

Volkan Kaymaz

Dependence of the Turkish Tourism Sector on Five Countries of Origin and Tourism Demand

Abstract

Because of its fragile structure, tourism is a sector where tourist arrivals fluctuate, and competition is high. Tourism demand is changing rapidly according to many different factors. Most of the tourist arrivals to Turkey are from European countries. This paper analyzes the relationship between tourist arrivals from countries of origin and basic macroeconomic variables in the period between 2010-2020. The study, which uses the Autoregressive distributed lag (ARDL) boundaries testing approach, shows that tourist arrivals interact with key macroeconomic variables such as exchange rate and unemployment rate. This situation reveals the necessity of eliminating dependence on certain countries in the tourism sector and turning to different markets.

Keywords: tourist arrivals, tourism demand, unemployment, exchange rate, consumer confidence, ARDL model

1. Introduction

Tourism is one of the leading economic sectors for economic growth and employment creation. Although there are countries that are identified with tourism, the sector displays a competitive structure, and tourist arrivals can change rapidly according to many economic and social variables. Tourism demand turns into an elastic structure with the increase in alternative services offered in similar destinations. Increasing competition causes tourism demand for countries to be fragile and volatile.

Social events, riots, coups, terrorist attacks (Araña & León, 2008), natural disasters, pandemics (Yang & Chen, 2009), and economic crises play a decisive role in changing the amount of demand and the structure of demand. This change can be short-term, as well as providing appropriate services for tourists who prefer alternative regions can cause a permanent change in demand. On the other hand, habits take a long time to change, an environmentalism-sustainability approach and an increase in the effectiveness of the sharing economy affect the long-term balance of the tourism sector.

The characteristics of services provided in the tourism sector differ, just like other economic goods. Just as many different variables play a role in individuals' demands for luxury or normal goods, tourists consider too many variables when demanding services and experiences. Many factors play a role in the preferences of tourists. Tourism services do not show the characteristics of a compulsory good, and the demand is elastic. Countries aim to increase their revenues by providing competitive services in the tourism market; however, tourist arrivals tend to show instability due to the elastic nature of tourism demand, and therefore it is difficult to predict tourist arrivals. Countries position themselves by taking into account the quality and price of the service they provide in the tourism market and making plans for the future by analyzing tourist arrivals. Especially in countries where tourism revenues have a large share of gross domestic product, it is the duty of governments as well as the private sector to determine the necessary policy tools to ensure sustainability and an increase in revenues (Chatziantoniou, 2016). As the countries of origin with high tourist arrivals and

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potential tourists are analyzed, the tourism potential of the countries is better understood, and thus plans are made more accurately.

Although the demand for tourism varies according to the characteristics of the preferred destination, the change in macroeconomic indicators over the years affects the demand. Therefore, the macroeconomic variables of both the country of choice for tourism and the country of origin are important. Detailed analysis of tourism, which is a demand-oriented sector, is important for regional and national tourism investments. With the right planning, tourism arrivals and revenues can be increased. The study aims to examine the economic variables of the countries of origin with high tourism demand for Turkey, make inferences about the change in tourist arrivals, and make a short- and long-term analysis of tourism demand. In this way, new policy proposals for the sector can be created, regulations can be made, and competitiveness can be increased.

The rest of this study is organized as follows: In the second section of the study, Turkey's tourism sector and developments are examined, and tourist arrivals from countries of origin are evaluated. In the third section, the factors affecting tourism arrivals are discussed by taking into account the studies in the literature. In the fourth section, the methodology and data used in the study are examined. In the fifth section, long-term and short-term analysis results are discussed, and the relations between tourist arrivals and selected variables are interpreted. The final section concludes the study.

2. Tourism and tourist arrival in Turkey

Tourism helps reduce the current account deficit, contributes to employment, and increases the demand for other connected service sectors. Globalization and the development of communication tools, reduced transport costs, increased investment, and relative enrichment of countries that provide rapid economic growth, such as China, ensure that the demand for tourism regularly increases. While all countries demand a share of the growing sector, 43% of total tourism expenditures are made by citizens of China, the United States, Germany, and France (World Tourism Organization [UNWTO], 2020). Other countries that supply tourism aim to capture a share of this spending.

