THE IMPACT OF HERITAGE INDEX WITH SELECTED INDICATORS ON TURKISH FOREIGN DIRECT INVESTMENT*

Heritage Endeksinin Seçilmiş Göstergeler İle Türkiye'deki Doğrudan Yabancı Yatırımlar Üzerindeki Etkisi

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Abstract

Foreign trade is a very important variable for national economies. The investment could be inward or outward. World trade has forced the entire world to act as a single economy with effects of globalization. Especially the increase in the transferability of capital, service and technology played an important role in the smooth movement of capital. Developing countries also need large amounts of technology, intermediate goods and investment goods to strengthen their economies. At the same time, its positive contribution to the labor market and its positive impact on economic growth have made these investments one of the most important economic actors. This study using Heritage Index data (which calculated for 178 countries around the world each year) for the Turkish Economy to the discuss development of foreign trade and investment. The data used in the study are not sufficient for the empirical application. Therefore, descriptive statistical method was preferred in this study. In the study, the index values between 2002 and 2016 were used. As a result of the study, the relationship determined only two variables of the index.

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Özet

Dış ticaret, ulusal ekonomiler için vazgeçilmez bir unsurdur. Yatırım ülke içine gelen ya da ülke dışına çıkan bir yapıda olabilir. Küreselleşmeyle artan dünya ticareti, tüm dünyayı tek bir ekonomi olarak hareket etmeye zorlamaktadır. Özellikle sermaye, hizmet ve teknolojinin transfer kabiliyetindeki artış, sermayenin düzgün hareket etmesinde önemli rol oynamıştır. Gelişmekte olan ülkelerin ekonomilerini güçlendirmek için büyük miktarlarda teknoloji, ara malları ve yatırım mallarına ihtiyaçları vardır. Aynı zamanda, işgücü piyasasına yaptığı olumlu katkı ve ekonomik büyüme üzerindeki olumlu etkisi, bu yatırımları en önemli ekonomik aktörlerden biri haline getirmiştir. Bu çalışma, Türkiye Ekonomisindeki yatırımın gelişimini ve dış ticaret ile ilişkisini tartışmak için Heritage Index verilerini (her yıl dünya çapında 178 ülke için hesaplanan) kullanmaktadır. Çalışmada kullanılan veriler ampirik uygulama için yeterli olmadığından betimsel istatistik yöntemi tercih edilmiştir. 2002 ile 2016 yılları arası endeks değerleri kullanılmıştır. Çalışma sonucunda endeksin iki değişkeni dışında bir ilişkiye rastlanmamıştır.

***Anahtar Kelimeler**:* Doğrudan Yabancı Yatırımlar, Türkiye Ekonomisi

Jel Kodları: F21, R11

1. Introduction

The mobility of foreign direct investment starts with colonial activities that enable the transportation of natural resources of the post-16th century countries. The examples of FDI according to today's definition have started to be seen after the industrial revolution. The industrial revolution and the rapidly developing industries have started to direct their capital accumulation to relatively low labor costs and cheap raw material resources in order to achieve higher returns (Saygın, 2018: 68). After the industrial revolution, the increasing foreign trade volume has been moved to a much more advanced level with the effect of globalization. This enabled capital to move more easily (Mahirogullari, 2005: 1276).

The concept of capital is one of the four production factors in economics and the fixed part of wealth. In addition to expressing a mon-

etary magnitude which is meaningful for daily use, this concept also represents a real magnitude economically (Ünsal, 2005: 9). The concept of investment is defined as the additions to the physical capital stock (Makins, 1991: 145-148). Again, activities to increase production capacity are defined as investments (Yıldırım, 2010: 70).

2. Foreign Direct Investment and Heritage Index

The term FDI consists of foreign capital and investment. FDI is defined as the merger of these two concepts and the transfer of capital directly to a foreign country in order to increase production capacity and increase production in the country. This capital transfer is referred to as portfolio investment if it involves short-term and cash movements.

Table 1: Differences between FDI and Portfolio Investments

Portfolio Investments	Foreign Direct Investment
Only real persons make portfolio investment.	FDI builders are generally multinational companies.
There is no possibility of interfering with the management of the investee company and controlling its movements.	It has the right to intervene in the supervision and management of the companies established in the invested country or the company, which is a partner.
The investor only transfers the cash capital.	With the investment made, the existing company has transferred the knowledge of technological knowledge and management used in the production process together with a certain amount of capital.
Because of gaining income in portfolio investments, the transfer of this and current depreciation, provisions are determined.	The transfer of profits from the multinational company to the headquarters can be prevented or restricted by legal reasons.
Its contribution to the national economy is limited.	His contribution to the national economy is much greater. In particular, infrastructure investments and technological investments have a positive impact on the national economy.

