Empirical Research Article

Does Globalization Influence Inbound Tourism? Evidence from a Dynamic Panel Threshold Analysis

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Abstract

This study explores the nonlinear impact of globalization on inbound tourism over the period 1995–2014 for 53 countries. The results reveal a nonlinear relationship between globalization and inbound tourism, suggesting that different levels of globalization for countries have varied impacts on inbound tourism development. More globalized countries are able to draw more inbound tourists, but this does not enhance their international tourism receipts (percentage of GDP) and net tourism service exports under a higher level of globalization, indicating that globalization does not necessarily benefit inbound tourism development.

JEL classifications

C23, C26, F60, L83, Z32

Keywords

globalization, inbound tourism development, dynamic panel threshold regression model, tourism specialization

Introduction

Tourism has developed very rapidly around the world compared with many other industries (Zappino 2005). Because of tourism's role in creating employment, increasing export income, and promoting infrastructure improvement, it is one of the major drivers of global economic development (Dwyer, Forsyth, and Spurr 2004; Po and Huang 2008; Belloumi 2010; Chiu and Yeh 2017), which is the so-called tourism-led growth hypothesis. As noted by the World Tourism Organization (UNWTO 2017), many countries are opening up more destinations, increasing tourism investments, and explicitly considering tourism when initiating their economic policies (Chou 2013; Chen and Chiou-Wei 2009; Oh 2005). The World Travel and Tourism Council (WTTC) forecasts the annual contribution rate of tourism to an economy will be 3.8% per year in the next 10 years. According to Hjalager (2007), travel and tourism result from the globalization processes, with international tourism in fact continuously increasing along with the tide of globalization. From the growth-led tourism hypothesis, economic growth spurs international tourism (Oh 2005; Payne and Mervar 2010; Brida, Cortes-Jimenez, and Pulina 2016), and globalization affects economic growth by enhancing trade and (economic and political) cooperation among countries (Dreher 2006), hence influencing international tourism. Indeed, surveys by UNWTO note that the number of international tourists reached the fastest growth of 7% in 2017 since the 2008 financial crisis and larger than UNWTO's long-run prediction of 3.8% annually for the period 2010–2020. International tourism income actually rose 4.9% to hit US$1.340 trillion in 2017 (World Tourism Organization 2018).

Globalization is generally defined as a process of strengthening economic, social, and political interdependencies and integration among economies on a global scale (Song, Li, and Cao 2018). International trade,

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foreign investment, international transport, intergovernmental cooperation, etc. are concrete manifestations of globalization that can spread ideas, products, technologies, information, jobs, and cultures across national borders (Al-Rodhan and Stoudmann 2006). Globalization has both advantages and disadvantages. With the development of globalization, knowledge and information can be widely disseminated and global transportation becomes more convenient, which encourage companies in countries to develop new markets, promote innovation, and improve product quality (Meethan 2004; Bhagwati 2005; Freidman 2005). However, it may also bring some problems, such as enlarging a country's income inequality (Chiu and Lee 2019), expanding the income gap between countries or regions, damaging local industries, making developing economies more dependent on advanced economies, and adversely affecting small businesses (Mowforth and Munt 2015). Generally, globalization is now a common topic of the modern world.

Tourism has made great progress under the process of globalization (C. L. Chang et al. 2010). Its contribution to economic growth still continues to outpace other industries, and the impact is increasing because of its interaction with globalization (Fayed and Fletcher 2002). Globalization allows more stakeholders to enter the market, thereby stimulating competition and making the business environment more complex (Hociung and Frâncu 2012). Globalization has also brought great changes to tourism and the economy, as it enhances marketing activities, spreads technical knowledge, develops transportation and infrastructure, increases investment incentives, improves and diversifies tourism products, raises tourism sector employment, changes the tourism environment and sociocultural characteristics, etc. (Mustafa 2010; Dwyer 2015). Because of such a wide range of complexities, it makes sense to investigate more closely the relationship between globalization and tourism.

Zhao and Li (2006) analyze the impact of globalization on tourism development in the third world based on the perspective of the political economy. In their views, the mobility of capital, population, ideas, and information has been increasing around the world in the context of globalization and concretely affects the economic, sociocultural, and ecological fields of third world countries. Under globalization, they find that more countries and regions in the third world have become new tourist destinations, resulting in a large increase in foreign investment and tourism income. Jin, Qu, and Bao (2019) also note that the development of tourism in destination countries could be assisted via political, social, and cultural exchanges between the origin and destination countries. To consider tourism marketing and information, Naudé and Saayman (2005) use the number of Internet users in a country to measure the impacts of networks and information on tourist flows. They find a positive impact of such technology users on international tourist arrivals in Africa; thus, an increase in social globalization could enhance international tourism arrivals. Based on the above studies, tourism managers should look at globalization with a correct attitude and proactively confront the challenges of it by taking relevant measures to promote the healthy and sustainable development of tourism (Dwyer 2015).

The contributions and purposes of this study are as follows. First, most existing studies focus on investigating the tourism-economic growth nexus (Lanza and Pigliaru 2000; Adamou and Clerides 2010; De Vita and Kyaw 2017) or the globalization–economic growth nexus (Rodrik 1998; Rousseau and Sylla 2003; Gurgul and Lach 2014; and so on), while the globalization–tourism nexus is targeted even less. Though the effect of globalization on tourism is increasingly important in the rising tide of globalization, researchers have seldom incorporated globalization into an empirical study of tourism (Ivanov and Webster 2013a; Javid and Katircioglu 2017). To fill this gap in the literature, our study explores the impacts of globalization on inbound tourism.

Second, as Ivanov and Webster (2013a) note, low globalization limits inbound tourism, but may also have a positive effect on it through restrictions on imports. High globalization could stimulate inbound tourism (Saha, Su, and Campbell 2017), but may also have a negative effect on it in the form of importing goods and services required by tourists (Ivanov 2005). According to Hjalager (2007), the globalization of tourism can be classified into four stages: missionaries in the markets, integrating across borders, fragmentation of the value chain, and transcending into a new value chain. This suggests that globalization can have different effects on inbound tourism under different degrees of globalization; that is, there could be a nonlinear relationship between globalization and inbound tourism. Thus, this study employs the dynamic panel threshold regression model to explore the potential nonlinear effects of globalization on inbound tourism.

