.
- Savings and investment rates are equal. No distinction was made between those who made savings and those who made investments, and those who made savings were considered as those who made investments.
- The law of decreasing yields in the economy is valid.
- Technology is external. At the same time, technology can be utilized without incurring any cost in the economy.
- Full competition and full employment conditions prevail in the market.
- Fixed yield function according to scale is accepted for the production function.
- International convergence hypothesis is accepted. In other words, it is assumed that developing countries with the same conditions in the long run can grow faster than developed countries and close the welfare gap.
- The economy will always grow in a balanced way.

#### Intrinsic Growth Model

The neoclassical growth theory describes a balanced growth in which capital per capita increases at the same rate as per capita production or consumption. When equilibrium is achieved, the rate of increase in per capita income and consumption are at the same level as the rate of technological development.

In this model, which considers population growth and technological development to be external, the public has no significant role. Neoclassical growth model; it saves the economy from the knife-back equilibrium condition and the government's intervention in the economy. However, this time, a new problem emerges, such as the accumulation of knowledge, technology, and human capital as external actors of growth. Internal growth models reveal the importance of the state in the economy and develop an uninterrupted growth mechanism in developed economics without becoming stagnant. The government establishes an open economic system by providing better quality health and education services, promoting R & D and technology transfers, protecting property rights and strengthening communication networks. Moreover, the state re-plays an active role in the economy by removing barriers to competition. In short, internal growth theories seek economic growth within the system (Riedinger, 2017).

The basic assumptions on which the internal growth model is based:

- Economic growth should be sought within the system and there are no factors affecting the system from the outside.
- Technological development is internal and influenced by economic decisions.
- Instead of the Neo-classical production function based on decreasing yields, the production function based on increasing yields is used.
- According to Endogenous Growth Models, full convergence hypothesis is not accepted and it is emphasized that less developed countries should take necessary measures in order not to increase income gap with developed countries.
- Factors such as education, health, public policy and investment rate contribute positively to economic growth in the long run.
- The state needs to intervene in the economy in order to achieve an optimal growth rate.
- Information is a public good that everyone can access to it and there is no exclusion of anyone in the use of information.
- The extent to which other economic agents benefit from the information resulting from technological development is of importance.

• The accumulated capital factor grows internally over time and its marginal productivity increases.

# 2.3. Empirical Literature

Explanation of the factors on which economic growth is based has always played an important role in econometric analysis studies. Traditional growth models explain growth differences between countries with differences in the capital accumulation of countries. However, new growth theories try to explain these differences with new factors. Countries' terms of trade, geographical location, social capital, cultural wealth and the influence of institutions are some of the factors used in explaining economic growth.

Since the 1980s, economic and financial globalization has gained momentum in the world, many countries have switched to a free market economy and have started to remove the restrictions on the movements of goods, services and capital between countries. As a result, countries have become integrated with each other and there have been significant increases in global trade and capital volume (Umutlu, 2010).

According to the traditional version, the heavy debt burden requires the state to increase taxes in the future in order to finance high debt payments. This increase in taxes means a decrease in investments after taxation and thus a slowdown in growth. According to the broader approach, even the state needs to postpone debt due to its high external debt burden and therefore high external debt service costs, even to finance general public expenditures. At the same time, uncertainties about the future debt profile reduce investment incentives, leading to low investment and low growth.

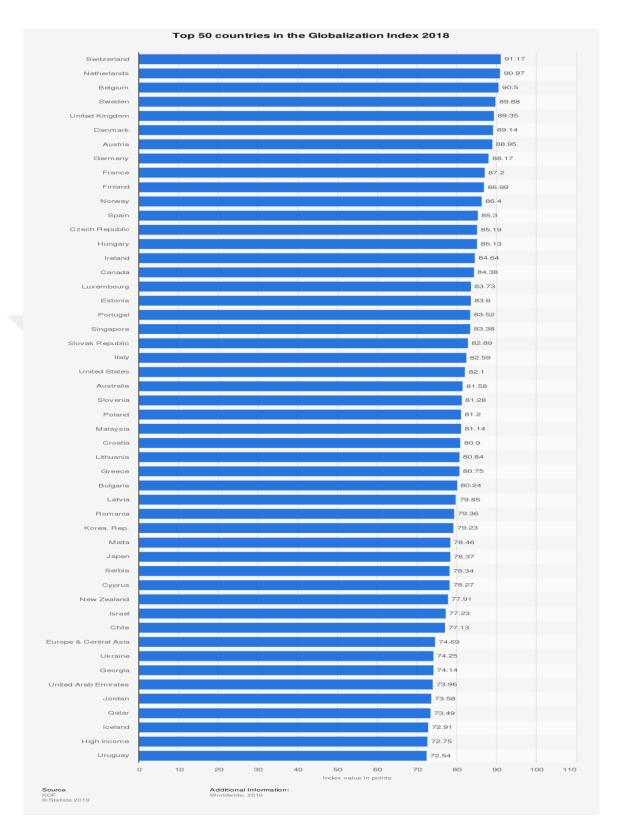


Figure 1. Top50 Globalization Index by Country

**Source**: Statista, 2018 <a href="https://www.statista.com/statistics/268168/globalization-index-by-country/">https://www.statista.com/statistics/268168/globalization-index-by-country/</a>

Liberalization in the fields of international trade, investment and finance has given a new impetus to capitalism, which attempts to institutionalize on a global scale. State-centered economic policies such as tax, investment, trade, finance and social security; States in terms of creating employment and increasing social welfare in terms of the need for international foreign capital began to take shape in line with the expectations of global economic actors.

The table above shows the countries that are rapidly globalizing. It is especially noteworthy that European countries are in the top 50 places. This table also shows how quickly countries adapt to changes.

Innovation; There are two different dimensions, technological and organizational. Networking and cooperation between countries have become more important today than in the past in terms of competitiveness. In addition, intrafirm organizational innovations can play a vital role in gaining benefits from technological change to increase competitiveness. When technology-based innovation is considered, it is seen that especially technology-based small firms have started to play a more important role in the development and diffusion of new technologies (McMillan and Rodrik, 2011).

#### 2.3.1. International Trade and Economic Growth

For Krugman (1990), the reasons why commercial liberalization is beneficial for economic development in developing countries are as follows: first, developing countries have labor intensity, diversified production patterns in agriculture and manufacturing. People have low per capita incomes, and markets in these countries are often small. The free trade regime allows low-cost producers to increase their production far beyond the demand in the domestic market. Second, industrialization based on local industry leads to higher capital needs, while the free trade regime provides a much larger permanent income. On the other hand, open trade regimes require more confidence in the market. Empirical evidence on the positive effects of trade liberalization is substantial.

Trade liberalization has a positive impact on a nation's economic growth, income, GDP growth and poverty level. Finally, studies also suggest that there may

be short-term costs in terms of decreasing the real wages of unskilled labor and / or declining at the beginning, as it drives away inefficient firms from the business world due to greater competition (Bhagwah and Srivnivasan, 2001). Indeed, it has been found that failure to make progress in these areas may limit the potential benefits of trade deficit. Bhagwah and Srivnivasan (2001) found that if the investment in human capital was stronger, the deepening of the financial markets, the lower price inflation and the availability of public infrastructure, the growth effects of the gap could be significantly improved.