Source: Edited by author

The limits of the market volume on the world and the races to maximize the profits of companies (especially with the technological developments in the last 20 years) make the economies of the country much closer to each other. In this respect, FDI has a much greater impact on globalization. In particular, the increase in FDI rates given in the table below supports this view.

Table 2: Average Increase Rates in Export and FDI 1980-2016 (%)

Rates / Years	1980-1990	1991-2000	2001-2010	2011-2016
FDI Rate of Increase	17,58	24,51	9,29	4,86
Export Increase Rate	4,7	6,43	4,38	3,67
Portfolio Investment Increase Rate	637,73	1.203,57	127,90	13,11

Source: (Compiled from World Bank data)

If FDI results in a new business opportunity, such investments are called Greenfield investments. It is the foreign investor's use of technology and method of production to operate a business with its own management approach. Investments in operation are fully controlled by the investor. Because the investor can start the entire system starting from the production facility. Before the company starts production, employees can receive in-service training according to their service standards. This enables the standards and product quality of the same workplace to continue without deteriorating.

Table 3: First Five Countries Receiving Greenfield Investment in EU Countries (2017Q1)

Member Country	Billion € (in total)	Job opportunities (in total %)
Britain	4.1 (24.1)	9684 (19.0)
Netherlands	2.4 (14.0)	1248 (2.5)
Germany	2.0 (12.0)	4153 (8.2)
France	2.0 (11.8)	6853 (13.5)
Ireland	1.8 (10.6)	4245 (8.3)

Source: (EC, 2017: 2-3)

In Table 3, the top five countries in the European Union are listed. The main areas where these investments were collected were communication, software and real estate sectors. As it is seen, investments in green areas have an important place in the investments made to EU countries.

Table 4: Green Field Investments in the World

Regions / Years	2016	2017	Change %
World	834	571	-0,32
Developed countries	254	282	0,11
European Union	148	146	-0,01
North America	69	105	0,52
Developing countries	515	261	-0,49
Africa	94	41	-0,56
Latin America and the Caribbean	74	61	-0,18
Asia	347	158	-0,54
Transition Economies	65	28	-0,57

Source: (UNCTAD, 2018)

Greenfield investments decreased by 3% in 2017 worldwide. Greenfield investments in developed countries and North America are increasing, while in all other regions there is a decrease.

Although there are many studies in the literature about the main determinants of FDI, one of the pioneering studies in the theoretical framework is the work of B. Ohlin on the main reason for investments. According to Ohlin, the high rate of profitability in developing countries and the relatively low-interest rates used in financing the investments are among the main reasons for the investments (Ohlin, 1933).

Heritage index is a chart of index values published annually by an independent US-based foundation that conducts research on 12 key specificities in 186 countries across the globe. These values include values between 0 and 100.

To the latest index value published in 2017, the first three countries were Hong Kong, Singapore and New Zealand, respectively. The index started to be established in 1995 and continued to be announced annually. According to this index, it evaluates countries within the framework of four broad variables that determine economic freedoms:

- Rule of law
- State activity
- Regulatory policies
- Open markets

The other sub-categories are 12 sub-categories: property rights, legal activity, state integrity, tax burden, government expenditure, financial discipline, freedom of labor, labor freedom, monetary freedom, freedom of trade, freedom of investment and financial freedom. Scores in this category are centered to create an overall score. 80 or higher scores free; 70-79,9 are mostly free, 60-69,9 Moderate free, 50-59,9 Most of the non-free countries with a score below 50 are classified as oppressed countries (heritage.org).

3. Foreign Direct Investment in Turkey

The history of FDI in Turkey begins in the period before Republic. First, foreign capital, which had the opportunity to enter the country through trade agreements with capitulations, especially in the decline period of the Ottoman Empire, has been active in the field of public service investments and natural resources operation.