Third, one of the advantages of the dynamic panel threshold regression model is that endogenous variables are allowed when estimating the threshold effect. Since the literature offers evidence of the tourism-led growth hypothesis, the growth-led tourism hypothesis, and a bidirectional causality between tourism development and economic growth (Dritsakis 2004; Kim, Chen, and Jang 2006; Seetanah 2011), it implies that the problem of endogeneity exists between them. To improve the endogeneity bias, we consider instrumental variables, that is, lags of GDP growth per capita, in the model.

The rest of the article runs as follows. The next section briefly reviews the relevant literature. The third section introduces the model and estimation strategies. The fourth section discusses variable definitions, variable processing, and data sources. The fifth section presents the empirical results. The final section reviews the conclusions and outlines some implications.

Literature Review

Most studies over the past few decades have devoted great efforts to examine the causal relationship between tourism development and economic growth. The first stream of literature focuses on the tourism-led growth hypothesis, or the contribution of tourism development to economic growth (Dwyer, Forsyth, and Spurr 2004; Belloumi 2010), while the second stream of literature focuses on the growth-led tourism hypothesis, or the stimulating effect of economic growth on tourism development (Oh 2005; Payne and Mervar 2010). The third stream of literature argues that both tourism development and economic growth can impact each other (Dritsakis 2004; Kim, Chen, and Jang 2006; Seetanah 2011). Economic growth is more likely to support international tourism development by providing efficient infrastructure, human capital, and attractive places (Du, Lew, and Ng 2016). Some studies propose that the size of the economy plays a dominant role in stimulating tourism development (Kim, Chen, and Jang 2006; Lin, Yang, and Li 2019). Because of the relatively lower levels of capital and technology inputs required by tourism compared to manufacturing industries, developing countries are more willing to support tourism development by allocating economic growth-induced capital assets, in order to benefit from tourism specialization (Sequeira and Nunes 2008). These results imply that different levels of economic growth may affect the development of tourism to different degrees (i.e., nonlinear effects). According to research on the globalization–economic growth nexus, a highly globalized country often has strong economic growth (C. P. Chang and Lee 2010; Gurgul and Lach 2014), and so different levels of globalization may also influence tourism development by different degrees through its impacts on the economy.

Theoretical analysis, descriptive analysis, and surveys are the most common approaches in earlier studies to examine the relationship between globalization and tourism (see Fayed and Fletcher 2002; Sugiyarto, Blake, and Sinclair 2003; Azarya 2004; Zhao and Li 2006; Hjalager 2007; Mustafa 2010; Hociung and Frâncu 2012; Cole and Davies 2014; Dwyer 2015). These studies mainly investigate how various manifestations of globalization affect tourism and argue that globalization could encourage international tourism development. For instance, Hjalager (2007) distinguishes four stages and different manifestations of the tourism industry's globalization and proposes that some activities related to globalization drive tourism development, such as transnational ownership structures and investments, cross-border marketing collaborations, the purchase and sale of know-how, and free movement. Sugiyarto, Blake, and Sinclair (2003) employ the computable general equilibrium (CGE) model to validate the impact of globalization on Indonesia's tourism and economic growth, showing results that globalization could help raise foreign tourist consumption on hotels and restaurants because of the cheaper prices of hotels and restaurants in that country; that is, globalization benefits the development of tourism revenue and related industries.

In terms of empirical studies, most researchers concentrate on investigating the relationship between international tourism and a specific manifestation of economic globalization, such as international trade (Kulendran and Wilson 2000; Shan and Wilson 2001; Suresh, Gautam, and Kumar 2011) and foreign direct investment (FDI) (Endo 2006; Tang, Selvanathan, and Selvanathan 2007), nearly ignoring the impacts of other dimensions of globalization on tourism. To overcome this omission in the literature, some researchers apply the Konjunkturforschungsstelle (KOF) index constructed by Dreher (2006) in the field of tourism research, because it could comprehensively measure globalization in the economic, social, and political dimensions. For example, Fereidouni, Al-Mulali, and Najdi (2014) examine the Granger-causal relationship between globalization and inbound tourism in the Middle East and North Africa region and find a positive bidirectional correlation between economic, social, and political dimensions; overall globalization; and inbound tourism. By using a sample of 133 countries as well as the dynamic panel generalized method of moments (GMM), Javid and Katircioglu (2017) find that economic, social, and political globalization have significantly positive impacts on tourism development, implying that an improvement in any aspect of globalization will induce higher tourism growth in these countries.

Ivanov and Webster (2013b) adopt cross-sectional analysis on 127 countries and present that economic, social, and political globalization could enhance the tourism competitiveness of destination. Furthermore, Ivanov and Webster (2013a) investigate whether globalization affects the contribution of tourism to economic growth and state that globalization has no significant impact on the tourism-growth nexus in general. As Ivanov and Webster (2013a) note, both high and low levels of globalization could impact tourism's contribution to growth both positively and negatively, and thus in a linear model the relationship between globalization and tourism's contribution to growth is insignificant.

The results of Ivanov and Webster (2013a) indicate a potential nonlinear relationship between globalization and tourism growth.

The above existing studies only consider a linear relationship between globalization and tourism development. However, the literature concerning both the globalization–tourism nexus and the economy-tourism nexus indicates a potential nonlinear relationship between globalization and inbound tourism development. Therefore, this present study adopts a nonlinear model.