## 2.3.2. Foreign Investment and Economic Growth

Foreign direct investments increase the capital of an existing company or acquire a company in a country or provide the founding capital for a newly established company. Thus, the companies located in another country and with itself technology, business information and provides the control authority of the investor (Karluk, 2002). In other words, foreign direct investment is the use of the firm in one country to control and distribute its assets in another country.

Foreign direct investments contribute to the repayment of foreign debts of these countries by providing capital accumulation to the host countries through foreign exchange input and they can increase economic growth by encouraging foreign technologies and new products in their economies. Foreign direct investments are also often associated with secondary benefits through technology distributed to companies in the country of investment. Foreign direct investments contribute to the country's acquisition of new technical knowledge by introducing new technologies and by training local employees who can then work for local firms.

Providing unfair competitive advantage over domestic enterprises that cannot compete through foreign companies' high capital, advanced technology and superior knowledge such as management knowledge, economic growth may be adversely affected. However, the fact that the positive contribution of foreign direct investments is greater than the negative effects has formed the basis of attracting foreign direct investments.

### 2.3.3. Globalization and Economic Growth

The relationship between globalization and economic growth is a subject that is highly discussed in the literature on growth and development. Theoretical growth studies sometimes report a controversial and definitive discussion of the relationship between globalization and growth.

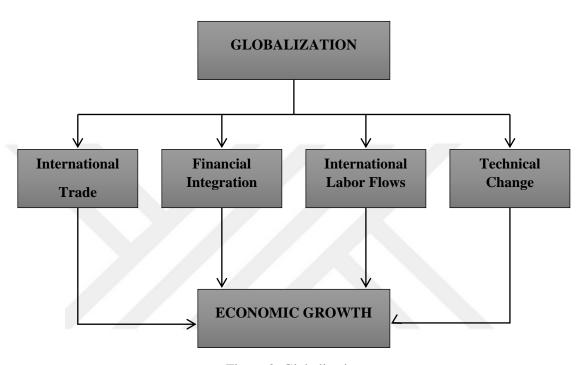


Figure 2. Globalization

Source: Worldwide, 2016

Sachs and Warner (1995), in the 1970-1989 period with the convergence analysis in developing economies as an indicator of globalization in the level of trade openness investigated the impact of economic growth. They found that increasing trade openness among economies had a positive impact on economic growth.

Edwards (1997) examined the relationship between regression estimation and total factor productivity and openness in 93 countries between 1960 and 1990. It was observed that the increase in openness increased the total factor productivity faster in the countries (Rao, 2010).

Dollar and Kraay (2004) examined the impact of globalization on economic growth through regression analysis in 101 countries in the 1980-1990 period. The

results of the analysis showed that globalization causes faster growth and causes poverty reduction.

Dreher (2006) tested three main globalization indices in 123 countries in the 1970-2000 period to see if globalization affects economic growth by using OLS and GMM methods. The author concludes that globalization promotes economic growth.

Chang et al. (2011) investigated the effects of globalization and social globalization on output in G7 countries during 1970-2006. They found that globalization and social globalization contributed positively to the product as a result of empirically applied multiple structural fracture cointegration test.

(Ying at al. 2014) examined the long and short term relationships between globalization and the growth of ASEAN countries between 1970 and 2008 through panel data analysis. It has shown that economic globalization has a positive effect on growth, social globalization has a negative effect and political globalization has a negative effect which is not significant.

Gozgor and Can (2017) examined the relationship between economic globalization, diversification of exports and economic growth by using unbalanced panel data analysis in 139 countries in the period 1970-2010. Granger causality test results show that there is a two-way causal relationship between economic globalization and economic growth. Moreover, it was concluded that export diversification and economic globalization were positively associated with economic growth only in upper middle income economies.

# 2.3.4. Emprical Review

Table 1. Litreture Review

Study	Aim	Sample	Econometric Method	Results
Samuel A. (2010)	Effects of globalization on economic growth.	(1970-2008) 29 SSA	Least Squares Method and Seemingly Unrelated Regression	Foreign Direct Investments accelerate economic growth. However, there is no relationship between financial developments and economic
Dreher(2006)	To create an index which represents economic, political and social dimensions of globalization.	(1970-2000) 123 Countries	OLS and GMM	growth.  Countries which have high globalization rate show that developing faster in addition they have higher economic growth rate.
Jenatabadi and Samimi (2014)	To find out whether economic globalization have any effect on economic growth.	(1980-2008) 33 OIC (Organizations of Islamic Cooperation Countries)	Dynamic panel data analysis (GMM)	In these countries economic globalization impacts economic growth on positive way. That positive effect is related by human capital and financial power. Developed countries demands more benefit developing and under developed countries from economic globalization.

Kılıç, (2015)	To determine the effects of economic, political and social globalization on emerging countries.  Determine the relationship between variables and political, social and economic globalization.	(1981-2011) 74 Emerging Countries	Fixed-effect least squares method and Panel Granger causality Test	Although economic growth is affected by positively from political globalization, social globalization affects negatively.
Sakyi (2012)	To obtain whether economic globalization have any effect on democracy and income in sub-Saharan countries.	(1980-2005) 31 SSA	FMOLS	In long term globalization influences economic growth positively.
Türedi (2016)	Consider whether globalization have any effect on economic growth.	(1996-2014) 40 emerging countries	Fixed effects panel data approach.	The countries which that used at the analyze part, globalization significantly effects economic growth positively.

**Source:** Created by author

#### **CHAPTER 3**

In the last quarter of the 20th century, there was a consensus among those leading economic policies that liberalization in financial markets would have a positive impact on economic growth and especially on the financial development of developing countries, and the free movement of capital accelerated. However, developing countries that are involved in these practices and want to realize their economic development more rapidly experience various problems in adaptation to the process and the increase in economic risks and breakages due to unlimited liberalization from time to time has led to questioning the contribution of financial liberalization to economic growth. Therefore, the relationship between the globalization process led by this structural transformation in financial markets and economic growth and financial development has become one of the main research topics of academics (Helhel, 2018).

The current world order has started to crack as a result of the economic transformation but there has not been any change yet. Even though the hegemony of the US, which emerged as a global hegemonic power in the twentieth century, has weakened, it still continues. In this process, China, India, Russia, Brazil, Turkey, Mexico, Indonesia geopolitical location of the country, is noteworthy for the growing influence of emerging economic and political power.

Political instability is a factor that narrows the horizons of policy makers and thus leads to short-term macroeconomic policies. As a result, policy makers change the direction of macroeconomic policies more frequently, which increases policy volatility and adversely affects economic performance. The increase in political change will also increase political uncertainty and negatively affect economic decisions directly related to production, such as investments and savings. In countries where political change is frequent, investors will turn to the instruments that maintain the real value of their assets, which will lead to a decrease in fixed capital investments and an increase in liquid and speculative investments.

