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Sanctions and Tourism Market Polarization

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ABSTRACT

Tourism market polarization is one of the consequences of sanctions, boycotts, and economic or political obstacles. In recent years, many countries have faced increasing polarization in their tourism markets. This study aims to investigate the main factors influencing Iran's tourism market polarization, as a country under sanctions where the level of polarization has more than doubled over the past decade. To achieve this aim, the analysis distinguishes between different origin countries of tourists. The study employed panel data analysis for 51 origin markets over the period 2009–2022, a method that combines time-series and cross-sectional data. The findings can be divided into two categories. First, the results related to the main explanatory variables show that factors such as visa removal and the gravity index do not have a significant effect on polarization, while sanctions as a whole and the number of inbound tourists significantly influence the level of tourism market polarization. Second, the results of country-specific effects indicate that some countries exert a stronger influence on tourism market polarization compared to others. By combining these effects with the volume of inbound tourists from existing or targeted markets, potential markets can be identified to help reduce polarization. According to the results, Central Asian and Northern European countries (such as Uzbekistan, Tajikistan, Kyrgyzstan, Norway, and Finland) are among the most prioritized potential markets for reducing Iran's tourism market polarization.

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1. Introduction

Attracting foreign tourists to a destination strongly depends on the nature of international relations between the destination and origin countries. While relations among various institutions (both public and private) are important, political relations between governments play a particularly vital role in shaping tourism flows (Hall & Seyfi, 2021; Prabowo & Sinaga, 2020; Uslu & Akay, 2019; Wujie, 2023). Hostile political relations, reflected in the form of international sanctions, not only reduce the number of inbound tourists but also generate broader negative impacts on the tourism industry. One of the most significant of these impacts is tourism market polarization (TMP)—a situation in which a country's inbound tourism becomes highly concentrated in a few origin markets (Madan, 2023; Wallensteen, 1968). Such polarization increases the overall risk faced by the destination. Here, "risk" refers to uncertainty in planning, revenue forecasting, and long-term sustainability. A highly polarized market creates excessive dependence on a limited number of countries of origin, such that any decline in tourist flows from these markets can result in substantial reductions in tourism revenue. Consequently, polarization reduces the bargaining power of a country with respect to the international tourism economy (Peng et al., 2023; Solarin et al., 2023; Yap et al., 2023).

In the tourism industry, the risks associated with polarization are amplified because the product involves the movement of people rather than goods, and such flows are influenced not only by individual decisions but also by tour operators and transportation companies, especially airlines, that play a key role in shaping demand.[1] To mitigate these risks, diversification is often employed as a strategy: expanding the number of origin markets helps reduce dependence on a few countries and lowers vulnerability to demand shocks (Duro et al., 2022). Thus, a greater degree of market concentration implies greater vulnerability and fewer alternative sources of demand, which can lead to severe fluctuations in tourism revenue.

International sanctions have expanded in the 21st century, affecting a growing number of countries. Nations such as Iran, Russia, Syria, and North Korea have been subjected to severe economic and financial restrictions, with evident consequences for their tourism sectors. Iran, in particular, has experienced some of the most comprehensive sanctions worldwide, lasting over four decades and intensifying since 2018 (Bajoghli et al., 2024). According to data published by the World Tourism Organization (UNWTO) [2], the share of Iran's five largest origin markets (Iraq, Afghanistan, Azerbaijan, Turkey, and Pakistan) rose from 65% in 2008 to 90% in 2020. A sharp increase occurred in 2018, when a new round of sanctions was imposed: The concentration of these markets jumped from 75% in 2017 to 85% in 2018. Since then, their share has consistently remained above 85%. Despite these risks, Iranian tourism policymakers appear to give limited attention to TMP, focusing mainly on existing markets—particularly those that already send the largest number of visitors (Alavi & Yasin, 2000; Barati, 2019; Heidari Chianeh et al., 2013). For instance, Iran's Seventh Five-Year Development Plan (2024–2028) emphasizes continued reliance on current markets (such as Iraq), with no explicit mention of diversification into new ones (Islamic Parliament Research Center, 2023)

Tourism market diversification (TMD) offers a potential solution by increasing revenues, stabilizing cash flows, and reducing market risks (Solarin et al., 2025; Yap et al., 2023). TMD strategies directly counteract TMP by decreasing dependency on single markets (Barati, 2020; Gu et al., 2022). However, to design effective diversification strategies, origin markets must be examined separately to identify opportunities, risks, and their relative impact on overall polarization (Rahman et al., 2023; Williams & Balaz, 2014). Although diversification strategies can enhance resilience, they can also be costly, and poorly designed approaches may waste financial resources[3] (Hoskisson & Hitt, 1990; O'Brien et al., 2014; Yap et al., 2023). To date, no study has investigated the polarization index of Iran's tourism market, while most international research has primarily focused on diversification rather than polarization itself. This gap underlines the importance of the present study.

1. The low share of tour operators has been reported in various countries (ACECR, 2020; Barati, 2024; Candela & Figini, 2012). Candela and Figini (2012) attribute this low share to factors such as freedom of choice, diversity in motives and tastes, better management of travel costs and the mix of travelers.

2. Yearbook of Tourism Statistics

3. This is because TMD strategy requires significant financial resources to develop new products and target new markets, with a risk of wasting resources if the strategy is unsuccessful (Yap, et al., 2023).

Iran possesses substantial tourism potential and is recognized as one of the world's most historically rich and attractive destinations (Khodadadi, 2016a; Nematpour et al., 2024). These assets could facilitate overcoming TMP even under sanctions. In 2023, Iran's Ministry of Cultural Heritage, Tourism, and Handicrafts proposed visa exemptions for 65 tourism markets, with parliament approving 33 of them. However, the Islamic Parliament Research Center criticized the selection process, noting that no rigorous scientific basis had been employed (Eskandari, 2023). Soon after, implementation was disrupted and the bill was returned for revision, highlighting the need for expert, evidence-based policymaking. Identifying the determinants of TMP and pinpointing potential new origin markets are thus essential for effective policy interventions.

This study, while acknowledging the persistent context of sanctions, aims to provide evidence-based recommendations for selecting new tourism origin markets to reduce Iran's TMP. Although the findings are specific to Iran, they may also offer insights relevant to other countries facing sanctions or political restrictions with similarly polarized markets, such as Russia.

Following this introduction, the paper presents the literature review, outlines the research methodology, explains the variables and modeling approach, reports and analyzes the results, and finally concludes with policy recommendations.

2. Literature Review

Several theories of international relations are relevant to tourism, including realism, liberalism, constructivism, critical theory, Marxism, and Feminism. While these theories do not directly address the impact of sanctions on tourism market polarization (Antoniou, 2023), they generally agree that sanctions imposed on target countries increase export costs, reduce international competitiveness, and raise the cost of both goods and services. Sanctions can also disrupt resource allocation, alter economic structures, and increase uncertainty, inhibiting both domestic and foreign investments (Hufbauer et al., 2008; Roudari, et al., 2023). Although sanctions are widely discussed in geopolitical literature, their implications for tourism—especially regarding individual mobility—have received limited scholarly attention (Hall, 2017). Only recently have studies begun to examine the effects of sanctions on tourism flows (e.g., Earl, 2021; Khodadadi, 2016a, 2016b, 2018; Seyfi & Hall, 2020a, 2020b). However, these studies primarily focus on the general effects of sanctions and do not address TMP directly.

According to Matthews's theory (related to international relations and international tourism), political relations between governments influence trade relations among public enterprises and interactions between nongovernmental groups. Among these, governmental relations often form the foundation, shaping visa policies, exchange rate arrangements, and access to transportation networks. Changes in international economic relations, thus, can indirectly influence tourism flows and potentially lead to market polarization (Wujie, 2023).

Polarization under sanctions has been studied from two perspectives in political economics. First, from the perspective of sanctioned countries, trade restrictions often increase informal economic activities and create artificial supply manipulations by interest groups, resulting in a concentration of markets (Madan, 2023). Extending this reasoning to tourism, sanctions may concentrate tourism service provision among specific suppliers or regions within the country. Second, from the perspective of trade partner countries, sanctions can discourage engagement with the sanctioned destination, limiting target markets and further increasing tourism market concentration (Madan, 2023; Nadira et al., 2021; Parsapour et al., 2017; Ulver, 2022). In tourism, this often translates into a higher share of inbound tourists coming from a limited set of countries.

