



ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

FINANCIAL INTEGRATION AND EXPORT ASSOCIATION OF TÜRKİYE WITH OECD COUNTRIES

TÜRKİYE’NİN OECD ÜLKELERİYLE FİNANSAL ENTEGRASYON VE İHRACAT İLİŞKİSİ

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Abstract

The Financial integration of countries is constantly increasing with their mutual trade. In other words, the rising of partnerships in the international market ensures higher financial integration over time. Increasing financial integration among countries also will be the reason for raising the similarity and bilateral agreements of these countries. This paper shows what countries have tendency to act together in terms of financial integration with Türkiye in the designated period. For this purpose, the stock market indexes of Belgium, France, Germany, Israel, Italy, Spain, Switzerland, and the United Kingdom those are top trading partner of Türkiye and members of the Organization for Economic Co-operation and Development (OECD) selected for this research. Gregory – Hansen (1996) cointegration test is used to find the financial integration between the stock market indices of selected countries and Türkiye. The result of test method shows that the highest correlation is with Germany after Israel, and the second line is for the United Kingdom. According to the result of the cointegration test, although Türkiye acts together with all selected countries, Germany stands on different points. This could explain with Germany is the major partner of Türkiye in terms of mutual trade.

Keywords: International Trade, Financial Integration, Stock Market, Cointegration Test

Jel Classification: F02, F37

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Öz

Ülkelerin ekonomik olarak gelişimlerine paralel olarak uluslararası piyasalarla olan entegrasyonları da gelişim göstermektedir. Piyasalar arasında entegrasyonun artması ülke piyasaların benzerliğinin ve ikili ilişkisinin artmasına da neden olabilmektedir. Bu çalışmada, Türkiye'nin ihracatında üst sıralarda bulunan ve İktisadi İşbirliği ve Gelişme Teşkilatı'na (OECD) üye olan ülkelerden Almanya, Belçika, Birleşik Krallık, Fransa, İspanya, İsrail, İsviçre ve İtalya'nın borsa endeksleri ile Türkiye'nin borsa endeksi incelenmiştir. Seçilen ülkeler ile Türkiye'nin borsa endeksleri arasındaki finansal entegrasyonun bulunmasında Gregory-Hansen (1996) eşbütünleşme testi kullanılmıştır. Kullanılan test yöntemi sonunda, en yüksek korelasyonun İsrail'den sonra Almanya ile olduğu, sırasıyla Birleşik Krallık'ın geldiği görülmektedir. Eşbütünleşme sonuçlarına göre ise Türkiye'nin seçilen tüm ülkeler ile hareket ettiği görülmektedir fakat Almanya farklı bir noktadadır. Bu durum Türkiye'nin Almanya ile olan ikili ticareti ile açıklanabilmektedir.

Anahtar Kelimeler: Uluslararası Ticaret, Finansal Entegrasyon, Hisse Senedi Piyasası, Eşbütünleşme Testi
Jel Sınıflandırması: F02, F37

1. Introduction

The concept of financial integration emerged at the beginning of the 20th century, when activities aimed at increasing commercial relations between countries began to be implemented. Respectively, the First World War and the subsequent great economic depression that started in 1929 led countries to act in a more controlled manner regarding their monetary policies. Subsequently, the oil crises in the 1970s caused large amounts of dollars to accumulate in oil-exporting countries and the financial systems that began to emerge in the 80s and 90s integrated from local to all world economic systems. In addition, the integration of stock exchanges and capital markets into international capital movements has also accelerated the integration of financial markets.

Financial integration is defined as the integration of countries' local financial markets with international financial markets (Wasiu and Temitope, 2015:658). With the increase in liberalized economies, an increase in capital movements and financial integration between countries is observed. Despite the increase, it is seen that it is limited to a few financially developed countries. However, globalization, which we have begun to feel more in our daily lives especially since the 90s, the development of communication technologies, and the emergence of lower transaction costs in transactions in international markets, have also contributed to the development of capital movements and bilateral trade between countries.