On the other hand, the relationship between political instability and economic performance is not always from political instability to economic performance. Low economic growth may also undermine political stability.

Globalization facilitated the universal circulation of physical capital and human capital, and the economic interaction that started at the social base supported cultural, social and political interaction and led to the formation of power associations in the same geographical regions. It is clear that all this mobility will trigger changes in all areas of social life and will have a developing and integrating effect on societies.

There are many empirical studies examining the effects of globalization on economic growth. In line with the developments in foreign direct investment, technological transfers and capital flows, globalization is accepted as one of the most important concepts for economic development. It is a controversial issue on which capital flows in the form of direct capital inflows positively affect growth, but indirect capital inflows, which are of borrowing type, may adversely affect growth (Sever, 2010).

In 2001, the emerging economies were introduced as BRICS, referring to Brazil, Russia, India and China. However, it is not thought that these countries will cooperate as a new balance element in the international system and they will take part in a formation. With the inclusion of South Africa in these countries, the group, which is called BRICS, is closely followed by developed countries. This new formation aimed at establishing a cooperation mechanism in time and aimed to create a competitive environment where more fair and equal conditions prevailed in the international system.

BRICS, which is seen as a new alternative block dominated by Asian countries, has created a fairer expectation of a world order for developing countries. BRICS is also known as Rising South, which aims to increase cooperation among member states in areas such as finance, economy, technology, health and security. BRICS, which includes the desire for more cooperation and acceptance of itself as a powerful formation against the USA and the Western countries, which is called the

developed North; It demands more influence in international financial institutions such as the IMF and the World Bank. In line with these demands, the IMF and World Bank reforms in 2016 increased the representation quotas of the existing BRICS countries, but did not provide the necessary representation chances (İstikbal, 2018).

The increasing influence of emerging market economies in the global economic system is creating new economic actors. Since the 1970s, the economic growth performance of developed countries is worse than that of developing countries. However, as a result of the financial crises of the 1980s, when neoliberalism started to rise, developing countries performed slightly worse. These problems are not normal for the new world order. Nevertheless, developing countries that pursued developmental policies in the grip of neoliberal policies have recovered and attracted attention with high growth rates. It has been argued that developing countries, which are gradually increasing their power in the global economic system, may soon leave developed countries behind. Indeed, China has become the world's largest economy in terms of purchasing power parity. In addition, according to the market rate in 2028, China is predicted to be the world's largest economy (İstikbal, 2018).

As a matter of fact, it is calculated that BRICS countries will surpass G8 countries in size in future projections. According to these findings, a more fair economic system discourse and the desire to represent less developed and developing countries become more important for BRICS.

# 3.1. BRICS Economies: An Overview

In addition to the Goldman Sachs (2003) report, BRICS countries, which are predicted to become even bigger economic powers within 40-50 years, have been accepted as the major developing countries in the world economy after 2001. Due to the high population in countries such as India and China, the amount of production is very large, the abundance of resources in South Africa and Brazil, the presence of strong human capital in engineering and science in Russia and Brazil, as well as the balancing of resource dependence and geographical trends of these countries to the world economy successfully makes it easy to integrate.

As can be seen from the table, China, which is the second largest economy in the world today, is ahead of the other five countries in macroeconomic indicators such as total GDP, the ratio of gross savings to GDP, the amount of foreign direct investment and inflation rate (with consumer prices).

Table 2. BRICS country economic indicators summary and comparison

Country	Year	GDP	GDP	GDP Per	Unemployment	Inflation
			Growth	Capita	rate (%)	(%)
			(%)			
South	2016	\$296.341 billion	-1.06	\$13247	26.5	6.5
Africa	2017	\$349.268 billion	0.00	\$13464	27.3	5.1
	2018	\$368.288 billion	-0.57	\$13730	26.9	4.5
Brazil	2016	\$1.769 trillion	-4.10	\$15331	12.6	8.7
	2017	\$2.054 trillion	0.25	\$15662	12.8	3.4
	2018	\$1.869 trillion	0.33	\$16068	12.5	3.6
Russia	2016	\$1.283 trillion	0.15	\$24072	5.5	7.0
	2017	\$1.579 trillion	1.52	\$25766	5.2	3.6
	2018	\$1.658 trillion	2.26	\$27147	4.7	2.8
	2016	00.00	<b>7</b> 0	<b>4.524</b>	2.5	4.0
India	2016	\$2.29 trillion	7.0	\$6634	2.7	4.9
	2017	\$2.653 trillion	6.04	\$7168	2.5	2.4
	2018	\$2.726 trillion	5.88	\$7761	2.5	4.8
China	2016	\$11.138 trillion	6.16	\$15513	4.5	2.0
	2017	\$12.143 trillion	6.16	\$16782	4.4	1.5
	2018	\$13.608 trillion	6.12	\$18210	4.4	2.0

Source: The World Bank, 2019

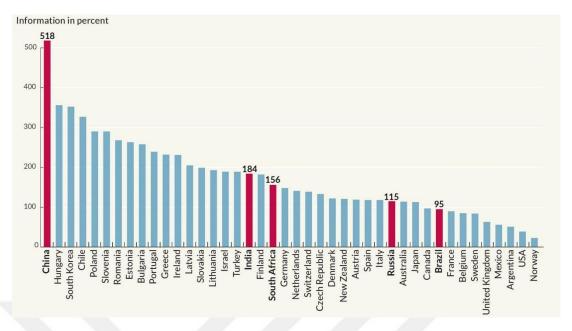


Figure 3. Cumulative gains in real GDP per capita due to increasing globalization between 1990-2016 compared the per capita GDP in 1990.

Source: Prognos, 2018

Turkey's overall economic performance, in front of China as per capita income levels and ranks second after Russia. It is in an economy close to the BRICS countries, which are expected to produce twice as much as the G7 countries in 2050. Because of Turkey's gross savings to GDP ratio, inflation rate, current account balance to GDP ratio to GDP ratio and exports outside variables is a much better location than South Africa.

South Africa is the country with the worst unemployment rate and India is the country with the lowest unemployment rate. India is in the last place in the ratio of exports to GDP, while South Africa ranks first according to the data in the table. South Africa, on the other hand, is the country that lags behind these six countries in general except inflation rate and the ratio of current balance to GDP.

Parallel to total income, per capita income also tends to increase. In addition, China's overall GDP, the ratio of gross savings to GDP, the amount of foreign direct investment and the prevailing rate of inflation variables have continued in the last five and ten years. Turkey per capita income levels as compared to the last one and the last five-year average value is in third place. Compared with the gross savings to GDP ratio of Turkey's economy, inflation, current account balance to GDP ratio to

GDP ratio and exports outside variables is a much better location than South Africa. The ratio of gross public debt to GDP, the ratio of exports to GDP and the inflation rate have improved since the last decade (Güney, 2017).

