

The Long Term Relationship between Globalization and Tourism: The Case of Turkey¹

Jülide YALÇINKAYA KOYUNCU¹

Deniz SONGUR²

¹Prof. Dr., Bilecik Şeyh Edebali University /Faculty of Economics and Administrative Sciences/Department of Economies, julide.yalcinkaya@bilecik.edu.tr, ORCID:0000-0001-7930-4901

².Phd Student, Bilecik Şeyh Edebali University /Faculty of Economics and Administrative Sciences/Department of Economies, songurdeniz@hotmail.com, ORCID:0000-0003-2552-29991

Abstract: Globalization, which started to show its effects rapidly after 1980, has greatly affected all sectors and also has a significant impact on tourism (i.e., number of arrivals). In this study, the long-term relationship between general globalization (GLOBAL), economic globalization (ECOGLOB), trade globalization (TRADEGLOB), financial globalization (FINGLOB), social globalization (SOCGLOB), interpersonal globalization (PERSONGLOB), informational globalization (INFOGLOB), cultural globalization (CULGLOB) and political globalization (POLGLOB) and the number of inbound tourists (TOURIST) is analyzed by using the ARDL method for the period 1995-2020 and Turkey sample. After the long-term empirical analyses, statistically significant results were obtained for only GLOBAL, ECOGLOB, POLGLOB variables and their defacto and dejure forms. Therefore we reported just those statistically significant findings in this study. We obtained statistically significant positive coefficients for GLOBAL, ECOGLOB, POLGLOB variables and their defacto and dejure forms except dejure form of political globalization (POLGLOBAL_Y); thus they have significant positive impact on number of incoming tourists in Turkey during the period of 1995-2020. Meanwhile several diagnostic tests were implemented for each model utilized in the analyses.

Key Words: Globalization, Tourism, Stationarity, Co-integration, ARDL analysis.

1. INTRODUCTION

Tourism, symbolizes the social capital of societies and the global awareness of individuals by enabling the exchange of cultures and values, which are of great significance for societies in a globalizing world. (Sharif et al., 2021: 957). The development of tourism in recent years has attracted the attention of many researchers. Tourism has a significant impact on how we see and comprehend the world. One of the factors having a significant impact on tourism is globalization. After 1980, globalization has started to show its effects rapidly and has greatly affected all sectors in the world. As globalization expands the market and integrates societies, tourism has been one of the important factors in its development. The tourism sector plays a significant role for a country in terms of providing employment facilities, decreasing poorness, improving income distribution, composing supplement demand for goods and services, generating supplement tax revenues and foreign exchange reserves, as well as contributing significantly to GDP. Tourism has become one of

the most important means for countries to achieve these objectives (Gülcemal, 2020: 253).

Although there are different approaches to the phenomenon of globalization, in most definitions, both economy and society are important factors underlying the globalization of the world economy. As stated by Boğa and Erkişi (2019), it is difficult to make comparisons among previous studies due to the use of different periods and the share of tourism in the total economy varies from country to country. Kosolapov N.A. (2001) defines globalization in the context of the intensification of the crisis phenomenon and the weakening of the role of the national state, the tendency to unite forces, the spread of means of consumption on a global scale, and the solution of local problems. The structure of global society is flexible and polycentric in international relations. According to Dreher (2006), globalization is a procedure eroding national borders, integrating public economies, cultures, technologies and governance, and producing complex relationships of interdependence. Objective indicators help to identify which countries have globalized or are about to globalize, including the Maastricht Globalization Index (MGI) assessed

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by the Netherlands Research Institute (Martens and Zywiets, 2006) and other globalization indices. The KOF was introduced by the Swiss

Economic Institute by Dreher et al. 2006 (Javid and Katircioğlu, 2017: 3). Unlike the Maastricht Globalization Index, the KOF Index does not take environmental factors into account. KOF index was updated in 2008 by Dreher et al. and in 2019 by Gygli et al.

Tourism is the fundamental sector that facilitates the change of socio-cultural norms and set on long-term foreign capital inflows (Zhao and Li, 2006: 204). However, the connection between tourism and globalization is bilateral. That is, while the development of tourism contributes to the economic, social and political aspects of the globalization (Dwyer, 2015: 2), the tourism industry has also become a major beneficiary of globalizing world. Especially, globalization has made international travel easier and improved the awareness of new travel destinations (Hociung and Frâncu, 2012: 134). While the benefits of globalization are not limited to any one sector of the economy, the tourism industry contributes to all aspects of globalization and is influenced by the benefits of globalization. (Sharif, et al., 2021: 958).

2. LITERATURE REVIEW

Sharif et al. (2021) investigated the relationship between tourism and globalization for the US economy using the (QQ) quantile regression technique for the period 1995-2017. As a result, there is a positive two way relation among all globalization indices and tourism in the pre-crisis period in the US.

P. Tzeremes (2020) examined the relationship between globalization indicators, total factor productivity index and tourism development with Generalized Moment and Granger Causality analysis method for 25 European countries for the period 1995-2016. According to the findings, the study revealed that globalization and total factor productivity increase tourism development.