Nowadays, trade volumes are expected to increase depending on the development of financial integration between countries. Especially since the early 90s, the increasing impact of globalization and the acceleration of technological developments have led to an increase in capital movements and trade volumes between countries. This impact was felt strongly in Türkiye. In the study, the countries with which Türkiye's financial integration is intense and the countries with which its trade volume is intense were investigated. In this context, countries such as Germany, Belgium, the United Kingdom, France, Spain, Israel, Switzerland, and Italy were identified and the long-term relationship between the stock market indices of these countries and Türkiye's stock market index was examined. First of all, preliminary tests and unit root tests were conducted, and then it was investigated with the help of

Gregory and Hansen (1996) cointegration test. In this way, the effect of financial integration between selected countries and Türkiye on trade volumes will be investigated.

In the following sections of the study, a literature review is first conducted to support the subject. Afterward, the method used in the study and the application results will be included. In the last part, an evaluation will be made according to the results obtained and the study will be terminated.

2. The History of Türkiye's Financial Integration

Türkiye abolished capital restrictions in 1989 as a result of trade and financial liberalization that occurred in the early 1980s. Deep swings and boom-bust cycles were the results of this change, whereby the speculative whims of financial arbitrageurs ultimately determine the paths of national output. Thus, capital movements, particularly short-term flows, have determined the direction of domestic economic activity. Fast capital inflows and economic expansion were followed by withdrawals and crises, quite similar to what many Latin American emerging nations had through after liberalizing capital flows. Capital inflows and economic growth show a strong association when capital flows liberalized in 1989, but current account deficits turn into long-term issues. Increased volatility, the emergence of twin current account and budgetary deficits, and high inflation during the 1990s contributed to the International Monetary Fund's (IMF) heavy involvement in macroeconomic management by 1998. Between 1999 and 2003, the IMF gave US\$ 20.4 billion in financial support. After the severe crisis of 2001, Türkiye adopted a conventional approach that involved increasing interest rates and preserving an overpriced real exchange rate managed under unrestricted capital mobility. Under the guidance of the IMF, the government took a contractionary budgetary posture and started a number of privatizations and "market friendly" structural reform initiatives. Figure 1. Shows the period of financial integration of Türkiye from 1989 to 2022.

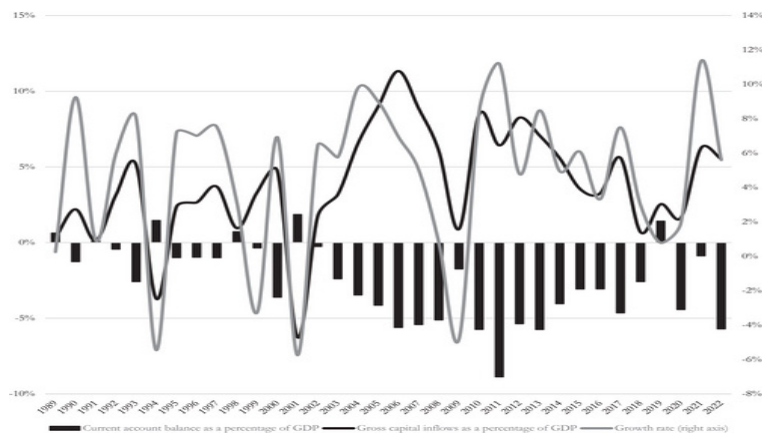


Figure 1. Capital Inflows, Current Account, and Economic Growth

Source: IMF World Economic Outlook Database (www.imf.org/en/Publications/SPROLLS/world-economic-outlook-databases)

3. Literature Review

Financial integration and the increase in capital transfer between countries and bilateral trade have led researchers to focus on financial integration. Thus, a literature on financial integration and foreign trade has been formed. This section includes a literature review examining the relationship between financial integration and foreign trade between countries.

Korkmaz et al. (2009) investigate the relationship between the Turkish stock market and the stock markets of developed and developing countries. The study employed cointegration analysis to examine and evaluate stock market data from the years 1995 to 2007. According to the results of the analysis, a long-term relationship was determined between Türkiye's stock market and the stock markets of 16 developed and 21 developing countries.

Kučerová (2012) assesses the relationship between financial and trade integration in the European Union (EU) member countries (EU10, EU17, and EU27) over the period 1993–2012. The author uses the method of correlation analysis and by the result of research; comparing the EU 10 to the EU 7, the EU 10 countries saw less financial integration progress. Additionally, trade integration and financial integration are related processes that should not be evaluated independently.