Polarization reflects both firm-level responses and changes in tourist behavior. Silverstein and Butman (2006) argue that market polarization arises when consumers increasingly concentrate at the extremes of the price spectrum. In tourism, sanctions increase travel costs and may create a negative perception of the destination, discouraging some tourists. Consequently, only tourists with strong cultural, religious, or VFR (visiting friends and relatives) ties may continue to visit, reinforcing polarization (Barati, 2022; Khalid et al., 2024).

Few studies have examined the relationship between tourism and sanctions, as sanctions have been imposed on developing countries, such as Myanmar, South Africa, Syria, Iran, etc. Scientific research is carried out in low-income countries much less than in developed countries (Farahani & Shabani,

2014). Pratt and Alizadeh (2018) demonstrated that sanctions and travel bans imposed on Iran significantly altered tourism demand, particularly inbound international tourist arrivals.

Sanctions increase risk and reduce tendency for entry international tourists, also creating a negative image of Iran among tourists. Similarly, Gorji et al. (2023) report that sanctions heightened tourists' perceived risk and negatively influenced affective and cognitive destination image. Most inbound tourists to Iran are repeat visitors (Seyfi & Hall, 2020b), which may partially mitigate negative perceptions; however, the concentration of tourist arrivals from neighboring countries continues to exacerbate tourism market polarization (TMP).

One strategy to counter TMP is tourism market diversification (TMD). Yap et al. (2023) show that diversifying origin markets can increase tourist arrivals and reduce TMP. However, even when market diversification is implemented, the interaction with sanctions or blockades may limit its effectiveness. Their study of Qatar demonstrates that diversification does not entirely offset the negative impacts of sanctions on market polarization. Similarly, Pratt & Alizadeh (2018) found that sanctions in Iran reduced both overall tourist arrivals and the share of main markets, reinforcing TMP. While numerous studies have examined tourism market diversification (Can & Gozgor, 2018; Gu et al., 2022; Peng et al., 2023; Rahman et al., 2023; Saboori et al., 2022, 2023), few simultaneously address both sanctions and market diversification, with Yap et al. (2023) being the notable exception.

Overall, this literature indicates that while sanctions directly affect tourism demand and destination image, they also contribute to tourism market polarization. Market diversification strategies offer a partial mitigation, but careful empirical investigation is required to identify potential new markets and assess the effectiveness of diversification under sanctions. The present study builds on this gap by examining Iran's tourism market polarization and identifying factors that can guide evidence-based diversification strategies.

3. Tourism Market Polarization in Iran

According to UNESCO, the number of registered records for Iran in the World Heritage List reached 27 cases, and the number of registered individual records doubled to 100 works. This is in the top ten countries in the world in terms of having historical and ancient sites (Pratt et al. 2018; UNESCO, 2023). This feature has made it to be one of the most visited countries despite the many obstacles for inbound tourists to Iran. Some of these obstacles include long bureaucratic process of issuing visas for Western tourists, the ban on financial transactions with Iranian banks and the impossibility of using international credit cards in Iran, the increase in inflation in recent years and the decrease in Iran's price competitiveness compared to its competitors (no significant difference in the real relative prices), the lack of targeted policies to market diversification and increase in the inbound international tourists (Blanke & Chiesa, 2013; Pratt et al., 2018).

Iran, despite its high potential in attracting tourists, has not been immune to this process, and the polarization of markets in Iran is quite evident. According to statistics of World Tourism Organization (yearbook of tourism statistics), the chart below shows the share of the main markets of tourists entering Iran (in two groups: the first category includes the five countries of Iraq, Turkey, Afghanistan, Azerbaijan, and Pakistan, comprising between 63% and 89% of the share of inbound tourists; and the second category includes 20 countries,[1] comprising between 76% and 99% of the share of inbound tourists. Considering the 50 countries with the highest tourist arrivals to Iran, their combined share accounted for between 79% and 99.8% of total tourist arrivals over the past decade.

Figure 2 show the TMP of Iran. Two major shocks of sanctions in 2011 and 2017 have been inflicted on Iran's economy. Although Iran's economy has been under various international sanctions, especially from the United States, for 45 years.

From June 2010 by November 2011, United State passed and executed the Comprehensive Iran Sanctions. The sanctions imposed on Iran at the beginning of 2012 (Ghomi, 2022). Moreover, The Countering America's Adversaries Through Sanctions Act was approved in 2017 and imposed sanctions against Iran. These sanctions increased sharply until 2018 (Royce, 2018). Despite the increase in the number of inbound tourists, the TMP is quite evident (Figure 1). Specifically, until two

1. These countries include Iraq, Azerbaijan, Afghanistan, Turkey, Pakistan, Armenia, Turkmenistan, Bahrein, India, Kuwait, China, Lebanon, Russia, Georgia, Germany, Syria, France, Oman, Italy, Saudi Arabia.

years after the imposition of sanctions shocks, the intensity of TMP increased significantly (from 2011 until 2013 and from 2017 until 2019). Of course, in the duration years when there are no such shocks, there is no noticeable change in the TMP (from 2013 until 2017 and before 2013 or after 2019). It seems that sanctions have been a factor in increasing polarization (with a time lag). This research seeks to prove this idea. Theoretically, the increased market risk and the existence of restrictions on the movement of tourists due to sanctions could lead to a reduction in the number of target markets.

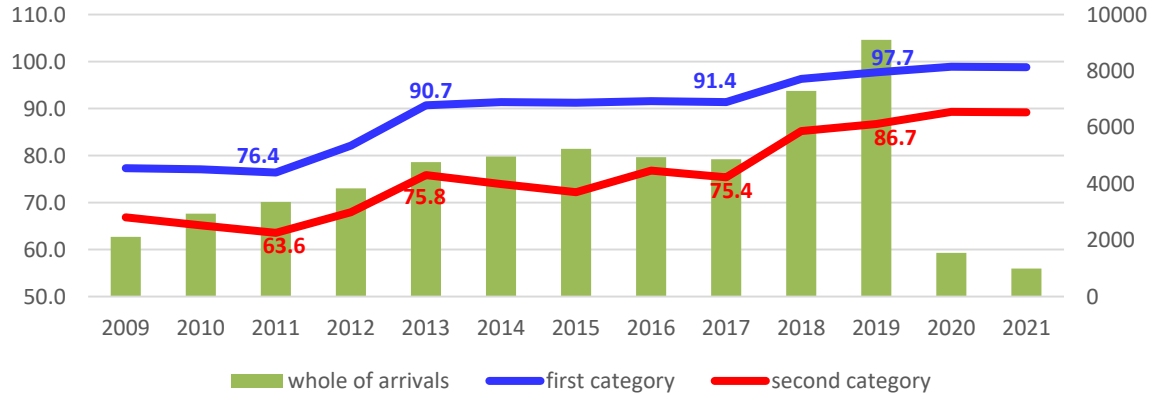


Fig. 1. Arrivals to Iran in Term of Country Categories (Source: World Tourism Organization (2023), Yearbook of Tourism Statistics)

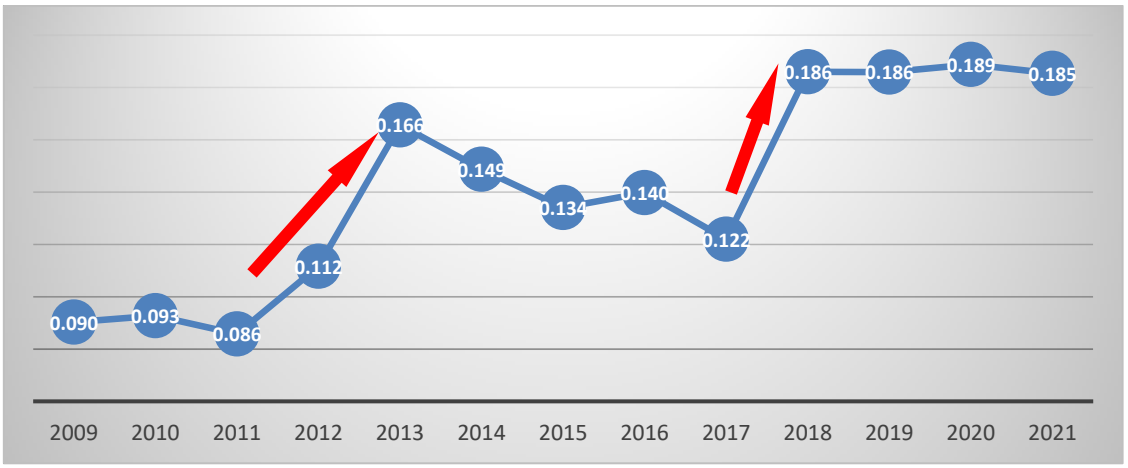


Fig. 2. Tourism Market Polarization in Iran, 2009-2021 (Source: Authors' calculations based on the Yearbook of Tourism Statistics (World Tourism Organization, 2023))

