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ARAŞTIRMA MAKALESİ

THE IMPACT OF FOREIGN DIRECT INVESTMENT ON HIGH TECHNOLOGY PRODUCT EXPORTS: E7 EXAMPLE

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Abstract

This study examines the impact of foreign direct investment in developing countries on exports of high-tech products. Foreign direct investment in developing countries enables them to acquire technology, new production and management strategies that are not available in their own countries. Developing countries can contribute to economic growth by producing new goods with new technology. In the light of this information, it is aimed to determine the effects of foreign direct investments on exports of high-tech products with panel cointegration analysis using annual data for the period 2010-2020 for E7 countries, which are developing countries. As a result of the analysis, the countries in which foreign direct investments have the most impact on exports of high-tech products are China, Russia, Brazil, India, and Indonesia, respectively. The countries that saw the least impact were Turkey and Mexico, respectively. When the short-run coefficient values are examined, the effects are lower compared to the long-run. In this case, it has been determined that foreign direct investment, which affects the export of high-tech products, provides more significant outputs in the long run, and the effects are lower in the short run. It was determined that the foreign direct investment variable increased the export of high technology products by 12.9%.

Key words: Foreign Direct Investment, High-Tech Product Export, E7 Countries
Jel Codes: F63, O32, P45

Doğrudan Yabancı Yatırımların Yüksek Teknolojili Ürün İhracatlarına Etkisi: E7 Örneği

Öz

Bu çalışmada gelişmekte olan ülkelere yapılan doğrudan yabancı yatırımların yüksek teknolojili ürün ihracatlarına etkisi ele alınmıştır. Gelişmekte olan ülkelere yapılan doğrudan yabancı yatırımlar kendisinde var olmayan teknolojiyi, yeni üretim ve yönetim stratejilerin elde edilmesini sağlamaktadır. Gelişmekte olan ülkeler yeni teknolojiyle, yeni mallar üreterek ekonomik büyümesine katkı sağlayabilmektedirler. Bu bilgiler ışığında, gelişmekte olan ülke grubu olan E7 ülkelerine ait 2010-2020 dönemine ilişkin yıllık veriler kullanılarak doğrudan yabancı yatırımların yüksek teknolojili ürün ihracatlarına etkilerini panel eşbütünleşme analizi ile tespit edilmesi amaçlanmıştır. Analiz sonucunda, doğrudan yabancı yatırımların yüksek teknolojili ürün ihracatına en çok etki eden ülkeler sırasıyla Çin, Rusya, Brezilya, Hindistan, Endonezya olmuştur. En az etki eden ülkeler ise sırasıyla Türkiye ve Meksika olmuştur. Kısa dönem katsayı değerlerine bakıldığında, uzun döneme göre etkiler daha düşük çıkmıştır. Bu durumda yüksek teknolojili ürün ihracatını etkileyen doğrudan yabancı yatırım uzun dönemde daha

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önemli oranda çıktılar sağlamakta, kısa dönemde etkilerin daha düşük seyrettiği belirlenmiştir. Doğrudan yabancı yatırım değişkeninin yüksek teknolojili ürün ihracatını %12,9 artırdığı tespit edilmiştir.

Anahtar Kelimeler: Doğrudan Yabancı Yatırım, Yüksek Teknolojili Ürün İhracatı, E7 Ülkeleri
Jel Kodları: F63, O32, P45

1. Introduction

Foreign direct investments plan an important role in the transfer of new technology and the acquisition of new management and production strategies. Developed countries produce new products with the new technologies they have acquired. In this process, they take advantage of cheap labor and cheap national resources in developing countries to minimize rising costs. Developing countries, on the other hand, acquire technology that they do not have in a shorter period of time and use this technology in their production processes. In this way, they contribute to their economic growth by being more efficient and faster in the production of goods.