Shin and Yang (2012) study on the similar factors that influence trade and finance integration. Author uses the panel data analysis with 5940 annual observations for the period of 1983 to 2004. They discover that trade in assets promotes trade in goods and vice versa.

Gur (2013) examines that whether exports from financially integrated nations are comparatively higher in sectors of the economy. Writer used the panel data analyses for period of 1996-2004. The result that writer has is on two parts; the most significant and consistent influence on the sectoral distribution of export flows comes from investments in international portfolio equities. Exports are also comparatively increased by international portfolio equity investments in industries.

Samırkaş and Düzakın (2013) examine the relationship between the Turkish stock market and the stock markets of Eurasian countries. In the study where stock market data from the period of 1987-2012 was used with the cointegration method. According to the analysis results, a significant long-term relationship was found between Türkiye and the Egyptian stock market, but no significant relationship was found between Türkiye and the stock markets of United Arab Emirates (UAE), Bahrain, Bulgaria, Croatia, Kazakhstan, Pakistan, Romania and Jordan.

Tang (2016) evaluates the impact of financial market development on the Central and Eastern Europe Countries (CEEC) exports to the EU nations. The author uses Two-stage least squares (TSLS) and generalized method of moments (GMM) estimations method with the period of 1994 – 2013. The findings suggest that increased bank and stock market development has a detrimental rather than a beneficial impact on exports.

Alsu and Taşdemir (2017) state that Türkiye has financial integration with the 5 countries with the highest export volume. In the study, monthly stock market data was analyzed for the period

of 2004-2017 for Germany, England, France, Italy, and the United States of America (USA) and using the cointegration method. As a result of the analysis, Germany is the country with the highest correlation with Türkiye; it was determined that the country with the lowest correlation was the USA.

Akram and Jangam (2020) examine the nexus between export diversification and financial integrations. The authors consider the generalized method of moments (GMM) method to find the nexus for 96 economies over the period of 1995 – 2014. The result of the method is financial integration is an essential factor for export diversification.

Liang and Lin (2022) state that countries with a higher financial integration exhibit higher advantages in mutual trade among countries. They use the panel data set of 53 countries for the period of 1989 – 2004. The result indicate that financial integration can be a source of mutual trade for countries when the industries relying on external finance.

Orkunoglu-Şahin (2022) states that how to improve of Türkiye's foreign trade issue from 1980s. The author analyzed the period of 1980-2021. The paper is a research paper and writer has gotten as a result that in order for Türkiye's foreign trade to reach its intended level, structural issues like the country's reliance on imports for exports, exchange rate volatility, exporting low-value goods, and insufficient ability to develop local technology production will need to be resolved.

Aşık and Yolcu-Karadam (2022) examine that empirically test whether the Linder Hypothesis is valid for Turkish exports. They use the panel dynamic OLS estimation for period of 1990-2019. According to writers, between 1990 and 2019, Türkiye's bilateral exports are unaffected by the income disparity between its trading partners.

Vo (2022) investigates that the relationship between international trade integration and financial integration for Asia countries for period of 2001-2015. The writer uses two-stage least squares estimator and finds positive relationship international trade integration and financial integration.

3. Methodology

This section mentions the Augmented Dickey-Fuller unit root test (ADF) that is used in accordance with the scope of the study, the Zivot-Andrew (1992) unit root test that considers a single break, and the Gregory – Hansen (1996) Cointegration Test that allows the detection of breaks and long-term cointegration relationships. Before these tests, a few preliminary tests will be mentioned.

3.1. Augmented Dickey-Fuller (1981) Unit root Test (ADF)

Developed by Dickey-Fuller (1981) the Unit Root Test is found by estimating constant and constant-trend equations. The equations are as follows:

$$\text{Constant: } \Delta X_t = \beta_0 + \beta_1 X_{t-1} + \sum_{i=1}^k \lambda_i \Delta X_{t-i} + u_t$$

$$\text{Constant/Trend: } \Delta X_t = \beta_0 + \beta_1 X_{t-1} + \beta_2 \text{trend} + \sum_{i=1}^k \lambda_i \Delta X_{t-i} + u_t$$

In the equations, X represents the series considered. In addition, is the difference of the series, k is the lag values of the dependent variables included in the system, β and λ parameters, trend; represents the trend of linear time and u represents the error term (Dickey and Fuller, 1981:1057-1072).