Methodology

To explore the nonlinear relationships among globalization, inbound tourism development, and some control variables, this study employs the dynamic panel threshold regression model developed by Kremer, Bick, and Nautz (2013), who extend the threshold model proposed by Caner and Hansen (2004) that applied the generalized method of moments (GMM) estimators to allow endogeneity. We define our estimated model as

$$\begin{aligned}\ln tourism_{i,t} = {} & \beta_0 \ln tourism_{i,t-1} + \beta_1 \ln og_{i,t} \times I(\ln og_{i,t} \le \gamma) \\ & + \delta_1 I(\ln og_{i,t} \le \gamma) + \beta_2 \ln og_{i,t} \\ & \times I(\ln og_{i,t} > \gamma) + \phi z_{i,t} + \mu_i + \varepsilon_{i,t}\end{aligned} \tag{1}$$

where $\ln tourism_{i,t}$ measures tourism specialization in logarithm, including international tourism receipts ($\ln tr$), international tourist arrivals ($\ln ta$), and net tourism service export ($\ln ts$); $\ln og_{i,t}$ is the overall globalization index in logarithm; and $z_{i,t}$ is the vector of control variables in semi-logarithm or logarithm and partitioned into endogenous variables $z_{1i,t}$ and the exogenous variables $z_{2i,t}$, including real GDP per capita growth ($\ln gpgdp_{i,t}$), investment ($\ln invest_{i,t}$), population growth ($\ln gpop_{i,t}$), inflation ($\ln inf_{i,t}$), and the real effective exchange rate index ($\ln exrate_{i,t}$).

This study regards the growth of real GDP per capita ($\ln gpgdp_{i,t}$) as an endogenous variable. Based on Bick (2010) and Kremer, Bick, and Nautz (2013), our study also allows differences in regime intercepts (δ_1). Here, the regime is defined by the threshold variable $\ln og_{i,t}$ and the threshold level γ and presented by the indicator function, that is, I(•). Moreover, μ_i is the country-specific fixed effect, ε_{it} is the error term, $i = 1, \ldots, N$ represents country, and $t = 1, \ldots, T$ represents time periods.

The model estimation, as Kremer, Bick, and Nautz (2013) show, first has to eliminate the individual effects by way of a fixed-effects transformation. To achieve this goal, they eliminate the fixed effects by using the forward orthogonal deviations transformation proposed by Arellano and Bover (1995). Next, we obtain the forward orthogonal deviations transformation of the error term and its variance as follows:

$$\varepsilon^*_{i,t} = \sqrt{\frac{T-t}{T-t+1}} \times \left[\varepsilon_{i,t} - \frac{1}{T-t}(\varepsilon_{i,t+1} + \cdots + \varepsilon_{i,T})\right] \tag{2}$$

$$Var(\varepsilon^*_i) = \sigma^2 I_{T-1} \tag{3}$$

In equations (2) and (3), the random error term is serially uncorrelated and has no heteroscedasticity, ensuring that the estimation procedure of Caner and Hansen (2004) can be applied to the dynamic panel equation (1).

This study then estimates a reduced-form regression for the endogenous variables ($z_{1i,t}$) as a function of the instruments (lags of $z_{1i,t}$). Given an arbitrary γ, the slope coefficient can be estimated based on the instrumental variables. The estimator of the threshold value γ is chosen as the one correlated with the smallest sum of squared residuals; that is, $\hat{\gamma} = \text{argmin} S_n(\gamma)$. Once $\hat{\gamma}$ is determined, we apply GMM to estimate the slope coefficients for the previous used instruments and the previous estimated threshold $\hat{\gamma}$.

Data Specifications

This study uses a panel data set covering the period 1995–2014 for 53 countries (see Table S1 of Supplemental Material). To measure inbound tourism development, we first adopt the ratio of international tourism receipts to GDP (tr), which is usually taken as a proxy for tourism specialization in most of the literature (Sequeira and Nunes 2008). However, this index only focuses on international tourism receipts and ignores the impact of changes in GDP scale. As the scale of GDP gets bigger, the proportion of inbound tourism receipts gets smaller.

To consider the above problem, we additionally adopt the ratio of international tourist arrivals to population (ta, Adamou and Clerides 2010), as well as the ratio of the travel services of commercial service exports to the travel services of commercial service imports (ts, Chiu and Yeh 2017), which can measure inbound tourism development from the perspectives of tourism arrivals and net tourism service exports, respectively. The travel services of commercial service exports and the travel services of commercial service imports reflect the exports (ie, tourism receipts) and imports (ie, tourism expenditures) of goods and services consumed by travelers in a country, respectively. Therefore, the ratio of the travel services of commercial service exports to the travel services of commercial service imports can measure the net exports of tourism service. The three tourism specification indices (tr, ta, and ts) come from the World

Development Indicators (WDI) database of the World Bank.

To comprehensively measure globalization, we adopt the overall globalization index (*og*) developed by Dreher (2006) and improved by Dreher, Gaston, and Martens (2008). This index is generated by weighting three subindices, of which economic globalization accounts for 36%, political globalization accounts for 27%, and social globalization accounts for 37%. Table S2 of Supplemental Material lists the components of the three subindices (economic, social, and political). The overall globalization index data are sourced from the KOF database made by the Swiss Economic Institute. The value of the overall globalization index is between 0 and 100. A higher value indicates that a country is more globalized.

Five control variables—that is, real GDP per capita growth (*gpgdp*, %), investment proxied by the ratio of gross fixed capital formation to GDP (*invest*, %), population growth (gpop, %), inflation proxied by the change in the consumer price index (*inf*, %), and the real effective exchange rate index (*exrate*, constant in 2010)—are all obtained from the WDI database. According to Sarel (1996), converting variables into logarithmic form can avoid the interference of extreme values on the accuracy of regression results. Because of the fact that negative observations cannot be transformed logarithmically, we apply a semi-log transformation of the variables $x_{i,t}$, based on Khan and Ssnhadji (2001) and David, Pedro, and Paula (2005):

$$x_{i,t} = \begin{cases} x_{i,t} - 1, & x_{i,t} \leq 1 \\ \ln x_{i,t}, & x_{i,t} > 1 \end{cases} \quad (4)$$

This study's variables include ln*gpgdp*, ln*invest*, ln*gpop*, and ln*inf* in semilogarithm, and the other variables are in logarithm. Maddala and Wu's (1999) ADF panel unit root test is used to test the stability of each variable in this study. According to Table S3 of Supplemental Material, the results reveal that we can reject the null hypothesis of a unit root existing at the 1% significance level. Thus, all variables are stationary in levels, that is, I(0).