4. Methodology

Econometric methodology is a useful tool for analyzing impacts. Therefore, to recognize the impact of sanctions on the polarization of the tourism market, this article uses econometric methodology and panel data. Yap et al. (2023), Wujie (2023), and Park and Jang (2024) have also used the same method to analyze the effects of sanctions/boycotts on the tourism market. In this study, the panel data analysis is used to evaluate the effects on the TMP and to analyze the effects separately for each market (country of origin). The limitation in time series data and the possibility of analyzing the results in terms of countries make the use of this estimation method valuable. The time period is 2009-2022 and the investigated markets include 51 countries[1] with the most inbound tourists to Iran. Authors tried to

1. These countries include: Afghanistan, Armenia, Australia, Austria, Azerbaijan, Bahrain, Bangladesh, Belgium, Canada, China, Denmark, Egypt, Emirates, Finland, France, Georgia, Germany, Greece, India, Indonesia, Iraq, Italy, Japan, Jordan, Kazakhstan, Korea, Kuwait, Kyrgyzstan, Lebanon, Malaysia, Netherlands, Norway, Oman, Pakistan, Philippines, Poland, Qatar, Russian, Saudi, Spain, Sweden, Switzerland, Syrian, Tajikistan, Thailand, Turkey, Turkmenistan, Ukraine, United Kingdom, USA, and Uzbekistan.

consider as many cross-sections as possible so that potential markets can be examined more carefully. In fact, existing actual markets have been used to identify future potential markets. In the following, the dependent variable and independent variables are introduced. The polarization index is used as the dependent variable, while the indicators "GDP per capita," "visa cancellation," "Gravity index," "Relative Price Exchange Index," "population," and "sanctions" are used as independent variables. Each of these variables will be explained in detail below.

Generally, indices that indicate the "concentration intensity" are used to determine the degree of "polarization." For example, Atiyas et al. (2015), Jošić et al. (2019), UNCTAD (2022), Coelho Junior et al. (2023), and Yap et al. (2023) are among the studies that have used these indices. Various indicators such as the Gini, Herfindahl-Hirschman, Hall-Tindelman, Theil, Concentration Ratio of Bain, and Entropy are used to determine the degree of "polarization." The Herfindahl-Hirschman index (HHI) is more commonly used in studies in this field (Pratt et al., 2023). In this study, the adjusted HHI index is used to estimate the TMP as follows,:

$$S_{i,t} = \frac{x_{i,Iran,t}}{X_{Iran,t}} * 100 \quad (1)$$

$$HHI_t = \sum_{i=1}^{n} S_{i,t}^{\,2} \quad (2)$$

$$HH\acute{I}_t = \frac{HHI_t - \frac{1}{n}}{1 - \frac{1}{n}} = \frac{n * HHI_t - 1}{n - 1} \quad (3)$$

$$SHH\acute{I}_{l,t} = HH\acute{I}_t \Big/ S_{i,t} \quad (4)$$

where $x_{i,Iran,t}$ is the arrivals to Iran from the origin of i in year t, and $X_{Iran,t}$ is the whole of arrivals to Iran (total inbound Tourism) in year t. TMP is based on the HHI score, and it varies between 0 and 1. $H\acute{H}I$ is adjusted index of HHI. The n denotes the number of markets (the number of countries of origin). The closer the $H\acute{H}I$ is to 1, the higher the TMP. $SH\acute{H}I_{l,t}$ index has been calculated to determine the influence of cross-sections (each market) on TMP. The $H\acute{H}I$ is constant (invariant) across sections but vary across times. In order to be able to use panel data models for estimation, the dependent variable must vary in both sections and times. Therefore, to relate $H\acute{H}I$ to the sections, it is divided by $S_{i,t}$ (the share of each country in the inbound tourist market). $SH\acute{H}I_{l,t}$ is used as a dependent variable in this study model.[1]

The explanatory variables comprise a set of determinants of market diversification, including GDP per capita, prices, governance and institutional factors, human capital, and two-way communication (Elhiraika & Mbate, 2014). Following Elhiraika & Mbate (2014), the independent variables in this research are: "GDP per capita" in terms of purchasing power parity (PPP); the "visa cancellation" variable, which is regarded as an institutional/governmental factor; the "population" variable, which is also treated here as human capital—that is, as a source of potential tourists—given that tourism markets depend heavily on the population of the country of origin; the "Gravity Index," which, following Akter et al. (2017), is regarded as a factor of two-way communication between countries and which accounts for the geographical distance between them, thereby expressing, in a sense, cultural and geographical proximity; and the "Relative Price Exchange Index" variable, which may take the form of relative prices or purchasing power. The "Relative Price Exchange Index" and the "Gravity Index" are explained in further detail below.

1. When, for a country, the HHI changes in the same direction with that country's share of the inbound tourism market, the change in the dependent variable is adjusted, but when the HHI changes in the opposite direction to that country's share of the tourism market, the changes in the dependent variable will be significant (intensification). In fact, in the conditions of increase of polarization, those countries whose share of the tourism market has decreased show the greatest impact. This index (SHHI) will be useful for situations where factors such as sanctions or international obstacles reduce inbound trips for some countries. On the one hand, it is possible to identify markets affected by international obstacles (such as sanctions) and to check the effectiveness level of those markets from such obstacles.

Price variables have been widely implied in the international tourism literature (Yap et al., 2023). Dogru et al. (2017) have stated that relative prices should be standardized in terms of exchange rates to determine the purchasing power of tourists. In this study, the "Relative Price Exchange (RPE)" index (Yap et al., 2023) represents the purchasing power of the countries of origin compared to the destination country (Iran).

$$RPE_{i,t} = \frac{CPI_{Iran,t}}{CPI_{i,t} * ER_{i,t}} * 100 \tag{5}$$

where CPI denotes the consumer price index, and ER denotes the ratio of the rial (the Iranian rial) to the currency of country i. If country i has a higher CPI than Iran, its inflation rate is expected to be higher, so its currency would normally depreciate against the rial. In this case, the RPE of country i would be low, indicating that its people have less purchasing power in Iran than they do in their home country.

The Gravity model has been applied for the tourism as below:

$$TA_{ij} = k\frac{M_i M_j}{D_{ij}^2} \tag{6}$$

where, TA_{ij} denotes the flow international tourism from origin 'i' to destination 'j', 'k' represents constant, M_i signifies inbound tourists, M_j denotes outbound tourists, and D_{ij} represents the distance between the origin 'i' and destination 'j' (Iran).

In this research, two models are used as follows: One is basic model (equation 7) (Elhiraika & Mbate, 2014) and other is augmented model (equation 8) (Yap et al., 2023).

$$TMP_{it} = \alpha + \beta X_{it} + \varepsilon_{it}, \tag{7}$$

$$\text{where } X \in \left(\text{Iran.Inbounds}_{it}, \text{GDPPC}_{it}, \text{TA}_{it}, \text{Pop}_{it}, \text{RPE}_{it}, \text{Sanction}_t\right)$$

$$TMP_{it} = \alpha + \beta' X_{it} + \varepsilon_{it}, \tag{8}$$

$$where\ X' \in \left(Iran.Inbounds_{it}, GDPPC_{it}, TA_{it}, Pop_{it}, RPE_{it}, Sanction_t, \sum_{j=1}^{51}\left(Origin_{jt} \times Sanction_t\right) \right)$$

The Origin in this model includes 51 countries (separately) and actually 51 dummy variables have been added in the model (separately for each country). Because the countries' foreign policies are uncorrelated (with the exception of the European Union), no categorization was performed here, and the countries were entered separately into the model. In addition, the sanction variable is a dummy variable; by multiplying it by the origin variable, the impact of the sanctions can be examined separately for each country. Taking logarithms of both sides of the relationship yields the final models (9 and 10) as follows:

$$\Delta ln\left(TMP_{it}\right) = \alpha + \beta_1 \Delta ln\left(Iran.Inbounds_{it}\right) + \beta_2 \Delta ln\left(GDPPC_{it}\right) + \beta_3 \Delta ln\left(TA_{it}\right) + \beta_4 \Delta ln\left(RPE_{it}\right) + \beta_5 sanction_t + \beta_6 VISA_{it} \tag{9}$$

$$\Delta ln\left(TMP_{it}\right) = \alpha' + \beta_1' \Delta ln\left(Iran.Inbounds_{it}\right) + \beta_2' \Delta ln\left(GDPPC_{it}\right) + \beta_3' \Delta ln\left(TA_{it}\right) + \beta_4' \Delta ln\left(RPE_{it}\right) + \beta_5' sanction_t + \beta_6' VISA_{it} + \sum_{j=1}^{51}\left(Origin_{jt} \times Sanction_t\right) \tag{10}$$

where the $Origin_j$ represents the inbound tourists from any given country (i.e., arrivals to Iran's major international tourism markets, by country of origin). If the *sanction* is equal to 1, "$Origin_j \times Sanction$" will be equal to the arrivals from country j; otherwise, it will be zero. Here, we use generalized method of moments (GMM). If the dependent variable is introduced with a lag among the independent variables (which causes a correlation in the model), GMM estimators are used to estimate the model. Roodman (2009) asserted that differenced system GMM estimators allow for independent variables that do not need to be strictly exogenous.