## **3.2. BRICS in Global Economy**

BRICS countries, which make up 42 percent of the world population and more than 23 percent of the global economy according to 2017 figures, are also an important indicator of the rise of developing countries in the global power equation due to their membership to the G20. However, with the slowdown in the world economy after the Global Finance Crisis, Brazil and Russia economy recorded negative growth rates twice during these years. Like every country, these countries have various problems in economic terms, but their potential is still high. Because BRICS countries, which exhibited a growth performance of 30 percent between 2008 and 2017, have the potential to contribute to world economic growth and prosperity in the coming years (İstikbal, 2018).

Especially the BRICS countries, which survived the 2008 Global Financial Crisis with less damage compared to developed countries, used the post-crisis period to increase the cooperation among themselves. Today, there are potential competitors and partners in solving the problems of economic instability and environmental sustainability in the international system. In this respect, especially developing countries are in the process of restructuring themselves on a regional and global scale. The rise of BRICS, which is reshaping global governance, also portrays the rise of Asia and supports Africa's development process. This is seen as an opportunity to open up new policy areas and to restructure the globalization process as an alternative to traditional forces and their neoliberal policy proposals. At this point, it is important for developing and underdeveloped countries that different formations emerge in order to construct a more polar world order in a more fair way. The structural changes occurring simultaneously with the transformation process in the world economy bring more intense interaction of national economies. A dynamic and expanding international order has a direct impact on the foreign policies of countries in the economic political context.

Although the economic structure of the member states differs from one another, it is possible that a new cooperation will yield fruit in different areas. Despite the rapid growth rates of the member states of the formation, the fact that economic structures differ from each other suggests that they are not a homogenous group. China's export-oriented structure, India's information and communication services sector, Brazil, Russia and South Africa's raw materials export and natural resource abundance economies and different political structure-objectives may make it difficult to adopt a common attitude in the case of globalization. Developed countries' reluctance to reform the path of global governance and their status quo are pushing developing countries to pursue different quests. Developing countries that look at global economic problems from their own perspectives claim to be a new focus of power in the multipolar world order with the formation of BRICS. The institutionalization efforts of this formation, which wants to turn the gap in the global system into an opportunity, continue.

## **CHAPTER 4**

# **Emprical Analyses**

In this study, it has been attempted to investigate and analyze the relationships between the variables (in the data period) using econometric analysis. Before conducting the research analysis, the presence or absence of a single root in the model data will be tested. Although there are various methods for single root testing, ADF testing is widely used among parametric tests. Also, for the analysis of the research, the most appropriate model for panel data analysis is selected by performing experiments between individual effect model, fixedeffect model, and random effect model.

### 4.1. Data Set

The data used in the research is taken from the World Bank's data collection website. These data are from 2000 to 2018. This study examines the impact of globalization factors in BRICS and Turkey on annual GDP per capita.

BRICS countries are composed of 5 countries. These five countries are shown in table 3.

Table 3. BRICS Countries

Brazil	China	İndia
Russia	South Africa	

The dependent and independent variables used in the study and the sources from which the data were collected are shown in Table 4.

Table 4. Descriptions of Variables

Dependent vo	ariable	Data sources
Gross Domes	stic Product Per Capita Annual (GDPPC)	WTI
Independent	variables	
LFPR	Labor Force Participation Rate (%)	WTI
FDI	Foreign Direct Investment (as a percentage of	WTI
GDP)		
EXIM	Goods and Services External Balance (as a	WTI
percentage of	f GDP)	
GFCF	Gross Fixed Capital Investment (as a percentage	WTI
of		
GDP)		
GLO	KOF Globalization Index	KOF Globalisation Index
PSE	Primary and secondary school enrollment	OECD Data
EGLO	Economic Kof Globalization index	KOF Globalisation Index
PGLO	Political Kof Globalization index	KOF Globalisation Index
SGLO	social Kof Globalization index	KOF Globalisation Index

GDPPC (Gross Domestic Product per Capita): GDP growth rate based on the annual local currency in market prices. Totals are in U.S. dollars for the fixed the year 2000. GDP is calculated by subtracting subsidies that are not in addition to the value of products from the sum of the product tax with the production added value created by all producers in the economy. In this study, annual exchange rates of gross domestic product per capita were utilized. This variable represents the rate of economic growth. In this respect, this variable is worth a percentage. Economic growth was included in the analysis in percentage growth in GDPPC, as a country's increase in production and total gross domestic product within a year.

Labor Force Participation Rate: This variable is calculated according to estimates by the International Labour Organization (ILO) and shows the ratio of the population aged 15 years and over to the total active population. High labor force participation is expected to have a positive effect on economic growth.

**External Balance of Goods and Services:** It is found by extracting the values of goods and services imported from exported goods and services. In the analysis, the ratio of this value to gross domestic product per capita was used.

Gross Fixed Capital Investment: Infrastructure improvements, cultivated land, machinery, and purchased machine parts and the construction of road, railway and other means of transportation, school hospitals, government offices, lodgings, factory buildings, commercial offices include the development of industrial zones. In the analysis, the ratio of this variable to gross domestic product per capita was used.

**Kof Globalization Index:** Axel Dreher's 2006 "Does Globalization Affect Growth? Evidence from a New Index of Globalization is an index he has brought to the literature. Index values can be obtained from http://globalization.kof.ethz.ch/ and are updated and published every year. The index is divided into three subtitles. These are economic globalization, political globalization, and social globalization.

Table 5. KOF Globalization Index Components

<b>KOF Globalization Index Components</b>	KOF Index
	Components
	Percentage
	Weighting
A)Economic Globalization	36%
i) Current Flows	50%
• Foreign Trade (% of GDP)	22%
Foreign Direct Investment (% of GDP)	27%
Portfolio Investments	24%
Income Payments to Foreign Citizens	27%
ii) Restrictions	50%
Hidden Import Barriers	23%
Average Tariff Rate	28%
• Foreign Trade Tax Revenues (% of Current Revenue)	26%
Capital Account Restrictions	23%
B) Social Globalization	37%
i) Personal Communication Data	33%
Telephone Traffic	26%
Transfers	2%
International Tourism	26%
Foreign Population (Ratio to Total Population)	21%

International correspondence (per capita)	25%
ii) Information Flow Data	35%
• Internet User (per 1000 people)	36%
• Television (per 1000 people)	38%
• Total budget allocated to the newspaper (% of GDP)	26%
iii) Cultural Convergence Data	32%
Number of McDonald's Restaurants	46%
Number of Ikeas	46%
• Total budget allocated to the book (% of GDP)	7%
C) Political Globalization	27%
Number of Embassies in the Country	25%
Membership to International Organizations	% 27
Participation in UN Security Council Resolutions	22%
International Agreements	26%

**Foreign direct investment:** A foreign direct investment (FDI) is an investment in the form of a controlling ownership in a business in one country by an entity based in another country. It is thus distinguished from a foreign portfolio investment by a notion of direct control.

The origin of the investment does not impact the definition, as an FDI: the investment may be made either "inorganically" by buying a company in the target country or "organically" by expanding the operations of an existing business in that country.

**Primary and secondary school enrolment rate:** The net enrollment rate is the ratio of school-age children enrolled in the school to the relevant official school-age population. Secondary education complements primary education that aims to lay the foundations for lifelong learning and human development by providing more subject or skill-based education using more expert teachers at the fundamental level.

