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Tourism and FDI-Growth Nexus in Upper-Middle Income Countries: Evidence from Static and Dynamic Panel Analyses

Abstract

This paper examines the role of tourism in foreign direct investment-growth relations in upper-middle-income countries. We deploy static and dynamic panel analysis to evaluate how tourism indicators influence the impact of FDI net inflows on growth using unbalanced panel data on 29 upper-middle-income countries from 2010 to 2019. The tourism indicators are receipts, arrivals, and expenditures. The results from static and dynamic analyses indicate that for the most part (1) FDI and tourism exert asymmetric effects on growth, (2) tourism indicators reduce the negative effect of FDI on growth, (4) trade openness is a positive and significant predictor of growth, and (5) domestic credit negatively contributes to growth. Deductively, results evidence that tourism indicators are critical drivers of economic growth in upper-middle-income countries. Overall, tourism receipts show the largest influence on FDI to spur the most appreciable impact on growth. Despite this, the fact that tourism indicators cannot eliminate the destructive impact of FDI on economic growth shows that tourism development policies should be based on a greener and more sustainable ground, taking into account the effects of the coronavirus.

Keywords: tourism, foreign direct investment, economic growth

1. Introduction

International tourism activities have recently become one of the rapidly developing sectors. With such a growth rate, it contributes to the economies of many countries. The potential of a country to benefit from tourism activities depends on international capital. Because of this capital, transportation, accommodation, and infrastructure services are developed (Sokhanvar, 2019). With the growth of the tourism sector, the export income of the country can be increased, new job opportunities can be created, which can give birth or indirectly, and it can offer job opportunities to young unemployed people and women (Fauzel et al., 2017). The tourism-led growth hypothesis suggests that tourism generates income and positively affects economic growth through economies of scale (Helpman & Krugman, 1985). The tourism industry continues its existence as a sector with high capital needs, with its capacity to create new business opportunities and its potential to contribute to economic growth. Qualified personnel, tourists' income, exchange rate, prices in the destination reliable physical infrastructure, and reliable communication services are very important (Samimi et al., 2013; Adeleye et al., 2022; Erjevec & Devčić, 2022).

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In addition to tourism activities, foreign direct investments (FDI) also affect economic growth. FDI can be defined as an asset investment made from a foreign country to another country. These investments can be made in the stock market of another country, as well as in land trade or the establishment of new facilities. If these investments are made as new facilities, it will mean a more permanent relationship between the two countries. In a sense, this is an indication that FDI is a better source of capital for the tourism industry (Rajapakse, 2016). FDI contributes to the economy such as technology, physical assets, innovation, and capital formation. In addition, it helps meet the demand for goods and services in the tourism sector by contributing to infrastructure services. Moreover, with the development of the tourism sector, the increasing demand for transportation, cuisine, and hotels attracts foreign investors. (Satrovic & Muslija, 2018). The growth of the tourism sector in developing countries is directly dependent on foreign investments. The continuation of the development of the tourism sector depends entirely on its sustainability. Considering that the tourism sector in developed countries is based on foreign direct investments, it shows that FDI should also be sustainable (Peric & Niksic Radic, 2011). In addition to bringing physical infrastructure and standard services to the tourism sector from developed countries to developing countries, FDI also raises the foundations of tourism sector facilities, especially in hotels, restaurants, and recreation centers (Pham & Tran, 2015). In other words, FDI is one of the most effective engines in the development of capital, infrastructure, and knowledge and in providing access to global marketing in tourism (Andergassen & Candela, 2013). In addition, FDI reduces the openness rate between developed and developing countries in the tourism sector (Samimi et al., 2013). In this direction, the plan FDI, which has an increasingly important role in the global economy, has an important place in the tourism industry and country economies. (Tang et al., 2007; Samimi et al., 2013). This study aims to contribute to tourism plans and policies by investigating the tourism and foreign direct investment-growth relation. At this point, it is critical to analyze the contribution of FDI to the tourism sector and economic growth. Another contribution of the study is to engender the development of new policies to encourage the inflow of foreign capital for countries aiming to get a significant share of tourism revenues. Section 2 reviews the literature on the FDI-tourism-growth relation. Section 3 provides the data, variables, and estimation techniques. Section 4 represents the results and Section 5 concludes with policy propositions.

2. Literature review

2.1. Foreign direct investment-tourism-growth relation

Developing countries attach importance to the arrival of FDI in the country to increase tourism arrivals and sustain economic growth (Zhang et al. 1999; Andergassen & Candela, 2013). Therefore, there is a relationship between FDI and tourist arrivals (Selvanathan et al., 2012). The impact on tourism from FDI is realized not only in the form of investments but also through business tourists. Foreign investors bring resident or potential tourist resources to the markets of developing countries (Lim, 1997; Kulendran & Wilson, 2000). For this reason, several studies examined the relationship between FDI and tourism. Tisdell and Wen (1991) examined the investment of FDI inflows in Chinese tourism. The study showed that the rapid growth rate of tourism in China is the driving force of foreign investment in the tourism sector. Also, Sanford and Dong (2000) examined the relationship between tourism and FDI by applying Tobit analysis for the USA and established a positive and significant relationship. Tang et al. (2007) focused on the tourism-FDI and economic growth causality for China between 1978-2005 and found causality from FDI to tourism in addition to dual causality between tourism and economic growth which confirms the tourism-led growth hypothesis.