The source of flow international tourism statistics (inbound and outbound) is the World Tourism Organization's *Yearbook of Tourism Statistics*. The GDP (per capita, PPP), CPI, and population statistics are obtained from the World Bank Data (n.d.). Exchange rates are estimated from Xenon

Laboratories database (XE., n.d.). The data related to the visa were obtained from the Ministry of Foreign Affairs of Iran.

Panel data is a dataset obtained from the behavior of entities (individuals, regions, companies, states, etc.) across time, known as longitudinal data. It helps control for unmeasured, unobservable, and unchanging variables over time, but not across entities. In other words, it can identify individual heterogeneity (Torres-Reyna, 2010). Therefore, in this study, it can be useful to identify potential tourism markets (entities).

In the first step, the heterogeneity (between years and between countries, separately) will be examined and drawn as a graph (gplots package and plotmeans function in R Software). The greater the deviation from the means at the 95% confidence level, the more it indicates that important variables have been omitted from the model, and thus the results may be unreliable. However, in case of a small deviation around the means, the variables of the model will have high reliability. In the second step, the unit root for variables is checked. Of course, since the variables are logarithmical, they will typically lack unit root. Before the unit root test, it investigates whether residuals across entities are correlated. If there is a correlation, then Breusch-Pagan LM and Pesaran CD (cross-sectional dependence) tests must be used for unit root test.[1] The next step is to determine whether the model should be estimated as a pooled or a panel (fixed/random) effect model. If the pooled model is not approved, the next step is to determine the type of effects (random or fixed). The Hausman test is used to determine the type of effects (fixed or random). The null hypothesis is that the preferred model is the random effects model (Greene, 2008). First, the fixed effects model and the random effects model are estimated separately, and then the Hausman test is performed. After the type of model has been determined, the results are analyzed. All estimations are performed using R software and the plm package.

5. Results and Finding

Figure 3 illustrates the 95% confidence interval around the means of $T\acute{M}P$ variable, across countries and across years. Countries that account for a higher share of inbound tourists to Iran (such as Afghanistan, Iraq, Turkey, and Azerbaijan, with a total share of about 70%) have less volatility. In contrast, countries that account for a lower share of inbound tourists to Iran exhibit greater fluctuations (such as Jordan, Bangladesh, Greece, and Kyrgyzstan, with a total share of less than 2%), and they score higher on the TMP index. This can mean that during different years, the rising in the share of countries due to various factors (such as sanctions) has caused polarization. In fact, countries with a lower share in inbound tourists, although they have a small share in Iran's tourism market, will have more effects in terms of influencing polarization. In general, systematic heterogeneity are not observed among countries.

The heterogeneity across different years shows that the $T\acute{M}P$ index has not fluctuated much. Only since 2019, due to the COVID-19 and significant changes in the composition of inbound trips, has time heterogeneity been observed. This is necessary to add the dummy variable related to COVID-19 for the mentioned years (2019 to 2021).

Furthermore, the investigation of the Iran's $T\acute{M}P$ according to the countries' GDP per capita shows that the polarization is not related to countries with high GDP per capita. In fact, the GCC countries, Germany, USA, Japan, and European countries have not played a significant role in the polarization of the Iran's $T\acute{M}P$. It is expected that the variable effect of GDP per capita will not be significant or will have a low coefficient of influence on polarization. If this hypothesis is correct, these countries can be identified as appropriate potential markets for the development of Iran's tourism and for reducing the TMP.

1. *pcdtest* function in R Software

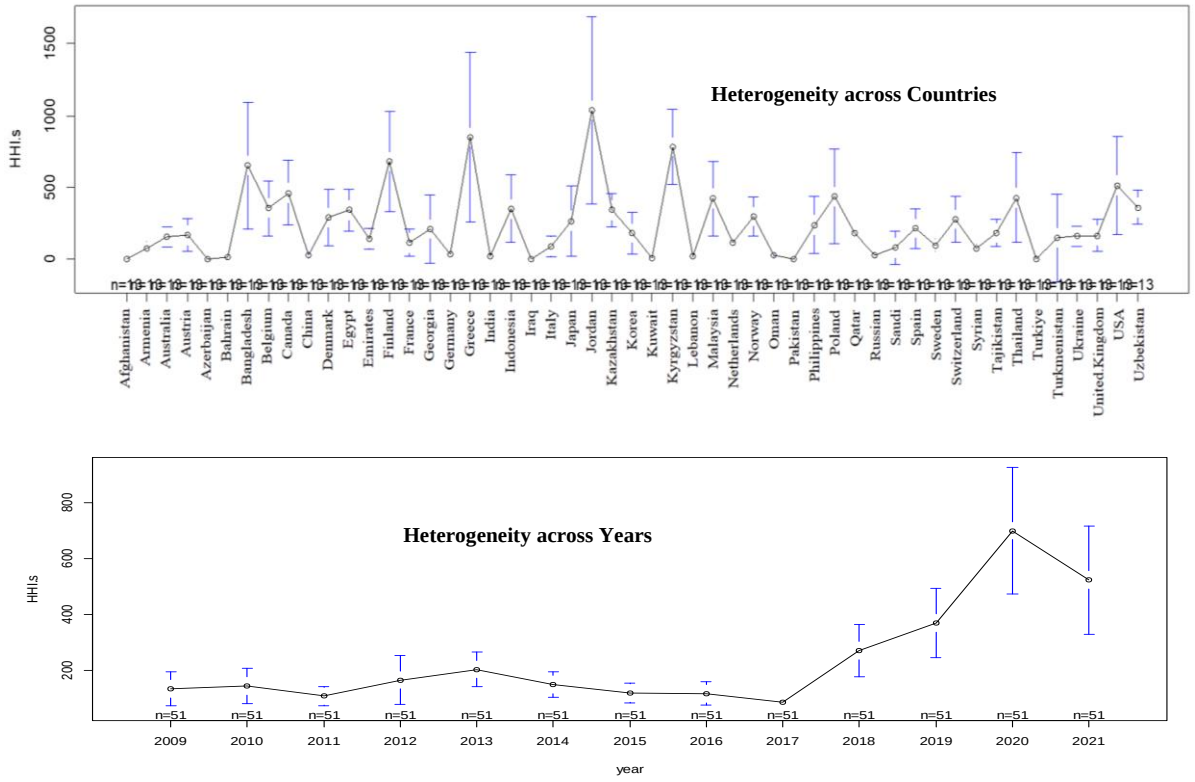


Fig. 3. Heterogeneity across Countries and Years; 95% confidence interval around the means of $T\acute{M}P$

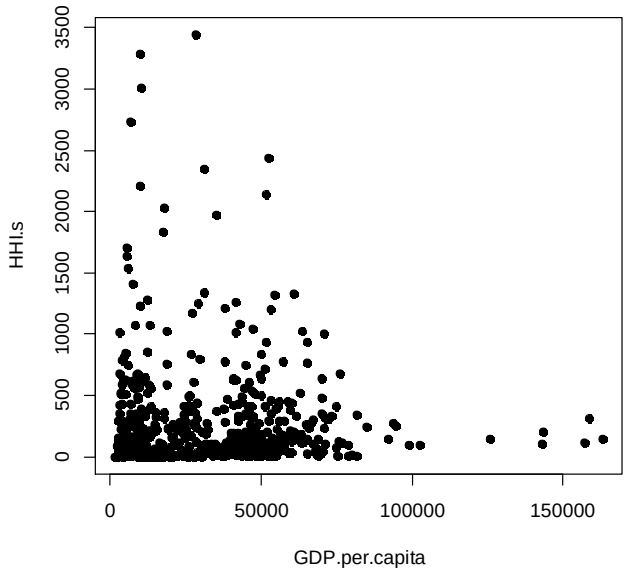


Fig. 4. GDP per Capita and $T\acute{M}P$

The null hypothesis is rejected in the Pesaran CD test and the Breusch-Pagan LM test, meaning there is cross-sectional dependence. The results show that there is a dependency between cross-sectionals (countries); however, this dependence does not affect the results of the unit root test. To confirm this conclusion, Pesaran CIPS test is used here to check the unit root. The Pesaran CIPS test shows that the variables are stationary and therefore do not need to be differenced. This is probably because we use the logarithm of the indices, which makes the variables stationary.