For foreign direct investments to take place, a country needs to have a relatively risk-free economy. The stability of the economy and policies of the country to be invested in, transparency in the country's administration, and the lack of bureaucratic processes attract more foreign direct investment. This is because these factors indicate that the country of investment is less risky. In countries with fewer bureaucratic processes, the establishment of new businesses is easier in terms of fewer procedures to be applied. This enables developing countries to export high-tech products and investor countries to achieve faster results in increasing their profitability rates.

In the light of this information, this study aims to determine the effects of foreign direct investments on exports of high-tech products by using annual data for the period 2010-2020 in E7 countries from the developing country group with panel cointegration analysis. The first part of the study covers the relationship between foreign direct investment and high-tech exports, the second part is a literature review and the last part is a panel cointegration analysis.

2. The Relationship Between Foreign Direct Investment and High Technology Product Exports

Following the debt crisis in the 1980s and the recent turmoil in the markets in the late 1990s, developing countries changed their attitudes towards foreign direct investment, believing that it could provide benefits to their economic development. Most countries have established investment agencies because of the growth benefits of foreign direct investment and have also pursued policies that include fiscal incentives to attract these investments (Alfaro, Chanda et al., 2004: 107).

Foreign direct investment are important as they contribute to the economic growth of the host country through the diffusion of technologies and practices within multinational enterprises and subsequently to local enterprises (OECD, 2002: 19). Foreign direct investments provide new capital inflows to the host country. This leads to economic revival and positively affects competition in the local market

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(Loungani and Razin, 2001: 7). Foreign direct investment also play an important role in strengthening economic integration as they provide long-term linkages between different countries. They not only change the capital structure of the recipient country but also provide positive externalities such as technology and knowledge spillovers (Dinh, Vo, et al., 2019: 1).

Technological development in developing countries generally depends on the nation's technology policies and technology transfers from multinational enterprises to these countries. National technology policies in developing countries and the factor capital of a country also affect the level of technological development of that country. The rate of technology transfers across countries vary according to factors such as;

- Distribution of foreign direct investment through multinational corporations,
- Contractual agreements for the supply of technology know-how and services,
- Franchises for the use of foreign names.

Moreover, the acquisition of new technology in countries is not as easy as the acquisition of capital goods. New technology leads to changes in the production process or the way of management. In order to adapt to these differences, it is important to first make the necessary preparations in the business or industry to assimilate the original technology and benefit from it. Not only technology transfer, but also alignment and success in administrative and organizational management are necessary to benefit from new technology (Kotler, Jatusripitak and Maesincee, 2005: 189).

Developing countries often lack the necessary infrastructure, educated populations, liberalized markets, economic and social stability to innovate. This limits their capacity to produce new technology. Developing countries can positively affect the productivity of domestic enterprises through foreign direct investment. The investing country transfers know-how and managerial skills to the investee country, thereby improving the quality of local human capital (Bengoa and Sanchez-Robles, 2002: 531).

Since qualified human capital will have the competence to use new technologies properly, it is likely to increase productivity in production. Multinational companies promote higher education through foreign direct investment inflows. With new technology, there is a greater demand for a highly educated workforce in order to benefit from this technology with maximum efficiency. New techniques and new knowledge acquired from investing companies lead to an increase in the skilled workforce in the investing country. New technology also increases the productivity of local firms. With spillovers in countries, this new technology can be transferred to the nearby economy through investments (Azam, Khan et al., 2015: 156).

When making foreign direct investment, the investor country prefers countries that are economically and politically less risky. This is because the objective of the investor country is to achieve higher profits at lower costs. Although developing countries have more cheap labor, they lack capital. For this reason, they cannot allocate sufficient budget for R&D activities and cannot obtain new innovations

and new technologies. The investor country aims to obtain higher returns by taking advantage of the cheap labor force and natural resources of the country in which it will invest. For this reason, investor countries prefer countries with less bureaucratic procedures, relatively more stable economically and politically, lower tax burden and growth potential. While the investing country contributes to its economic growth by acquiring new production techniques and new technologies that it does not have, the investing country provides cheaper labor and profitability with less cost.