Table 5: Foreign Capital Investments in the Ottoman Empire

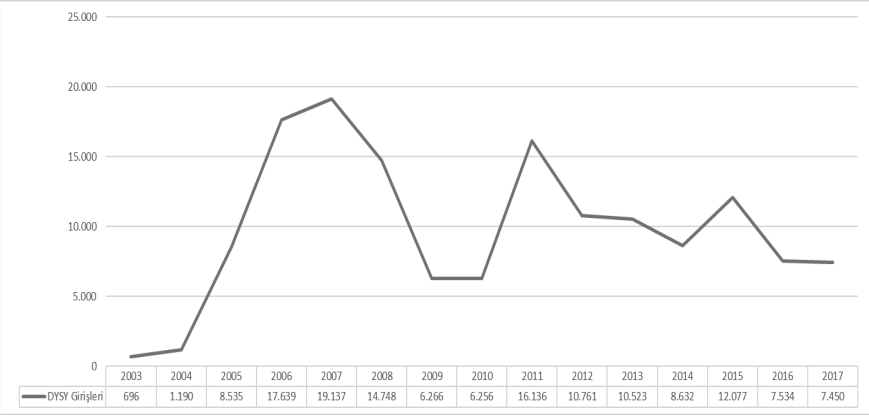
Investment	Total (Thousand Ottoman Lira)	Annual Net Return	Rate of Return (%)
Railways	53.310	1.040	1,95
Electricity, Tram, Water	5.700	170	2,98
Harbor and Dock	4.710	160	3,4
Industry	6.500	560	8,61
Trade	2.660	----	----
Metals	3.580	230	6,42
Banking and Insurance	8.200	890	10,85
State-paid Railway km Assurance	----	420	----
Total	84.600	3370	3,98
Foreign Debt	144.480	13000	8,98
Grand total	234.140	16370	6,99

Source: (Kepenek and Yentürk, 1997: 12)

Investments have increased with post-1980 liberation. In 2002, after the coalition government of Turkey has ended and began the era of one-party rule period. Thanks to the stable and balanced policies that have been carried out since this date, the environment of trust in the economy and the markets have emerged, and in this context, the LMS has increased considerably. One of Turkey's total FDI 1975-2004 year from shareholders can receive between 2004 and 1975 from international FDI pie while only the 19 627 million US dollars level, 2005 - an increase of approximately 8-fold between 2015 reached 161 238 million US dollars (Ministry of Economy, 2016: 10).

Investments have increased with post-1980 liberation. In 2002, after the coalition government of Turkey has ended and began the era of one-party rule period. Turkey's FDI ratio between the years 2005-2015 increased approximately 8 times when compared to the 1975-2004 (Ministry of Economy, 2016: 10).

Figure 1: FDI Inflows in Turkey and the World (2003-2016) ($ Million)



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
DYSY Girişleri	696	1.190	8.535	17.639	19.137	14.748	6.266	6.256	16.136	10.761	10.523	8.632	12.077	7.534	7.450

Source: (CBRT, EVDS)

With the effect of the confidence provided by the general economic structure and the power of one-party government, FDIs exceeding the level of 10 billion dollars in the country's economy in 2005, and by 2007, the country has achieved the success of attracting the highest GDP in the history of the country. Turkey has risen to a 23rd place in the world with 22 billion dollars in FDI in 2007. This figure corresponds to the 9th place in the developing countries themselves (Undersecretariat of Treasury,

2009: 2). However, the US-based mortgage crisis, which started in 2007 and spread all over the world in 2008, has led to serious drawbacks in general. However, the effects of this crisis, in 2011 FDI in Turkey can be reached to $ 16.2 billion in 2010 at a backdrop was observed in the following years.

Table 6: Components of FDI in Turkey (2013-2017)

	2013	**2014**	**2015**	**2016**	**2017**
[Capital + Other Capital (Net) + Real Estate (Net)]	13.563	13.119	18.002	13.343	10.904
Capital (Investment - Liquidation)	9.936	8.371	11.713	6.913	5.581
Investment	10.523	8.632	12.077	7.534	7.450
Liquidation	587	261	364	621	1.869
Other Capital (Net)	578	427	2.133	2.540	680
Property (Net)	3.049	4.321	4.156	3.890	4.643

Source: (CBRT, Balance of Payments, Sixth Handbook - Detailed Presentation) (Million USD)

When analyzing the table above Turkey in 2017 a total of 10 904 million US dollars 5.581 million was realized in the amount of the equity component of FDI, while the portion consists of 4,643 million US dollars of foreign real estate purchases. 13:43 USD million total entries took place in 2016.

4. Literature

There are many studies in the literature on the main determinants of FDI. However, one of the studies in the first theoretical framework is the work of Ohlin (1933). Different variables were used in the analysis. Studies have focused on several variables in which significant results are found in the literature. Different time intervals and different country or country groups have been studied.

There are very few studies conducted in this area using the Heritage Index. Imitaz ve Bahsir (2017) examined 20 years period from 95 to 2014

for South Asia by applying panel data techniques and used Heritage Index data. They found only one variable on index effects FDI.