Zivot-Andrews unit root test was applied to determine the break dates for the study.

3.2. Zivot – Andrews (1992) Unit root Test

Zivot-Andrews (1992) proposed a model in which he estimated internally and tried to predict break dates with a different approach. The regression equations used to perform Zivot-Andrews unit root tests are as follows:

$$\text{Model A: } y_t = \mu + \theta_1 DU(\lambda) + \beta t + \delta y_{t-1} + \sum_{j=1}^k \delta_j \Delta y_{t-j} + e_t$$

$$\text{Model B: } y_t = \mu + \theta_2 DT(\lambda) + \beta t + \delta y_{t-1} + \sum_{j=1}^k \delta_j \Delta y_{t-j} + e_t$$

$$\text{Model C: } y_t = \mu + \theta_1 DU(\lambda) + \theta_2 DT(\lambda) + \beta t + \delta y_{t-1} + \sum_{j=1}^k \delta_j \Delta y_{t-j} + e_t$$

Model A shows a constant break, Model B shows a trend break, and finally, Model C shows a break in the constant and trend. t gives the time (t = 1, 2, 3...). The breaking time is indicated by TB. In addition, while DU in the model indicates a break in the constant, DT is used as a dummy variable indicating a break in the trend. Its representation is as follows:

$$DU_t = \begin{cases} 1 & t < TB \\ 0 & \text{other case} \end{cases}$$

$$DT_t = \begin{cases} t - TB & t < T\lambda \\ 0 & \text{other case} \end{cases}$$

Least Squares Method (EKC) is used to estimate break scores. In this method, regression estimation is made from the t-2 number. The data obtained from the model that gives the smallest value (t statistic) for the d coefficient is determined as the break date in the unit root test. The smallest t-statistic value of the d coefficient is compared with the table value. If is obtained, the hypothesis is rejected and the alternative hypothesis accepted (Zivot and Andrews, 1992: 254).

The Gregory–Hansen cointegration test that allows the existence of one and only structural break uses in the research.

3.3. Gregory – Hansen (1996) Cointegration Test

Gregory and Hansen (1996) stated that in cointegration analysis to find a long-term relationship between variables, only unit root tests will not be sufficient and structural breaks should also be considered. In the developed cointegration test, three different models investigated the cointegration relationship between the series. The first model (Model C) considers the break at the level, and the second model (Model C/T) takes into account the trend with the break at the level. The third model (Model C/S) examines regime change.

$$\text{Model C: } y_{1t} = \mu_1 + \mu_2 \delta_{t\tau} + \alpha_1 y_{2t} + \varepsilon_t$$

$$\text{Model C/T: } y_{1t} = \mu_1 + \mu_2 \delta_{t\tau} + \beta_t + \alpha_1 y_{2t} + \varepsilon_t$$

$$\text{Model C/S: } y_{1t} = \mu_1 + \mu_2 \delta_{t\tau} + \alpha_1 y_{2t} + \alpha_2 \delta_{t\tau} + \varepsilon_t$$

Model C, reveals the constant term before the structural break, and reveals the change in the constant term at the moment of the structural break. Dummy variables that allow structural changes to be added to the model are shown as follows:

$$\delta_{t\tau} = \begin{cases} 0 & \text{if } t \leq [n\tau] \\ 1 & \text{if } t > [n\tau] \end{cases}$$

While refers to the period in which the break occurred, n refers to the number of observations. τ gives the breaking point.

The model takes into account the trend with a break at the C/T level. Model C/S examines regime change. In the model, represents the cointegration slope coefficient before the regime change, and represents the slope coefficient after the regime change (Gregory and Hansen, 1996: 102-03).