Table 1 presents the annual average values of variables for 53 countries covering the period 1955–2014. In our sample, the Netherlands has the highest level of globalization (90.92), while Sierra Leone has the lowest level (34.37). On average, countries with high-income levels have relatively greater globalization scores, or approximately 1.4 times that of low-income countries. Table 1 also suggests that high-income countries with more globalization could attract more international tourist arrivals, but they create a relatively low ratio of international tourism receipts to GDP and net tourism service exports.

When countries are more open to other countries, they can attract more foreign visitors to consume domestic products, thereby increasing tourist arrivals and international tourism receipts. On the other hand, globalization also can raise the real GDP of countries by spurring trade in goods and services and expand international tourism expenditures by inspiring domestic residents to go abroad and consume foreign products. Therefore, though globalization increases tourist arrivals and international tourism receipts, it might reduce the ratio of international tourism receipts to GDP and net tourism service exports by enlarging the amount of GDP and international tourism expenditures.

Empirical Results

Nonlinear Results of the Dynamic Panel Threshold Regression Model

Table 2 takes the ratio of international tourism receipts to GDP (ln*tr*), the ratio of international tourist arrivals to population (ln*ta*), and net tourism service exports (ln*ts*) as the dependent variables, respectively, in models (1), (2), and (3). As to the estimated threshold values, they range from 42.2034 to 56.4425, suggesting that the impacts of globalization on inbound tourism could be different from one regime (less globalized) to another (more globalized). In model (2), we find that there is a significantly positive relationship between globalization and international tourist arrivals in two regimes. Specifically, a lower level of globalization has a greater positive effect on international tourist arrivals, but this positive effect weakens under a higher level of globalization.

According to our sample (see Table 1), most developing countries are generally in regime 1 (less globalized) and have larger room to enhance their globalization. As they open themselves up to other countries by improving their degree of globalization, they are able to attract more international tourist arrivals with their pristine natural landscapes and their lower prices for goods and services. Conversely, most developed countries of our sample are more globalized (in regime 2). Via the development of globalization, they are able to attract more international visitors by way of their more perfect construction of tourism facilities and better tourism services. Because the tourism development of developed and developing countries is at different stages with varying characteristics, the positive impacts of globalization on their tourism developments are at different degrees.

In models (1) and (3), the results show that the estimated coefficients of globalization are significantly

Table 1. The Average Values of Each Variable for the 53 Countries (1995–2014).

Country	*Tr* (%)	*Ta* (%)	*Ts* (%)	*og*	*Gpgdp* (%)	*Invest* (%)	*Gpop* (%)	*Inf* (%)	*exrate*
26 high-income countries									
Australia	2.93	25.28	1.47	81.93	1.93	26.64	1.37	2.72	85.4
Bahamas	27.06	466.03	3.65	51.27	0.15	27	1.63	1.89	103.76
Bahrain	8.91	634.44	1.43	66.87	0.19	22.97	4.44	1.45	115.76
Canada	1.41	55.39	0.83	86.99	1.57	22.14	1	1.91	86.6
Chile	1.44	13.92	1.46	69.33	3.45	23.65	1.12	3.88	96.95
Cyprus	15.18	232.47	1.45	73.93	0.96	21.4	1.6	2.36	94.66
Czech Republic	4.45	57.43	1.3	80.37	2.44	29.61	0.09	3.79	80.93
Denmark	2.02	111.36	0.68	88.08	1.1	21.29	0.4	2.03	96.86
France	2.33	119.74	1.23	85.96	1.07	21.88	0.56	1.52	99.93
Germany	1.3	27.02	0.55	83.83	1.39	20.92	–0.03	1.5	102.79
Hungary	5.75	33.26	1.69	83.49	2.42	24.4	–0.24	8.57	86.05
Israel	2.58	31	0.97	70.6	1.64	21.47	2.1	3.54	100.01
Italy	2.18	69.32	1.64	80.79	0.29	20.1	0.34	2.32	97.71
Malta	16.1	310.19	2.48	71	2.79	21.48	0.66	2.37	94.58
Netherlands	2.12	61.57	0.64	90.92	1.53	21.41	0.46	2.05	98.16
Norway	1.42	80.65	0.4	83.35	1.39	24.34	0.85	2.01	94.98
Poland	3.08	40.8	1.6	75.61	4.27	21.73	–0.07	6.46	91.63
Portugal	5.34	59.31	1.61	82.81	1.1	23.14	0.2	2.41	97.51
South Korea	1.32	13.98	0.77	62.42	4.05	32.38	0.64	3.25	118.57
Singapore	5.74	165.89	0.9	85.75	3.23	28.49	2.35	1.78	100.08
Spain	4.58	116.63	2.52	83.42	1.25	25.16	0.81	2.63	93.08
Sweden	1.98	45.9	0.69	88.18	1.98	22.24	0.5	1.17	106.63
Trinidad and Tobago	3.85	30.42	2.05	58.67	4.9	19.4	0.4	6	83.25
United Kingdom	1.79	43.4	0.45	88.35	1.58	17.27	0.55	2.15	114.32
United States	1.11	18.04	1.05	79.8	1.47	21.31	0.96	2.37	107.42
Uruguay	3.77	62.32	1.78	64.67	2.73	18.04	0.33	11.65	89.28
Average	4.99	112.53	1.36	77.63	1.96	23.07	0.89	3.22	97.57
27 low-income countries									
Armenia	4.77	13.64	1.36	47.6	7.38	25.62	–0.61	14.02	82.6
Belize	17.08	77.93	2.92	44.73	1.22	20.82	2.78	1.97	109.38
Bolivia	2.06	5.51	1.65	51.96	2.33	16.94	1.77	5.81	98.9
Brazil	0.31	2.52	0.9	58.78	1.81	19.11	1.23	9.76	80.68
Bulgaria	8.23	60.49	1.69	67.21	3.58	21.85	–0.78	67.01	81.85
China	1.07	3.18	1.08	56.71	8.87	41.35	0.68	3.01	94.73
Colombia	1.27	3.11	1.73	54.71	2.27	20.99	1.3	8.31	89.9
Costa Rica	7.54	36.49	1.84	60.69	2.5	20.28	1.64	10.47	91.44
Dominican Republic	10.07	36.9	3.51	52.99	3.86	21.77	1.47	9.73	96.12
Fiji	21.66	58.97	3.19	53.78	1.45	18.97	0.73	3.39	111.39
Ghana	3.82	2.6	3.4	48.16	3.29	24.19	2.51	20.07	104.73
Guyana	6.59	16.14	1.63	52.77	3.15	25.59	0.03	5.44	95.93
Malaysia	6.82	61.56	2.3	75.06	2.99	26.5	2.07	2.57	100.7
Mexico	1.41	19.92	2.17	59.57	0.98	21.71	1.48	9.71	101.95
Moldova	4.14	1.41	0.69	55.57	3.19	26.19	–0.19	13.06	86.29
Morocco	7.38	19.69	2.31	55.36	2.7	30.54	1.26	1.9	103.84
Nicaragua	3	12.98	2.2	50.26	2.67	26.74	1.43	8.83	102.38
Paraguay	1.19	7.06	1.73	53.81	1.56	17.22	1.71	7.77	95.4
Philippines	2.37	3.23	0.87	55.01	2.71	20.79	1.92	5.02	96.07
Russian Federation	1.26	15.25	0.62	65.37	3.36	21.51	–0.15	27.4	80.65
Saint Lucia	31.34	172.51	3.71	42.31	0.83	25.45	0.97	2.73	103.16
Sierra Leone	2.06	0.58	3.43	34.37	2.73	12.17	2.51	10.01	114.86
South Africa	2.84	14.92	2.04	60.61	1.65	18.93	1.4	6.23	92.26
Togo	2.13	2.06	4.54	44.89	0.77	17.45	2.76	3.53	98.24
Tunisia	8.19	57.98	2.89	57.39	2.9	24.42	1.09	3.78	111.61
Ukraine	2.62	30.86	0.66	61.6	2.11	21.48	–0.69	33.39	103.04
Venezuela	0.53	2.51	2.46	56.26	0.74	24.3	1.73	32.91	72.27
Average	5.99	27.41	2.13	54.72	2.73	22.70	1.19	12.14	96.31