According to Michael Porter (1990), a country's investment attractiveness is manifested in four main areas.

1- Factor Conditions: It is related to the country's natural resources, location, qualified and unqualified workforce and infrastructure.
2- Terms of Request: It is related to the production and service diversity of the investing country.
3- Related and Supporting Industries: It should be more involved in promoting and supporting international competitiveness for the country's investment attractiveness.
4- Corporate Strategy, Structure and Competition: A country's investment attractiveness is related to strong domestic competition.

In addition to the balance of economics and politics, foreign countries should also pay attention to the protection of property rights and foreign trade areas to increase investment attractiveness. Clearly knowing property rights, who owns what, and how services are used, bought and sold reduces uncertainty and provides a basis for investment. Foreign trade zones are seen as another way to attract foreign direct investment. Foreign investors are offered credit for private entry, a factory to store their goods or wholesale outlets. Foreign direct investment attractiveness in countries can be increased through policies such as providing tax exemptions to investors by investing in pricing, investment advisory services, post-investment services, accelerating the permitting processes for the necessary procedures (Kotler, Jatusripitak and Maesincee, 2005: 185-188).

3. Literature Review

Bozdağlıoğlu and Özpınar (2011), analyzed the effects of foreign direct investments on export performance in Turkey for the period 1992/1-2009/7 using VAR method. Causality analysis reveals a unidirectional causality from foreign direct investment to exports in Turkey.

Göçer, Bulut and Dam (2012), examined the effects of foreign direct investments on export performance in Turkey. They used monthly data for the period 2000-2010 and analyzed it with the bounds test approach. As a result of the analysis, they found that foreign direct investment has a positive effect on exports.

Çetin and Seker (2013), examined the relationship between foreign direct investment and exports. They conducted a VAR-based Granger causality test for eight selected developing countries using data

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for the period 1980-2009. As a result of the analysis, they did not find bidirectional causality between the variables.

Topallı (2015), examined the causality relationship between foreign investments on economic growth and exports of high-tech products for selected developing countries for the period 1989-2013. As a result of the analysis, a bidirectional causality relationship was found between exports of high-tech products and foreign direct investment.

Kızılkaya, Sofuoğlu, and Ay (2017), examined the impact of foreign direct investment and openness to international trade on exports of high-tech products with panel data analysis for the 2000-2012 period for 12 developing countries. As a result of the analysis, they found that foreign direct investment and openness to foreign trade have a positive effect on exports of high-tech products.

Ekananda and Parlinggoman (2017), examined the impact of high technology exports and foreign direct investment on economic growth for the period 1992-2014. In the study, the random effect model was used with the high-tech and non-high-tech exports and GDP data of 50 countries. As a result of the study, they found that economic growth plays a positive role on foreign and domestic investment in 50 countries, but high-tech exports do not have a positive effect on GDP.

Acaravcı and Akyol (2017), examined the impact of foreign direct investments on economic growth and foreign trade in Turkey for the years 1998-2015 using time series method. The analysis reveals that there is a unidirectional causality relationship between foreign direct investment and growth in Turkey.

Öncü and Çelik (2018), examined the relationship between foreign direct investment and economic growth in BRICT countries with panel causality analysis using data from 1998-2016. As a result of the analysis, they found that there is bidirectional causality between foreign direct investment and economic growth.

Gür (2020), examined the effect of foreign direct investments on innovation for BRICS-T countries for the period 2007-2019 with panel cointegration analysis. The analysis includes exports, imports, foreign direct investments and the global innovation index. As a result of the analysis, it was found that the variables are long-run related. As a result of the causality analysis, it found a bidirectional causality relationship between exports and innovation, and a unidirectional causality with foreign direct investment and imports.