In the model, the date that is the smallest on which the ADF, and test statistics are selected as the break date.

$$\begin{aligned} ADF^* &= \inf_{\tau \in T} ADF(\tau) \\ Z_t^* &= \inf_{\tau \in T} Z_t(\tau) \\ Z_\alpha^* &= \inf_{\tau \in T} Z_\alpha(\tau) \end{aligned}$$

As a result of these tests, break dates are revealed.

4. Empirical Finding

8 OECD member countries with a high trade volume of Türkiye selects for the study. It is aimed to examine the relationship between the stock markets of these countries and to make inferences about their mutual exports. In this regard, the countries to which the most exports make in 2001 and onwards and the stock markets of these countries examine monthly. Data on the stock markets of Türkiye and the countries in question were obtained from the Investing website. The analysis period covers 225 months of price data between 01.02.2001 and 01.12.2019 without including the Pandemic period. Export data is obtained from the Turkish Statistical Institute (TUIK). Descriptive statistics of country indices shows in Table 1.

Table 1. Descriptive Statistics

Countries	Obs.	Mean	Std. Dev.	Min	Max
Türkiye	227	6,0962	0,7437	4,3341	7,0861
UK	227	8,6587	0,1863	8,1794	8,9551
Belgium	227	7,9945	0,2455	7,3993	8,4546
France	227	8,3581	0,1991	7,8701	8,7167
Germany	227	8,8379	0,4160	7,7927	9,4916
Italy	227	10,0768	0,2905	9,4628	10,6863
Spain	227	9,1619	0,2060	8,5998	9,6734
Switzerland	227	8,8772	0,2130	8,3150	9,2701
Israel	227	6,8663	0,4771	5,7397	7,4454

When Table 1 examines, seems that the country market with the highest price average is Italy. On the other hand, the lowest average price finds in the Turkish market. In addition, understand that the highest volatility is in the Turkish market and the lowest volatility is in the UK market. Maximum and minimum observations support the findings at the end.

Before examining the long-term relationship between countries, it is useful to examine the correlation relationship. Correlation coefficients show in Table 2.

Table 2. Correlation Relationship between Country Indexes

Countries	Türkiye	UK	Belg.	France	Germany	Italy	Spain	Switzer.	Israel
Türkiye	1,0000								
UK	0,8171	1,0000							
Belgium	0,5160	0,7906	1,0000						
France	0,4036	0,7811	0,9452	1,0000					
Germany	0,8701	0,9583	0,6963	0,6820	1,0000				
Italy	-0,4796	-0,1255	0,4136	0,4780	-0,2977	1,0000			
Spain	0,4204	0,5101	0,7201	0,6723	0,4197	0,4745	1,0000		
Switzerland	0,7178	0,9354	0,8836	0,8816	0,8979	0,0804	0,6100	1,0000	
Israel	0,9795	0,8309	0,5447	0,4443	0,8901	-0,4401	0,4850	0,7470	1,0000

According to Table 2, Türkiye's highest correlation is with Israel. Then comes Germany and the United Kingdom. Understand that Türkiye's lowest correlation is with Italy. Seems that Italy's correlation with other European countries and Israel is weak when compare with France and Belgium.

4.1. Unit Root Tests

Prior to analyzing the financial market interactions of the chosen nations, the study examines the stationarity levels of the specified series. Among the unit root tests required to investigate stationarity levels, the ADF unit root test prefers which frequently use in the literature. Subsequently, the Zivot-Andrews unit root test is conducted, taking into account any breakpoints. Table 3 and Table 4 display the outcomes of the ADF and Zivot-Andrews unit root tests, respectively.

Table 3. ADF Unit Root Test Result (Level and First Difference)

Level	First Difference			
	Constant	Constant & Trend	Constant	Constant & Trend
Countries	Statistic	Statistic	Statistic	Statistic
Türkiye	-1,785	-2,648	-16,894***	-16,938***
UK	-1,230	-3,110	-15,194***	-15,198***
Belgium	-1,250	-1,692	-12,101***	-12,087***
France	-1,701	-2,294	-13,811***	-13,867***
Germany	-0,521	-3,290	-13,863***	-13,881***
Italy	-2,069	-1,847	-14,265***	-14,288***
Spain	-2,028	-2,055	-14,430***	-14,397***
Switzerland	-0,755	-2,307	-12,517***	-12,550***
Israel	-1,088	-1,843	-13,553***	-13,553***

Note: Augmented Dickey-Fuller unit root test (ADF); Constant; - 3,468, - 2,882, and - 2,572, and Constant, and Trend; - 3,998, - 3,433, and - 3,133 respectively for %, 5%, and %10. ***, **, and * indicate the significance level of 1%, 5% and 10%, respectively.