Furthermore, Craigwell and Moore (2008) examined the FDI and tourism relation for Small Island Developing States (SIDS) countries using a panel causality test and established a bidirectional causality between FDI and tourism which they found not to be homogeneous within the group of countries. Garcia-Flores et al. (2008) examined the relationship between tourism and FDI in Mexico between 1982 and 2007 and found

a positive relationship between FDI and tourism development. Similarly, Salleh et al. (2011) examined the nexus between tourism and FDI for Malaysia, Thailand, and Hong Kong and found that tourist arrivals for Malaysia and Thailand affect FDI while for Hong Kong, a two-way relationship exists. Also, Othman et al. (2012) analyzed the effect of FDI on tourism in African countries and showed that FDI causes significant tourism growth. Andergassen and Candela (2013) analyzed the FDI-tourism nexus in underdeveloped countries and showed that FDI represented the forward-looking links in tourism. Samimi et al. (2013) examined the FDI-tourism relationship for developing countries from 1995-2008. While the existence of a long-run relationship is established, the short-run causality is inconclusive. Rajapakse (2016) investigated the effect of foreign direct investment in tourism (FDIT) and the tourism arrivals to Sri Lanka and the results indicate the direct relationship between foreign direct investment to tourism.

Likewise, Chen (2017) examined the relationship between inbound tourism and FDI in China from 2000 to 2014 using dynamic panel analysis to find that increase in tourism arrivals stimulates FDI flows to tourism industries and inflows to other sectors. Khoshnevis Yazdi, Homa Salehi et al. (2017) established a bidirectional short-term causality between FDI and tourism in Iran from 1985 to 2013, while Khoshnevis Yazdi, Nateghian et al. (2017) did not find any causal relationship between FDI and tourism in their studies for 27 EU countries between 1995 and 2014. Adeola et al. (2020) analyzed the link between FDI inflows and tourism in Africa from 1995 to 2014 and found a long-term reciprocal relationship. Fauzel (2020) examined the effect of FDI on tourism arrivals for a selected group of 17 small island economies between 1995 and 2018 to find a positive and direct relation in the long run.

In addition to these studies showing that a significant relationship exists between FDI and tourism, some studies reveal that a greater FDI leads to growth in tourism (Bull 1990; Forsyth & Dwyer 1992; Purcell & Nicholas 2001). More so, FDI has an important role in the development of infrastructures of countries such as airports and hotels. (Peric & Radic, 2010). Despite all these positive effects of tourism, the seasonal effect of tourism causes fluctuations in the economy of the local people. The effect of this fluctuation is evident in the housing purchase of the local people. It can be said that the volatility in the employment rate, the instability in income, the ineffective use of capital, and the sudden concentration of the population in holiday regions can cause these fluctuations. Mikulic et al. (2021) investigated the effect of tourism on housing purchases in Croatia and concluded that tourism seasonality reduces housing affordability. They also stated that local people are pushed out of the housing market, forcing them to choose more affordable places further away from the center of the destination. Likewise, Stojcic et al. (2022) associated the effects of seasonality with the ineffective use of capital, instability in income, and sensitivity to external shocks. They also found that seasonality and vulnerability to tourism in a destination have negative effects on high-growth firms. Several studies examined tourism and housing affordability using different variables such as income level, education, household size, and mortgage rates (Bramley, 2012; Luffman, 2004). At the same time, on the supply side, the impact of tourism on the local people was investigated using land availability, spatial planning, infrastructure, building costs, and taxes by Cruz and Nwuba et al. (Cruz, 2008; Nwuba et al., 2015).

2.2. Foreign direct investment- growth relation

Many studies examined the FDI-growth nexus but there is no consensus in terms of findings. In contrast to Ofori and Asongu (2021), Borenzstein et al., (1998), Flexner (2000), Zhang and Song (2001), Khawar (2005), Carkovic and Levine (2002), Lyroudi et al., (2004), Athukorola (2003), Hermes and Lensink (2003) and Durham (2004) found that there is no relationship between FDI and economic growth. However, Campos and Kinoshita (2002) found a positive FDI-growth nexus from 25 countries in Central and Eastern Europe and the former Soviet Union. Also, Choe (2003) found a positive FDI-growth relation in 80 countries between 1971-1995 similar to the findings of Li and Liu (2005) who analyzed the relationship between FDI economic growth for 84 countries between 1970 and 1999. Likewise, Chowdhury and Mavrotas (2006) investigated

