



THE EFFECTS OF EXPORT IMPORT COVERAGE RATIO ON ECONOMY

Afife ÖZKAN

Istanbul Commerce University, Turkey

Mustafa Emre CİVELEK

Istanbul Commerce University, Turkey

Received: April 20, 2021

Accepted: May 28, 2021

Published: June 15, 2021

Abstract:

In this research, a conceptual model was tested in order to clarify the relationship between the foreign trade balance and economic growth. Therefore the main purpose of the research is to examine the effect of the ratio of exports to imports on economic growth. Reliability-tested secondary data prepared by international institutions were used for per capita GDP values and the ratio of countries' exports to imports. Regression analysis was performed using the mentioned data using the SPSS computer program. The per capita GDP values of 126 countries for the years 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018 and the ratio of the countries' exports to their imports were used in the study. By performing regression analysis, it was concluded that there is a statistically significant relationship between GDP values and the export- import coverage ratio values of the countries.

Keywords:

Export-Import Coverage Ratio, Economic Growth, Foreign Trade

1. Introduction

The main purpose of this research is to examine the effect of the ratio of exports to imports on economic growth. All the products produced by the countries may not be enough to meet the needs of the country. In this case, the required products can be obtained from other countries. Foreign trade is the entire trade of goods and services between countries. The main factor driving companies to sell or buy goods from the international market is commercial gain (Gürsoy, 2009). The expansion of the total production volume (gross domestic product - GDP) in a country is defined as economic growth. The increase in the welfare level of the country is due to the growth of the economy more than the population growth rate. Economic growth affects production, consumption and foreign trade in countries (Seyidoğlu, 2017). When examining the benefits, gains and risks of foreign trade for the country's economies due to the reasons of foreign trade between countries, it is generally focused on how the foreign trade policies implemented by countries affect the economy (Köse, 2018).

In the research data, the reliability-tested secondary data prepared by international institutions were used for the foreign direct investment amounts, per capita GDP values, and the ratio of countries' exports to imports between 2011 and 2018 in 126 countries. The World Bank for FDI and GDP data for the provision of these data; For export / import rates of countries, Trade Map, a web-based service provider whose data is based on customs data and provides trade statistics in a global scope, was used. Regression analysis have been performed using the aforementioned data using the SPSS computer program. As a result of the analysis, it has been found that the foreign trade balance has a statistically significant relationship on economic growth.

2. Balance of Payments and External Balance

Balance of payments can be defined as a document in which all economic relations of a country are recorded with other countries in a certain period, usually covering a calendar year. The balance of payments reveals the foreign exchange gains and losses of the countries. Therefore, it is also an indicator of currency balance or imbalance. With the balance of payments, the governments of the countries calculate whether foreign currency revenues can cover

the expenses; If they cannot, they can understand the extent and conditions of borrowing. Accounts of the balance of payments are current account, capital account, official reserves accounts. There has been also a statistical difference account as a correction account (Oktay, 2005).

The current account is important as it is the account in which the country's exported and imported goods and services are recorded. Current account includes trade of goods and services and one-sided transfers. The balance between total goods imports and total exports of goods is called the foreign trade balance or foreign trade balance. While the balance of foreign payments expresses income and expenses, the foreign trade balance includes only goods and goods import and export. To the international service import and export group; Transactions such as tourism revenues and expenses, transportation - communication services, banking - insurance, financial services, computer and information services, patent and license commissions, and official services abroad are recorded. This section is also called invisible items. One-sided transfer item in the balance of payments, on the other hand, includes transactions in which no resource transfer is made in return for money inflow to the country. In this group, grants made to the state or the state's donations to others and transfers made by people living abroad are monitored (Kızılkaya & Sofuoğlu, 2018).

Capital account includes physical investments made by investors in a country to other countries and financial relations such as bonds and stocks. Capital transactions are divided into two according to their maturity. While long-term capital refers to international capital transactions with a maturity of more than one year; short-term capital includes private and formal international capital flows with a maturity of less than one year. The official reserves account is an account that shows the changes in the Central Bank's foreign reserves such as gold, foreign exchange and IMF resources as a result of interventions in the foreign exchange market due to economic and financial imbalances. Statistical differences item is used in balance of payments statistics to balance accounting records (Eren, 2006).