Jena et al. (2021) analyzed the relationship between tourism and globalization for 112 countries for the period 1995-2014 by using the panel quantile regression estimation method. According to the results, globalization has a negative impact on countries which have exceedingly low tourism revenue, while globalization has a positive and significant impact on developing countries.

Fereidouni et al. (2014) explored the short and long-term relationships between indicators of globalization (economic, political, social) and the number of tourist arrivals in the MENA region using data from 1995 to 2008. The results suggest that tourist arrivals can promote globalization and integration with the global economy and society can promote tourist arrivals.

Javid and Katircioğlu (2017) investigate how economic, social and political globalization indicators affect tourism development. Different approaches (i.e., OLS, fixed effect, random effect, dynamic OLS, GMM) are applied for a sample of 133 countries and period of 1995-2014. The results show that economic, social and political globalizations are important factors for tourism development.

Gülcemal (2020) probes how economic, social and political globalization indicators affect the development of tourism in the context of the economies of eight Mediterranean countries between 1995 and 2018. He used least squares, random effects, dynamic OLS, GMM methods in the analyses. The results of the analysis show that the classified globalization factors have positive and significant effects on tourism development in the selected countries. It was found that improving any of these globalization factors means higher tourism growth in the countries.

Ventura et al. (2023) aims to analyze tourism and socioeconomic dynamics, taking into account globalization and socioeconomic structural factors. Economic growth, travel and financial success in BRICS countries are analyzed. In order to emphasize the relationships between tourism and socioeconomic indicators between BRICS and G7 countries, they examined the period 1995-2018 with panel data regression method. The results of the analysis show that there are significant differences between developing and developed economies. In terms of socioeconomic structure, developed economies in North America and Europe have a significant advantage over emerging economies in attracting visitors.

Zhang (1995) examined the determinants and functional forms of international tourism demand for travel from the United States, the United Kingdom, France, former West Germany and Japan to Canada for the period 1977-1986. This study shows that the determinants of tourism demand may vary from country to country

Martins et al. (2017) use three econometric models to determine the relationship between

macroeconomic variables and tourism demand. Tourism demand is measured by inbound visitor population and on-site expenditures. The database is an unbalanced data of 218 countries over the period 1995-2012. Some increase in world GDP per capita, appreciation of the national currency and a fall in local prices help to increase tourism demand.

Ghosh (2020); 1991-2018 examines the determinants of tourism demand affecting tourist arrivals from Asia to Australia using an extended panel gravity model. It shows that tourist arrivals positively and significantly affect the GDP per capita of both countries. As a result, globalization positively affects tourist flows.

Zhao and Li (2006) analyzed the effect of globalization on tourism development in the third world from a political economy perspective. According to them, the mobility of capital, population, ideas and information are increasing worldwide in the context of globalization and has a tangible impact on the economic, socio-cultural and ecological spheres of third world countries. Under globalization, more and more countries and third world regions have become new tourism destinations, leading to huge increases in foreign investment and tourism revenues.

Chiu (2020) investigates the non-linear impact of globalization on inbound tourism (international tourism receipts, international tourist arrivals, net exports of tourism services) using the GMM method for 53 countries over the period 1995-2014. The results reveal a non-linear relationship between globalization and inbound tourism and show that different levels of globalization for countries have different effects on inbound tourism development. More globalized countries may attract more inbound tourists, but this does not increase international tourism receipts and tourism service exports at higher levels of globalization, suggesting that globalization does not necessarily benefit incoming tourism development.

Ivanov and Webster (2012) examined the link among globalization and tourism development through a cross-sectional analysis for 167 countries covering the period 2000-2010 and found that social, political, economic globalization indicators are not effective in promoting the development of the tourism sector.

Malec and Abrhám (2016) scrutinized the determinants of the tourism industry for selected European countries using a least squares approach. Although the results revealed a large number of dynamics, in general, price and foreign exchange rate were found to be negative determinants of

tourism demand in most of the study countries, while income of tourism source countries was found to be a positive determinant of tourism demand in the study countries.

Harun and Suprayitno (2012) analyzed the general characteristics of the Singapore tourism industry and its role in the globalization process. The result of the study showed that the prices of the consumer index (Index) positively affect the number of tourist arrivals to Singapore and only the total number of hotels in Singapore is the most important factor contributing to the revenue of the tourism industry.

Vencovska (2014) modeled the determinants of tourism demand in the Czech Republic between 2000 and 2012. The results of the estimation method using the Arellano Bond generalized method of moments (GMM) revealed that tourism demand in the Czech Republic is positively determined by the income of tourists to source countries and the trade deficit of the destination country. The price level was found to be an important determinant of tourism demand, albeit in a negative direction.