the FDI-growth relation for Thailand, Malaysia, and Chile between 1969-2000 using the Toda-Yamamoto causality test and found a bidirectional causality relationship between variables in Malaysia and Thailand but none for Chile. Choong et al. (2010) found a positive FDI-growth relationship for 19 developed and 32 developing countries between 1988-2002. In the same vein, Ludosean (2012) found a positive FDI-growth relation for Romania between 1991 and 2009. Using the GMM technique, Baklouti and Boujelbene (2016) found a positive FDI-growth nexus for MENA countries between 1998-2011 same with Ameer and Xu (2017) for 83 developing countries between 2005 and 2014. Using the cointegration technique, Dinh et al. (2019) also found positive FDI growth for 30 developing economies from 2000 to 2014. Also, Owusu-Nantwi and Erickson (2019) found a positive FDI-growth relation for ten developing countries in South America. Other studies examined the horizontal and vertical spread of FDI with spatial econometric methods. Amongst such is Halpern and Murakozy (2007) who found positive horizontal spreads between Hungarian regions while they found a negative horizontal spread within regions. Javorcik and Spatareanu (2008), on the other hand, found negative horizontal spreads within and between regions while positive vertical spreads within and between regions. Stojcic and Orlic (2020) analyzed the productivity of firms in the manufacturing and service sectors in Central and Eastern Europe between 2007 and 2011 and found that FDI had negative effects on direct competitors in the form of the intra-regional and inter-regional market but positive spillovers on downstream firms. In addition, these effects are greater from FDI in neighboring regions and increase with distance. However, Mariotti et al. (2015) in their study, found that distance does not have an effect on spillovers and that spillovers are strong in information-intensive sectors. Finally, Merlevede and Purice (2016) found that distance has a limited effect on horizontal spillovers in upper-middle productivity regions but with a positive and significant intra-regional backward spillover upon the immediate entry of foreign firms.

2.3. Tourism-growth relation

Oh (2005) examined the relationship between tourism development and economic growth in South Korea and found no significant relationship. Sequeira and Campos (2005) analyzed the effect of tourism on economic growth in a panel of countries from 1980 to 1999 to find that tourism does not affect economic growth. Also, Fayissa et al. (2008) investigated the relationship between tourism revenues and economic growth between 1995 and 2004 using a panel method for 42 African countries to establish a positive nexus. Narayan et al. (2010) found that a positive tourism-growth relationship exists in the Pacific Islands between 1988-2004. Likewise, Srinivasan (2012) used the ARDL technique to establish a positive tourism-growth relationship in Sri Lanka between 1969 and 2009. Also, Seghir et al. (2015) found a positive tourism-growth relation among 49 countries from 1988 to 2012. Simundic et al. (2016) showed that tourism positively affected economic growth in Latin American and Caribbean countries from 2000 to 2014. Lastly, Roudi et al. (2018) found significant causal relations between tourism and growth in selected small island countries.

3. Data and analytical approach

3.1. The variables

To address the objectives of the study which are to (1) examine the impact of FDI on economic growth and (2) evaluate if tourism activities boost or hinder the FDI-growth relationship, we use an unbalanced panel data of seven variables from 29 upper-middle income countries¹ spanning 2010 to 2019. In line with the literature (Allou et al., 2020; Haller et al., 2020; Brida et al., 2020; Anser et al., 2021; Kamal et al., 2021), the outcome variable of interest is the growth rate of GDP (GR) and the main explanatory variables are

¹ Albania, Argentina, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Brazil, Bulgaria, China, Costa Rica, Dominican Republic, Indonesia, Iran, Islamic Republic, Jamaica, Jordan, Kazakhstan, Lebanon, Malaysia, Maldives, Mexico, Montenegro, North Macedonia, Paraguay, Peru, Russian Federation, Serbia, South Africa, Thailand, and Turkey.

foreign direct investment net inflows (FDI) and a vector of tourism indicators - tourism receipts (TRCPT), arrivals (TARV) and expenditures (TEXP). The control variables are trade openness (TR) and domestic credit (DC). World Development Indicators are used as a data source from 2005 to 2019. Details on the historical properties and the pairwise correlation among the variables are shown in Tables 1 and 2. From Table 1, The average economic growth rate (GR) of upper-middle-income country economies is 3.22. While the Azerbaijani economy experienced the highest growth rate of 34%, the economy of Armenia experienced the highest rate of contraction - 14.4%. The standard deviation value also indicates that the economic growth rate is around the average. The foreign direct investment net inflows (FDI) average is at the level of 4.14. It is seen that the FDI data is also valued around the standard deviation data, just like the growth rate of the GDP (GR) series. It stands out that Montenegro has the highest FDI with 37.31%, while the lowest net inflows were 0.05% to the Malaysian economy during the financial crisis.

Table 1
Summary statistics

Variables	Obs	Mean	Std. dev.	Min	Max
GDPGR	290	3.221	3.004	-7.444	13.396
FDI	289	4.014	3.039	0.119	18.302
TARV	261	10136986	13803826	116000	62900000
TRCPT	260	8.97E+09	1.23E+10	1.99E+08	6.52E+10
TEXP	260	1.19E+10	3.66E+10	67000000	2.77E+11
TR	286	78.689	33.059	22.486	165.979
DC	270	59.075	36.614	12.69	164.664

Note: 8.97E+09 = 8.970.000.000.00. GDPGR = gross domestic product growth rate. FDI = foreign direct investment net inflows. TARV = tourism arrivals. TRCPT = tourism receipts current. TEXP = tourism expenditure current. TR = trade openness. DC = domestic credit.