According to Baltagi (2005), cross-sectional dependence is a problem in macro panels with long time series. This is not much of a problem in micro panels (few years and a large number of cases). The null hypothesis in the B-P/LM and Pesaran CD tests of independence is that residuals across entities are not correlated. The B-P/LM and Pesaran CD (cross-sectional dependence) tests are used to

test whether the residuals are correlated across entities. Cross-sectional dependence can lead to bias in test results (also called contemporaneous correlation).

The F test is used to detect pooling model and fixed effects model, also Breusch-Pagan LM test is used to detect pooling model and random effects model. Table 1 shows results of these tests.[1]

The null hypothesis of both tests has been rejected, which means that the fixed effects model and the random effects model are more preferable than the pooling model.

We have reached this point that both fixed effects and random effects are superior to the pooling model. But which model is more favorable—fixed effects or random effects? The Hausman test indicates that the fixed effects model is preferable to the random effects model. Rejecting the null hypothesis means that fixed effects are more favorable.[2]

Table 3 shows the estimation results of panel data model with fixed effects. In this model, only the explanatory variables and the dummy variable of sanctions are entered.

Table 1. Detection Tests between Pooling Model and Panel Data (Fixed and Random Effect)

	F test	***Lagrange Multiplier***
p-value	< 2.2 e-16	< 2.2 e-16
F/ Chisq	F = 4.7075	Chi-squares = 136.31
alternative assumption	significant effects	significant effects

Table 2. Hausman Test for Detection Fixed and Random Effects

	F test
p-value	0.0005186
Chisq	F = 24.016
alternative assumption	One model is inconsistent

Table 3. Results of the Fixed Effects Model (Without Separating the Effects of Sanctions by Country)

	Estimate	**t-Value**	**pr> (|t|)**	**Siglificance Codes**
Log (GDP per capita)	0.2273	3.0066	0.002751	**
Log (RPE)	13.133	0.4661	0.641330	
Log (Inbound to Iran)	-183.766	-8.2748	8.208e-16	***
Log (Gravity)	20.629	1.5824	0.114079	
Sanctions	200.840	6.1487	1.418e-09	***
VISA	-110.298	-2.8581	0.004408	**
R-squared	45.231			
F-statistics/p-value	83.411/< 2.2 e-16			

significant codes: 0 '***', 0.001 '**', 0.01 '*', and 0.05 '.'

After the imposition of sanctions, the arrivals from countries of Georgia, Kyrgyzstan, and Afghanistan have not had a significant impact on polarization. In fact, the arrivals from these countries to Iran has not been subject to sanctions. Even arrivals from the United Arab Emirates, China, and Canada were not significant at the 99% level. Non-compliance of these countries from sanctions against arrivals to Iran can be due to extensive family and business connections. After the sanctions, China has become Iran's main trade market, and the United Arab Emirates has also become the main gateway to trade with China and other South Asian countries. Although trade between Iran and China has halved since the sanctions, China's share of Iran's foreign trade has increased from 20% to 30% (Mokhtari Shirehjini et al., 2024). The growth of immigration to Canada and the high share of Iranians among Canadian citizens (nearly 400,000 people), which has almost doubled in the last 6 years (Supreme Council for the Affairs of Iranians Abroad [SCAIA], 2021), explain the ineffectiveness of the role of sanctions in affecting arrivals from this country. After the sanctions against Iran, many international flights to Iran were canceled, but Canada still has direct flights to Iran, indicating the lack of significant influence of inbound tourists from Canada to Iran. The greatest impact on arrivals to Iran has been from European and East Asian countries. Italy, Japan, Greece, Indonesia, Philippines, South

1. In the plm package, R software, functions of pFtest, and plmtest are used respectively to compare the pooling model with two models of fixed effects and random effects.
2. In the plm package of R software, the phtest function is used to compare the fixed effects and random effects models.

Korea, Norway, Australia, France, Ukraine, and Spain have the highest coefficients, respectively. Observing the estimate coefficients for the countries shows the non-significance of the gravity variable. In fact, regardless of whether the countries are near or far from Iran, or whether their share of inbound tourists is high or low, they have affected polarization.

Table 4. Results of the Fixed Effects Model (With Separating the Effects of Sanctions by Country)

	Estimate	t-Value	pr> (|t|)	Significance Codes
Log (GDP per capita)	0.001034	4.938	1.107e-06	***
Log (RPE)	0.41673	6.596	1.178e-10	***
Log (Inbound to Iran)	-0.64168	-10.100	<2.2e-16	***
Log (Gravity)	0.00210	0.070	0.9437579	
Sanctions	2.55089	0.234	2.537e-07	***
VISA	-0.55083	-0.516	0.6060784	
Afghanistan	0.849	1.250	0.2116	
Armenia	1.086	5.699	2.169e-08	***
Australia	2.389	3.670	0.0003	***
Austria	1.846	2.980	0.0030	**
Azerbaijan	1.271	4.609	5.259e-06	***
Bahrain	2.032	3.232	0.0013	**
Bangladesh	2.268	3.554	0.0004	***
Belgium	1.827	3.062	0.0023	**
Canada	1.636	2.146	0.0323	*
China	1.455	2.441	0.0150	*
Denmark	2.074	3.220	0.0014	**
Egypt	2.183	3.395	0.0007	***
Emirates	1.525	2.277	0.0232	*
Finland	1.695	2.736	0.0064	**
France	2.358	3.942	9.349e-05	***
Georgia	0.754	1.400	0.1619	
Germany	2.114	3.355	0.0008	***
Greece	2.978	4.568	6.353e-06	***
India	2.283	3.512	0.0004	***
Indonesia	2.681	4.085	5.212e-05	***
Iraq	1.815	4.478	9.533e-06	***
Italy	4.486	6.406	3.721e-10	***
Japan	3.048	4.457	1.047e-05	***
Jordan	2.086	5.699	2.169e-08	***
Kazakhstan	2.272	3.876	0.0001	***
Korea	2.555	3.806	0.00016	***
Kuwait	2.040	4.121	4.478e-05	***
Kyrgyzstan	0.399	0.434	0.664	
Lebanon	1.456	3.946	9.205e-05	***
Malaysia	2.107	3.666	0.0003	***
Netherlands	1.767	2.908	0.0038	**
Norway	2.477	3.692	0.0002	***
Oman	2.274	3.647	0.0003	***
Pakistan	1.529	3.301	0.0010	**
Philippines	2.619	4.383	1.456e-05	***
Poland	1.774	2.936	0.0035	**
Qatar	2.097	3.038	0.0025	**
Russian	2.275	4.054	5.909e-05	***
Saudi	2.013	3.135	0.0018	**
Spain	2.323	3.780	0.0002	***
Sweden	1.911	2.740	0.0064	**
Switzerland	2.212	3.563	0.0004	***
Syrian	2.126	3.042	0.0025	**
Tajikistan	2.201	3.065	0.0023	**
Thailand	2.021	3.298	0.0010	**
Türkiye	2.119	2.171	0.0304	*
Turkmenistan	2.211	4.388	1.420e-05	***
Ukraine	2.337	3.520	0.00047	***
United. Kingdom	2.277	3.576	0.0004	***
USA	1.627	2.657	0.0081	**
Uzbekistan	2.348	3.305	0.0010	**
R-squared			0.86366	
F-statistics/p-value			18.2024 / <2.22e-16	

significance codes: 0 '***', 0.001 '**', 0.01 '*', and 0.05 '.'

The "sanction" variable coefficient is 2.255 and it is a very high value. This means that the change in sanctions can reduce the Iran's TMP with a factor of 2.225. To reach the level of TMP that existed in 2009, it is enough to be reduced the sanctions by half, or in other words, the countries that comply with the sanctions should be reduced by half. Definitely, the removal of sanctions will greatly reduce TMP and make Iran one of the countries with a very diverse tourism market. Iran's tourism market is prone to attract tourists from different countries and is non-polar by nature (Figure 2 shows that after the shock of sanctions, Iran's tourism market has again moved towards decreasing TMP).