Increasing tourism demand is driving up employment rates in the sector, and this rise is positively affecting economic growth. The tourism sector's share in total employment in Turkey has increased every year and reached 8.1% in 2019 (Organisation for Economic Co-operation and Development [OECD], 2020). The increase in the number of people employed in the tourism sector can be based on many reasons, such as increased investment, the development of the sharing economy, as well as the introduction of alternative locations for tourism; however, the main factor is the increase in the number of tourists arrivals to the country from abroad. The Turkish tourism sector, whose share in gross domestic product ranges from 3 to 4%, has not yet reached its potential compared to similar countries.

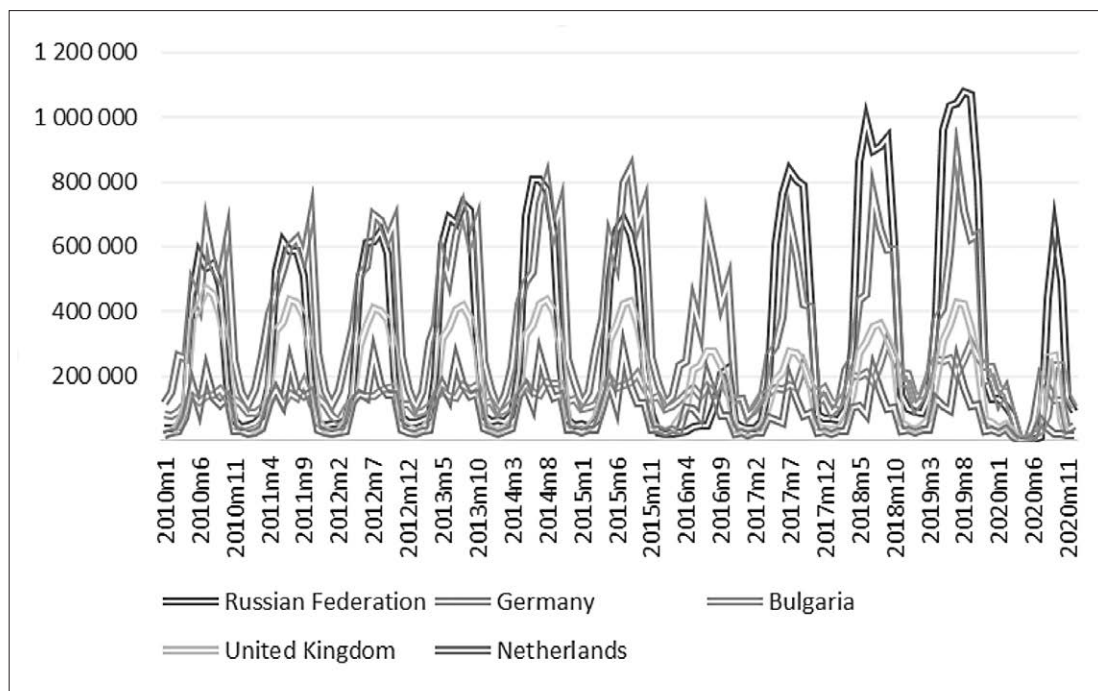
The eleventh Development Plan prepared by the Presidency of Strategy and Budget aims to break the structure focused on summer tourism and extend the tourist season all year. Turkey hosted more than 45 million tourists in 2019, and tourism investments have been increasing regularly over the past 25 years. Although the total number of hotels is lower in Turkey than in alternatives such as Spain and Italy, the number of 5-stars hotels is much more than in the other two countries. Over the years, tourist arrivals have also been increasing regularly in Turkey, but in 2008, when the global financial crisis occurred, and in 2016, when the political tension with Russian Federation occurred, the sector experienced a contraction.