3. DATA AND METHODOLOGY

In this section, the long-term relationship between general globalization (GLOBAL), economic globalization (ECOGLOB), trade globalization (TRADEGLOB), financial globalization (FINGLOB), social globalization (SOCGLOB), interpersonal globalization (PERSONGLOB), informational globalization (INFOGLOB), cultural globalization (CULGLOB) and political globalization (POLGLOB) and the number of inbound tourists (TOURIST) has been analyzed by means of the ARDL method for the years of 1995-2020 and sample of Turkey. After the empirical analyses, statistically significant results were obtained for GLOBAL, ECOGLOB, and POLGLOB variables; hence only their findings have been reported. Meantime, defacto and de jure forms of GLOBAL, ECOGLOB, and POLGLOB variables were analyzed and we got statistically significant results for them as well but de jure form political globalization (POLGLOBAL_Y). We also added per capita income (PCGDP), inflation (INFLATION) and population (POPULATION) variables into the model as control variables. PCGDP variable is given by GDP per capita (current US\$); TOURIST variable is measured as international tourism in terms of number of arrivals; INFLATION variable is GDP deflator; and POPULATION variable is total population. Globalization data were collected from KOF index and remaining part of the data was gathered from WDI. Logarithmic forms of all variables are used in all analyses. We expect to have positive coefficient estimation for globalization, per

capita GDP, and population variables whereas negative coefficient estimation is anticipated for inflation variable. The following model is estimated

$$\Delta \text{TOURIST}_t = \alpha_0 + \sum_{i=1}^p \delta_i \Delta \text{TOURIST}_{t-i} + \sum_{i=0}^q \phi_i \Delta \text{GLOBAL}_{t-i} + \sum_{i=0}^r \gamma_i \Delta \text{POPULATION}_{t-i} + \sum_{i=0}^s \lambda_i \Delta \text{INFLATION}_{t-i} + \sum_{i=0}^t \omega_i \Delta \text{PCGDP}_{t-i} + \theta_0 \text{TOURIST}_{t-1} + \theta_1 \text{GLOBAL}_{t-1} + \theta_2 \text{POPULATION}_{t-1} + \theta_3 \text{INFLATION}_{t-1} + \theta_4 \text{PCGDP}_{t-1} + \varepsilon_t \quad (1)$$

In Equation 1 above, the notations $\theta_0, \theta_1, \theta_2, \theta_3$ and θ_4 denote the long-term coefficients, $\delta_i, \phi_i, \gamma_i, \lambda_i$ and ω_i denote the short-run coefficients, Δ denotes the first order difference operator, α_0 denotes the model constant term and ε_t denotes the model white noise error term.

The null hypothesis of the ARDL bounds test is $H_0: \theta_0 = \theta_1 = \theta_2 = \theta_3 = \theta_4 = 0$ and asserts the absence of cointegration relationship among relevant

for the ARDL bounds test.

variables, while the alternative hypothesis is $H_1: \theta_0 \neq \theta_1 \neq \theta_2 \neq \theta_3 \neq \theta_4 \neq 0$ and claims the presence of cointegration relationship among relevant variables. As long as the F-statistic value obtained for the ARDL bounds test is greater than the upper bound critical value, it is concluded that there is a cointegration relationship among the variables.

The following model was estimated to obtain parameter estimators for the short and long terms:

$$\text{TOURIST}_t = \beta_0 + \sum_{i=1}^p \alpha_i \Delta \text{TOURIST}_{t-i} + \sum_{i=0}^q \mu_i \Delta \text{GLOBAL}_{t-i} + \sum_{i=0}^r \pi_i \Delta \text{POPULATION}_{t-i} + \sum_{i=0}^s \omega_i \Delta \text{INFLATION}_{t-i} + \sum_{i=0}^t \delta_i \Delta \text{PCGDP}_{t-i} + \gamma \text{ECM}_{t-1} + \varepsilon_t \quad (2)$$

In Equation 2 above, the notations: $\alpha_i, \mu_i, \pi_i, \omega_i$ and δ_i represent the dynamic coefficients that return the series to the long-term path, the abbreviation ECM stands for the error correction term of the

model, and the γ notation represents the speed of returning the series to the long-term path in the face of short-run shocks. The coefficient should have a statistically significant negative sign.

Table 1: KPSS (Kwiatkowski-Phillips-Schmidt-Shin) Stationarity Test Results (H_0 : Relevant series is stationary)

VARIABLES	Constant Model		Constant and Trend Model	
	Level/Test Stat. (%1 Critical Value)	1 st Differences (%1 Critical Value)	Level/Test Stat. (%1 Critical Value)	1 st Differences (%1 Critical Value)
POPULATION	0.780221 (0.739000)	0.188463 (0.739000)	0.059324 (0.216000)	---
PCGDP	0.637893 (0.739000)	---	0.171773 (0.216000)	---
INFLATION	0.697246 (0.739000)	---	0.173571 (0.216000)	---
TOURIST	0.652984 (0.739000)	---	0.209367 (0.216000)	---
GLOBAL	0.692885 (0.739000)	---	0.134043 (0.216000)	---
GLOBAL_F	0.715938 (0.739000)	---	0.102648 (0.216000)	---
GLOBAL_Y	0.606242 (0.739000)	---	0.163571 (0.216000)	---
ECOGLOB	0.461366 (0.739000)	---	0.095389 (0.216000)	---
ECOGLOBAL_F	0.666596 (0.739000)	---	0.117834 (0.216000)	---
ECOGLOBAL_Y	0.173773 (0.739000)	---	0.099591 (0.216000)	---
POLGLOB	0.725713 (0.739000)	---	0.149193 (0.216000)	---
POLGLOBAL_F	0.642530 (0.739000)	---	0.086486 (0.216000)	---
POLGLOBAL_Y	0.720573 (0.739000)	---	0.181985 (0.216000)	---