Çeştepe and Çapcı (2021), examined the effect of foreign direct investment on economic growth for Turkey by causality analysis using quarterly data for the years 1989-2019. According to the causality analysis results, positive shocks in foreign direct investment cause positive shocks in GDP.

Uğur and Taş (2022), examined the effects of foreign direct investments on exports for Turkey between 1980-2019 using cointegration and causality analysis. As a result of the analysis, it is stated that foreign direct investment has a positive relationship with exports in Turkey.

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4. Econometric Analysis

4.1. Purpose and Importance of the Research

The aim of the study is to determine the impact of foreign direct investment on high-tech exports in developing countries. Developing countries have less capital than developed countries. This prevents it from acquiring new technologies by allocating more budget to R&D expenditures. Developing countries, on the other hand, can accelerate their economic growth by acquiring technologies that do not exist in their own countries through foreign direct investments and by providing more efficiency in their production. With the technology acquired, countries can become more competitive by increasing their exports of high-tech products. For this reason, foreign direct investment is important for developing countries to increase their exports of high-tech products.

4.2. Introduction of Data and Sampling

In this study, the long-run and short-run relationship between foreign direct investment and exports of high-tech products will be revealed. Data was generated from the data site www.worldbank.org. The analysis period is 2010-2020 on an annual basis as the period when the data start at a common point and for the E7 country group for which data are complete for this period. The analyses are obtained with the help of Gaussian codes and Eviews version 12.0. The variables in the model are given in Table 1.

Table 1. Introduction of the Variables Used in the Analysis

Variable	**Screening**	**Definition**
High Technology Products Export/Total Exports	HTPE	Dependent variable
Foreign direct investments/GDP	FDI	Independent variable

Table 2. Descriptive Statistical Information on Variables

Statistics	**HTPE**	**FDI**
Average	13.89573	1.115584
Median	11.43970	1.960000
Maximum	32.13548	3.800000
Minimum	2.115046	-0.400000
St. deviation	8.697843	0.756909

4.3. Research Methodology

In this study, since the relationship will be measured over the variables for the years determined on a country basis, both time and cross-sectional dimensions are available and the data structure is panel data. Prior to the analyses, descriptive statistical information on the variables were provided and time

course structures were presented with the help of graphs. The first step in panel data analysis is to test the homogeneity of the variables used in the analysis. Paseran and Yamagata (2008) homogeneity test was applied and it was decided that the slope coefficients were not homogeneous. In this case, first generation unit root tests based on the heterogeneity assumption, namely Im, Pesaran and Shin (2003) Maddala and Wu (1999) and Choi (2001), are applied. The aim of unit root tests is to determine the stationarity of the variables for the difference of which order they are stationary as a result of determining the trend effects of the variables over time. First generation unit root tests indicate stationarity for the first order difference. The next step is to test for cross-section dependence to determine whether there is a need for second generation unit root tests. If there is cross-section dependence in the panel data set, using second generation unit root tests provides more consistent, efficient and robust estimation. In this study, Pesaran (2004) CD_{LM} test was used and it was found that there is cross-section dependence. Therefore, the CIPS statistic was calculated by taking the arithmetic mean of the CADF statistics for each country and the second generation stationarity results were examined. These results indicate that the series are stationary for the first order difference. The Westerlund and Edgerton (2007) LM Bootstrap Panel Cointegration Test, which yields good results in small samples, was applied to determine the long-run structure of the relationships by taking the first-order difference of each series. After determining that the series are cointegrated and long-run related, the long-run cointegration coefficients were examined using the FMOLS (Fully Modified OLS) method. In the next stage, the error correction term was used to determine the short-run causality relationship between the cointegrated series. By running the error correction model, which shows how much of the imbalance in the independent variable would be corrected in the next period, the existence of short-term relationships between variables was revealed.