Note: *tr* = ratio of international tourism receipts to GDP; *ta* = ratio of international tourist arrivals to total population; *ts* = ratio of the travel services of commercial service exports to the travel services of commercial service imports; *og* = overall globalization index; *gpgdp* = growth of real GDP per capita; *invest* = ratio of gross fixed capital formation to GDP; *gpop* = population growth; *inf* = inflation; *exrate* = real effective exchange rate.

Table 2. The Estimated Results of the Dynamic Panel Threshold Model.

Model	(1) ln*tr*	(2) ln*ta*	(3) ln*ts*
Threshold estimates			
$\hat{\gamma}$	45.4780	56.4425	42.2034
95% confidence interval	[42.2034–45.5606]	[56.0191–71.5855]	[42.1921–45.9006]
Impact of globalization			
$\hat{\beta}_1$	–0.9710 (0.6231)	1.9594*** (0.3479)	1.1607** (0.4435)
$\hat{\beta}_2$	–0.5394*** (0.1722)	0.5143*(0.2639)	–0.3940*** (0.1447)
Impact of covariates			
ln*gpgdp*$_t$	0.0061 (0.0059)	0.0060 (0.0047)	0.0063 (0.0041)
ln*invest*$_t$	0.1142*** (0.0332)	0.1281*** (0.0330)	0.0700** (0.0325)
ln*gpop*$_t$	0.0177 (0.0182)	0.0742*** (0.0209)	–0.0022 (0.0109)
ln*inf*$_t$	–0.0055 (0.0044)	0.0031 (0.0071)	0.0049 (0.0053)
ln*exrate*$_t$	–0.5014*** (0.0873)	0.4763*** (0.0957)	–0.0648 (0.0669)
ln*tr*$_{t-1}$	0.3388*** (0.0523)		
ln*ta*$_{t-1}$		0.1224*** (0.0214)	
ln*ts*$_{t-1}$			0.6195*** (0.0367)
$\hat{\delta}_1$	1.1717 (2.4431)	–6.0076*** (1.9333)	–5.6840*** (1.7043)
Observations	1,060	1,060	1,060

Note: The variables are given as the parameter estimates, and the corresponding standard deviations are in parentheses. ***, **, and * indicate the 1%, 5%, and 10% significance levels, respectively.

negative (–0.5394 and –0.3940, respectively) in regime 2, suggesting under a higher level of globalization that countries with an increasing level of globalization will reduce their international tourism receipts as a percentage of GDP and net tourism service exports. The reasons could be as follows. First, globalization boosts the development of inbound tourism, which benefits a country's tourism receipts, but it may also lead to income outflow through the importing of goods and services to meet the demand of tourists (Ivanov 2005). Second, the multiplier effect of international tourism is frequently exaggerated, and income outflow is too high in many third world countries, especially for small island-states (Cater 1987; Harrison 1992). Because of the low level of industrial development, these countries can only produce primary products that fail to satisfy domestic demand, and therefore they rely heavily on imports. Tourists from developed countries have higher requirements for services and tourism products, so they need to import advanced products or equipment abroad to serve them, leading to an increase in the outflow of foreign exchange reserves (Zhao and Li 2006).