Source: Authors' computations.

For tourism indicators, tourism receipts (TRCPT), arrivals (TARV), and expenditures (TEXP), the average of tourism arrivals (TARV) are 10.136.986 people. China has the highest tourist arrivals in 2018 with 62.900.000 people while the least is Belarus in 2006 with 89.000 people. The average tourism receipts (TRCPT) is about US\$8.97 billion. Thailand has the highest US\$65.2 billion in 2018 and Paraguay recorded the lowest with US\$96 million in 2005. The mean tourism expenditure (TEXP) is US\$11.9 billion with China having the highest of US\$277 billion in 2018 while Montenegro recorded the lowest of \$58 million in 2007. The trade openness average and domestic credit average used as control variables in the study were calculated as 78.689 and 59.075, respectively. The standard deviation values of both indicators also show that they are around the mean. From Table 2, except for trade openness, domestic loan volume, and FDI, the regressors have statistically significant relationships with economic growth. In addition, it has been determined that tourism arrival, tourism receipts, tourism expenditures, trade openness, and domestic credit correlate with FDI.

Table 2
Pairwise correlation analysis

Variables	[1]	[2]	[3]	[4]	[5]	[6]	[7]
(1) GDPGR	1.000						
(2) lnFDI	0.078	1.000					
(3) lnTARV	0.165***	-0.347***	1.000				
(4) lnTRCPT	0.203***	-0.248***	0.891***	1.000			
(5) lnTEXP	0.109*	-0.397***	0.793***	0.804***	1.000		
(6) lnTR	-0.004	0.326***	-0.281***	-0.277***	-0.528***	1.000	
(7) lnDC	0.069	-0.139**	0.313***	0.446***	0.36***	0.157**	1.000

Note: ln = natural logarithm. GDPGR = gross domestic product growth rate. FDI = foreign direct investment net inflows. TARV = tourism arrivals. TRCPT = tourism receipts current. TEXP = tourism expenditure current. TR = trade openness. DC = domestic credit.

*** ** and * denote statistical significance at the 1%, 5% and 10% levels, respectively.

Source: Authors' computations.

3.2. Empirical model

To critically address the study objectives, a two-step model is constructed in a stepwise manner such that each tourism indicator (Z) is used independently in a model. To check outliers, smoothen the data, and derive elasticity associations, all the variables except GR are transformed into natural logarithms. Controlling for other variables, a one-way error component model sets up economic growth (GR) as a function of foreign direct investment (FDI) and a tourism indicator. That is:

$$GR_{it} = \alpha_0 + \alpha_1 \ln FDI_{it} + \beta' \ln Z_{it} + \alpha_2 \ln TR_{it} + \alpha_3 \ln DC_{it} + d_t + e_{it} \quad [1]$$

Where \ln is natural logarithm; GR represents economic growth; Z' is the vector of tourism variables; TR and DC are trade openness and domestic credit; d represents year dummies; e is the idiosyncratic error term assumed to be white noise; α and β are parameters to be estimated; i represents the country and t represents the time. Equation [1] examines the marginal impact of FDI on growth controlling for tourism activities and other covariates. For the *a priori*, we expect that $\alpha_1 > 0$, $\beta' > 0$, $\alpha_2 > 0$, $\alpha_3 > 0$. That is, the effect of FDI on growth is expected to be positive, *ceteris paribus*. Similarly, tourism activities are expected to boost the economy. In the same vein, trade openness and financial system activities are expected to drive growth. However, where FDI is not channeled to productive sectors, or the terms of trade are not competitive in the international market vis-à-vis a financial system riddled with uncertainties will constitute a drag on the economy. In other words, the outcome of the coefficients of these variables is indeterminate. To analyze the conditional effect of FDI on growth given tourism activities, Equation [1] is modified with the inclusion of an interaction term. Such that, Equation [2] gauges if the initial impact of FDI on growth is sustained and if tourism improves or distorts the FDI-growth nexus. The model is stated as:

$$GR_{it} = \eta_0 + \eta_1 \ln FDI_{it} + \zeta' \ln Z_{it} + \varphi (\ln FDI * \ln Z_{it}) + \eta_2 \ln TR_{it} + \eta_3 \ln DC_{it} + d_t + v_{it} \quad [2]$$

This study adopts the analytical procedures of Anser, Adeleye, Tabash, and Avira (2021) Adeleye, Adedoyin, and Nathaniel (2020), and Adusei and Adeleye (2020). φ is the sign of the coefficient of the interaction term which gauges if the interaction of FDI and tourism enhances or distorts the total impact of FDI on economic growth? Thus, the conditional effect of FDI on economic growth is computed as:

$$\frac{\partial GR}{\partial \ln FDI} = \eta_1 + \varphi \ln Z \quad [3]$$

However, since the expected coefficient of FDI may be positive or negative, evaluating its *conditional* impact on economic growth is not out rightly predictable. For instance, if η_1 is positive, a positive (negative) φ indicates that *tourism* amplifies (reduces) the effect of FDI on economic growth. Similarly, if η_1 is negative, a positive (negative) φ indicates that *tourism reduces* (strengthens) the devastating impact of FDI on growth. Finally, $\varphi=0$ shows that the interaction of FDI with *tourism* has no significant bearing on economic growth.