The share of the five countries that send the most tourists to Turkey is 40.52% in total. The share of tourist arrivals to Turkey from the five countries of origin in the total number of tourists is large. This causes Turkey to depend on certain countries in the tourism sector. Increasing tourist revenues from different countries of origin are one of the goals for Turkey, and therefore marketing activities are carried out in alternative

destinations. As stated in the 11th Development Plan, Turkey aims to grow in health, congress, winter, and cruise tourism (Presidency of Strategy and Budget, 2011). Thus, it aims to increase tourism income by segmenting the market, not being dependent on a few countries and spreading the tourism season throughout the year; however, in cases where experience is low and investments are not sustainable (Babenko, 2014), segmentation efforts may fail. Turkey's desire to reduce its dependence on certain countries in the tourism sector and to open up to different markets aims to reduce economic risk and expand to different markets (Yahagi, 2000). Turkey plans to increase investments that will attract high-income tourists from Middle Eastern Countries and Central Asian Turkic Republics. But focusing on different markets and new investments is costly. The heterogeneity of the tourist mass addressed by the sector causes image problems. On the other hand, new investments make it difficult to focus on certain markets and may harm service quality (Farmaki, 2011). Focusing on existing markets plays an important role in developing long-term relationships, increasing satisfaction by providing better service to the existing tourist mass, accurately estimating tourism demand, and reducing irregularity in tourist arrivals.

Spending by tourists, especially from Russian Federation and Germany, accounts for the majority of Turkey's tourism revenues. In 2018, 14.5% of Russia's total tourists preferred Turkey, and the announcement of 2019 as the Turkish-Russian year, increased tourist arrivals (Turkish Hoteliers Federation [TUROFED], 2019). Germany, on the other hand, is almost the world's tourist reserve, and Turkey receives a remarkable share of this reserve. In addition, not only the variables related to Turkey but also the variables in the countries of origin affect the demand for tourism. Therefore, it is important for sustainability to conduct an analysis taking into account developments in the countries of origin. Figure 1. shows that tourist arrivals from 5 countries have been stable over the years; however, in 2016, various political problems with the Russian Federation reduced total tourism revenues and arrivals, and when the process between the two countries returned to normal, tourist arrivals from Russian Federation returned to their previous level a year ago.

Figure 1
Arrivals to Turkey from the country's of origin



Source: Republic of Turkey Ministry of Culture and Tourism (2020).

3. Literature review

Studies investigating tourism demand have used different variables and econometric techniques. Due to its nature, tourism demand is affected by many factors, which causes the number of tourists coming to some countries to fluctuate over the years. In addition to the macroeconomic economic variables used in the studies, dummy variables specific to the examined countries and regions can be included in the analysis. On the other hand, apart from economic variables, some sociopolitical factors are also used in models. Transportation costs, which vary depending on the country's economy and oil prices, are also included in some demand estimates. Transportation costs are particularly effective in making decisions for potential tourists who may prefer long-distance destinations.

The value of the local currency can provide competitiveness in the tourism sector and play a decisive role in tourism demand. Especially in competition for tourism destinations that provide similar services, the exchange rate shapes the decisions of tourists. If the local currency of the country to be selected as a tourism destination is worthless according to the country of origin, potential tourists may want to take advantage of the current price.

Relative prices are also frequently used in the literature to explain demand and make predictions for the future. The ratio of local prices to prices of the country of origin expresses the change in purchasing power. As the rate rises, tourism demand is expected to fall, as tourist destination prices will be high compared to the prices of the country of origin.

As an income variable, per capita gross domestic product is generally included in the analysis (Athanasopoulos et al., 2008). Income can directly change the selected tourism destinations. With the increasing income, potential tourists can ignore the transportation costs, they can choose niche destinations by making longer trips and get the opportunity to have different experiences.

Tourism demand is often influenced by advertisements, fashion, and popularity. Periodically changing trends in origin countries affect tourist arrivals. One of the factors affecting tourism spending and demand is investment and marketing spending, although it is rare in the literature. The fact that investment expenditures are temporary and the difficulty of accessing marketing expenditures data causes these variables to be limited in the analysis; however, micro-marketing activities to the target group can positively affect tourism demand. In addition, non-economic factors such as social events, coups, terrorism, natural disasters or epidemics on a global scale directly affect the demand for tourism.