3. Economic Growth

Economic growth is linked to the periodic increase in national income in a country. For this reason, this increase, which will provide economic growth, can occur if the basic variables in that country's economy expand to provide a higher real output per capita. It can be thought that a country's economic growth can be improved in the long run as a result of the expansion of a country's production scale or by making its current production more efficient. Governments, to increase economic growth; They can create developments that increase the economic growth of the country by following policies that increase the productivity of production factors, as well as by implementing education and technology policies that increase capital and by taking basic improvement steps such as infrastructure investments. Data such as the gross national product of a country, gross national product, personal income level, gross domestic product, per capita national income are among the concepts used to determine the economic growth level of the country (Cinel, 2014). Economic growth can be defined as the increase in tools and products that meet human needs. One of the ways to measure economic growth is to check whether there is an increase in GDP from one period to another in real value, that is, free of price increases. GDP refers to the equivalent of all measurable values produced by the economy at the market price (Eğilmez, 2013).

Economic growth occurs when a society acquires new resources or learns to produce more with existing resources. Thus, an increase occurs in the total output of their economies. A larger workforce or an increased capital stock can be created with new resources. The production and use of new machinery and equipment (capital) increases the productivity of workers. Advances in scientific knowledge and technological change, the application of new production techniques, will bring innovation and efficiency (Case, Fair, & Oster, 2012).

Economic growth can also be expressed as the continuous increase in real Gross Domestic Product (GDP) over time. Although growth is a way to increase the living standard in the country, the steady increase of the real GDP in that country over time does not mean that the living standards of the people living in the country will increase. In this case, another concept considered is the growth rate of the population. When the population growth rate increases more than the growth rate; output per capita decreases rather than increases, so the standard of living cannot improve. Likewise, if the population growth rate increases at the same speed as the real GDP increases, the living standard remains constant since the per capita output does not change in this equality. From this point of view, the aim of economic growth is to enrich a poor country with economic growth while trying to increase the living standards of each individual of that country (Ünsal E. , 2016).

3.1. Measuring Economic Growth

Gross domestic product is the total market value of all final goods and services produced within an economy in a given year. GDP is also the most common measure of an economy's total output. It is the most used concept when calculating economic growth (O'Sullivan, M. Sheffrin, & J. Perez, 2018).

GDP includes Gross National Product (GNP) and net foreign factor income. By definition, GNP can be expressed as the value of all final goods and services produced in a given period of a country. While calculating the GNP; While the contribution of foreign nationals to the production in the country is subtracted from the GDP value, the contribution of the nationals of the country to the production in foreign countries are being added. For this reason, the Gross Domestic Product (GDP) gives the value of the final goods and services produced domestically. Real GDP, on the other hand, is the version of all final goods and services produced in a country in a given period, free of inflation (Akiş, 2010). GDP can be calculated in three main ways. The first method of these finds the total amount spent on all final goods and services in a given period. This is the expenditure approach to GDP calculation. The other way is to collect the revenues - wages, rents, interest and profits - generated by all factors of production in the production of final goods and services. This refers to the income approach in GDP calculation. In the third method, the production values of final goods and services are summed up. This is also the production approach (Case, Fair, & Oster, 2012).

Based on the GDP calculated at current prices in a particular year, dividing by the GDP calculated at the same year's fixed prices; A GDP price deflator is obtained. With this ratio, price changes in the country can be monitored. The reason this; While the production amounts are fixed in the share and denominator of the GDP price deflator, only the prices change. In order to create a price index series, after a certain year is determined as the base; This ratio is calculated for different years and multiplied by 100, thus creating GDP price deflators. The index value is 100 since the GDP calculated in current and fixed prices in the base year is equal. With this index series created, the price level changes of the country between periods can be calculated. Since this index is based on GDP, it covers all goods and services produced in the economy. The inflation rate of countries can be calculated with the deflator (Şenses, 2017). While GDP is a measure of quantity; The GDP deflator can be described as a measure of price. For the course of economic policies, how the general price level changes is measured by the GDP deflator (Case, Fair, & Oster, 2012).