3.3. Estimation techniques

To methodically draw the significance of FDI on economic growth and evaluate if tourism activities boost or hinder the FDI-growth relationship, the study adopts the use of static and dynamic models (Niebel, 2018; Adeleye & Eboagu, 2019, Adeleye et.al., 2020, Adusei & Adeleye, 2020). It is common to rely on robust standard errors to provide valid statistical inferences when some of the assumptions of the basic regression model are violated. For the static analysis, the study deploys the Driscoll and Kraay (1998) technique which is based on the work of Newey and West (1987). The Driscoll-Kraay² estimator produces robust standard errors and controls for cross-sectional dependence (Vogelsang, 2012; Yerdelen Tatoğlu, 2013). The dynamic analysis is conducted using the two-step system GMM which is an instrumental variables technique that

² See either Driscoll and Kraay (1998) or Hoechle (2007) for mathematical treatment.

controls for possible endogeneity of the variables, heteroscedasticity, and omitted variables (Arellano & Bond, 1991; Arellano & Bover, 1995; Blundell & Bond, 1998; Roodman, 2014).

4. Results and discussions

This section details the results from the estimations of Equations [1]-[3]. The focus is on the impact of FDI on GDP, the impact of tourism activities on the GDP, and whether tourism activities affect the FDI-growth relationship. From Table 3, columns [1], [3], and [5] relate to the analysis of Equation [1] while columns [2], [4], and [6] relate to results from Equation [2].

4.1. Results from static analysis

From columns [1], [3], and [5], the coefficient of FDI is positive but statistically not significant. On the other hand, all the tourism indicators except tourism arrivals significantly improve economic growth at the 1% level. For instance, a percentage change in tourism receipts and expenditures is associated with a 2.92% and 1.23% increase in growth while tourism arrivals significantly reduce growth by 1.06%, on average, *ceteris paribus*. Studies have shown that tourism receipts play a role in the development of many countries' economies (Po & Huang, 2008; Adeleye et al., 2021). Tourism receipts are factors that stimulate economic growth. Similarly, Lee and Chang (2008), Fayissa et.al (2011), Ekanayeke and Long (2012), and Yalçinkaya et. al(2018) concluded that tourism receipts have to expand effect on GR. Receipts have the potential to positively impact economic growth given the fact that most of the tourism expenditures are devoted to the consumption of non-traded goods and services in the host country (Dritsakis, 2012; Wang, 2014). Also, results from tourism expenditures support Fleischer and Rivlin (2009), and Brida et.al (2015).

Table 3
Driscoll-Kraay estimator results (Dep Var: GDPGR)

Variables	[1]	[2]	[3]	[4]	[5]	[6]
lnDC	-2.538*** (0.815)	-2.431*** (0.822)	-3.639*** (0.365)	-3.660*** (0.444)	-2.522*** (0.843)	-2.394** (0.868)
lnTR	3.272** (1.256)	2.920** (1.225)	4.372*** (1.507)	4.286*** (1.449)	4.504*** (1.066)	4.145*** (1.014)
lnFDI	0.358 (0.275)	-7.858*** (2.802)	0.387 (0.237)	-5.493** (2.444)	0.387 (0.274)	-7.312*** (1.691)
lnTRCPT	2.915*** (1.007)	2.279** (1.039)				
lnFDI*lnTRCPT		0.373*** (0.132)				
lnTARV			-1.063*** (0.303)	-1.581*** (0.418)		
lnFDI*lnTARV				0.380** (0.166)		
lnTEXP					1.226*** (0.441)	1.116*** (0.373)
lnFDI*lnTEXP						0.355***
Constant	0.000 (0.000)	0.000 (0.000)	15.597** (5.911)	24.254** (9.268)	-32.866*** (5.377)	-29.263*** (4.895)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	240	240	240	240	240	240
Countries	29	29	29	29	29	29
Within R-squared	0.2314	0.2411	0.231	0.2416	0.218	0.2315
F statistic	963.479	19,225.547	97,86.333	8,479.111	12,746.345	15,344.622

Note: Standard errors in (.). ln = natural logarithm. GDPGR = gross domestic product growth rate. FDI = foreign direct investment net inflows. TARV = tourism arrivals. TRCPT = tourism receipts. TEXP = tourism expenditures current. TR = trade openness. DC = domestic credit; heteroscedasticity-corrected t-statistics in (.). *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' computations.