In the applied ADF unit root test, seems that the series contain unit roots at their level values. In order to determine the integration levels of the index values, the first differences of the values must be taken. It was understood that the values obtained because of first differences is greater than the critical values. As a result, it was determined that the series became stationary.

Following the ADF unit root test, the Zivot-Andrews unit root test is conducted. The finding indicate:

Table 4. Zivot – Andrews (1992) Unit Root Test Result (Constant and First Difference)

Countries	Level				First Difference			
	Constant		Constant & Trend		Constant		Constant & Trend	
	Statistic	Break Date	Statistic	Break Date	Statistic	Break Date	Statistic	Break Date
Türkiye	-4,330	2003/12	-4,474	2008/1	-17,141***	2009/2	-17,184***	2009/3
UK	-4,073	2008/6	-4,167	2007/11	-6,810***	2009/2	-6,958***	2006/4
Belgium	-4,449	2008/5	-4,803	2008/3	-5,982***	2007/6	-6,090***	2007/6
France	-4,385	2008/6	-4,414	2008/6	-14,152***	2007/6	-14,307***	2007/6
Germany	-3,973	2008/6	-3,913	2008/6	-14,029***	2009/3	-14,255***	2007/6
Italy	-4,376	2008/6	-4,718	2008/6	-8,029***	2007/5	-8,141***	2007/5
Spain	-3,599	2004/9	-4,695	2008/6	-8,124***	2006/11	-8,311***	2007/6
Switzerland	-4,365	2008/9	-4,768	2007/12	-12,861***	2007/5	-13,067***	2007/5
Israel	-3,916	2004/11	-3,970	2004/11	-13,750***	2007/11	-13,778***	2007/11

Note: Z-A Unit root test; Constant; - 5,34, - 4,80 and - 4,58 and Constant and Trend; - 5,57, - 5,08 and - 4,82 respectively for %1, %5 and %10. ***, ** and * indicate the significance level of 1%, 5% and 10%, respectively.

It is possible to talk about the existence of a structural break for all countries mentioned in the study with the Zivot-Andrews unit root test that is applied after the ADF unit root test. According to the test results obtained, it is seen that the series contain unit roots in their level values. As a result, it was deemed appropriate to take the differences of the series. After taking the first differences, it is seen that the series become stationary with different structural break dates.

4.2. Cointegration Test

After examining the stationarity levels, it was deemed appropriate to perform the Gregory-Hansen (1996) cointegration test to examine the existence of a long-term relationship between countries. Test result shows in Table 5:

Table 5. Gregory – Hansen (1996) Cointegration Test

Countries		t – Statistic	Break Date	1%	5%	10%
Türkiye – UK	ADF	-11,35***(5)	2005/11	-5,13	-4,61	-4,34
	Zt*	-18,43***(5)	2005/12	-5,13	-4,61	-4,34
	Za*	-271,99***(5)	2005/12	-50,07	-40,48	-36,19
Türkiye – Belgium	ADF	-12,31***(5)	2013/1	-5,13	-4,61	-4,34
	Zt*	-18,35***(5)	2010/9	-5,13	-4,61	-4,34
	Za*	-270,87***(5)	2010/9	-50,07	-40,48	-36,19
Türkiye – France	ADF	-11,33***(5)	2010/8	-5,13	-4,61	-4,34
	Zt*	-18,36***(5)	2005/12	-5,13	-4,61	-4,34
	Za*	-271,06***(5)	2005/12	-50,07	-40,48	-36,19
Türkiye – Germany	ADF	-11,46***(5)	2005/11	-5,13	-4,61	-4,34
	Zt*	-17,83***(5)	2005/12	-5,13	-4,61	-4,34
	Za*	-264,78***(5)	2005/12	-50,07	-40,48	-36,19
Türkiye – Italy	ADF	-11,35***(5)	2012/12	-5,13	-4,61	-4,34
	Zt*	-18,39***(5)	2013/3	-5,13	-4,61	-4,34
	Za*	-271,6***(5)	2006/3	-50,07	-40,48	-36,19
Türkiye – Spain	ADF	-11,38***(5)	2013/1	-5,13	-4,61	-4,34
	Zt*	-17,95***(5)	2005/12	-5,13	-4,61	-4,34
	Za*	-265,99***(5)	2005/12	-50,07	-40,48	-36,19
Türkiye – Switzerland	ADF	-12,41***(5)	2010/10	-5,13	-4,61	-4,34
	Zt*	-18,42***(5)	2014/12	-5,13	-4,61	-4,34
	Za*	-271,79***(5)	2014/12	-50,07	-40,48	-36,19
Türkiye – Israel	ADF	-12,33***(5)	2005/11	-5,13	-4,61	-4,34
	Zt*	-16,98***(5)	2006/1	-5,13	-4,61	-4,34
	Za*	-254,16***(5)	2006/1	-50,07	-40,48	-36,19