3.2. Determinants of Economic Growth

3.2.1. Labor and Human Capital

The sum of those working and job seekers in an economy makes up the workforce. Employment of individuals, who have the willingness and ability to work and who decide to earn income, to provide services from their labor is called employment. Another method of calculating the labor force figure is to subtract the total of those who are physically and mentally incompetent from the working age population in an economy and those who do not want to work at the current wage rate in the market (Alkin, 2009). Human capital can be defined as knowledge, competence, skills and qualifications that provide social, individual and economic improvement in people. Since the beginning of the 1960's, the concept of human capital has gained importance. It has been observed that factors such as the level, quality and health standards of human capital are linked to economic growth. Considering the relationship between human capital and economic growth, the productivity of labor and other inputs in production; It is observed that progress in technical and scientific knowledge has increased. Economies provide more production and a parallel high growth rate with a high human capital stock and can sustain this. The regulation of education and technology policies by governments that increase the productivity of the factors of production creates the infrastructure for innovative production (Eriçok & Yılanç, 2013). Increasing the productivity of human capital depends on many material and immaterial factors. While factors such as the regulation of the working environment and wage level are expressed as material factors; Elements such as social capital and ethical values are also classified as immaterial factors. Social capital is the set of norms that support mutual cooperation between people. Social networks and organizations that create solidarity and cooperation are defined as social capital. The importance of social capital in terms of economy stems from the fact that it is necessary for the effective use of human capital. Social capital can be expressed as norms and social networks that affect a society's health and productivity in production (Eser & Ekiz Gökmen, 2009).

3.2.2. Accumulation of Capital

Capital accumulation can also be named as capital stock and can be defined as the capacity to produce goods and services for a production unit within a certain period. Although capital accumulation is considered as the value of physical assets used by the production process; It includes also research and development, health, education and similar non-physical expenditures. Increasing capital accumulation also increases the possibility of innovative companies to invest in new products and production methods in an economy (Saygılı, Cihan, & Yurtoğlu, 2005). Capital accumulation is one of the dynamics of the industrialization process, which aims to reach production methods using new techniques, rapidly increasing raw material consumption and wider markets. Population growth and technical progress; It requires a continuous increase in the capital stock if living standards are to be maintained or increased. The need to import machinery and equipment for developing countries increases the demand for capital goods of the industrialized countries that produce this technology. Countries have different savings opportunities for investments, which creates the need to finance the purchase of capital equipment needed by borrowing countries (Kenwood & Loughheed, 1999). One of the most important reasons for income differences between countries is capital accumulation, which is one of the determinants of economic growth. High physical and human capital accumulation in the country will positively affect economic growth (Ünsal E. , 2016). By producing and exporting high technology products; A development in terms of foreign trade in favor of the country is necessary to ensure rapid capital accumulation (Şiriner & Dođru, 2005).

3.2.3. Natural Resources and Geography

While natural resources have been unevenly distributed over the world geography; it is observed that some countries have been richer in natural resources and some have less resources. If the wealth of natural resources has been properly utilized in the country, it creates incentives for investments and increases economic growth. On the other hand, countries with abundant natural resources may not have a higher standard of living in practice. In some cases, it even causes poverty. When natural resource wealth does not exclude human capital accumulation and is supported by necessary political and economic programs, it can have a positive effect on economic growth (Bal & Akça, Dođal Kaynak Zenginliđi ve Ekonomik Büyüme Arasındaki Eksik Halka: Beşeri Sermayenn Aracılık Etkisi, 2018). In the modern world, the vast majority of rich countries have been located in temperate climates, while most tropical countries appear to be poor. Due to the generally high temperature in the tropics; It has been observed that job performance has low, there has a risk of disease and agricultural potential is severely limited. Another issue that geographical factors affect economic growth; This is because regions without access to the oceans seem to be poorer than regions with access. It is thought that the reason for this is that they have less share in the world trade and therefore they cannot learn the economic developments fast. Another geographical factor affecting economic growth is having a location close to rich countries. The proximity of transportation and communication is also positively associated with economic success (Szostak, 2009). It has been predicted that two thirds of the total world trade is realized between MNCs. Multinational companies look for the best possible locations among alternatives with suitable logistics infrastructure. Host countries have therefore begun to focus on logistics capabilities and performance as an important tool for attracting FDI. It is considered that countries with high logistics performance are more likely to attract foreign direct investment (Çelebi, Civelek, & Çemberci, 2015). Logistics quality and cost is not only related to the performance of infrastructure and public institutions, but also to private services. In addition to the delivery time and cost of goods, the predictability and reliability of the supply chain is becoming increasingly important (Coşkun & Civelek, 2020). With technical progress, it has reduced to a certain extent the relation of international trade to geographical conditions. In this context, the importance of socio-cultural factors, especially the mentality, education and working discipline of the country's people for technical development should be emphasized (Han & Kaya, 2004).