Firstly, the Kwiatkowski-Phillips-Schmidt-Shin (KPSS) stationarity test was applied to the variables used in our model to determine the stationarity levels of the variables. Since the co-integration analysis in the study will be performed with the ARDL bounds test and the ARDL bounds test does

not allow for series integrated at degree two and above, we have to make sure that the series we will use in the model are integrated at a degree below two (i.e. must be I(0) or I(1) or both) with the help of the KPSS stationarity test. According to the results of the KPSS stationarity test given in the

Table 1 above, it is determined that all variables in the model are stationary at level (i.e., I(0)) except the POPULATION variable for the constant model where the POPULATION variable is stationary in its first difference (i.e., I(1)).

4. ESTIMATION RESULTS

4.1. Estimation Results of General Globalization

Table 2: ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	6.120882	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

According to the ARDL bounds test result in Table 2 above, since the F-statistic value of 6.120882 is greater than the upper bound critical values at all significance levels, it indicates that there is a cointegration relationship between the number of

(GLOBAL) Model

The AIC (Akaike Information Criteria) criterion was used to determine the optimal number of lags for the model and the AIC criterion pointed out that the most appropriate lagged model among 162 models is ARDL (2,1,0,1,1).

tourist arrivals, general globalization and other control variables. In other words, it indicates that the number of tourist arrivals, general globalization and other control variables move together in the long term.

Table 3: General Globalization (GLOBAL) Long Term Results

Variable	Coefficient	Std. Error	t-statistic	P-value
PCGDP	0.307190	0.160646	1.912215	0.0765
POPULATION	2.741881	0.643201	4.262867	0.0008
GLOBAL	4.455458	1.499728	2.970845	0.0101
INFLATION	-0.183803	0.066834	-2.750124	0.0156

According to the long-term results in the Table 3 above, the coefficient of GLOBAL has a positive sign and is significant at 5%, the coefficient of the PCGDP variable has a positive sign and is significant at 10%, the coefficient of the POPULATION variable has a positive sign and is significant at 1%, and the coefficient of the INFLATION variable has a negative sign and is significant at 5%. It is determined that a 1% increase in the general globalization index increases the number of tourist arrivals by 4.45%.

When the per capita GDP increases by 1%, the number of incoming tourists increases by 0.30%. A 1% increase in the country's population increases the number of tourist arrivals by 2.74%. It was concluded that a 1% increase in inflation will decrease the number of incoming tourists by 0.18%.

Table 4: Diagnostic Tests

Table 4 below presents the results of a series of diagnostic tests for the estimated model.

	Test statistic	P-value
Jarque-Bera Test	3.813391	0.148571
Breusch-Godfrey test	4.456902	0.0357
Harvey Test	1.302973	0.3170
Ramsey RESET Test	0.077564	0.7850
Conclusion		
CUSUM Test	The parameters of the model are stable.	

Since the p-value (0.148571) of the test statistic value of 3.813391 obtained for the Jarque-Bera normality test is greater than the 10% significance level, the null hypothesis H_0 , which claims that the error terms are normally distributed, cannot be rejected, which leads us to the conclusion that the

error terms of the model are normally distributed. The results of the Breusch-Godfrey test used to detect the autocorrelation problem of the error terms of the model show that there is no autocorrelation problem among the error terms of the model at 1% significance level. According to the

results of the Harvey test used to detect the heteroscedasticity problem of the model, since the hypothesis H_0 (H_0 : there is no heteroscedasticity problem) cannot be rejected at 1%, 5% and 10% significance levels, it leads us to the conclusion that the error terms of the model have constant variance. According to the results of the Ramsey Reset test for model specification error, the hypothesis H_0 , which claims that there is no specification error, cannot be rejected at 1%, 5% and

10% significance levels. In other words, the estimated model does not contain model setup error. In addition, the results of the CUSUM test used for the parameter stability test shows that the parameters of the model are stable.

4.2. Estimation Results of Defacto General Globalization (GLOBAL_F) Model

With the help of Akaike Information Criteria, the most appropriate lagged model among 162 models is ARDL (2, 0, 0, 1, 1).

Table 5: ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	6.485818	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

The findings of the ARDL bounds test for cointegration are shown in Table 5 above. The F test statistic value calculated as 6.485818 is above the upper critical value at all levels of significance.

Therefore, it shows that there is a cointegration relationship between the number of tourist arrivals and the defacto general globalization and other control variables. In other words, it is determined that the variables move together in the long term.