Table 6 shows the descriptive statistics of the variables used in the study.

*Table 6. Descriptive Statistics of the Variables* 

	Maan	Median	Max.	Min.	Std.	Cum	Sum Sq.	Observ
	Mean	Median	wax.	IVIIII.	Dev.	Sum	Dev.	ations
EGLO	47.79	48.737	58.1177	25.8890	6.683	4683.9	4333.42	98
EXIM	1.149	-0.1667	20.0269	-8.138.12	5.172	112.68	2594.80	98
FDI	2.244	2.0827	5.97886	0.22945	1.250	219.92	151.568	98
GDPP C	7165.1	7497.69	14062.7	826.592	3778.2	702234	1.38E+01	98
GFCF	25.914	22.1428	45.6898	15.1502	8.7044	2539.60	7349.39	98
GLO	63.683	64.2946	72.2915	47.2995	5.663	6241.0	3110.81	98
LFPR	64.09	60.419	82.4710	48.4910	9.624	6281.7	8984.39	98
PGLO	87.50	89.069	93.1836	74.5085	5.238	8575.5	2662.15	98
PSE	108.1	104.34	151.326	94.4464	12.123	10600	14257.3	98
SGLO	55.74	56.451	71.23592	29.3185	9.6140	5463.1	8965.79	98

# 4.2. Empirical Model and Methodology

Panel data is defined as a combination of horizontal cross-sectional observations belonging to units such as individuals, countries, firms, and households in a given period. Panel data consists of N-number of units and t-number of observations corresponding to each group.

The panel is created by combining horizontal cross-sectional data with a time dimension.

The method of estimating existing economic relationships between variables using panel data models via horizontal segment data associated by time dimension is called "panel data analysis." In these analyses, it is usually observed that the number of horizontal sections (N) is greater than the number of periods (T). In the study, the following empirical specification is used to examine the impact of globalization on economic growth in BRICS.

## Model 1

$$lnGDPPC = \alpha_i + \beta_1(lnLFPR) + \beta_2(lnEXIM) + \beta_3(lnGFCF) + \beta_4(lnFDI) + \beta_5(lnGLO) + \beta_6(lnPSE)$$

### Model 2

$$lnGDPPC = \alpha_i + \beta_1(lnLFPR) + \beta_2(lnEXIM) + \beta_3(lnGFCF) + \beta_4(lnFDI) + \beta_5(lnPSE) + \beta_6(lnEGLO)$$

#### Model 3

$$lnGDPPC = \alpha_i + \beta_1(lnLFPR) + \beta_2(lnEXIM) + \beta_3(lnGFCF) + \beta_4(lnFDI) + \beta_5(lnPSE) + \beta_6(lnSGLO)$$
 **Model 4**

$$lnGDPPC = \alpha_i + \beta_1(lnLFPR) + \beta_2(lnEXIM) + \beta_3(lnGFCF) + \beta_4(lnFDI) + \beta_5(lnPSE) + \beta_6(lnPGLO)$$

In this study, we will use four models to better investigate the effects of independent variables on the dependent variable. Each of these 4 models uses the same type of globalization index in the model.

In the first model, the comprehensive globalization index is used. The second model uses the economic index of globalization. The third model uses the social index of globalization, and the fourth model uses the politic index of globalization.

### 4.3. Unit Root Tests

Before analyzing the time series data, it is necessary to investigate whether these series contain a unit root, i.e., whether they are stationary or not. The unit is characterized as a series of static string without root problems. There is a possibility that there may be a fake regression problem in non-stationary time series. In this case, the result obtained by regression analysis does not

reflect the actual relationship. Some issues arise in models created using non-

stationary time series and a relationship between variables that do not exist is

misinterpreted and evaluated as if there exists.

Various parametric and non-parametric tests have been developed to

investigate whether a series contains a stable unit root, i.e., whether it contains a unit

root. The most widely used parametric tests are the Augmented Dickey-Fuller (ADF)

test, developed by Dickey and Fuller (1981). It was investigated using this test

whether the time series used in this model carried a unit root. It is decided to reject or

accept the H0 hypothesis by comparing the t statistic obtained as a result of the test

with the critical value.

Before starting this test, the logarithm of the data was taken. Using the

natural logarithm of the data of variables gives the opportunity to interpret the

result better, and it is more stable and normal.

The H0 hypothesis indicates that the series is not stationary and has a unit

root, while the alternative hypothesis suggests that the series is stationary. If the

calculated value is absolutely higher than the critical value, the H0 hypothesis is

rejected, and the series is determined to be stable.

 $H_0$ : Series is not stationary

 $H_1$ : Series is stationary

Table 7 shows the results of the ADF unit root test for the variables used

in the empirical analysis.

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Table 7. Unit Root Test Results

Null Hypothesis: Unit root process)	(individual unit roo	t					
Series: LEGLO							
Automatic lag length selection based on SIC: 0 to 1							
Method Statistic Pr							
ADF - Fisher Chi-square	438.734	0.0000					
ADF - Choi Z-stat	-370.202	0.0001					
Series: D(LEXIM)							
Automatic lag length selecti	on based on SIC: 0 to 1						
Method	Statistic	Prob.					
ADF - Fisher Chi-square	183.189	0.0190					
ADF - Choi Z-stat	-203.640	0.0209					
Series: LFDI							
Automatic lag length selecti	on based on SIC: 0 to 3						
Method	Statistic	Prob.					
ADF - Fisher Chi-square	298.034	0.0030					
ADF - Choi Z-stat	-238.289	0.0086					
Series: D(LGDPPC)							
Automatic lag length selec	ction based on SIC: 0						
Method	Statistic	Prob.					
ADF - Fisher Chi-square	318.529	0.0015					
ADF - Choi Z-stat	-303.578	0.0012					
Series: LGFCF							
Automatic lag length selecti	on based on SIC: 0 to 3						
Method	Statistic	Prob.					
ADF - Fisher Chi-square	226.887	0.0305					
ADF - Choi Z-stat	-226.703	0.0117					
Series: LGLO							
Automatic lag length selecti	on based on SIC: 0 to 3						