As for control variables, the estimated coefficients of lntr_{t-1}, lnta_{t-1}, and lnts_{t-1} are significant and positive, under the supposition that there is persistent development of inbound tourism from one year to the next. To seek and maintain the higher development of inbound tourism (ie, international tourism receipts, international tourist arrivals, and net tourism service exports), countries should do their best to improve their tourism environments. The results also find insignificant coefficients of ln*gpgdp* and ln*inf*, suggesting that economic growth and inflation have insignificant influences on inbound tourism development.

In model (1), the estimated coefficients of ln*exrate* are significantly negative, implying that an appreciation of the domestic currency will reduce the consumption incentive of international passengers and thus decrease international tourism receipts (% of GDP). There is also a significantly positive relationship between investment and inbound tourism. One policy implication is that governments and firms could make greater efforts at investing in infrastructure construction and at providing better services that are more conducive to the development of inbound tourism.

A Brief Summary

To clearly demonstrate the effect of a change in globalization on the relationship between globalization and inbound tourism, we further analyze the results. Although a mixed pattern is observed, we note some clear findings. First, as to the impacts of globalization on international tourism receipts (% of GDP), the results show when the threshold variable is higher than a certain optimal level that globalization has a significantly negative correlation with inbound tourism. This indicates that globalization does not effectively enhance international tourism receipts (% of GDP). The result is similar to the findings of Ivanov and Webster (2013a), who show that globalization does not increase tourism's contribution to economic growth.

Second, as to international tourism arrivals, we find that there exists a significantly positive relationship between globalization and inbound tourism in the two

regimes. The results denote that globalization stimulates an increase in inbound tourists – that is, countries with greater globalization can attract more foreigners as inbound tourists.

Third, in the net tourism service exports model the results present that globalization has an inverted U-shaped relationship with net tourism service exports. The estimated coefficients of globalization are significantly positive in the first regime (less globalized), but are significantly negative in the second regime (more globalized). It means that greater globalization benefits net tourism service exports under an initial lower level of globalization. Conversely, after globalization reaches certain levels, it actually can harm net tourism service exports.

According to the above results, globalization indeed attracts more international tourist arrivals, but does not help enhance countries' international tourism receipts (% of GDP) and net tourism service exports. It may be that globalization spurs countries' (goods and service) trade and economic growth to a greater extent than it does to their international tourism receipts and tourism service exports. Thus, another policy implication emerges, whereby during this current tide of globalization, in order to draw more inbound tourists, countries need to put more resources into tourism development.

Conclusion and Policy Implications

As globalization continues to expand, more and more people are moving across borders as well as traveling to foreign countries. Globalization helps stimulate the tourism competitiveness of countries and encourages the development of international tourism (Mustafa 2010; Hociung and Frâncu 2012; Dwyer 2015). While globalization could have an important impact on inbound tourism development, few empirical studies pay attention to the question "*Does globalization influence inbound tourism*?" To fill this gap in the literature, we use a panel data set of 53 countries for the period 1995–2014 to investigate the relationship between globalization and inbound tourism development by applying a dynamic panel threshold regression model. The empirical results offer evidence for the nonlinear effects of globalization on inbound tourism development. Under a higher level of globalization, international tourism receipts (% of GDP) and net tourism service exports drop as globalization increases, but globalization is able to attract more international tourist arrivals. Under a lower level of globalization, the positive effect of globalization on international tourist arrivals is bigger than the effect under a higher level of globalization.

Some policy implications emerge according to our results as follows. First, during the process of globalization, the liberalization of communications and transportation and the convenience of cultural exchanges around the world have stimulated the demand for traveling, resulting in greater numbers of inbound tourists who help in the development of inbound tourism. Thus, countries should attach importance to the role of globalization in increasing tourist arrivals and devote more efforts to increase the levels of globalization. To promote political, economic, and social integration with other countries around the world and attract more international tourists, policies adopted by countries should be directed toward encouraging international trade and investment (e.g., reduce trade barriers and capital restrictions), increasing information dissemination (e.g., strengthen various tourism publicity activities and fully display their own unique tourism resources), enhancing cooperation with other countries (e.g., actively participate in international organizations), and maintaining regional stability. We do note that these policies are more effective for countries in the regime of low globalization.

Second, the deepening of globalization induces more intense competition in the tourism market, which may have a negative impact on a country's inbound tourism; that is, it reduces the ratio of international tourism receipts to GDP and net tourism service exports. Countries should actively confront the negative impact of globalization on inbound tourism and devote more efforts at improving tourism competitiveness in the international market to attract more inbound tourists. Specifically, they could develop a suitable form of tourism in accordance with the characteristics of their own tourism resources and local conditions so as to form a unique competitive advantage. Because of the huge differences between the cultures of the source country and the destination country, governments also should continue to introduce personalized tourism products to incoming tourists and at the same time maintain their own national characteristics to attract different source markets. In order to guarantee domestic market competition, countries also need to regulate tariff and nontariff barriers on imported tourism goods (Javid and Katircioglu 2017).

Third, tourism policies should provide and improve both physical and nonphysical conditions to ensure more sustainable tourism development (Hidayati 2018). For example, countries can improve infrastructure, create new tourism products to spur greater consumption by international tourists, and formulate a complete inbound tourism plan and corresponding management practices in accordance with the actual market circumstances and sources of inbound travelers. In addition, developing countries' inbound tourism depends more on the provision of services by transnational tourism corporations, which can sometimes result in a significant reduction in tourism receipts for developing countries.

In view of this, destination countries, especially developing economies, should reduce their dependence on developed countries and do their best to improve their tourism services in order to enhance their international tourism receipts and tourism service exports under globalization.

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Reference

Adamou, A., and S. Clerides. 2010. "Prospects and Limits of Tourism-Led Growth: The International Evidence." *Review of Economic Analysis* 3: 287–303.

Al-Rodhan, N. R. F., and G. Stoudmann. 2006. *Definitions of Globalization: A Comprehensive Overview and a Proposed Definition*, vol. 6. Geneva: Geneva Centre for Security Policy.