3.2.4. Scientific and Technological Developments

Technological developments reveal the necessary research and development (R&D) studies for companies to increase productivity, innovations and inventions as a result of their activities. While technological development and scientific research cause growth in the economies of the country; It also leads to an increase in earnings and market shares for companies. Thus, technological innovations and inventions cause growth in the long term for the economy in general (Altın & Kaya, 2009). Since the beginning of the 1960s, with the understanding of the importance of human capital on economic growth, training activities have been accelerated to increase the

knowledge, skills and competencies of people. With more attention being paid to the development of human capital; Progress has also been observed at the level of scientific and technical knowledge. This increases the efficiency of labor and other inputs in production. Systematic application of scientific knowledge is required to increase productivity in the production of goods and services; It is seen that countries that have made progress in technological development and economic growth have invested in labor training (Eriçok & Yılancı, 2013). Thanks to technology, developing new products, improving existing products and making them cheaper is an important force affecting economic growth. The criterion for economic growth in industrialized countries is not the increase in traditional labor and capital inputs; It is attributed to the level of progress in technology (Özsağır, 2008).

4. Research Method and Conceptual Model

Regression analysis is a statistical analysis technique that tries to explain the relationship between two or more dependent and independent variables. With regression models, researchers can reach predictions and estimates of the shape, direction and unknown values of the relationship in the study. In regression analysis, the independent variable is represented by the symbol (X) and the dependent variable by the symbol (Y). In order for the analysis to be carried out, the dependent variable must be gathered at least in a spatial scale. Independent variables, on the other hand, may be measured at the intermittent, proportional, or class level. However, if the independent variable is measured at a class level, it cannot be used directly in the regression model. Variables measured at class level should be transformed into new variables to be used in regression analysis (Durmuş, Yurtkoru, & Çinko, 2018).

The computer has been an indispensable tool for statistical evaluation of research results. For this purpose, many statistical package programs such as SPSS, SAS, MINITAB, SYSTAT have been developed. In this study, regression analysis method was used with the help of SPSS program. Many researchers use the regression analysis technique when evaluating research results. The researcher should make a model proposal by examining the statistics that give general information such as the significance control tests of the regression and the determination coefficient R² in relation to the regression model he has generally formed. However, in order to make some predictions or predictions about the subject and to explain the relationship between variables, it is necessary to examine whether a model is an adequate and usable model. Otherwise, a suggested model is always in question and does not always indicate the availability of a model (Şahinler, 2000).

4.1. Conceptual Model and Hypothesis

The conceptual model of the research is as seen in Figure 1. Hypotheses put forward in line with the conceptual model are listed below.