4.4. Cross-Section Dependence and Homogeneity Tests

For cross-section dependence, Pesaran (2004) LM CD test and the bias-corrected LM adj. test from Pesaran et al. (2008) were applied. Since $p<0.05$ for both tests, H_0 was rejected and the null hypothesis H_1 indicating cross-section dependence was accepted. On the other hand, Pesaran and Yamagata (2008) applied homogeneity test using delta tilde and adjusted delta tilde tests. Since $p<0.05$ as a result of the test, Ho was rejected and the hypothesis H_1 indicating heterogeneity was accepted.

Table 3. Cross-Section Dependence and Homogeneity Test Results

Cross-section dependence test (H_0: No cross-section dependence)		
Test	**Test statistic**	**p-value**
LM (Breusch and Pagan (1980)	28.563	0.000
LM_{adj} (Pesaran et al. (2008)	31.932	0.000
LM CD (Pesaran (2004)	33.405	0.000
Homogeneity test (H_0: Slope coefficients are homogeneous)		
Test	**Test statistic**	**p-value**
Delta_tilde	8.478	0.000
Delta_tilde_adj	9.132	0.000

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4.5. First and Second Generation Unit Root Test Results

First generation unit root tests are divided into two categories: homogeneous and heterogeneous models. Since the coefficients are heterogeneous, Im, Pesaran and Shin (2003), Maddala and Wu (1999), Choi (2001) first generation unit root tests based on the heterogeneous model assumption will be used.

Table 4. First Generation Panel Unit Root Test Results

Variables		**Im et al. (2003)**	**Maddala and Wu (1999)**	**Choi (2001)**
HTPE	Level	-0.717(0.274)	9.812(0.179)	-0.932(0.139)
	∇	-6.852(0.007)*	38.487(0.000)*	-10.567(0.000)*
FDI	Level	-1.271(0.146)	12.047(0.275)	-0.631(0.267)
	∇	10.228(0.000)*	47.365(0.000)*	-11.436(0.000)*

Note: ∇ denotes first order difference and * denotes stationarity. The deterministic specification of the tests includes constant and trend. Probability values are reported in parentheses. Tests for significance at the 0.05 level were conducted. The null hypothesis of the tests is that there is a unit root. The optimal lag length is determined using the Schwarz information criterion.

All variables have unit root at level values. It was determined that they are stationary I(1) for the first order difference. Due to cross-section dependence, second generation unit root tests will be applied. The CADF test developed by Pesaran (2007) was applied.

Table 5. Second Generation Panel CADF Unit Root Test Results

Variables	**Level**		**1st order difference**	
	Constant	**Constant + Trend**	**Constant**	**Constant + Trend**
HTPE	-1.180	-1.209	-4.242*	-4.599*
FDI	-1.099	-1.115	-7.382*	-8.586*

Stationary variable for *0.05

For the second generation unit root test CADF, the lag length was taken as 1 according to the Schwarz information criterion. As a result of the test, the series were not stationary at level, but stationary for the first order difference.

4.6. Westerlund & Edgerton (2007) LM Bootstrap Panel Cointegration Test

In panel data analyses, cointegration techniques were used to test the existence of a long-run relationship between time series *(T)* and cross-sectional *(N)* variables. In this study, the LM bootstrap panel cointegration test developed by Westerlund and Edgerton (2007) was used to determine the long-run relationship between the variables. This cointegration test is based on the Langrage test multiplier proposed by McCoskey and Kao (1998). This cointegration test takes into account the dependence between cross-sectional units. Moreover, Westerlund and Edgerton (2007) cointegration test was found to yield good results in small samples. In this test, the acceptance of the hypothesis H_0 indicates that there is a cointegration relationship for all cross-sections.