Unlike Stryzhak (2019) and Eugenio-Martin et al. (2004), Jebli et.al (2019) showed no direct positive relationship between tourism arrivals and GDP. This is because tourism arrivals alone are not factors that boost economic growth. We also find a significant negative relationship between domestic credit and economic growth. The -2.53 coefficient reveals a contractionary effect of the 1% increase in domestic credits for middle-income country groups on growth. The trade openness coefficient (3.27) indicates that a 1% increase in trade openness can stimulate economic growth.

On the interaction terms, it is important to re-state that the marginal effect of FDI on GR is conditional on the values of tourism indicators as expressed in Equation [3]. In column [2], the coefficient 0.373 is positive and statistically significant at the 1% level. It indicates that the interaction causes GR to increase. To this end, the conditional effect of FDI on GR is computed as $-7.858 + [0.373 * \ln TRCPT]$. Thus, it is plausible to argue that the positive interaction of FDI and TRCPT is associated with an increase in growth, on average, ceteris paribus. By the same equivalence, the positive interaction of $\ln FDI * \ln TARV$ is computed as $-5.493 + [0.380 * \ln TARV]$ suggesting that the effect of FDI on growth is contingent on the values of tourism arrivals. Likewise, the impact of FDI on growth conditioned on tourism expenditures is computed as $-7.312 + [0.355 * \ln TEXP]$. Given that these conditional effects of FDI on growth are computed at average values of tourism indicators, to obtain more information from the interaction effect we follow Soylu et al (2022) by plotting the conditional effect of FDI on economic growth at different levels of each tourism indicator³. This approach allows for an objective evaluation of whether the effect is significant across all levels of tourism. Figure 1 is derived from Table 4 which displays the conditional effect based on the estimated coefficients, *t*-statistics, and *p*-values.

Table 4
For margin plots

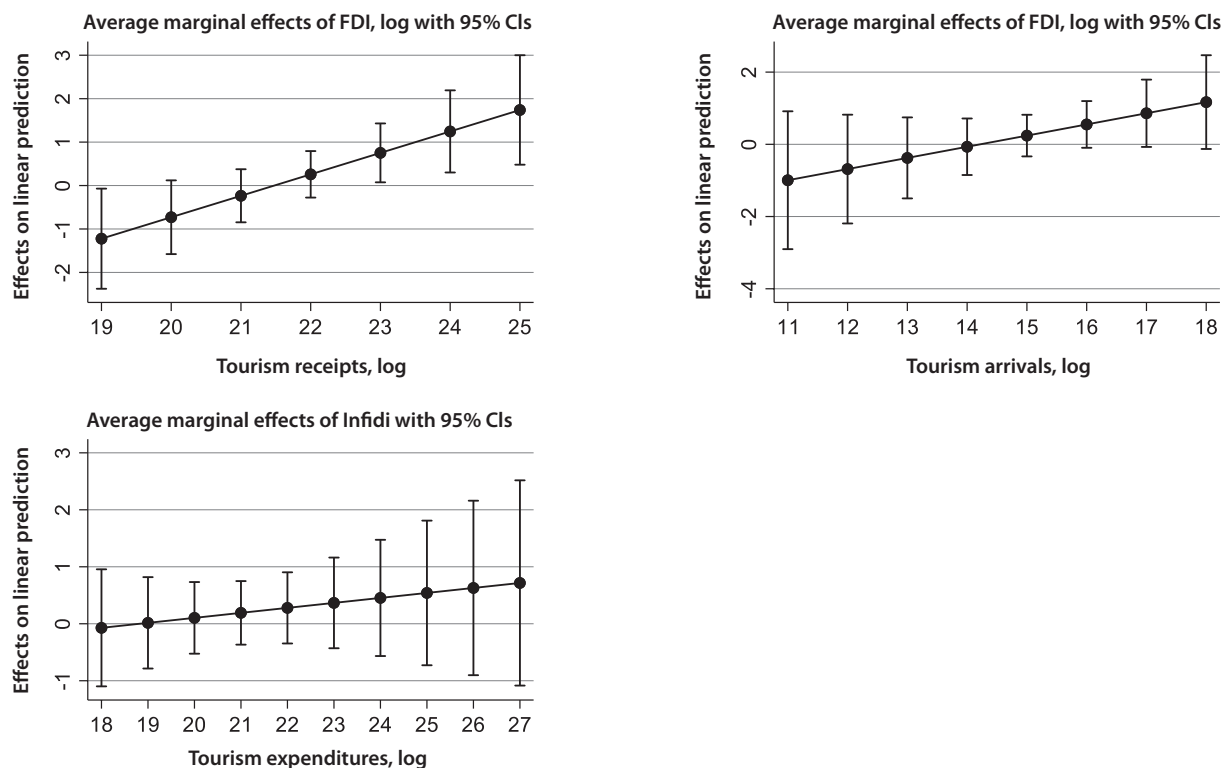
Tourism receipts				Tourism arrivals				Tourism expenditures			
Range	Coeff.	<i>t</i> -stat	PV	Range	Coeff.	<i>t</i> -stat	PV	Range	Coeff.	<i>t</i> -stat	PV
19	-1.223	-2.09	0.038	11	-0.995	-1.03	0.306	18	-0.071	-0.14	0.891
20	-0.729	-1.69	0.092	12	-0.686	-0.9	0.371	19	0.016	0.04	0.968
21	-0.235	-0.76	0.449	13	-0.377	-0.66	0.509	20	0.104	0.33	0.745
22	0.258	0.95	0.342	14	-0.068	-0.17	0.865	21	0.191	0.68	0.5
23	0.752	2.19	0.03	15	0.241	0.82	0.41	22	0.279	0.88	0.38
24	1.246	2.6	0.01	16	0.551	1.68	0.095	23	0.366	0.91	0.366
25	1.740	2.72	0.007	17	0.860	1.82	0.07	24	0.454	0.88	0.382
				18	1.169	1.77	0.077	25	0.541	0.84	0.402
								26	0.629	0.81	0.419
								27	0.716	0.78	0.434