Arellano, M., and O. Bover. 1995. "Another Look at the Instrumental Variables Estimation of Error-Components Models." *Journal of Econometrics* 68 (1): 29–51.

Azarya, V. 2004. "Globalization and International Tourism in Developing Countries: Marginality as a Commercial Commodity." *Current Sociology* 52 (6): 949–67.

Belloumi, M. 2010. "The Relationship between Tourism Receipts, Real Effective Exchange Rate and Economic Growth in Tunisia." *International Journal of Tourism Research* 12 (5): 550–60.

Bhagwati, J. 2005. "A New Vocabulary for Trade." *Wall Street Journal*. https://www.wsj.com/articles/SB112311935638704645.

Bick, A. 2010. "Threshold effects of inflation on economic growth in developing countries." *Economics Letters* 108 (2): 126–129.

Brida, J. G., I., Cortes-Jimenez and M. Pulina. 2016. "Has the Tourism-Led Growth Hypothesis Been Validated? A Literature Review." *Current Issues in Tourism* 19 (5): 394–430.

Caner, M., and B. E. Hansen. 2004. "Instrumental Variable Estimation of a Threshold Model." *Econometric Theory* 20 (5): 813–43.

Cater, E. A. 1987. "Tourism in the Least Developed Countries." *Annals of Tourism Research* 14 (2): 202–26.

Chang, C. L., T. Khamkaew, M. McAleer, and R. Tansuchat. 2010. "A Panel Threshold Model of Tourism Specialization and Economic Development." *International Journal of Intelligent Technologies and Applied Statistics* 3 (2): 159–86.

Chang, C. P., and C. C. Lee. 2010. "Globalization and Economic Growth: A Political Economy Analysis for OECD Countries." *Global Economic Review* 39 (2): 151–73.

Chen, C. F., and S. Z. Chiou-Wei 200. "Tourism Expansion, Tourism Uncertainty and Economic Growth: New Evidence from Taiwan and Korea." *Tourism Management* 30 (6): 812–18.

Chiu, Y.-B., and C.-C. Lee. 2019. "Financial Development, Income Inequality, and Country Risk." *Journal of International Money and Finance* 93: 1–18.

Chiu, Y.-B., and L.-T. Yeh. 2017. "The Threshold Effects of the Tourism-Led Growth Hypothesis: Evidence from a Cross-Sectional Model." *Journal of Travel Research* 56 (5): 625–37.

Chou, M. C. 2013. "Does Tourism Development Promote Economic Growth in Transition Countries? A Panel Data Analysis." *Economic Modelling* 33: 226–32.

Cole, M. T., and R. B. Davies. 2014. "Royale with Cheese: Globalization, Tourism, and the Variety of Goods." *Review of Development Economics* 18 (2): 386–400.

David, D., G. P. Pedro, and H. E. Paula. 2005. "Threshold Effects in the Relationship between Inflation and Growth: A New Panel-Data Approach." MPRA Paper 38225. University Library of Munich, Germany. https://mpra.ub.uni-muenchen.de/38225/1/MPRA_paper_38225.pdf.

De Vita, G., and K. S. Kyaw. 2017. "Tourism Specialization, Absorptive Capacity, and Economic Growth." *Journal of Travel Research* 56 (4): 423–35.

Dreher, A. 2006. "Does Globalization Affect Growth? Evidence from a New Index of Globalization." *Applied Economics* 38 (10): 1091–110.

Dreher, A., N., Gaston and P. Martens. 2008. *Measuring Globalization: Gauging Its Consequences*. New York: Springer.

Dritsakis, N. 2004. "Tourism as a Long-Run Economic Growth Factor: An Empirical Investigation for Greece Using Causality Analysis." *Tourism Economics* 10 (3): 305–16.

Du, D. A., A. Lew, and P. T. Ng. 2016. "Tourism and Economic Growth." *Journal of Travel Research* 55 (4): 454–64.

Dwyer, L. 2015. "Globalization of Tourism: Drivers and Outcomes." *Tourism Recreation Research* 40 (3): 326–39.

Dwyer, L., P., Forsyth and R. Spurr. 2004. "Evaluating Tourism's Economic Effects: New and Old Approaches." *Tourism Management* 25 (3): 307–17.

Endo, K. 2006. "Foreign Direct Investment in Tourism—Flows and Volumes." *Tourism Management* 27 (4): 600–14.

Fayed, H., and J. Fletcher. 2002. "Report: Globalization of Economic Activity: Issues for Tourism." *Tourism Economics* 8 (2): 207–30.

Fereidouni, H. G., U., Al-Mulali and Y. Najdi. 2014. "Globalization Indicators–Inbound Tourism Relationship in the MENA Region." *Anatolia* 25 (3): 364–73.

Freidman, T. 2005. *The World Is Flat: A Brief History of the Twenty-First Century*. New York: Farrar, Straus and Giroux.

Gurgul, H., and Ł. Lach. 2014. "Globalization and Economic Growth: Evidence from Two Decades of Transition in CEE." *Economic Modelling* 36: 99–107.

Harrison, D. 1992. "International Tourism and the Less Developed Countries: The Background." In *International Tourism and the Less Developed Countries*, edited by D. Harrison, 1–19. London: Belhaven Press.

Hidayati, F. 2018. "Tourism and Economic Growth: The Role of Globalization." *Journal of Public Administration Studies* 2 (2): 16–20.

Hjalager, A. M. 2007. "Stages in the Economic Globalization of Tourism." *Annals of Tourism Research* 34 (2): 437–57.

Hociung, I. G., and L. G. Frâncu. 2012. "Globalization–Tourism–Communication, Competitiveness Triangle on the Market Affected by the Economic Crisis." *Theoretical and Applied Economics* 19 (7): 133–46.

Ivanov, S. 2005. "Measurement of the Macroeconomic Impacts of Tourism." PhD diss., University of Economics, Varna, Bulgaria.