Unemployment and consumer confidence play important roles in outbound tourism in countries and have significant implications for future tourist movements (Gounopoulos et al., 2012). In the event that unemployment rates increase or future expectations are negative, consumers give up their tourism expenses as a precaution or prefer domestic tourism. During periods of economic decline, increased uncertainty and the danger of unemployment leads individuals to save. High unemployment in economies causes wages to fall. As a result of low wages, potential tourists review their decisions and decide to postpone their visits or turn to cheaper alternatives.

Apart from economic variables, tastes, habits, and political relations between countries also shape the destinations to be selected. In terms of the preferred country, it is important to which type of tourists the country appeals to. While some countries offer sun-sea tourism, some countries emphasize culture, and some countries put forward winter tourism. Although there are many studies in the literature, there is a consensus on tourism demand for very few variables. The fact that the tourism sector appeals to tastes, fashion, and perceptions causes the demand expectations to be not met and the total demand to fluctuate in some periods.

One of the studies aimed at understanding the demand for tourism in Turkey was prepared by Icoz et al. (1998). The main aim of the study is to analyze tourist arrivals from countries of origin with economic

variables. Analysis results from the data of selected countries from Europe between 1982 and 1993 show that the decrease in the value of the Turkish Lira increased tourist arrivals. On the other hand, tourism arrivals are decreasing as inflation in Turkey increases rapidly compared to the countries of origin.

Dritsakis (2004), which examines the tourism demand for Greece with data on tourism arrivals from Germany and the United Kingdom, uses the cointegration method. The fact that income and tourist arrivals move in the opposite direction is interpreted by the researcher as British and German tourists prefer different tourist destinations when income increases.

Naude and Saayman (2005) analyze the tourism demand of 43 African countries for the years 1996-2000. Using the total tourist arrivals to measure tourism demand, the study uses ordinary least squares and first-step GMM techniques. Emphasizing that political instability in Africa is one of the obstacles to the development of tourism, the study reveals that hotel capacity and internet usage positively affect tourism demand instead of economic variables such as income and transportation costs in the country of origin.

Salleh examines the relationship between tourist arrivals and tourism prices in Malaysia using the ARDL approach. Tourist prices in alternative destinations, transport costs, and exchange rates are considered independent variables. The results show that tourism arrivals to Malaysia are moving in the opposite direction with an increase in prices, transport costs, and the exchange rate, but price increases in similar destinations are increasing tourism demand for Malaysia.

A study that examined tourism participation with the Spanish Household Budget Survey data shows a negative relationship between unemployment and tourism participation, but as income and education levels increase, the demand for tourism increases (Alegre et al., 2013).

De Vita and Kyaw (2013) examine tourist arrivals from Germany to Turkey with national income per capita, exchange rate, and transport costs data between 1996-2009. The coefficients of the exchange rate adjusted price and transportation costs are negative in regression results.

Saayman and Saayman (2013) examine South African tourism demand by taking into account tourist arrivals and expenditures from countries of origin. South African tourist arrivals in developed countries are analyzed using the Autoregressive Distributed Lag (ARDL) model. According to the model results, the original country of gross domestic product positively affects tourism demand, while relative prices move in the opposite direction as expected with tourism demand. Currency volatility affects tourism demand differently depending on the country of origin.

A study which examines the arrival of tourists from various countries of Europe to 7 different regions of Portugal. Serra et al. (2014) used the GMM approach with data from 2000 to 2011. There is a positive correlation between tourism demand and gross domestic product, but the increase in unemployment rates reduces tourist arrivals, as expected.

Using the country of origin approach, Chatziantoniou et al. (2016) explore what factors affect Greek tourism demand. In the study, which uses macroeconomic indicators of the countries of origin, the SARIMA type model is used. In addition to macroeconomic variables such as CPI and industrial production index, the consumer and business confidence index is included in the study. The results of the model are interesting. According to the results, indicators of consumer confidence and industrial production are statistically important for predicting tourist arrivals.

Ghani (2016) examined tourist arrivals to Malaysia from Organization of Islamic Cooperation (OIC) member countries using the bilateral tourism flows gravity model. According to the forecast results, per capita, income and tourism arrivals vary in the same direction.