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Table 6. Westerlund and Edgerton (2007) LM Boostrap Cointegration Results

LM_N^+	E7 COUNTRY GROUP					
	Constant			Constant+trend		
	Statistics	Asymptotic p value	Bootstrap p value	Statistics	Asymptotic p value	Bootstrap p value
	8.508	0.134	0.298	9.185	0.414	0.471

Bootstrap probability values were obtained from a distribution with 10,000 replications. Asymptotic probability values were obtained from the standard normal distribution. Lag and lead levels were taken into account. When the results in Table 7 are examined, it is seen that there is a cointegration relationship between the series considered in the country group ($p>0.05$). In this case, the series move together in the long term. Once it is decided that the series are cointegrated, the coefficients in the model can be estimated with cointegration estimators. We will proceed to the long-run coefficient estimates of the model.

4.7. FMOLS (Fully Modified OLS) Estimation of Long-Term Cointegration Coefficients

In this study, long-run cointegration coefficients were examined using the FMOLS (Fully Modified OLS) method. According to Phillips and Hansen (1990), since the FMOLS method takes into account the simultaneous relationships between the error terms of the equations of the variables, it also eliminates second order deviations. The FMOLS estimator overcomes the diagnostic problems that occur with standard estimators. This method is obtained by improving the OLS by taking into account the endogeneity and autocorrelation problem. Moreover, to overcome the inadequacy of the OLS estimator in computing the optimal values of cointegrated equations, FMOLS assumes asymptotic bias and exogeneity. This estimator, which assumes cross-section independence, also allows the estimation of a different cointegration vector for each cross-section of the panel in case of heterogeneity.

Table 7. Results of Estimation of Long Run Cointegration Coefficients

Countries	***FLogFDI***
CHINA	0.162*
INDONESIA	0.128*
TURKEY	0.114*
BRAZIL	0.136*
RUSSIA	0.142*
INDIA	0.130*
MEXICO	0.093*
PANEL	**0.129***

*Statistically significant variable for 5% (Autocorrelation and variance problems in the analysis were eliminated by Newey-West method). "F" denotes first order difference.

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According to the results of Table 8, the foreign direct investment variable, which is the independent variable considered in the country group for the panel as a whole, is positively and statistically significantly related to the exports of high-tech products. The foreign direct investment variable increases the high-tech product exports variable by 12.9%.

The foreign direct investment variable is significant for each country in the E7 country group, and the coefficient magnitudes indicate that China, Russia, Brazil are the most influential countries on the exports of high-tech products. The lowest impact is obtained for India, Indonesia, Turkey and Mexico.

4.8. Short Term Analysis: Error Correction Model

In determining the short-run causality relationship between cointegrated series, information is obtained by using the error correction term. In short, it is an error correction model that shows how much of the imbalance in the independent variable will be corrected in the next period. In the short-term analysis, the lags of the differenced series and the one-term lagged value of the error term series (Error Correction Term: ECT_{t-1}) obtained from the long-term analysis are used.

Table 8. Short Run Error Correction Model Coefficient Estimates for Country Group

Dependent Variable: $\Delta LnHTPE_t$	**Coefficient**	**St. Error**	**t-Statistic**	**p**
$\Delta LnFDI_t$	0.118	0.022	5.363	0.000*
ΔECT_{t-1}	-0.409	0.064	-6.390	0.000*
Fixed	1.693	0.297	5.701	0.000*
R^2 =0.697, DW=2.11, J-B (p)=0.196, Harvey test(p)=0.141				

Note: *denotes statistical significance at the 0.05 level, JB; Jarque-Bera normality test probability value. Autocorrelation and variance problems in the forecasts are tried to be eliminated with the Newey-West method.

In Table 8, the coefficient of the error correction term is negative and statistically significant in the E7 country group. That is, the error correction mechanism of the model works. In this case, 40.9% of the short-run deviations between the long-run co-moving series disappear and the series converge back to the long-run equilibrium value. The variables again approach the equilibrium value in the long run. Thus, both long-run and short-run relationships between the series were obtained.

When we look at the short-run coefficient values, the effects are lower than in the long-run. In this case, FDI, which affects the HTPE, provides more significant outputs in the long run, while the effects are lower in the short run.