Note: PV = probability values.
Source: Authors' computations.

As shown in Figure 1, the estimated coefficients of the margin plots are on the vertical axis while the range of each tourism indicator is on the horizontal axis. Conditional on the values of tourism receipts, we observe that the marginal effect of FDI on growth is positive and statistically significant at points 19, 20, 23, 24, and 25. These conditional effects are significant at the 1%, 5%, and 10% levels, respectively. Also, contingent on tourism arrivals, FDI shows a positive and significant effect on economic growth at points 16, 17, and 18 at the 10% level while there is no significant marginal effect when tourism expenditure is accounted for because the marginal effect is *not* statistically different from zero.

³ Since we use a double-log model (see Equations 1 and 2), the margin plots of $\ln FDI$ are derived using the log values of each tourism indicator. The range of values for $\ln TRCPT$, $\ln TARV$, and $\ln TEXP$ are: 19-25, 11-18, and 18-27.

Figure 1
Margin plots of FDI on economic growth from 29 middle-income countries, 2010-2019



Source: Authors' computations.

4.2. Results from dynamic analysis

In five out of six models, the GMM results in Table 5 reveal that growth is not persistent given the negative and statistically significant coefficients of the lagged dependent variables. From the outcomes of the linear models shown in columns [1], [3], and [5], the effect of FDI and tourism on growth is negative and not statistically significant. On the interaction of FDI and tourism variables, evidence shows that tourism receipts and expenditures exert a positive effect on economic growth. In other words, the interaction *reduces* the negative effect of FDI on growth. These outcomes portend significant contributions to the FDI-growth literature as they emphasize the importance of tourism to economic growth.

Table 5
Two-step system GMM results (Dep Var: GR)

Variables	[1]	[2]	[3]	[4]	[5]	[6]
GDPGR, lag	-0.132** (0.056)	-0.032 (0.040)	-0.119** (0.057)	-0.025 (0.030)	-0.139*** (0.053)	-0.018 (0.027)
lnDC	0.113 (1.159)	-0.540 (0.736)	-0.049 (1.178)	-0.503 (0.674)	-0.139 (1.287)	-0.383 (0.802)
lnTR	3.461** (1.495)	3.951*** (0.960)	3.158** (1.502)	3.911*** (0.782)	2.738* (1.652)	3.518*** (0.894)
lnFDI	-0.412 (0.322)	-14.182*** (5.253)	-0.457 (0.393)	-6.241 (4.031)	-0.244 (0.464)	-9.953* (5.440)
lnTRCPT	-0.111 (0.449)	-1.068*** (0.296)				
lnFDI*lnTRCPT		0.607*** (0.233)				

Table 5 (continued)

lnTARV			-0.149 (0.415)	-0.892*** (0.345)		
lnFDI*lnTARV				0.348 (0.256)		
lnTEXP					-0.193 (0.371)	-0.894** (0.397)
lnFDI*lnTEXP						0.421* (0.240)
Constant	-8.796 (9.212)	12.993* (7.176)	-7.183 (6.670)	3.367 (5.598)	-3.406 (8.448)	10.391 (9.020)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	215	215	215	215	215	215
Groups	29	29	29	29	29	29
Instruments	27	27	27	27	27	27
AR2 p-value	0.572	0.385	0.523	0.352	0.612	0.379
Hansen p-value	0.587	0.457	0.589	0.518	0.417	0.649
Wald statistic	1860	10269	5743	972.0	1772	3736

Note: Standard errors in (). ln = natural logarithm. GDPGR = gross domestic product growth rate. FDI = foreign direct investment net inflows. TARV = tourism arrivals. TRCPT = tourism receipts. TEXP = tourism expenditures current. TR = trade openness. DC = domestic credit. heteroscedasticity-corrected t-statistics in (). *** p<0.01, ** p<0.05, * p<0.1.

Source: Authors' computations.