Table 6: Defacto General Globalization (GLOBAL_F) Long Term Results

Variable	Coefficient	Std. Error	t-statistic	P-value
PCGDP	0.448930	0.064158	6.997267	0.0000
POPULATION	1.901650	0.652622	2.913860	0.0107
GLOBAL_F	2.850054	0.594576	4.793422	0.0002
INFLATION	-0.128771	0.052983	-2.430437	0.0281

Long-term coefficient estimates are given in Table 6. As seen in Table 6, the coefficient of GLOBAL_F variable has a positive coefficient and is significant at 1%. When the signs of the coefficients summarized in Table 6 are evaluated, it is seen that the coefficient of the PCGDP variable is positive and significant at 1%, the coefficient of the POPULATION variable is positive and significant at 5%, and the coefficient of the INFLATION variable is negative and significant at 5%. It is stated that a 1% increase in the defacto general globalization index increases the

number of tourist arrivals by 2.85%. It is determined that a 1% increase in per capita GDP enhances the number of tourists by 0.44%.

A 1% increase in the country's population augments the number of tourists by 1.90%. It is concluded that a 1% increase in inflation will decrease the number of tourists by 0.12%.

Table 7 below presents the results of a series of diagnostic tests for the estimated model.

Table 7: Diagnostic Tests

	Test statistic	P-value
Jarque-Bera Test	0.294596	0.863037
Breusch-Godfrey test	1.058452	0.3751
Harvey Test	0.605594	0.7598
Ramsey RESET Test	0.098553	0.7582
Conclusion		
CUSUM Test	The parameters of the model are stable.	

Since the p value (0.863037) of the test statistic value of 0.294596 obtained for the Jargue-Bera test

is greater than 10% significance level, the error terms are normally distributed. According to the

Breusch-Godfrey autocorrelation test results, it is concluded that there is no autocorrelation problem among the error terms of the model. According to the results of Harvey's variable test in Table 7, it is concluded that the error terms have constant variance at 1%, 5% and 10% significance levels. According to the results of the Ramsey Reset test for model specification error, it can be deduced that there is no model setup error at 1%, 5%, 10% significance levels.

As a result, the model does not contain model Table 8: ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	7.458214	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

The estimation results of cointegration test obtained from the ARDL bounds test approach are presented in Table 8. According to the estimation results, since the F-Statistic value 7.458214 is greater than the upper bound I (1) critical value at

Table 9: Dejure General Globalization (GLOBAL_Y) Long Term Results

Variable	Coefficient	Std. Error	t-Statistic	P-value
PCGDP	0.631699	0.122036	5.176352	0.0001
POPULATION	1.920350	0.772042	2.487366	0.0251
GLOBAL_Y	3.325091	1.203348	2.763200	0.0145
INFLATION	-0.076459	0.057434	-1.331244	0.2030

According to the long-term estimation results summarized in Table 9, the coefficient of dejure general globalization (GLOBAL_Y) has a positive sign and is significant at 5%. When we examined the other variables in Table 9, it is seen that the coefficient of the PCGDP variable is positive and significant at 1%, the coefficient of the POPULATION variable takes a positive sign and is significant at 5%, and the coefficient of the INFLATION variable takes a negative sign and not significant. It can be said that

Table 10: Diagnostic Tests

	Test statistic	P-value
Jarque-Bera Test	1.421254	0.491336
Breusch-Godfrey test	6.810712	0.0095
Harvey Test	0.895106	0.5440
Ramsey RESET Test	1.949971	0.1843
Conclusion		
CUSUM Test	The parameters of the model are stable.	

misspecification error. The results of the CUSUM test for the stability of the parameters in the ARDL model show that the parameters of the model are stable.

4.3. Estimation Results of Dejure General Globalization (GLOBAL_Y) Model

162 ARDL models were evaluated with Akaike Information Criteria and it was concluded that the most appropriate lagged model was ARDL (2,0,0,2,0).

all significance levels, it hints that there is a cointegration relationship between the number of tourist arrivals and dejure general globalization and other control variables. This implies that the variables move together in the long term.

a 1% increase in the dejure general globalization index leads to a jump in the number of tourist arrivals by 3.32%. We state that a 1% increase in per capita GDP causes to a rise in the number of tourists by 0.63%. It can be concluded that a 1% rise in the Turkey's population will increase the number of tourists by 1.92%.

Table 10 below displays the results of several diagnostic tests for the estimated model.

Since the p value (0.491336) of the test statistic value of 1.421254 obtained for the Jargue-Bera test is beyond the 10% significance level, it is concluded that the error terms are normally distributed. According to the Breush-Godfrey autocorrelation test result, H_0 hypothesis is rejected at all significance levels; hence there is autocorrelation problem in the error terms of the model. According to the results of Harvey's heteroscedasticity test, we can say that the error terms of the model have constant variance at 1%, 5% and 10% significance

levels. According to the Ramsey Test result, the model does not contain any misspecification problem. Meantime the CUSUM test for parameter stability indicates that the parameters of the model are stable.