To identify potential tourism markets under sanction conditions and to consider those markets that reduce the TMP, it is necessary to focus on markets with three characteristics: Firstly, they are not among the actual markets with the highest share of inbound tourists. Second, they have the greatest influence on polarization (higher β). Third, they have less significance in terms of the effectiveness of sanctions (less p-value). In fact, policymakers should not only focus on those potential markets that do not have a high share of inbound tourists to Iran but also consider those markets that can reduce polarization more strongly as well as those markets that are less affected by sanctions than other markets. Table 5 presents the ranking of the markets examined in this study based on the three criteria described above.

Table 5. Ranking of Countries (Potential Tourism Markets)

Markets	First Criteria	Second Criteria	Third Criteria
Uzbekistan	10	22	8
Bangladesh	18	29	3
Canada	41	4	7
Egypt	22	25	6
Kyrgyzstan	51	1	1
Tajikistan	21	17	16
Greece	3	47	4
Norway	7	35	13
Finland	40	10	5
USA	42	8	9
Indonesia	4	41	14
Ukraine	11	26	23
Philippines	5	43	12
Qatar	26	15	20
Kazakhstan	17	37	10
Emirates	44	6	14
Thailand	32	22	11
Denmark	29	19	17
Australia	8	32	26
Korea	6	36	25
Syrian	23	15	31
Switzerland	19	29	22
Belgium	36	17	18
Poland	38	12	20
Japan	2	45	24
Sweden	34	10	28
United. Kingdom	14	29	30
Spain	12	35	27
Austria	35	13	29
Türkiye	24	5	48
Malaysia	26	32	20
Jordan	28	50	2
Netherlands	39	11	32
France	9	38	36
Oman	16	32	35
Saudi	33	18	33
India	13	29	43
Italy	1	51	34
Germany	25	24	39
Georgia	50	3	37
Russian	15	40	38
China	46	7	41
Bahrain	31	20	44
Afghanistan	49	2	49
Turkmenistan	20	44	46
Pakistan	43	22	47
Kuwait	30	42	42
Lebanon	45	39	40
Iraq	37	46	51
Armenia	48	49	45
Azerbaijan	47	48	50

Countries of Central Asian (except Turkmenistan), East Asian, and Northern European, along with Canada, Egypt, and Greece, can be considered as markets that have the ability to reduce the Iran's TMP. Uzbekistan and Tajikistan share cultural commonality with Iran, while Indonesia, Egypt, and Bangladesh share religious commonality with Iran. On the other hand, Northern European countries (such as Norway and Finland) are among the countries with a high level of per capita income and are considered a good opportunity for the growth of tourism exports.

6. Discussion

The findings of this study show that countries with a lower share of inbound tourists to Iran exhibit greater fluctuations and have higher TMP index values. This can mean that during different years, the rising in the share of countries due to various factors (such as sanctions) has caused polarization because of the sanctions imposed (Ghomi, 2022; Royce, 2018). In fact, countries with a lower share in inbound tourists, although they have a small share in Iran's tourism market, will have more effects in terms of influencing polarization. Investigation of the Iran's TMP in terms of the countries' GDP per capita shows that the polarization is not related to countries with high GDP per capita. In fact, developed countries have not played a significant role in the Iran's TMP.

The research question was that whether sanctions have had a significant impact on the polarization of Iran's tourism market? And if yes, which countries would be the best tourism markets for Iran to avoid polarization? Modeling with and without the "sanctions" variable produced consistent results, indicating that inbound tourists from Georgia, Kyrgyzstan, Afghanistan, the United Arab Emirates, China, and Canada did not have a significant impact on market polarization. The limited response of these countries to sanctions, as reflected in inbound tourism to Iran, may be attributed to extensive cultural, familial, and business ties. For example, China accounted for 30% of Iran's foreign trade in 2020 (Mokhtari Shirehjini et al., 2024). Moreover, the Iranian immigrant population in Canada has nearly doubled over the past six years. Following the imposition of sanctions on Iran, many international flights to the country were canceled; however, direct flights between Canada and Iran remained available (SCAIA, 2021). Strong cultural and family ties between Iranians and Afghans, as well as the substantial level of Iraqi investment in Iran, may also contribute to these patterns.

The coefficient of the "sanction" variable is very high, indicating that the change in sanctions can reduce the Iran's TMP, with relatively high intensity, confirming the findings of Madan (2023). To reach the level of TMP that existed in 2009, it is enough to be reduced the sanctions by half, or in other words, the countries that comply with the sanctions should be reduced by half. In this study, sanctions are assumed to remain in place and not to have been lifted; therefore, the discussion is conducted under this assumption. Interestingly, countries that are aligned with Iran and opposed to U.S. sanctions, such as Russia and China, as well as countries such as Syria, Lebanon, and Iraq, have contributed differently to the polarization of Iran's tourism market. In particular, inbound tourists from these countries have significantly influenced tourism market polarization (TMP) under the prevailing sanctions regime. The patterns of inbound tourism from these countries can therefore be considered a factor contributing to TMP in Iran. Despite Iran's foreign policies aimed at supporting and maintaining relations with these countries, the empirical results reveal varying outcomes in practice. Specifically, the decline in inbound tourists from these countries, except Iraq, appears to have been associated with international sanctions and has contributed to changes in TMP.

To identify markets that can reduce TMP, three characteristics are considered: Firstly, they are not among the actual markets with the highest share of inbound tourists (Barati & Rasoulzadeh, 2024). Second, they have the greatest influence on polarization (Yap et al., 2023). Third, they have less significance in terms of the effectiveness of sanctions (Seyfi & Hall, 2020b). The results obtained indicate that Countries of Central Asian (except Turkmenistan), East Asian, and Northern European, along with Canada, Egypt, and Greece, have the ability to reduce the Iran' TMP. Close religious and cultural relations, a high share of trade exchanges, and geographical proximity (relatively lower costs and ease of tourist travel) could be among the reasons for choosing these markets.

This research is subject to several limitations. For a number of countries—such as Afghanistan, Pakistan, and Turkmenistan—time-series data on inbound tourism remain incomplete, making it statistically impossible to track bilateral tourist flows. Moreover, official statistics for Iran typically report passenger entries rather than true tourist counts, despite the conceptual distinction between the

two. As a result, the World Tourism Organization provides estimated figures that may deviate from actual conditions, especially for markets with low visitor volumes. Nonetheless, the exclusive use of a single standardized data source ensures internal consistency and enhances the reliability of the empirical results.

7. Conclusion

Sanctions are among the obstacles to tourism development and a factor affecting tourism market polarization (TMP). It is highly important for countries under sanctions to avoid polarization. Therefore, paying attention to this issue and selecting potential markets for tourism development with the aim of reducing TMP is an important objective for national policymakers. Usually, sanctions imposed on countries are not short-term, and experimental studies show that countries under sanctions will remain for decades under sanctions (Seyfi & Hall, 2018). Therefore, considering the presence of sanctions, the development of the tourism market is highly important. This study seeks to identify potential tourism markets by determining the factors that influence Iran's tourism market polarization (TMP) across different countries of origin. These countries cover 99.7% of Iran's foreign tourism market, and in this sense, they have a relatively complete coverage of Iran's tourism market. To analyze the effects of different countries, 51 countries were examined and their effects on TMP (under sanctions) were analyzed separately. The results showed that some markets (including Afghanistan, Kyrgyzstan, and Georgia) were not affected by sanctions and some markets (including Italy, Jordan, Greece, and Indonesia) had a higher impact factor in terms of influencing tourism polarization. By considering these two findings along with the existing actual markets, potential markets can be introduced as those that are not currently among the actual markets but have a greater influence on polarization and are less affected by sanctions.

The results indicate that Central Asian and Northern European countries could be considered important potential markets for reducing tourism market polarization (TMP).

National policy makers should focus on tourism development with these countries. Additionally, the results showed that removing visa (one-way or two-way) do not have a significant effect on TMP. In fact, the visa-free policy currently being pursued by Iran's Ministry of Tourism may not be sufficient to significantly reduce tourism market polarization (TMP). In particular, the countries targeted by this policy do not substantially overlap with the potential markets identified in this study as having priority for tourism development. Another conclusion of this research is that geographical distance or gravity index have no significant effect on TMP. In fact, although Iran's neighboring countries account for a large share of inbound tourists, countries such as Saudi Arabia, Germany, China, France, India, and Georgia also account for a significant share. On the other hand, there is no alignment between inbound tourists (origins) and outbound tourists (destinations) (except Iraq and Turkey). These factors have made the gravity index not meaningful. The results of this research can be useful in policymaking related to diversifying the tourism market, reducing market risk in tourism, and selecting target countries for developing the tourism market.