ADF - Fisher Chi-square       422.076       0.0000         ADF - Choi Z-stat       -283.574       0.0023         Series: LLFPR         Automatic lag length selection based on SIC: 0 to 1         Method       Statistic       Prob.         ADF - Fisher Chi-square       418.637       0.0000         ADF - Choi Z-stat       -193.417       0.0265         Series: LPGLO         Automatic lag length selection based on SIC: 0 to 3         Method       Statistic       Prob.         ADF - Fisher Chi-square       271.365       0.0074         ADF - Choi Z-stat       -165.032       0.0494         Series: D(LPSE)         Automatic lag length selection based on SIC: 0 to 1         Method       Statistic       Prob.         ADF - Fisher Chi-square       355.482       0.0004         ADF - Choi Z-stat       -362.234       0.0001         Series: LSGLO         Method       Statistic       Prob.	Method	Statistic	Prob.		
Series: LLFPR  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 418.637 0.0000  ADF - Choi Z-stat -193.417 0.0265  Series: LPGLO  Automatic lag length selection based on SIC: 0 to 3  Method Statistic Prob.  ADF - Fisher Chi-square 271.365 0.0074  ADF - Choi Z-stat -165.032 0.0494  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	ADF - Fisher Chi-square	422.076	0.0000		
Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 418.637 0.0000  ADF - Choi Z-stat -193.417 0.0265  Series: LPGLO  Automatic lag length selection based on SIC: 0 to 3  Method Statistic Prob.  ADF - Fisher Chi-square 271.365 0.0074  ADF - Choi Z-stat -165.032 0.0494  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	ADF - Choi Z-stat	-283.574	0.0023		
Method       Statistic       Prob.         ADF - Fisher Chi-square       418.637       0.0000         ADF - Choi Z-stat       -193.417       0.0265         Series: LPGLO         Automatic lag length selection based on SIC: 0 to 3         Method       Statistic       Prob.         ADF - Fisher Chi-square       271.365       0.0074         ADF - Choi Z-stat       -165.032       0.0494         Method       Statistic       Prob.         ADF - Fisher Chi-square       355.482       0.0004         ADF - Choi Z-stat       -362.234       0.0001         Series: LSGLO         Automatic lag length selection based on SIC: 0 to 1	Series: LLFPR				
ADF - Fisher Chi-square 418.637 0.0000  ADF - Choi Z-stat -193.417 0.0265  Series: LPGLO  Automatic lag length selection based on SIC: 0 to 3  Method Statistic Prob.  ADF - Fisher Chi-square 271.365 0.0074  ADF - Choi Z-stat -165.032 0.0494  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Automatic lag length selection based on S	SIC: 0 to 1			
ADF - Choi Z-stat  Series: LPGLO  Automatic lag length selection based on SIC: 0 to 3  Method  ADF - Fisher Chi-square  ADF - Choi Z-stat  Automatic lag length selection based on SIC: 0 to 1  Method  Statistic  Prob.  ADF - Choi Z-stat  Automatic lag length selection based on SIC: 0 to 1  Method  ADF - Fisher Chi-square  ADF - Fisher Chi-square  ADF - Choi Z-stat  -362.234  Automatic lag length selection based on SIC: 0 to 1  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Method	Statistic	Prob.		
Series: LPGLO  Automatic lag length selection based on SIC: 0 to 3  Method Statistic Prob.  ADF - Fisher Chi-square 271.365 0.0074  ADF - Choi Z-stat -165.032 0.0494  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	ADF - Fisher Chi-square	418.637	0.0000		
Automatic lag length selection based on SIC: 0 to 3  Method Statistic Prob.  ADF - Fisher Chi-square 271.365 0.0074  ADF - Choi Z-stat -165.032 0.0494  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	ADF - Choi Z-stat	-193.417	0.0265		
Method Statistic Prob.  ADF - Fisher Chi-square 271.365 0.0074  ADF - Choi Z-stat -165.032 0.0494  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Series: LPGLO				
ADF - Fisher Chi-square 271.365 0.0074  ADF - Choi Z-stat -165.032 0.0494  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Automatic lag length selection based on S	SIC: 0 to 3			
ADF - Choi Z-stat  Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method  ADF - Fisher Chi-square  ADF - Choi Z-stat  Automatic lag length selection based on SIC: 0 to 1  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Method	Statistic	Prob.		
Series: D(LPSE)  Automatic lag length selection based on SIC: 0 to 1  Method  ADF - Fisher Chi-square  ADF - Choi Z-stat  Automatic lag length selection based on SIC: 0 to 1  Automatic lag length selection based on SIC: 0 to 1	ADF - Fisher Chi-square	271.365	0.0074		
Automatic lag length selection based on SIC: 0 to 1  Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	ADF - Choi Z-stat	-165.032	0.0494		
Method Statistic Prob.  ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Series: D(LPSE)				
ADF - Fisher Chi-square 355.482 0.0004  ADF - Choi Z-stat -362.234 0.0001  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Automatic lag length selection based on S	SIC: 0 to 1			
ADF - Choi Z-stat  Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	Method	Statistic	Prob.		
Series: LSGLO  Automatic lag length selection based on SIC: 0 to 1	ADF - Fisher Chi-square	355.482	0.0004		
Automatic lag length selection based on SIC: 0 to 1	ADF - Choi Z-stat	-362.234	0.0001		
	Series: LSGLO				
Method Statistic Proh	Automatic lag length selection based on SIC: 0 to 1				
Statistic 1100.	Method	Statistic	Prob.		
ADF - Fisher Chi-square 349.749 0.0005	ADF - Fisher Chi-square	349.749	0.0005		
ADF - Choi Z-stat -262.824 0.0043	ADF - Choi Z-stat	-262.824	0.0043		

As can be seen in the root test results of the units of the models in question, the EXIM,

GDPPC and PSE variables are not at the stationary level, and these variables need to be considered with a degree of difference. As can be seen, these variables can become stationary, given a degree of difference for non-stationary variables.

Other variables including LEGLO, LSGLO, LGLO, LPGLO, LFDI, LLFPR, LGFCF, are stationary at their levels.

## 4.5. Panel data model

First, by performing the Limer and Chow test, we examined which of the two individual effect models and fixed-effect models were more suitable. The statistical basis for chow testing is as follows.

$$H_0: \alpha_1 = \alpha_2 = \dots = \alpha_N$$
  
 $H_0: \alpha_1 \neq \alpha_2 \neq \dots \neq \alpha_N$ 

For this test, the model was predicted using a cross-section fixed effects approach, and then the Limer test was applied. The results of the Limer tests are given in Table 8.

Table 8. Limer Test Results

Redundant Fixed Effects Tests (GLO)						
Test cross-section	n fixed effects					
Effects Test	Statistic	d.f.	Prob.			
Cross-section F	5,70816	-4,26	0.0020			
Cross-section Chi-square	2,33212	4	0.0001			
Redundant Fixed Effects Tests (EGLO)		l				
Test cross-section	n fixed effects					
Effects Test	Statistic	d.f.	Prob.			
Cross-section F	6,52802	-4,26	0.0009			
Cross-section Chi-square	Cross-section Chi-square 25,72612 4 0.000					
Redundant Fixed Effects Tests (SGLO)						
Test cross-section fixed effects						
Effects Test	Statistic	d.f.	Prob.			
Cross-section F	4,5815	-4,26	0.0062			
Cross-section Chi-square	19,7387	4	0.0006			

Redundant Fixed Effects Tests (PGLO)					
Test cross-section fixed ef	fects				
Effects Test	Statistic	d.f.	Prob.		
Cross-section F	6,83687	-4,26	0.0007		
Cross-section Chi-square	26,59301	4	0.0000		

The limer test, the probability of this test was rejected as null hypotheses as less than 0.05. It was concluded that the individual effect model was a more appropriate model between the common effect model and the individual effect model with rejecting the null hypothesis of the tests.