4.4. Estimation Results of Economic Globalization (ECOGLOB) Model

After the evaluation 162 distinct models, AIC criterion selects ARDL (2,0,2,2) model as optimal model.

Table 11: ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	6.769980	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

As seen from Table 11, the F-statistic value of 6.769980 exceeds the upper limit critical values at all significance levels and thus we state that the variables

move together in the long term (i.e., cointegration exists).

Table 12: Economic Globalization (ECOGLOB) Long Term Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PCGDP	0.581758	0.072275	8.049231	0.0000
POPULATION	2.910538	0.670496	4.340873	0.0012
ECOGLOB	2.966269	0.719738	4.121317	0.0017
INFLATION	-0.108114	0.061050	-1.770916	0.1042

Table 12 above shows the long term results for economic globalization. According to the long-term results, it is seen that the coefficient of economic globalization has a positive sign and is significant at 1%, the coefficient of the PCGDP variable is significant at 1% and positive, the coefficient of the POPULATION is positive and significant at 1%, and the coefficient of the INFLATION variable has a negative sign but not significant. A one percentage

rise in the economic globalization index causes a 2.96 percent increase in the number of tourist arrivals. A one percentage jump in per capita GDP increases the number of incoming tourists by 0.58 percent. A 1% jump in the country's population increases the number of tourists by 2.91 percent.

Table 13 below presents the diagnostic test results for the estimated model.

Table 13: Diagnostic Tests

	Test statistic	P-value
Jarque-Bera Test	0.102523	0.950030
Breusch-Godfrey test	14.68550	0.0015
Harvey Test	0.905090	0.5691
Ramsey RESET Test	0.396954	0.5428
Conclusion		
CUSUM Test	The parameters of the model are stable.	

When we look at the results obtained for the Jarque-Bera normality test, it is stated that the error terms are normally distributed since the p-value (0.950030) of the test statistic value of 0.102523 is greater than the 10% significance level. According to the Breusch-Godfrey autocorrelation test results, the model is exposed to autocorrelation problem.

According to the results of Harvey heteroscedasticity test, H_0 hypothesis cannot be rejected at 1%, 5% and 10% significance levels. Therefore, it is concluded that the error terms of the model have constant variance. According to the results of Ramsey Reset test for model setup error in Table 14, the model does not contain setup error

at 1%, 5%, 10% significance levels. According to the CUSUM test result, it is concluded that the coefficients of the model are stable.

4.5. Estimation Results of Defacto Economic

Table 14: ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	4.858768	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

The F-statistic value from the ARDL bounds test goes beyond the upper limit critical values at all significance level but 1% significance level. This

Globalization (ECOGLOBAL_F) Model

Among the 162 models, AIC criterion picks ARDL(1, 0, 2, 0, 0) model as the most appropriate lagged model.

result indicates that the number of tourist arrivals variable, defacto economic globalization and other control variables move together in the long term.

Table 15: Long Term Results of Defacto Economic Globalization (ECOGLOBAL_F)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PCGDP	1.226966	0.412062	2.977626	0.0089
POPULATION	-4.315842	4.380548	-0.985229	0.3392
ECOGLOBAL_F	2.967576	1.554489	1.909037	0.0744
INFLATION	0.218534	0.181008	1.207314	0.2449

Table 15 presents the long term results for defacto economic globalization. As can be seen from the table, de facto economic globalization is significant and positive at 10%. The coefficient of the PCGDP variable is significant at 1% and positive, the coefficients of the POPULATION and INFLATION variables are not statistically significant. According to these results, it is seen that a 1% increase in the

index of defacto economic globalization leads to a rise in the number of tourist arrivals by 2.96%. When the per capita GDP goes up by 1%, the number of tourists augments by 1.22%.

Table 16 below presents the results of a couple of diagnostic tests for the estimated model.

Table 16: Diagnostic Tests

	Test statistic	P-value
Jarque-Bera Test	10.88281	0.004333
Breusch-Godfrey test	2.229512	0.1444
Harvey Test	1.996975	0.1194
Ramsey RESET Test	0.622267	0.4425
Conclusion		
CUSUM Test	The parameters of the model are stable.	

The Jargue-Bera normality test implies the non-normality of the error terms of the model. Breusch-Godfrey autocorrelation test results hints that there is no autocorrelation problem among the error terms of the model. The results of Harvey's heteroscedasticity test points out the non-existence of heteroscedasticity problem in the model. According to the results of the Ramsey Reset test for model specification error, the model does not contain any model specification problem. The

CUSUM test was conducted to determine whether the coefficients of the variables are stable and test findings indicate stability of parameters.

4.6. Estimation Results of Dejure Economic Globalization (ECOGLOBAL_Y) Model

The most appropriate lagged model chosen by AIC criterion out of 162 models is ARDL (2, 0, 0, 2, 0) model.

Table 17: ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	7.470294	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

Table 17 shows the bounds test results of the model. Since the F-statistic value calculated as 7.470294 is larger than the upper limit critical

values, we can reach a conclusion that there is co-integration relationship among the variables.