5. Conclusion

Foreign direct investment enables developing countries to acquire new technology and achieve higher productivity in production processes. By acquiring not only new technology but also new management skills, the investing country can increase its exports of high-tech products. In order for foreign direct investment to take place, the country of investment must be stable in terms of its economy and

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applicable policies. Transparency in governance and minimal corruption increase the country's credibility. This, in turn, leads to more foreign direct investments and accelerates their economic development.

This study aims to determine the effects of foreign direct investment on exports of high-tech products by using annual data for the period 2010-2020 in E7 countries from the developing country group with panel cointegration analysis. In the analysis, Pesaran and Yamagata (2008) homogeneity test was applied and it was decided that the slope coefficients were not homogeneous. First generation unit root tests based on the heterogeneity assumption, namely Im, Pesaran and Shin (2003), Maddala and Wu (1999) and Choi (2001) were applied. Pesaran (2004) CD_{LM} test was used and cross-section dependence was found. Based on this, the second generation stationarity results were examined by calculating the CIPS statistic by taking the arithmetic mean of the CADF statistics found for a country.

The LM bootstrap panel cointegration test developed by Westerlund and Edgerton (2007) was used to determine the long-run relationship between the variables. Long-run cointegration coefficients were examined using the FMOLS (Fully Modified OLS) method. In determining the short-run causality relationship between cointegrated series, the error correction term is used to obtain information.

The coefficient of the error correction term is negative and statistically significant in the E7 country group. That is, the error correction mechanism of the model works. In this case, 40.9% of the short-run deviations between the long-run co-moving series disappear and the series converge back to the long-run equilibrium value. Foreign direct investment variable, which is the independent variable considered in the E7 country group for the panel as a whole, was found to have an increasing effect on high-tech product exports and to be statistically significantly related.

As a result of the analysis, the countries that have the most impact on the export of high-tech products by foreign direct investments are China, Russia, Brazil, India and Indonesia, respectively. The least affected countries were Turkey and Mexico, respectively. In this case, it was determined that exports of high-tech products are higher in E7 countries, which are the developing country group with more foreign direct investments. The foreign direct investment variable was found to increase the high-tech product exports variable by 12.9%. Therefore, the results obtained in this study, Topallı (2015), Turkey, Thailand, Singapore, South Korea, India and Brazil for the period 1989-2013 foreign direct investment, economic growth and the relationship between high technology exports, Ekananda and Parlinggoman (2017), in their studies examining the impact of high technology exports and foreign direct investments on economic growth of 50 countries for the 1992-2014 periods, Kızılkaya, Sofuoğlu and Ay (2017) coincide with the results of their studies examining the effects of foreign direct investments and openness on high-tech product exports, with the data of 12 developing countries for the period 2000-2012. In addition, Göçer, Bulut and Dam (2012), Çetin and Şeker (2013), Gür (2020), Uğur and Taş (2022), which examine the effect of foreign direct investments on exports, also overlap with the results of the studies.

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In order for India, Indonesia, Turkey and Mexico to attact foreign direct investments to their countries, reducing the heavy tax burdens and bureaucratic procedures required in new business establishment processes can contribute to the formation of new investments. Foreign investors invest in countries with the most risk-free economies. For this reason, the stability of the economies of the countries will enable them to be less affected by the economic and financial crises that will be experienced, and this will attract more investments to their countries by gaining the trust of the investors. Ease of obtaining loans in establishing a new business, tax incentives and foreign investments can be increased. In this way, they can get faster and more efficient outputs by incorparating management knowledge and technology that do not exist in their countries into their production. Thanks to the new foreign direct investments to be made, they can accelerate the export of high technology products of their countries.

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Araştırma ve Yayın Etiği:
Bu çalışmada, araştırma ve yayın etiği kurallarına uyulduğu yazarlar tarafından taahhüt edilmektedir.

Research and Publication Ethics:
In this study, the rules of research and publication ethics were fully followed by authors.