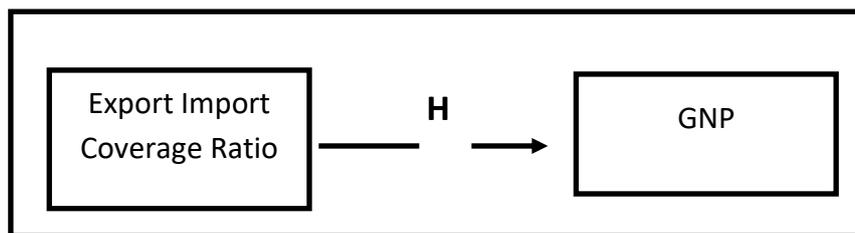


Figure 1. Conceptual Model

H: The ratio of exports to imports positively affects the Gross National Income

4.2. Analysis Results

This section describes the results of data analysis and hypothesis testing. All analyzes were made using SPSS. H hypothesis assumed that the Import Coverage Ratio of Exports positively affects the GNP. The standard β coefficient obtained as a result of this hypothesis regression analysis was accepted as a value of 0,206 and at significance level of 0,05.

Table 2. Hypothesis Test Results

| Hypothesis Relations | Standard β | P | Acceptance / Rejection |
|--------------------------------------|------------------|------|------------------------|
| H: Export Import Coverage Ratio→ GNP | 0,206 | 0,00 | Supported |

5. Result

Within the scope of this research, a conceptual model has been created to determine the relationship criteria between the balance of foreign finance in the world countries and economic growth and to evaluate the relationship between them. As a result of the research, it was found that the balance of foreign trade made a significant contribution to economic growth. In the final model of the study, foreign direct investment amounts, per capita GDP values of 126 countries for the years 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018, and the ratio of countries' exports to imports were used. With the regression analysis performed in the study, it was concluded that there was a statistically significant and positive linear relationship. When the determinants of economic growth are examined, we come across labor force and human capital, natural resources and geography, capital accumulation and scientific and technological developments. Technical and scientific developments increase the efficiency of labor and other inputs in production. Economies provide more production and growth with the improvement of human capital. Capital accumulation includes physical assets used by the production process, research and development, health, education and similar non-physical expenditures. Increasing capital accumulation, by increasing investment in an economy; It causes the emergence of new products and production methods. If the wealth of natural resources can be used correctly in the country, it increases investments and economic growth. The wealth of natural resources can have a positive effect on economic growth when supported by the necessary political and economic programs. For technical development, the importance of socio-cultural factors, basically the mentality, education and working discipline of the country's people should be emphasized. Developing new products with technology, improving existing products and making them cheaper is an important force affecting economic growth. The criterion for economic growth in industrialized countries is not the increase in traditional labor and capital inputs; It is attributed to the level of progress in technology.

It is thought that the entry of countries into wider markets through trade contributes to the increase of the welfare of the citizens of the country. Considering that growth causes increases in a country's per capita income and thus the structure of demand changes, foreign trade will also increase.

The scientific contribution of this research is to establish a link between the relevant concepts in the literature. Within the scope of this analysis, it is predicted that the ratio of exports to imports will contribute to significant developments in economic growth and welfare in the country.

References

- Akiş, E. (2010). İktisadi Büyüme ve Kalkınma. İstanbul: İstanbul Üniversitesi Açık ve Uzaktan Eğitim Fakültesi.
- Alkin, E. (2009). Herkes İçin Ekonomi. İstanbul: İstanbul Ticaret Odası Yayınları.
- Altın, O., & Kaya, A. (2009). Türkiye'de Ar-Ge Harcamaları ve Ekonomik Büyüme Arasındaki Nedensel İlişkinin Analizi. *Ege Akademik Bakış*, 251-259.
- Bal, H., & Akça, E. (2018). Doğal Kaynak Zenginliği ve Ekonomik Büyüme Arasındaki Eksik Halka: Beşeri Sermayenn Aracılık Etkisi. *Sosyal Bilimler Dergisi*, Cilt XI Sayı 1.
- Case, K. E., Fair, R. C., & Oster, S. M. (2012). *Principles of Economics*. ABD: Prentice Hall.
- Cinel, E. (2014). Türkiye'de Ekonomik Büyümenin Belirleyicileri (1980-2011). *Ordu Üniversitesi Sosyal Bilimler Enstitüsü*, 17-27.
- Coşkun, H., & Civelek, M. (2020). Effects Of The Sub-Dimensions Of Logistics Performance Index On Foreign Trade Coverage Ratio. *Journal of International Trade, Logistics and Law*, 144-152.
- Çelebi, Ü., Civelek, M., & Çemberci, M. (2015). The Mediator Effect Of Foreign Direct Investments On The Relation Between Logistics Performance And Economic Growth. *Journal of Global Strategic Management*, 17-21.