Tavares and Leita (2016) analyzed the determinants of Brazil's tourism demand with pooled ordinary least squares estimators between 2004 and 2013. According to the results of the OLS estimator, the income variable has a significant and positive coefficient. The coefficient and mark of the exchange rate differed according to the results of the OLS and the GMM system, but however, as the transportation costs increase in proportion to the distance of the selected 20 countries to Brazil, the demand for tourism decreases.

Martins et al. (2017) examined tourism demand with the nominal exchange rate, relative prices, and per capita national income. According to the results of the panel data analysis made with the data of more than 200 countries, tourism arrivals move in the same direction with the exchange rate and world gross domestic product while moving in the opposite direction with relative prices.

4. Methodology and data

4.1. Data

Monthly variables from 2010 to March 2020 are used to analyze the impact of macroeconomic indicators on tourist arrivals. The reason for choosing this period is not to take into account the negative effects caused by the Great Financial Recession, which began in 2008 and continued its effects in 2009. After March 2020, the effects of the pandemic affecting the whole world are felt on a global scale, and tourist arrivals are reduced compared to previous years after the first case of Covid-19 was seen in Turkey. Data for later months are not included in the analysis due to the increased effects of the pandemic in Europe and Turkey after March 2020. Data were obtained from the TurkStat and International Monetary Fund.

The analysis uses the basic macroeconomic variables of the five countries that send the most tourists to Turkey. These countries are the Russian Federation, the United Kingdom, Bulgaria, Germany, and the Netherlands, in order of tourists arriving. Importance has been given to the disclosure of selected macroeconomic data in 5 countries without loss and on a monthly basis. As of the period studied, the number of tourists coming to Turkey from Iran, Georgia, Iraq, Ukraine, and Azerbaijan is also significant; however, it is not included in the analysis because it is not possible to access some of these countries' data on a monthly basis. The dependent variable in the study is the number of tourists coming to Turkey from the countries of origin. Three independent variables are selected to minimize potential prediction biases. The independent variables are the exchange rate, consumer confidence index, and unemployment rate. Logarithmic tourist numbers data is used to normalize distribution and to ensure that estimators are not affected by extreme values. Because the distances of the origin countries studied in our study to Turkey are relatively short and similar to each other, transport costs are not included in the variables.

4.2. Empirical methodology

The main aim of the study is to examine the relationship between tourist arrivals from the country of origin to Turkey and the exchange rate, consumer confidence index and unemployment rates of the original country. The ARR represents tourist arrivals, the XR exchange rate, the CCI Consumer Confidence Index, and the UR unemployment rates.

$$ARR_t = f(XR_t, CCI_t, UR_t) \quad (1)$$

It is expected that the increase in the exchange rate variable calculated as the Turkish Lira / Original Country Currency will negatively affect tourist arrivals. The Consumer Confidence Index directly affects individuals' consumption and savings decisions. There is a positive relationship between consumer confidence and consumption expenditures. Uncertainty about the future leads to a reduced sense of confidence and a postponement of household consumption. Therefore, consumer confidence and tourism arrivals from countries of origin are expected to act together. Unemployment rates, on the other hand, provide information about

the overall economy. During periods when unemployment rates are low, investment increases, and wages are usually positively affected by this situation as the demand for labor increases. When economic growth is associated with periods of low unemployment rates, consumption expenditures and, therefore, tourism demand is also expected to increase.

In this study, the augmented distributed lag model (ARDL) developed by Peseran et al. (2001) is used, which has several advantages compared to traditional cointegration approaches. The Model is useful for separating long-term relationships from short-term dynamics. Unlike traditional cointegration tests (Johansen test 1995), the ARDL test allows estimating I(0) or I(1) when variables are integrated at different levels. In addition, the ARDL approach also provides consistent results for small samples. The equation of an ARDL model is specified as:

$$\Delta ARR_t = \delta_0 + \sum_{i=1}^p \delta_{1i} \Delta ARR_{t-i} + \sum_{i=1}^p \delta_{2i} \Delta CPI_{t-i} + \sum_{i=1}^p \delta_{3i} \Delta CCI_{t-i} + \sum_{i=1}^p \delta_{3i} \Delta UR_{t-i} + \lambda_1 ARR_{t-1} + \lambda_2 CPI_{t-1} + \lambda_3 CCI_{t-1} + \lambda_4 UR_{t-1} + e_t \quad (2)$$