While this study identifies a set of potential tourism markets, future research should evaluate the practical feasibility of accessing these markets and the key constraints that may hinder the expansion of inbound tourism through these channels. The identification of potential markets can be shaped by diverse objectives. Although the present study centers on the indicators of sanctions and market polarization, alternative criteria—including cultural, religious, and historical affinities, political relationships, and the typology of travel—may offer additional perspectives and can be explored in subsequent studies.

References

ACECR. (2020). Tousim Strategic & Practical Plan of Razavi Khorasan. Research Report for 2015-2020. Research Project, *Institute of Tourism in ACECR (in persian)*.

Akter, H., Akhtar, S., & Ali, S. (2017). Tourism demand in Bangladesh: Gravity model analysis. *Tourism, 65*(3), 346–360. https://hrcak.srce.hr/186958

Alavi, J., & Yasin, M. M. (2000). Iran's tourism potential, and market realities: An empirical approach to closing the gap. *Journal of Travel & Tourism Marketing*, 9(3), 1–22. https://doi.org/10.1300/J073v09n03_01

Antoniou, K. (2023). *Tourism as a form of international relations: An introduction*. Edward Elgar Publishing, https://doi.org/10.4337/9781802207774.00008

Atiyas, I., Galal, A., Selim, H., & FEMISE. (2015). Structural transformation and industrial policy: A comparative analysis of Egypt, Morocco, Tunisia and Turkey and case studies. FEMISE project on: structural transformation and industrial policy in selected Southern Mediterranean countries. Available at: https://bit.ly/2N1Vjnq

Baltagi, B. H. (2005). *Econometric analysis of panel data* (3rd ed.). John Wiley & Sons *Inc: New York, NY, USA*

Barati, J. (2019). Investigating the regional convergence of tourism and the role of tourism infrastructure in Iranian provinces. *Regional Planning*, 9(35), 1-12. https://dorl.net/dor/20.1001.1.22516735.1398.9.35.1.8

Barati, J. (2020). Infrastructure factors and their impact measuring on growth on tourism economy in Iranian provinces. *Journal of Economic Modeling Research*, 10(38), 207-246. https://doi.org/10.29252/jemr.10.38.207

Barati, J. (2022). Investigating the impact of the domestic travel of iranian households from change in household purchasing power. *Journal of Tourism Planning and Development*, 10(39), 247-273. https://doi.org/10.22080/jtpd.2022.19769.3375

Barati, J. (2024). Substitution effect of tourism destinations in Türkiye: Case study of Iranian tourists. *Journal of Tourism Leisure and Hospitality*, 5(2), 144-149. https://doi.org/10.48119/toleho.1383655

Barati, J., & Rasoulzadeh, M. (2024). The affectability of Iran's tourism industry from the new VAT law. *Iranian Economic Review*, *28*(3), 884-897. https://doi.org/10.22059/ier.2024.348594.1007537

Blanke, J., & Chiesa, T. (2013). The travel & tourism competitiveness report 2013: Reducing barriers to economic growth and job creation. Geneva: World Economic Forum.

Bajoghli N, Nasr V, Salehi-Isfahani D & Vaez, A.. (2024) How Sanctions Work: Iran and the Impact of Economic Warfare. United States: Stanford University Press. 212 pp. ISBN: 9781503637818

Can, M. & Gozgor, G. (2018). Revisiting the tourism-growth nexus: Evidence from a new index for the market diversification of tourist arrivals. *Current Issues in Tourism*, 21(10), 1157–1170. https://doi.org/10.1080/13683500.2016.1268103

Candela, G. & Figini, P. (2012). *The economics of tourism destinations*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-20874-4

Coelho, L. M., Burgos, M. D. C., Santos, E. P., & Pinto, P. A. L. D. A. (2019). Regional concentration of the gross production value of firewood in Paraíba. *Floresta e Ambiente*, *26*(3), 1–10. https://doi.org/10.1590/2179-8087.088717

Coelho, L. M., Selvatti, T. S., Vanderlei Alencar, F., Melo Nunes, A. M., Joaquim, M. S., Santos, E. P., & Souza, A. N. (2023). Global concentration of wood-pulp production, 1961–2021. *Southern Forests: A Journal of Forest Science*, *85*(1), 11–18. https://doi.org/10.2989/20702620.2023.2186282

Dogru, T., Sirakaya-Turk, E., & Crouch, G. I. (2017). Remodeling international tourism demand: Old theory and new evidence. *Tourism Management, 60*, 47–55. https://doi.org/10.1016/j.tourman.2016.11.010

Duro, J. A., Osorio, A., Pérez-Laborda, A., & Fernández-Fernández, M. (2022). Measuring tourism markets vulnerability across destinations using composite indexes. *Journal of Destination Marketing & Management, 25*, 100731. https://doi.org/10.1016/j.jdmm.2022.100731

Earl, A. (2021). Methodological issues in examining sanctions: Reflections on conducting research in Russia. *Tourism Management Perspectives*, 39(1). https://doi.org/10.1016/j.tmp.2021.100858

Elhiraika A. B., & Mbate M. M. (2014). Assessing the determinants of export diversification in Africa. *Applied Econometrics and International Development*, *14*(1), 147–160. https://ideas.repec.org/a/eaa/aeinde/v14y2014i1_11.html

Eskandari, A. H. (2023). Supervisory report regarding the cancellation of visas and its impact on tourism: The subject of Article (9) of the Law on the Establishment of the Cultural Heritage and Tourism Organization approved in 2013. *Iran's Islamic Council Parliament Research Center*, No 19361, Code 270 (in Persian).

Farahani, B. & Shabani, M. (2014). The impact of sanctions on Iran's tourism. *International Journal of Resistive Economics*, 2(1), 1-12. https://dor.isc.ac/dor/20.1001.1.23454954.2014.2.1.1.2

Ghomi, M. (2022). Who is afraid of sanctions? The macroeconomic and distributional effects of the sanctions against Iran. *Economics & Politics*, *34*(3), 395–428. https://doi.org/10.1111/ecpo.12203

Gorji, A. S., Garcia, F. A., & Mercade-Mele, P. (2023). Tourists' perceived destination image and behavioral intentions towards a sanctioned destination: Comparing visitors and non-visitors. *Tourism Management Perspectives*, 45, 101062. https://doi.org/10.1016/j.tmp.2022.101062

Greene, W. H. (2008). *Econometric analysis* (6th ed.). Pearson Prentice Hall, Upper Saddle River.

Gu, X., Sheng, L., & Lei, C. (2022). Specialization or diversification: A theoretical analysis for tourist cities. *Cities*, *122*, 103517. https://doi.org/10.1016/j.cities.2021.103517

Hall, C. M. (2017). Tourism and Geopolitics: The Political Imaginary of Territory, Tourism and Space. In D. Hall (Ed.) Tourism and Geopolitics: Issues from central and eastern Europe (pp. 15–24). Wallingford: CABI.

Hall, C. M., & Seyfi, S. (2021). Tourism and sanctions. In P.A.G. van Bergeijk (Ed.), *Research handbook on economic sanctions* (pp. 351-368). Edward Elgar Publishing.

Heidari chianeh, R., Rezatab, S. K., Soltani, N., & Motamedimehr, A. (2013). An analysis of tourism policy making in Iran. *Journal of Tourism Planning and Development*, *2*(5), 11-32. https://doi.org/10.1016/j.jdmm.2019.100381

Hoskisson, R. E., & Hitt, M. A. (1990). Antecedents and performance outcomes of diversification: A review and critique of theoretical perspectives. Journal of Management, 16(2), 461–509. https://doi.org/10.1177/014920639001600210

Hufbauer, G. C., Schott, J. J., Elliott, K. A., & Oeggm, B. (2008). *Economic sanctions reconsidered* (3rd ed.). Washington, D.C.: Peterson Institute for International Economics.