Individual effect models consist of two fixed effect models and a random effect model. The fixed effect model assumes that different interventions can cause differences between individuals. Fixed Effects model panel data using a fickle technique to capture differences between detection companies can interfere differently depending on differences in business, management, and incentive cultures. However, the intersection is the same between companies. This forecast model is often referred to as the Least Squares Dummy Variable (LSDV) technique.

The random effect model will predict panel data on where interference variables can be linked between time and individuals. In the random effect model, the difference between blocking is due to the error terms of each company. The advantage of using the random effect model is to eliminate heteroscedastic.

This study uses the Hausman test to select the most suitable model between random effect and fixed-effect models. The statistical basis for the Hausman test is as follows.

$$H_0 = corr\left(\sum_{i=1}^N \delta_i, \delta_{ii}\right) = 0$$

$$H_0 = corr\left(\sum_{i=1}^N \delta_i, \delta_{ii}\right) \neq 0$$

There is no significant correlation between rejecting the null hypotheses, individual effects, and the term error of the model. Table 9 shows the results of the Hausman test.

Table 9. Hausman Test Results

Correlated Random Effects - Hausman Test (Model 1)					
Test Summary	Chi-Sq.	Chi-Sq. d.f.	Prob.		
	Statistic				
Period random	21.784.566	6	0.0013		
Correlated Random Effects -	Hausman Test (	Model 2)			
Test Summary	Chi-Sq.	Chi-Sq. d.f.	Prob.		
	Statistic				
Period random	20.956.162	6	0.0019		
Correlated Random Effects -	Hausman Test (	Model 3)			
Test Summary	Chi-Sq.	Chi-Sq. d.f.	Prob.		
	Statistic				
Period random	18.031.601	6	0.0062		
Correlated Random Effects - Hausman Test (Model 4)					
Test Summary	Chi-Sq.	Chi-Sq. d.f.	Prob.		
	Statistic				
Period random	23.544.858	6	0.0006		

# 4.5.1. Heterogeneity of Variance

In panel data analysis, Wiggins and poi testing at eviews 10 can be used to understand the heterogeneity of variance. The result is the probability of this test.

The test results in all four models indicate that the probability value of the models in this test is greater than 0.05, indicating the acceptance of the test hypothesis. Thus, in none of the four research models, there is no heterogeneity of variance.

Table 10. Heterogeneity of Variance Test

	Model 1	Model 2	Model 3	Model 4
	Value	Value	Value	Value
CHI2_PVALUE	0.82717	0,26541	0,43698	0,39694
CHI2	2,852020	1,52236	1,89623	1,752365

### 4.5.2. Autocorrelation

There is no systematic tool for testing autocorrelation in the Eviews program, but we can use the Breusch-Godfrey test to control Autocorrelation. The results obtained after regression with the fixed-time effect model will be obtained from the commands of the Breusch-Godfrey test and the value and probability ratios of the Breusch-Godfrey test.

The results show that there is no correlation between data in all four models. In all four models, the probability values for the test are less than 0.05. The null hypothesis is, therefore accepted, indicating that there is no correlation in the model.

Table 11. Autocorrelation Test

	Model 1	Model 2	Model 3	Model 4
	Value	Value	Value	Value
CHI2_PVALUE	0.455006	0,756321	0,423365	0,541236
CHI2	5,722290	6,756951	5,266321	5,789962

## 4.6. Panel Data analysis

The results of the panel data estimations are provided in Table 10 to 13 for 4 models.

### Model 1

Table 12. Panel Data Least Squares Test Results (Model 1)

Dependent Variable: D(LGDPPC)							
	Method: Panel Least Squares						
Variable	Coefficient	Std. Error	t-Statistic	Prob.			
LFDI	0.025995	0.009052	2,87187	0.0080			
D(LEXIM)	-0.012175	0.013979	-0.870964	0.3917			
LGFCF	-0.212443	0.093248	-2,27825	0.0312			
LGLO	0.020547	0.214776	0.095665	0.9245			
LLFPR	-0.809196	0.243440	-3,32401	0.0026			
D(LPSE)	-0.016379	0.125632	-0.130373	0.8973			
С	4,0819020	1,3723610	2,97436	0.0063			
	Effect	ts Specification					
	Cross-section	fixed (dummy va	riables)				
R-squared	0.690997	Mean dependen	t var	0.048073			
Adjusted R-	0.572150	S.D. dependent var		0.040627			
squared							
F-statistic	5,814155	Durbin-Watson stat 1,7		1,743850			
Prob(F-statistic)	0.000145			l			

In the Table 12 model analysis, the variables LFDI, LGFCF, and LLFPR show a significant relationship with the dependent variable because the probability value is less than 0.05. The LFDI variable with positive coefficient has a positive relationship with the dependent variable, and the LGFCF and LLFPR variables with negative coefficients show a negative relationship with the dependent variable. The variables LEXIM, LGLO, and LPSE, with probability values greater than 0.05, confirm the H1 hypothesis that there is no relationship between the independent and the dependent variables.

The Durbin-Watson statistic of 1.74 indicates that there is no autocorrelation in the model. The probability value of the whole model with a value of less than 0.05 indicates the significance of the whole model.

Model 2

Table 13. Panel Data Least Squares Test Results (Model 2)

Dependent Variable: D(LGDPPC)						
Method: Panel Least Squares						
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
LFDI	0.025824	0.008820	2,927997	0.0070		
D(LEXIM)	-0.012072	0.014083	-0.857155	0.3992		
LEGLO	0.008346	0.104640	0.079759	0.9370		
LGFCF	-0.205987	0.055131	-3,736318	0.0009		
LLFPR	-0.809194	0.245164	-3,300617	0.0028		
D(LPSE)	-0.019312	0.126735	-0.152383	0.8801		
С	4,114338	1,240798	3,315882	0.0027		
	Effects	Specification				
	Cross-section fix	xed (dummy var	iables)			
R-squared	0.690964	Mean dependent var 0.0		0.048073		
Adjusted R-squared	0.572104	S.D. dependent var		0.040627		
F-statistic	5,813252	Durbin-Watso	on stat	1,73959		
Prob(F-statistic)	0.000145			1		

In the model analysis of Table 13, the variables LFDI, LGFCF, and LLFPR indicate a significant relationship with the dependent variable because the probability value is less than 0.05. The LFDI variable with positive coefficient has a positive relationship with the dependent variable, and the

LGFCF and LLFPR variables with negative coefficients show a negative relationship with the dependent variable. The variables LEXIM, LGLO, and LPSE, with probability values greater than 0.05, confirm the H1 hypothesis that there is no relationship between the independent and the dependent variables.

The Durbin-Watson statistic of 1.73 indicates that there is no autocorrelation in the model. The probability value of the whole model, with a value of less than 0.05, was significant for the whole model. Modified R-squared statistics indicate that the independent variables of the model account for only 57% of the total dependent variable changes .