With the finding that the variables are cointegrated, the error correction model can be estimated. The error correction model equivalence below is specified as follows.

$$\Delta ARR_t = \alpha_0 + \sum_{i=1}^p \delta_{1i} \Delta ARR_{t-i} + \sum_{i=1}^p \delta_{2i} \Delta CPI_{t-i} + \sum_{i=1}^p \delta_{3i} \Delta CCI_{t-i} + \sum_{i=1}^p \delta_{4i} \Delta UR_{t-i} + \eta_i ECM_{t-1} + u_t \quad (3)$$

where η , is the coefficient of the error correction term and *ECM* means error correction model. The term Error correction refers to long-term forecast results. It is also a term that predicts how much of the imbalance will disappear in the next forecast period.

5. Empirical results

In this study, Augmented Dickey-Fuller (ADF) and Philips Perron (PP) tests are performed to determine unit roots. Ouattara (2004) claimed that F-statistics calculated by Pesaran et al. (2001) can give misleading results in cases where variables are quadratic integral. For this reason, in order for the ARDL approach to be applied, the series must be stationary at the $i(0)$ or $i(1)$ level. The first differences of all variables included in the model become stationary when taken, so the requirements for the ARDL test are provided.

Table 1
Results of the ADF and PP unit root test

Countries	Variables	ADF		PP		
		Level	First difference	Level	First difference	Order of integration
Russia Federation	ARR	0.029	-2.964	-0.324	-5.643	I(1)
	XR	-1.166	-7.612	-1.876	-7.426	I(1)
	CCI	-1.836	-10.909	-1.988	-10.922	I(1)
	UR	-6.967	-5.090	-5.114	-5.300	I(0)
United Kingdom	ARR	-0.281	-6.291	-0.361	-5.943	I(1)
	XR	-0.524	-12.021	-0.499	-11.149	I(1)
	CCI	-1.584	-14.616	-1.327	-14.665	I(1)
	UR	-0.212	-9.200	-0.320	-9.435	I(1)

Table 1 (continued)

Bulgaria	ARR	-0.121	-11.063	-0.094	-12.618	I(1)
	XR	-0.081	-11.698	-2.321	-11.799	I(1)
	CCI	-2.317	-11.141	0.047	-11.149	I(1)
	UR	-0.281	-11.017	-0.344	-11.028	I(1)
Germany	ARR	-0.137	-2.438	-0.269	-10.520	I(1)
	XR	-0.065	-10.093	-0.108	-10.088	I(1)
	CCI	-2.820	-9.486	-3.023	-9.558	I(1)
	UR	-1.534	-12.784	-1.579	-12.650	I(1)
Netherlands	ARR	-0.457	-3.165	-0.321	-11.675	I(1)
	XR	3.349	-8.524	3.391	-8.471	I(1)
	CCI	-0.893	-6.643	-1.328	-6.675	I(1)
	UR	1.480	-7.769	0.555	-8.663	I(1)

A boundary test is performed to determine the long-term relationship between variables. If the calculated F-statistics is greater than the upper critical value determined by Pesaran et al. (2001) and Kripfganz and Schneider (2018), it is concluded that there is a long-term relationship between the variables. The calculated F-statistics in Table 2 is higher than the critical values. Therefore, there is a long-term relationship between variables.

Table 2
Estimates of the ARDL bounds test and critical value bounds

Countries	Russia Federation	United Kingdom	Bulgaria	Germany	Netherlands
	ARDL(7,0,1,0)	ARDL(8,0,0,0)	ARDL(3,4,5,8)	ARDL(8,1,0,0)	ARDL(8,4,0,4)
ARDL F-statistic	4.790*	14.099*	7.762*	16.615*	17.118*
		Pesaran, Shin, and Smith (2001)		Kripfganz and Schneider (2018)	
Sig. level		%1	%5	%1	%5
Lower bounds		3.41	2.62	4.391	3.043
Upper bounds		4.68	3.79	6.469	4.629