Table 18: Dejure Economic Globalization (ECOGLOBAL_Y) Long Term Results

Variables	Coefficient	Std. Error	t-Statistic	Prob.
PCGDP	0.801341	0.123644	6.481054	0.0000
POPULATION	2.061286	0.847320	2.432713	0.0280
ECOGLOBAL_Y	1.740116	0.719801	2.417496	0.0288
INFLATION	0.028680	0.070051	0.409407	0.6880

According to the findings in Table 18, the coefficient of dejure economic globalization has a positive sign and is significant at 5%. When we examine the other variables, it is seen that the coefficient of the PCGDP variable is significant at 1% with a positive sign, the coefficient of the POPULATION variable has a positive sign and is significant at 5%, and the coefficient of the INFLATION variable is insignificant. We can state that a one percent rise in the dejure

economic globalization index enhances the number of tourist arrivals by 1.74 percent. When the per capita GDP increases by one percent, the number of tourists goes up by 0.80 percent. A one percent increase in the country's population increases the number of tourists by 2.06 percent.

Table 19 below presents the results of some diagnostic tests for the estimated model.

Table 19: Diagnostic Tests

	Test statistic	P-value
Jarque-Bera Test	0.016615	0.991727
Breusch-Godfrey test	5.362814	0.0200
Harvey Test	0.999547	0.4749
Ramsey RESET Test	1.271802	0.2784
Conclusion		
CUSUM Test	The parameters of the model are stable.	

Jarque-Bera test findings support the normal distribution of error terms. According to the Breusch-Godfrey test results, the model does not suffer from autocorrelation problem at 1% significance level. Regarding to Harvey's heteroscedasticity test findings, we can conclude

that the error terms of the model have constant variance. The Ramsey Reset test results show the absence of model misspecification problem. The parameters of the model are stable based on the CUSUM test.

4.7. Estimation Results of Political Globalization (POLGLOB) Model

Among 162 models, the most appropriate model is

ARDL (2, 2, 0, 1, 1) based on AIC information criterion.

Table 20: ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	10.61285	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

The ARDL bounds test results in Table 20 reveal the existence of a cointegration relationship among the

variables, since the F statistic value (10.61285) is bigger than the upper limit critical values.

Table 21: Political Globalization Long Term Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PCGDP	0.661695	0.073018	9.062126	0.0000
POPULATION	2.110770	0.535412	3.942327	0.0017
POLGLOB	8.616100	2.525477	3.411673	0.0046
INFLATION	-0.221225	0.055555	-3.982090	0.0016

According to the long-term results in Table 21, the coefficient of political globalization has a positive sign and is significant at 1%, the coefficient of the PCGDP variable is significant at 1% and positive, the coefficient of POPULATION has a positive sign and is significant at 1%, and the coefficient of the INFLATION variable is negative and significant at 1%. It is seen that a 1% increase in the political globalization index increases the number of incoming tourists by 8.61%.

When the per capita GDP jumps by 1%, the number of tourists goes up by 0.66%. A 1% increase in the country's population augments the number of tourists by 2.11%. A 1% increase in inflation in Turkey will decrease the number of tourists by 0.22%.

Table 22 below presents the results of some diagnostic tests for the estimated model

Table 22: Diagnostic Tests

	Test statistic	P-value
Jarque-Bera Test	1.350837	0.508943
Breusch-Godfrey test	2.373437	0.1390
Harvey Test	4.141277	0.0096
Ramsey RESET Test	0.053096	0.8216
Conclusion		
CUSUM Test	The parameters of the model are stable.	

The error terms in the models are normally distributed based on Jarque-Bera test and there is no autocorrelation problem given the Breusch-Godfrey autocorrelation test results. According to the results of Harvey's heteroscedasticity test, the estimated model experiences heteroscedasticity problem. The results of the Ramsey Reset test for model specification error disclose that the estimated model does not contain model

specification error. Moreover the parameters of the model are stable given the CUSUM test findings.

4.8. Estimation Results of Defacto Political Globalization (POLGLOBAL_F) Model

Among 162 models, the ARDL(2, 2, 0, 1, 1) model was selected as the most appropriate lagged model given AIC criterion.

Table 23. ARDL Bounds Test

	Test Statistic	Significance Level.	Lower Limit I(0)	Upper Limit I(1)
F-Statistics	6.750827	10%	2.45	3.52
		5%	2.86	4.01
		2.5%	3.25	4.49
		1%	3.74	5.06

In the table above, the ARDL bounds test was used to determine whether there is a cointegration relationship among the variables. According to the test result, since the F-statistic value of 6.750827 is greater than the upper limit critical values at all

significance levels, it is deduced that there is a cointegration relationship between the number of tourist arrivals and defacto political globalization and other control variables. In other words, the variables move together in the long term.