Ivanov, S. H., and C. Webster. 2013a. "Tourism's Impact on Growth: The Role of Globalisation." *Annals of Tourism Research* 41: 231–36.

Ivanov, S. H., and C. Webster. 2013b. "Globalisation as a Driver of Destination Competitiveness." *Annals of Tourism Research* 43: 628–33.

Javid, E., and S. Katircioglu. 2017. "The Globalization Indicators–Tourism Development Nexus: A Dynamic Panel-Data Analysis." *Asia Pacific Journal of Tourism Research* 22 (11): 1194–205.

Jin, X., M., Qu and J. Bao. 2019. "Impact of Crisis Events on Chinese Outbound Tourist Flow: A Framework for Post-events Growth." *Tourism Management* 74: 334–44.

Khan, M. S., and A. S. Ssnhadji. 2001. "Threshold Effects in the Relationship between Inflation and Growth." *IMF Staff Papers* 48 (1): 1–21.

Kim, H. J., M. H., Chen and S. C. S. Jang. 2006. "Tourism Expansion and Economic Development: The Case of Taiwan." *Tourism Management* 27 (5): 925–33.

Kremer, S., A., Bick and D. Nautz. 2013. "Inflation and Growth: New Evidence from a Dynamic Panel Threshold Analysis." *Empirical Economics* 44 (2): 861–78.

Kulendran, N., and K. Wilson. 2000. "Is There a Relationship between International Trade and International Travel?" *Applied Economics* 32 (8): 1001–1009.

Lanza, A., and F. Pigliaru. 2000. "Why Are Tourism Countries Small and Fast-Growing?" In *Tourism and Sustainable Economic Development*, edited by A. Fossati and G. Panella, 57–69. Boston: Springer.

Lin, V. S., Y., Yang and G. Li. 2019. "Where Can Tourism-Led Growth and Economy-Driven Tourism Growth Occur?" *Journal of Travel Research* 58 (5): 760–73.

Maddala, G. S., and S. Wu. 1999. "A Comparative Study of Unit Root Tests with Panel Data and a New Simple Test." *Oxford Bulletin of Economics and Statistics* 61 (Suppl 1): 631–52.

Meethan, K. 2004. "Transnational Corporations, Globalization, and Tourism." In *A Companion to Tourism*, edited by A. A. Lew, C. M. Hall, and A. M. Williams, 110–21. Malden: Blackwell.

Mowforth, M., and I. Munt. 2015. *Tourism and Sustainability: Development, Globalisation and New Tourism in the Third World*, 4th ed. London: Routledge.

Mustafa, M. H. 2010. "Tourism and Globalization in the Arab World." *International Journal of Business and Social Science* 1 (1): 37–48.

Naudé, W. A., and A. Saayman. 2005. "Determinants of tourist arrivals in Africa: a panel data regression analysis." *Tourism Economics* 11(3): 365–391.

Oh, C. O. 2005. "The Contribution of Tourism Development to Economic Growth in the Korean Economy." *Tourism Management* 26 (1): 39–44.

Payne, J. E., and A. Mervar. 2010. "Research Note: The Tourism–Growth Nexus in Croatia." *Tourism Economics* 16 (4): 1089–94.

Po, W.-C., and B.-N. Huang. 2008. "Tourism Development and Economic Growth—A Nonlinear Approach." *Physical A* 387: 5535–42.

Rodrik, D. 1998. "Globalization, Social Conflict and Economic Growth." *World Economy* 21 (2): 143–58.

Rousseau, P. L., and R. Sylla. 2003. "Financial Systems, Economic Growth, and Globalization." In *Globalization in Historical Perspective*, edited by M. D. Bordo, A. M. Taylor, and J. G. Williamson, 373–416. Chicago: University of Chicago Press.

Saha, S. J., J. Su, and N. Campbell. 2017. "Does Political and Economic Freedom Matter for Inbound Tourism? A Cross-National Panel Data Estimation." *Journal of Travel Research* 56 (2): 221–34.

Sarel, M. 1996. "Non-linear Effects of Inflation on Economic Growth." *Staff Papers* 43 (1): 199–215.

Seetanah, B. 2011. "Assessing the Dynamic Economic Impact of Tourism for Island Economies." *Annals of Tourism Research* 38 (1): 291–308.

Sequeira, T. N., and P. M. Nunes. 2008. "Does Tourism Influence Economic Growth? A Dynamic Panel Data Approach." *Applied Economics* 40 (18): 2431–41.

Shan, J., and K. Wilson. 2001. "Causality between Trade and Tourism: Empirical Evidence from China." *Applied Economics Letters* 8 (4): 279–83.

Song, H., G., Li and Z. Cao. 2018. "Tourism and Economic Globalization: An Emerging Research Agenda." *Journal of Travel Research* 57 (8): 999–1011.

Sugiyarto, G., A., Blake and M. T. Sinclair. 2003. "Tourism and Globalization: Economic Impact in Indonesia." *Annals of Tourism Research* 30 (3): 683–701.

Suresh, K. G., V. Gautam, and M. Kumar. 2011. "Analysing the Relationships among Tourism, Trade, and Economic Growth in Indian Perspective." *Journal of International Business and Economy* 12 (1): 1–11.

Tang, S. E., A. Selvanathan, and S. Selvanathan. 2007. "The Relationship between Foreign Direct Investment and Tourism: Empirical Evidence from China." *Tourism Economics* 13 (1): 25–39.

World Tourism Organization. 2017. *UNWTO Tourism Highlights, 2017 Edition*. Madrid: World Tourism Organization.

World Tourism Organization. 2018. *UNWTO Tourism Highlights, 2018 Edition*. Madrid: World Tourism Organization.

Zappino, V. 2005. "Caribbean Tourism and Development: An Overview." *European Centre for Development Policy Management Discussion Paper* 65: 1–38.

Zhao, W., and X. Li. 2006. "Globalization of Tourism and Third World Tourism Development." *Chinese Geographical Science* 16 (3): 203–10.

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