Table 3
Estimated long-run coefficients

Variables	Russia		United Kingdom		Bulgaria		Germany		Netherlands	
	Coef	t-value	Coef	t-value	Coef	t-value	Coef	t-value	Coef	t-value
XR	-0.096*	(-2.29)	-2.25**	(-2.78)	-0.92**	(-2.73)	-1.360	(-1.44)	0.162	1.39
CCI	0.020	(0.94)	0.006	(1.42)	-0.021	(-1.78)	-0.01*	(-2.44)	-0.003	-1.71
UR	-0.190	(-0.45)	0.158**	(3.34)	-0.037	(-1.65)	0.268*	(2.10)	0.05***	2.91

Long-term analysis results are shown in Table 3. The effect of the exchange rate on tourism demand is negative for all other countries except the Netherlands. There is no statistically significant relationship between the tourist arrivals and the exchange rate of Germany and the Netherlands using the Euro. The results of the other three countries show that the increase in the Turkish Lira negatively affects tourist arrivals in Turkey. According to Dritsakis (2012), the appreciation of the euro against the US Dollar is effective in changing tourism flows for countries in the Mediterranean region. Accordingly, countries that are members of the European Union and use the Euro have lost tourists who turn to countries such as Tunisia and Turkey, which are located in the same geographical region. In this exchange, the depreciation of the local currencies of Tunisia and Turkey against the Euro is effective. The consumer confidence Index is only statistically significant for Germany, and as expected, tourist arrivals are positively affected as confidence increases. This situation shows that economic variables are more important and effective in the decisions of tourists who choose Turkey. The long relationship between unemployment rates and tourist arrivals is peer-to-peer in the three countries. Although the results are interesting, in developed countries such as the United Kingdom, Germany, and the Netherlands,

the long-term unemployment payments and the shorter job-seeking time compared to other countries may have been effective in this result. Diagnostic test results are included in Appendix.

Table 4
The short-run dynamics of the variables

Variable	Russia		United Kingdom		Bulgaria		Germany		Netherlands	
	Coef	t-value	Coef	t-value	Coef	t-value	Coef	t-value	Coef	t-value
C	3.970***	4.16	15.85***	7.48	7.796***	5.53	16.70***	7.50	19.21***	7.77
ARR	0.46***	0.000	0.990***	6.70	0.152	1.34	0.931***	6.76	.957***	5.11
ARR2	-0.037	0.666	0.881***	6.98	0.255*	2.40	1.152***	9.12	1.151***	7.38
ARR3	0.13	0.128	0.601***	4.86	-	-	0.738***	4.97	1.224***	9.42
ARR4	0.23**	0.010	0.598***	5.34	-	-	0.373**	3.16	0.657***	4.82
ARR5	-0.13	0.148	0.507***	4.85	-	-	0.553***	5.70	0.447***	3.41
ARR6	-0.42***	0.000	0.115	1.10	-	-	0.356**	3.35	.420***	3.50
ARR7	-	-	0.207*	2.11	-	-	0.224*	2.20	0.352***	3.66
DX	-	-	-	-	0.304	0.55	5641	1.96	-2.766***	-0.82
X1	-	-	-	-	-1.410*	-2.57	-	-	0.281	0.09
X2	-	-	-	-	0.622	1.13	-	-	-10.67**	-3.25
X3	-	-	-	-	1.19*	2.21	-	-	5.577	1.70
X4	-	-	-	-	-	-	-	-	-	-
DCCI	-0.022	-	-	-	-0.011	-0.93	-	-	-	-
CCI1	-	0.114	-	-	0.017	1.41	-	-	-	-
CCI2	-	-	-	-	0.018	1.69	-	-	-	-
CCI3	-	-	-	-	0.003	0.30	-	-	-	-
CCI4	-	-	-	-	0.028*	2.60	-	-	-	-
CCI5	-	-	-	-	-	-	-	-	-	-
UR	-	-	-	-	-0.076	-1.55	-	-	0.092	0.26
UR1	-	-	-	-	-0.059	-1.22	-	-	-0.587	-1.61
UR2	-	-	-	-	-0.035	-0.86	-	-	-0.082	-0.22
UR3	-	-	-	-	-0.012	-0.30	-	-	1.039**	2.76
UR4	-	-	-	-	-0.068	-1.68	-	-	-	-
UR5	-	-	-	-	-0.130**	-3.33	-	-	-	-
UR6	-	-	-	-	0.075	1.52	-	-	-	-
UR7	-	-	-	-	0.098	1.98	-	-	-	-
ECM-1	-0.277**	-3.99	-1.381***	-7.51	-0.646***	-5.55	-1.462***	-8.09	-1.793***	-7.68