There are also studies in the literature that are in accordance with the variables found in the analysis results of this study.

Malani, Hufbauer and Lakdawalla (1994) investigated FDI's determinants and studied FDI from Germany, Japan and the United States. FDI found that America's imports increased its imports more than exports by Japan.

Alguacil and Orts (2003) examined FDI inputs in Spain between 1970-1992 and 1978-1992 periods. As a result, they found a positive relationship between FDI and import.

Dritsaki et al. (2004) investigated the direct foreign capital investments and exports of Greece between 1960-2002. It is determined that FDI has a positive effect on exports.

Pramadgani et al. (2007) analyzed the relationship between exports, imports and growth for the periods of 1990-2004 on the Indonesian economy. As a result, they have found a positive relationship between exports and imports.

Yılmazer (2010), the period between 1991-2007 the relationship between exports and imports and FDI in Turkey were examined using causality test. As a result, it is determined that there is no causality relationship between FDI and export and there is a one-way causality towards imports by imports.

5. Empirical Application

Basically, applications called descriptive statistics; means to collect the data related to the desired research subject and to classify these data by a certain serialization. This classification can be explained by specific graphs. The analysis with this kind of process is called descriptive statistics and carries high reliability.

The relationship between the variables with FDI was first tried to be revealed with the correlation coefficient. Based on this coefficient, the simple regression equation was made between the variables that were related to FDI and the coefficients of elasticity coefficients of FDI were calculated on the average.

Accordingly, the binary regression equation between each variable and FDI is given in the following table. In the regression equations,

the parameter coefficients between each variable and FDI values were estimated separately by the

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_i \qquad (1)$$

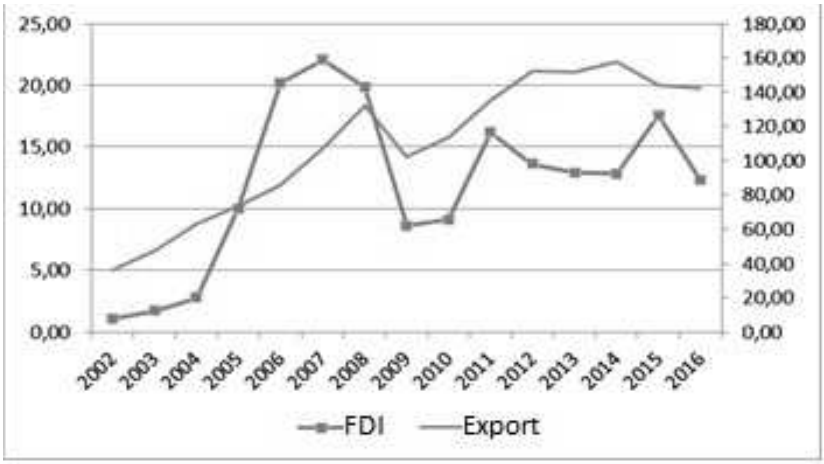
If we show the equation in the logarithmic manner it assumes the following form:

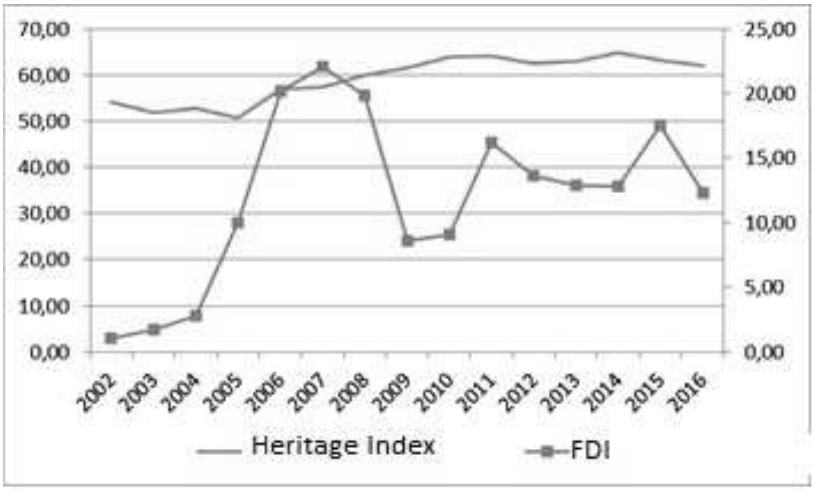
$$\log Y_i = \beta_0 + \beta_1 \log X_i + \varepsilon_i \qquad (2)$$

Y: Foreign Direct Investment (FDI)