Model 3

Table 14. Panel Data Least Squares Test Results (Model 3)

Dependent Variable: D(LGDPPC)						
Method: Panel Least Squares						
Variable	Coefficient	Std. Error	t-Statistic	Prob.		
LFDI	0.025377	0.009097	2,78970	0.0097		
D(LEXIM)	-0.012024	0.014003	-0.858639	0.3984		
LGFCF	-0.187507	0.109714	-1,70906	0.0994		
LLFPR	-0.811309	0.239645	-3,38546	0.0023		
D(LPSE)	-0.024985	0.131055	-0.190642	0.8503		
LSGLO	-0.021455	0.115800	-0.185276	0.8545		
С	4,183022	1.092.808	3,82777	0.0007		
Effects Specification						
Cross-section	on fixed (dun	ımy variable	s)			
R-squared	0.691296	Mean depen	dent var	0.048073		
Adjusted R-squared	0.572563	S.D. depend	lent var	0.040627		
F-statistic	5,82230	Durbin-Wat	son stat	1.725368		
Prob(F-statistic)	0.000143					

In the model analysis of Table 14, the LFDI and LLFPR variables have a significant relationship with the dependent variable because the probability value is less than 0.05. The LFDI variable with positive coefficient has a positive relationship with the dependent variable, and the LGFCF and LLFPR variables with negative coefficients show a negative relationship with the dependent variable. The variables LEXIM, LGLO, LGFCF, and LPSE, with probability values above 0.05, confirm the hypothesis H1 that there is no relationship between the independent and the dependent variables.

The Durbin-Watson statistic of 1.72 indicates that there is no autocorrelation in the model. The probability value of the whole model, with a value of less than 0.05, was significant for the whole model.

Modified R-squared statistics indicate that the independent variables of the model account for only 57% of the total dependent variable changes.

Model 4

Table 15. Panel Data Least Squares Test Results (Model 4)

Dependent Variable: D(LGDPPC)				
	Method: Panel Le	east Squares		
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LFDI	0.027618	0.009147	3,019394	0.0056
D(LEXIM)	-0.012138	0.013856	-0.876005	0.3890
LGFCF	-0.261943	0.099933	-2,621190	0.0144
LLFPR	-0.703592	0.288007	-2,442966	0.0217
LPGLO	0.293453	0.435588	0.673695	0.5065
D(LPSE)	-0.009307	0.124512	-0.074749	0.9410
С	2,562759	2,607228	0.982944	0.3347

Effects Specification				
Cr	oss-section fixed (	dummy variables)		
R-squared	0.696192	Mean dependent var	0.048073	
Adjusted R-squared	0.579342	S.D. dependent var	0.040627	
F-statistic	5,958023	Durbin-Watson stat	1,816005	
Prob(F-statistic)	0.000119		<u> </u>	

In the model analysis of Table 15, the variables LFDI, LGFCF, and LLFPR indicate a significant relationship with the dependent variable because of a probability value less than 0.05. The LFDI variable with positive coefficient has a positive relationship with the dependent variable, and the LGFCF and LLFPR variables with negative coefficients show a negative relationship with the dependent variable. The variables LEXIM, LGLO, and LPSE, with probability values greater than 0.05, confirm the hypothesis H1 that there is no relationship between the independent and the dependent variables.

The Durbin-Watson statistic of 1.73 indicates that there is no autocorrelation in the model. The probability value of the whole model, with a value less than 0.05, was significant for the whole model. Modified R-squared statistics indicate that the independent variables of the model account for only 57% of the total dependent variable changes.

### **CHAPTER 5**

#### Conclusion

This study aims to analyze that, , it has been attempted to investigate and analyze the relationships between globalization and economic growth by the variables using econometric analysis. In this study, according to the analyses, globalization has no affect on BRICS in economic growth. Based on this background, purpose of this study is empirical evidence for the impact of globalization has had on the economic growth in BRICS countries.

The results indicate that, during the period which is between 2000-2018 globalization do not affect the economic growth in BRICS. The data used in the research is taken from the World Bank's data collection website and KOF Globalization index. These data are from 2000 to 2018. The index is divided into three subtitles. These are economic globalization, political globalization, and social globalization.

In particular, according to the results four different models used. In this study, used four models to better investigate the effects of globalization on economic growth. Each of these 4 models uses the same type of globalization index in the model. In the first model, the comprehensive globalization index is used. The second model uses the economic index of globalization. The third model uses the social index of globalization, and the fourth model uses the politic index of globalization.

The results which we analyzed based on Model 1, Foreign Direct Investments (FDI), Gross Fixed Capital Investment (GFCF) and Labor Force Participation Rate (LFPR) variables have significant relationship to Gross Domestic Product Per Capita Annual (GDPPC). However, when FDI have positive coefficient on the other hand GFCF and LLFPR variables have negative coefficient with Gross Domestic Product Per Capita Annual. Otherwise, Goods and Services External Balance, KOF

Globalization Index and Primary and secondary school enrollment have no significant relationship with independent and dependent variables.

The results which we analyzed from Model 2, FDI, GFCF and LFPR variables have significant relationship to Gross Domestic Product Per Capita Annual. In addition, Goods and Services External Balance, KOF Globalization Index and Primary and secondary school enrollment variables have negative coefficient with Gross Domestic Product Per Capita Annual.

The results which we analyzed from Model 3 only FDI and LFPR variables have significant relationship to Gross Domestic Product Per Capita Annual. From these variables FDI has a positive coefficient on the other hand the other variables GFCF and LFPR have negative coefficient with the Gross Domestic Product Per Capita Annual. Otherwise, EXIM, GLO, GFCF and PSE have no significent relationship between dependent and independent variables. These variables confirm the hypothesis H1.

The results which we analyzed from Model 4, FDI, FGCF and LFPR variables have significant relationship to Gross Domestic Product Per Capita Annual. On the other hand, EXIM, GLO and Primary and secondary school enrollment (PSE) have no relationship on independent and dependent variables. Besides, these three variables values confirm the hypothesis H1.

The results obtained from model 1 supports the H1 hypothesis. Based on the results, there is no relationship between dependent and independent variables, so H1 hypothesis is accepted. The data obtained from the other three models support the H1 hypothesis. According to the data obtained from models 2, 3 and 4, the effect of independent variables on the dependent variable was measured as 57%. As a result, H0 hypothesis is rejected according to four different models used. The results show that there is no correlation between data in all four models. In all four models, The null hypothesis is, therefore accepted, indicating that there is no correlation in the model, which means that globalization has no affect on economic growth in BRICS Countries.

Although FDI contributes positively to the economic growth of developed countries, its impact remains limited due to political uncertainties in developing countries, trade barriers, capital controls and the like. Particularly in order for globalization and capital movements to enter into developing countries, an atmosphere of trust should be created for investors. Even if there is a direct investment in markets where there is no confidence environment, a temporary cash flow effect is expected to be created. Because it is thought that new investments will be limited.

Due to the lack of population planning in emerging countries, the impact of economic growth does not have sufficient impact on labor force participation rate and employment level. China and India which are the two most populous countries in the world. Therefore, the impact of globalization remains limited.

Based on the analyses results, study is not only includes BRICS countries also it may develop with the other emerging countries. In addition comparing BRICS and other emerging countries study may exceed in this area. Further research can impact of emerging countries.

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