Table 24: Defacto Political Globalization (POLGLOBAL_F) Long Term Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PCGDP	0.698907	0.090799	7.697298	0.0000
POPULATION	2.411648	0.637658	3.782039	0.0023
POLGLOBAL_F	3.634973	1.607907	2.260686	0.0416
INFLATION	-0.111480	0.061474	-1.813450	0.0929

Table 24 above shows the long term results for defacto political globalization. The coefficients of defacto political globalization, PCGDP, POPULATION and INFLATION variables are statistically significant. According to these results, it is concluded that the coefficient of defacto political globalization is significant at 5% and positive, the coefficient of PCGDP variable is significant at 1% and positive, the coefficient of POPULATION is significant at 1% and positive, and the coefficient of INFLATION variable is negative and significant at 10%. A one percent increase in the index of defacto political

globalization increases the number of tourist arrivals by 3.63 percent. When the per capita GDP goes up by one percent, the number of incoming tourists increases by 0.69 percent. A one percent rise in the country's population causes to a jump in the number of tourists by 2.41 percent. It is concluded that a one percent increase in inflation in Turkey will decrease the number of tourists by 0.11 percent.

Table 25 below presents the results of a couple of diagnostic tests for the estimated model.

Table 25: Diagnostic Tests

	Test statistic	P-value
Jarque-Bera Test	0.192976	0.908021
Breusch-Godfrey test	0.783965	0.4805
Harvey Test	1.873635	0.1435
Ramsey RESET Test	0.044200	0.8370
Conclusion		
CUSUM Test	The parameters of the model are stable.	

The probability value for the Jarque-Bera Test statistic (0.908021) is greater than 10%. The null hypothesis that the error terms conform to a normal distribution could not be rejected and it is concluded that the assumption of normal distribution is valid for the model. The probability value of the Breusch-Godfrey test is greater than 10% significance level. In this context, it is decided that there is no autocorrelation problem in the model. According to the results of Harvey's heteroscedasticity test, since the H_0 hypothesis cannot be rejected at 1%, 5% and 10% significance levels, it leads us to the conclusion that the error terms of the model have constant variance. According to the Ramsey Reset test results, the H_0 hypothesis, which claims that there is no model setup error, cannot be rejected at 1%, 5% and 10% significance levels. In other words, the model does not contain model setup error. CUSUM Test was applied to investigate whether all parameters estimated in the model are stable or not and it shows that the stability condition is met.

5. CONCLUSION

Globalization, which started to show its effects rapidly after 1980, has greatly affected almost all

sectors and also has a significant impact on tourism as well. This study attempts to examine the long-term nexus between nine types of globalization (i.e., general globalization, economic globalization, trade globalization, financial globalization, social globalization, interpersonal globalization, informational globalization, cultural globalization and political globalization) and the number of incoming tourists by employing the ARDL method for the period of 1995-2020 and sample of Turkey. KPSS stationarity test findings revealed that all of our variables are stationary at level (i.e., $I(0)$) for constant model and constant&trend model except the population variable for the constant model where the population variable is stationary in its first difference (i.e., $I(1)$). Co-integration analysis was conducted via ARDL bounds test and ARDL bounds test results disclose the existence of co-integrating association between globalization and number of tourist arrivals and the other control variables. After the long-term empirical analyses, statistically significant results were obtained for just general globalization, economic globalization, political globalization variables and their defacto and dejure forms. Therefore this study reports and discusses the estimation results of just those variables for

which we obtained statistically significant findings. According to the long-run estimations, we have statistically significant positive coefficients for just general globalization, economic globalization, political globalization variables and their defacto and dejure forms except dejure form of political globalization. Hence they have significant positive impact on number of incoming tourists in Turkey during the period of 1995-2020.

Long-run estimation results of general globalization indicate that: a 1% increase in the general globalization index increases the number of tourist arrivals by 4.45%; a 1% increase in the defacto general globalization index augments the number of tourist arrivals by 2.85%; and a 1% rise in the dejure general globalization index leads to a jump in the number of tourist arrivals by 3.32% in Turkey.

Long-run estimation results of economic globalization points out that: a 1% rise in the economic globalization index causes to a 2.96% jump in the number of tourist arrivals; a 1% jump normality test, autocorrelation test, heteroscedasticity test, model misspecification test, and parameter stability test) implemented for estimated models. In most cases, diagnostic tests findings show that estimated models are not exposed to non-normality, autocorrelation, heteroscedasticity, model misspecification, and parameter instability problems.

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- in the index of defacto economic globalization leads to a rise in the number of tourist arrivals by 2.96%; and a one percent rise in the dejure economic globalization index enhances the number of tourist arrivals by 1.74 percent in Turkey.
- Long-run estimation results of political globalization reveal that: a 1% increase in the political globalization index increases the number of incoming tourists by 8.61%; and one percent rise in the index of defacto political globalization increases the number of tourist arrivals by 3.63 percent in Turkey.
- The findings show that political globalization has the largest impact on the number of incoming tourist while dejure economic globalization has the smallest impact on the number of incoming tourist among all globalization types.
- In regard to control variables, they take the expected signs whenever they are statistically significant. Meanwhile several diagnostic tests (i.e.,
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