X: Each of the other independent variable

Figure 2: Relationship between FDI and Other Variables





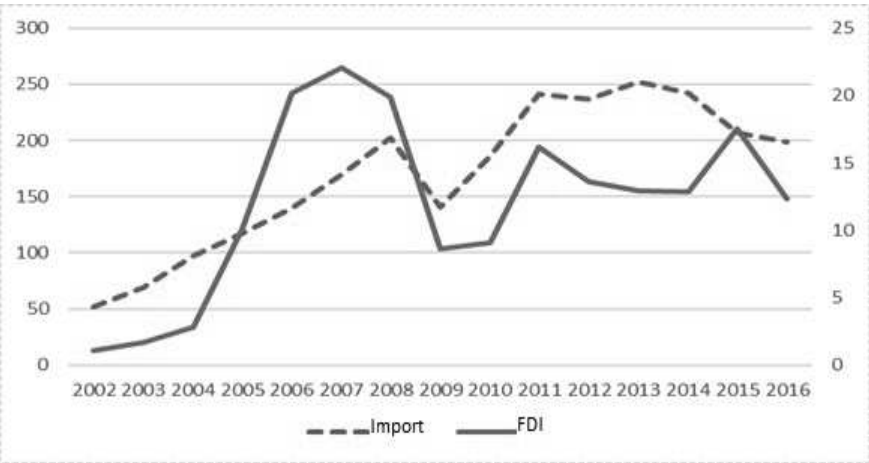


Table 7: Regression Relations between FDI and Other Variables

	FDI (Y)				
Each of the Arguments (X)	**B_0 Coefficient**	**B_1 Coefficient**	**Determination Coefficient (R^2)**	**F – value**	**Average Elasticity**
EXPORT	0,64 (0,87)	0,11 (0,01)	0,40	8,65 (0,01)	1,00
IMPORT	0,74 (0,85)	0,42 (0,008)	0,42	9,50 (0,008)	0,98
HERITAGE INDEX	-25,2 (0,22)	0,63 (0,08)	0,22	3,56 (0,08)	-

The parameter coefficients (β1) obtained according to the individual regression equation of FDI and each variable were found to be 10% significant in Heritage index values. However, the rate of disclosure of FDI was quite low. On the other hand, export, import and GDP coefficients were found to be significant at 5% level and their disclosure levels were at a medium level. These ratios overlap with the previously calculated correlation coefficient. When the obtained equations are examined completely, it is seen that the established regression equation has a meaning as a whole. The data of the Heritage index were not considered to have an impact.

Table 8: Correlation Relationship between FDI and Other Variables

	With FDI			
Variables	Correlation Coefficient	Significance level	Direction	Level
Export	0,543	%5 and %10	Positive	Medium
	-0,03			
Import	0,46	10%	Positive	Medium
	-0,08			
Heritage Index				
Property Rights	Meaningless in Positive Direction			
Tax Burden	Meaningless in Positive Direction			
Government Expenditures	Meaningless in Positive Direction			
Monetary Freedom	Meaningless in Positive Direction			
Freedom of Trade	Meaningless in Positive Direction			
Freedom of Investment	Meaningless in Positive Direction			
Financial freedom	Meaningless in Positive Direction			
Patent applications	Negative Direction Meaningless			
Investment and Incentive Certificates	Meaningless in Positive Direction			
Credit Notes	Meaningless in Positive Direction			
State Integrity	Meaningful in the Positive Direction (MEDIUM)			
Freedom of Business	Meaningful in the Positive Direction (MEDIUM)			

When the above table is examined, the variables that have a significant positive relationship with FDI are the State Integrity and Freedom of Business within the Export, Import and Heritage Index.

6. Conclusion

The importance of FDI to the country's economies is increasing every year. The capital outflows for the investing country and the FDIs for capital inflows from the host country are mostly exchanged among the economies of developed countries. With the advantage of developing technology and communication ease in the globalized world economy, risk and return factors of investment decisions can be analyzed very quickly, easily and reliably. This situation allows markets to move more

rapidly among the markets, and developing countries offer many different options to attract investors.

As a result of the descriptive analysis, the relationship between FDI and variables was determined by the correlation coefficient. Based on this coefficient, the simple regression equation was made between the variables that were related with FDI and the coefficients of elasticity of the variables to FDI were calculated on average. The variables that have a significant positive relationship with FDI are the State Integrity and Freedom of Business within the Export, Import. The resulting data of the research results indicate to us a particular impact on the investment of state data integrity and business freedom in Turkey's economy. The existence of a relationship between FDI and other variables in the Heritage Index could not be determined.

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