Islamic Parliament Research Center. (2023). 7th five-year national economic, social & cultural development plan. *rc.majlis.ir (in persian)*

Jošić, H., Žmuk, B., & Dumičić, K. (2019). Measurement of export market concentration for the largest European economic integrations. *Business Systems Research*, *10*(2), 61–72. https://doi.org/10.2478/bsrj-2019-018

Khalid, U., Okafor, L., & Burzynska, K. (2024). Sanctions and tourist flows: The roles of religion and geography. *Annals of Tourism Research Empirical Insights*, *5*(2), 100143. https://doi.org/10.1016/j.annale.2024.100143

Khodadadi, M. (2016a). Challenges and opportunities for tourism development in Iran: Perspectives of Iranian tourism suppliers. *Tourism Management Perspectives*, *19*(A), 90-92. https://doi.org/10.1016/j.tmp.2016.05.001

Khodadadi, M. (2016b). A new dawn? The Iran nuclear deal and the future of the Iranian tourism industry. *Tourism Management Perspectives*, *18*, 6-9. https://doi.org/10.1016/j.tmp.2015.12.019

Khodadadi, M. (2018). Donald Trump, US foreign policy and potential impacts on Iran's tourism industry: Post-nuclear deal. *Tourism Management Perspectives*, *26*, 28-30. https://doi.org/10.1016/j.tmp.2018.01.007

Madan, S. (2023). *Sanctions on Russia tell a familiar story* [Master's thesis, New York University].

Mokhtari Shirehjini, J., Hadian, H., Samadi, A. H., & Sadraei Javaheri, A. (2024). The role of diversification of trade partners on the effectiveness of international economic fluctuations in Iran's economy. *The Economic Research, 23*(4), 71–107. https://doi.org/10.22034/ECOR.23.4.71

Nadira, N., Putranti, I., & Basith, A. (2021). Analyzing European Union's membership polarization given towards sanctions given to Russia [Undergraduate Thesis of Universitas Diponegoro]. https://eprints2.undip.ac.id/id/eprint/8522

Nematpour, M., Khodadadi, M., Makian, S., & Ghaffari, M. (2024). Developing a competitive and sustainable model for the future of a destination: Iran's tourism competitiveness. *International Journal of Hospitality & Tourism Administration*, *25*(1), 92-124. https://doi.org/10.1080/15256480.2022.2081279

O'Brien, B. C., Harris, I. B., Beckman, T. J., Reed, D. A., & Cook, D. A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. Academic Medicine, 89(9), 1245-1251. https://doi.org/10.1097/ACM.0000000000000388

Park, M., & Jang, H. (2024). Beyond efficacy: How self-esteem and guilt drive participation in tourism boycotts. *Tourism and Hospitality*, *5*(4), 1292-1308. https://doi.org/10.3390/tourhosp5040072

Parsapour, S., Barati, J., & Rasoulzadeh, M. (2017). Investigating the factors affecting the sustainability of small firms and entrepreneurs (Case study of industrial firms of Mashhad). *Journal of Entrepreneurship Development*, *10*(1), 41-60. https://doi.org/10.22059/jed.2017.62288

Peng, Y. T., Saboori, B., & Ranjbar, O. (2023). Does tourism market diversification matter for CO2 emissions? Evidence from Singapore. *Environmental Science and Pollution Research. 30*(30), 76016-76025. https://doi.org/10.1007/s11356-023-27715-6

Prabowo, H. & Sinaga, O. (2020). The role of tourism on international relations: Evidence from the Indonesian economy. *Croatian International Relations Review*, *26*(86), 187-200. https://doi.org/10.2478/CIRR-2021-0001

Pratt, S. & Alizadeh, V. (2018). The economic impact of the lifting of sanctions on tourism in Iran: A computable general equilibrium analysis. *Current Issues in Asian Tourism, Taylor & Francis Journ*als, *21*(11), 1221-1238. https://doi.org/10.1080/13683500.2017.1307329

Rahman, S. A., Saboori, B., & Taghizadeh, S. K. (2023). A new insight on tourism-entrepreneurship nexus: The role of tourism market diversification. *Tourism Planning & Development*, *21*(5), 550-569. https://doi.org/10.1080/21568316.2023.2252413

Roodman, D. (2009). How to do Xtabond2: An introduction to difference and system GMM in stata. *The Stata Journal: Promoting Communications on Statistics and Stata*, *9*(1), 86–136. https://doi.org/10.1177/1536867X0900900106

Roudari, S., Ahmadian-Yazdi, F., Arabi, S. H., & Hammoudeh, S. (2023). Sanctions and Iranian stock market: Does the institutional quality matter? *Borsa Istanbul Review*, *23*(4), 919-935. https://doi.org/10.1016/j.bir.2023.03.006

Royce, E. (2018). *H.R. 3364—115th Congress (2017–2018): Countering America's adversaries through sanctions act*. U.S. Congress. https://www.congress.gov/115/plaws/publ44/PLAW-115publ44.pdf

Saboori, B., Ghader, Z., & Soleymani, A. (2022). A revised perspective on tourism-economic growth nexus, exploring tourism market diversification. *Tourism Economics*, *29*(7), 1812-1835. https://doi.org/10.1177/13548166221134183

Saboori, B., Ranjbar, O., & Can, M. (2023). Global perspective on tourism-economic growth nexus: The role of tourism market diversification. *Tourism Planning and Development*, *20*(5), 919-937. https://doi.org/10.1080/21568316.2022.2160806

Seyfi, S. & Hall, C.M. (eds.) (2018). *Tourism in Iran: Challenges, development and issues*. Routledge. New York.

Seyfi, S. & Hall, C.M. (2020a). Sanctions and tourism: Conceptualization and implications for destination marketing and management. *Journal of Destination Marketing & Management*, *15*, Art. 100381. https://doi.org/10.1016/j.jdmm.2019.100381

Seyfi, S. & Hall, C.M. (2020b). Sanctions and tourism: Effects, complexities and research. *Tourism Geographies*, *22*(4-5), 749–767. https://doi.org/10.1080/14616688.2019.1663911

Silverstein, M. J., & Butman, J. (2006). *Treasure hunt: Inside the mind of the new consumer*. Penguin Group. https://doi.org/10.1108/07363760710721019

Solarin, S. A., Apaydın, Ş., Kolawole Eluwole, K., & Stewart, C. (2025). Investigating the impact of tourism market diversification on the shadow economy in OECD and non-OECD countries. *Journal of Policy Research in Tourism, Leisure and Events*. Advance online publication. https://doi.org/10.1080/19407963.2025.2532164

Solarin, S. A., Ulucak, R. & Erdogan, S. (2023). Assessing the economic impacts of tourism markets and activities diversification: Evidence from a new dynamic regression approach. *Journal of Travel Research*, 63(8), 2078-2093. https://doi.org/10.1177/00472875231203395

Supreme Council for the Affairs of Iranians Abroad. (2021). *Distribution statistics of Iranians living abroad. Report from Communication and information of Iranians abroad.* https://iranian.mfa.ir/files/mfairanian/Amar.pdf

Torres-Reyna, O. (2010). *Getting started in Fixed /Random Effects Models using R*. Princeton University. New Jersey.

Ulver, S. (2022). The conflict market: Polarizing consumer culture(s) in counter-democracy. *Journal of Consumer Culture*, 22(4), 908-928. https://doi.org/10.1177/14695405211026040

UNCTAD. (2022). *Rethinking the foundations of export diversification in Africa: The catalytic role of business and financial services. Economic Development in Africa Report 2022.*

UNESCO. (2023). *Iran.* https://www.unesco.org/en/countries/ir

Uslu, A. & Akay, B. (2019). Assessing the effect of international relations on tourism demand in the context of Turkey-Russia aircraft crisis. *Journal of Tourism and Services*, *10*(18), 63–78. https://doi.org/10.29036/jots.v10i18.84

Wallensteen, P. (1968). Characteristics of economic sanctions. *Journal of Peace Research*, *5*(3), 248-267. https://doi.org/10.1177/002234336800500303

Williams, A. & Balaz, V. (2014). Tourism risk and uncertainty: Theoretical reflections. *Journal of Travel Research, 54*(3), 271-287. https://doi.org/10.1177/0047287514523334

World Bank. (n.d.). *World Bank Open Data*. https://data.worldbank.org

Wujie. X. (2023). The impact of geopolitical risks and international relations on inbound tourism——Evidence from China and key source countries. *Cogent Social Sciences*, *9*(2), 1-30. https://doi.org/10.1080/23311886.2023.2285244

XE. (n.d.). *Currency converter*. https://www.xe.com/currencyconverter/

Yap, G., Saha, S., Ndubisi, N. O., Alsowaidi, S. S., & Saleh, A. S. (2023). Can tourism market diversification mitigate the adverse effects of a blockade on tourism? Evidence from Qatar. *Tourism Economics*, *29*(4) 880–905. https://doi.org/10.1177/13548166211070742