- Durmuş, B., Yurtkoru, E., & Çinko, M. (2018). Sosyal Bilimlerde SPSS'le Veri Analizi. İstanbul: Beta.
- Eğilmez, M. (2013). Kendime Yazılar. www.mahfiegilmez.com: <https://www.mahfiegilmez.com/p/ekonomi-sozlugu.html> adresinden alındı
- Eren, E. (2006). İktisat Teorisi. Eskişehir: Anadolu Üniversitesi.
- Eriçok , R., & Yılcı, V. (2013). Eğitim Harcamaları ve Ekonomik Büyüme İlişkisi: Sınır Testi Yaklaşımı. Bilgi Ekonomisi ve Yönetimi Dergisi, Cilt: VIII Sayı: I.
- Eser, K., & Ekiz Gökmen, Ç. (2009). Beşeri Sermayenin Ekonomik Gelişme Üzerindeki Etkileri: Dünya Deneyimi ve Türkiye Üzerine Gözlemler. Sosyal ve Beşeri Bilimler Dergisi, Sayı: 2.
- Gürsoy, Y. (2009). Dış Ticaret İşlemleri Muhasebesi. Bursa: Ekin Yayınları.
- Han, E., & Kaya, E. (2004). İktisadi Kalkınma ve Büyüme. Eskişehir: Anadolu Üniversitesi.
- İçke, M. (2010). Uluslararası İktisadi İlişkiler. İstanbul: İstanbul Üniversitesi Yayınları.
- Kenwood, A., & Lougheed, A. (1999). The Growth of the International Economy 1820–2000.
- Kızılkaya, O., & Sofuoğlu, E. (2018). Türkiye'de Cari İşlemler Açığı Sorunu ve Enerji Politikaları. Ankara: Nobel Bilimsel Eserler.
- Köse, Z. (2018). Endüstri İçi Ticaret: Teori ve Uygulama. İstanbul: Hiperlink Yayınları.
- O'Sullivan, A., M. Sheffrin, S., & J. Perez, S. (2018). Economics Principles, Applications, and Tools Ninth Edition. England: Pearson Education Limited.
- Oktay, N. (2005). Dış Ticarete Giriş. Eskişehir: T.C. Anadolu Üniversitesi Yayın No: 1624.
- Özsağır, A. (2008). Düünden Bugüne Büyümenin Dinamiği. KMU GGBF Dergisi, Yıl:10 Sayı:14.
- Saygılı, Ş., Cihan, C., & Yurtoğlu, H. (2005, Nisan). Türkiye Ekonomisinde Sermaye Birikimi, Verimlilik ve Büyüme: 1972-2003. Ekonomik Modeller ve Stratejik Araştırmalar Genel Müdürlüğü.
- Seyidoğlu, H. (2017). Uluslararası İktisat, Teori Politika ve Uygulama. İstanbul: Güzem Can Yayınları.
- Szostak, R. (2009). The Causes of Economic Growth Interdisciplinary Perspectives . Berlin: Springer.
- Şahinler, S. (2000). En Küçük Kareler Yöntemi ile Doğrusal Regresyon Modeli Oluşturmanın Temel Prensipleri. MKÜ Ziraat Fakültesi Dergisi, Sayı: 5 (1-2): Sayfa: 57-73.
- Şenses, F. (2017). İktisada (Farklı Bir) Giriş. İstanbul: İletişim Yayınları .
- Şiriner, İ., & Doğru, Y. (2005). Türkiye Ekonomisinin Büyüme Dinamikleri Üzerine Bir Değerlendirme. Yönetim Bilimleri Dergisi, (3: 2).
- Ünsal, E. (2016). İktisada Giriş. Ankara: BB101 Yayınları.
- Ünsal, E. (2016). İktisadi Büyüme. Ankara: BB101 Yayınları.