Table 4 contains the short-term relations between the tourism arrivals of the country of origin and the selected economic variables of the countries. The error correction term is statistically significant for all countries. According to the results of the estimation made with Russian data, the error correction term is -0.27. The error correction term expresses the speed adjustment to restore equilibrium in the dynamic model, and it should have a statistically significant coefficient with a negative sign. According to the results of other countries, the term error correction is between -1 and -2, and they are statistically significant. This result shows that, according to Narayan (2006), the error correction process is damping around its long-term value. While the error correction term is between 0 and -1, equilibrium is reached monotonic, if the term is between -1 and -2, the equilibrium is reached in a fluctuating manner.

6. Conclusion

In recent years, the amount of demand for tourism has been increasing on a global scale, and the share of tourism revenues in the gross domestic product has been growing, but tourism is a fragile sector. Tourism demand varies according to many economic and social factors. In a market where demand is volatile, competition

with similar destinations comes to the fore. In the demand-driven sector, countries are trying to improve the quality of services to respond to tourists' wishes and ensure their return. Countries make various plans and investments to ensure the growth of the tourism sector. Thus, the sector's contribution to employment and economic growth can be increased. But the plans and investments that will be made should be shaped according to the demands of potential tourists.

Although the quality of the services offered by the country increases, the economic situation of potential tourists in the countries of origin also affects the demand for tourism. Changes in the economy of the country of origin and economic fluctuations on a global scale primarily affect the demand for non-mandatory services such as tourism. In this study, the demand for tourism is examined by taking into account the economic variables of the countries that send the most tourists to Turkey. According to studies in the literature, unemployment rates, exchange rates, and consumer confidence can directly affect the amount of tourism demand.

The ARDL approach is used to analyze the impact of selected economic variables on tourism arrivals. According to the results of the analysis, the impact of economic variables varies according to the countries of origin. This result shows that tourism demand is mainly influenced by the economic variables of the countries in which potential tourists live. While the unemployment rate and exchange rates, in particular, affect tourism demand, consumer confidence is understood to be effective only for tourists in Germany.

The five countries examined in the analysis account for the majority of tourist arrivals to Turkey from countries of origin. It is understood that economic variables directly affect the demand for tourism, and potential economic crises in the countries of origin will negatively affect the demand for tourism in Turkey. For this reason, increasing the tourist arrivals of other countries is one of the priority targets for Turkey; however, investments made to attract tourists from new markets are risky. The limited profitability, the inability to provide standard services, and the complexity of planning to focus on different areas are among the difficulties of opening up to new markets. On the other hand, developing long-term relations with tourists who prefer Turkey and their countries and responding fully to their demands promises an experience without bad surprises. For this reason, dependency on tourism needs to be examined in more detail.

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Appendix 1.

Residual diagnostic

Residual diagnostics										
	F-stats	p-value	F-stats	p-value	F-stats	p-value	F-stats	p-value	F-stats	p-value
χ^2 ARCH	0.258	0.6115	0.006	0.9360	0.809	0.3684	0.380	0.5374	0.850	0.3566
χ^2 WHITE	91.50	0.1240	0.54	0.4619	0.34	0.5597	1.58	0.2085	0.14	0.7124
χ^2 LM	0.860	0.3559	1.711	0.1938	1.904	0.1676	1.884	0.169	0.620	0.4310
χ^2 LINK	3.214	0.376	-3.274	0.582	0.809	0.3684	0.850	0.3566	0.850	0.3566
χ^2 BP	1.31	0.2525	0.54	0.4619	0.34	0.5597	1.58	0.208	0.14	0.712

Submitted: April 21, 2021

Received: September 28, 2021

Received: November 18, 2021

Accepted: November 22, 2021