Note: Critical values have taken from Gregory-Hansen (1996) original paper. ***, ** and * indicate the significance level of 1%, 5% and 10%, respectively.

The cointegration test results given in Table 5 require evaluation for each country individually. Considering the results of the cointegration test, Türkiye has a long-term relationship with each country's financial markets. The values obtained for all countries are greater than the 5% significance value in absolute value. In this case, the basic hypothesis that the selected countries do not have a cointegration relationship with Türkiye under structural breaks in the long term is rejected. Türkiye's stock market moves with countries where Türkiye's export volume is high in the long term. Break dates give results consistent with the effect of political stability after Türkiye's 2001 economic crisis, the abundance of money supply in the world, the global economic crisis, and Türkiye's reaching the highest income in its history.

5. Conclusion

This research examines at the relationship between Türkiye's financial markets and eight OECD nations that export a lot to Türkiye: Germany, Belgium, the United Kingdom, France, Spain, Israel, Switzerland, and Italy. It also aims to look at how financial integration affects the respective countries'

bilateral trade with Türkiye. Monthly data from 2001 to 2019 used in the research and the pandemic era are not included. Initially, a correlation study was performed to examine the link between the selected nations. The stationarity connection between Türkiye and a few chosen nations was then looked at. The Zivot-Andrews unit root test, which accounts for structural breakdowns, and the ADF unit root test select for examining the stationarity connection. To investigate the selected nations' long-term connection with Türkiye, the Gregory-Hansen (1996) cointegration test employed.

When the analysis results examined, it turns out that the country with the highest correlation with Türkiye is Israel. It can be seen that Italy has the lowest correlation. Spain comes after Italy. Upon examination of the applied unit root tests, various dates surfaced as break dates. In general, the years between 2007 and 2009 appear to be the years when breaks occurred for countries. The impact of the 2008 global crisis can be clearly seen here. Trade and money flows throughout the world were disrupted by the global economic crisis of 2008, which was started in the USA. The breakdown of reciprocal commercial links between Türkiye and other chosen nations is mostly due to this issue. Despite all of these negative consequences, the applied cointegration test results indicate that Türkiye and the chosen nations have a long-term association. We may also conclude from this circumstance that the consequences of crises are transient.

Studies have shown that there is a strong connection between countries' financial markets and bilateral trade (Beck, 2003; Kose et al., 2006; Kucerova, 2013). Bilateral trade between countries is an important factor for financial integration (Kucerova, 2013: 992). As a result of the analyses, one of the important results obtained is that financial and commercial integration in Türkiye has become deeper since 2001. It is clear that financial integration creates an increasing effect on the mutual trade of Türkiye and other countries. Although both trade and financial integration did not flow between Türkiye and selected countries during the financial crisis and recovery, they increased in the following years. In addition to experiencing similar breaking dates, Germany and the UK are among the top countries as the countries with the highest trade volume and full financial integration of Türkiye. As a result, Türkiye's bilateral trade with countries with high financial integration is also high. The analysis proves this situation.

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