5. Conclusion

This study extends the FDI-growth literature by interrogating the role of tourism in the nexus. With unbalanced panel data from 29 upper middle-income countries spanning 2005 to 2019, we use the GDP growth rate, FDI net inflows, and a vector of tourism indicators - tourism receipts, arrivals, and expenditures to analyze the interwoven relationship. Two objectives were addressed using static and dynamic panel techniques: (1) investigate the impact of FDI on economic growth and (2) evaluate if tourism activities boost or hinder the FDI-growth relation. This study concludes that: (1) FDI negatively affects growth, (2) tourism receipts and expenditures significantly stimulate growth, (3) tourism arrivals constitute a drag; (4) tourism indicators moderate the negative impact of foreign direct investment on growth, and (5) trade openness, used as a control variable, boosts economic growth.

Policy outcomes emanating from these outcomes are not far-fetched. Tourism indicators are essential for economic growth and development. In particular, the promotion of tourism-based export revenues, employment-oriented product and service development processes, and adaptation to the global integration process are attracting increasing attention in the tourism sector. Thanks to its foreign exchange potential, tourism is an essential alternative for developing economies that need foreign currency in periods when FDI is on the decline. It is, therefore, essential to integrate tourism sector complements into political processes, especially in tourist areas to eliminate the damaging effects of FDI on economic growth. With proper planning, tourism development policies, and an effective marketing drive, it is expected that tourism will reduce the damaging effects of FDI on growth. In addition, the exemption of tourism stakeholders from restrictive legal regulations and the effective use of global integration processes will reinforce the gains from tourism. Considering that tourism revenues are the driving force of economic growth for national economies, sustainability of infrastructure investments, communication, and transportation networks is essential to increase the number of tourists and thereby gain the trust of inbound tourists. In economic systems where information and communication technologies are widely used, the design of digital applications specific to the tourism sector, and the effective use of social media promotions and content will retain current tourists and attract the attention of potential tourists. Specifically, synergy and cooperation between the public

and private sectors will further strengthen the benefits derivable from tourism. Furthermore, it is expected that countries with natural and cultural diversity will benefit the most from tourism revenues. To this end, this study proposes the following measures: effective destination management; coordination mechanisms; product development processes for individuals with special needs; designing tourism master plans; initiating policies prioritizing specialization in tourism; ensuring sustainable tourism practices; increasing the competitiveness of the tourism sector; promoting regional and rural development through tourism; designing a guest-oriented product and service development; designing accessible tourism apps; and initiating policies that will prevent skill mismatch.

These propositions will contribute to the improvements of tourism with an appreciable impact on economic growth, development, and sustainability. However, the continuing impact of the coronavirus 2019 (COVID-19) epidemic presents a threat to tourism and a disincentive to growth. For future study, the role of governance and institutional quality in the FDI-growth nexus may be taken up, subject to the data available.

References

- Adeleye, B.N., Adedoyin, F.F., & Nathaniel, S. (2020). The criticality of ICT-trade nexus on economic and inclusive growth. *Information Technology for Development*, 27(2), 293-313. <https://doi.org/10.1080/02681102.2020.1840323>
- Adeleye, B.N., Ola-David, O., Jamal, A., & Sankaran, A. (2022). Moderation analysis on tourism–growth–emissions nexus in South Asia. *Journal of Policy Research in Tourism, Leisure and Events*, 14(1), 47-62. <https://doi.org/10.1080/19407963.2021.2017728>
- Adeleye, N., & Eboagu, C. (2019). Evaluation of ICT development and economic growth in Africa. *NETNOMICS: Economic Research and Electronic Networking*, 20(1), 31-53. <https://doi.org/10.1007/s11066-019-09131-6>
- Adeola, O., Boso, N., Osabutey, E.L.C., & Evans, O. (2020). Foreign direct investment and tourism development in Africa. *Tourism Analysis*, 25, 395-408. <https://doi.org/10.3727/108354220X15957702910144>
- Adusei, M., & Adeleye, N. (2020). Credit information sharing and non-performing loans: The moderating role of creditor rights protection. *International Journal of Finance and Economics*, 27, 4756-4769. <https://doi.org/10.1002/ijfe.2398>
- Allou, E.J., Adeleye, B.N., Cheng, J., & Rehman, A. (2020). Is there a nexus between China outward foreign direct investment and welfare in Côte d' Ivoire? Empirical evidence from the Toda–Yamamoto procedure. *African Development Review*, 32(3), 499-510. <https://doi.org/10.1111/1467-8268.12456>
- Ameer, W., & Xu, H. (2017). The long-run effect of inward and outward foreign direct investment on economic growth: Evidence from developing economies. *Review of Innovation and Competitiveness: A Journal of Economic and Social Research*, 3(2), 5-24. <https://doi.org/10.32728/ric.2017.32/1>
- Andergassen, R. & Candela, G. (2013). Less developed countries, tourism investments and local economic development. *Review of Development Economics*, 17(1), 16-33. <https://doi.org/10.1111/rode.12012>
- Anser, M.K., Adeleye, B.N., Tabash, M.I., & Tiwari, A K. (2021). Services trade-ICT-tourism nexus in selected Asian countries: New evidence from panel data techniques. *Current Issues in Tourism*, 25(15), 2388-2403. <https://doi.org/10.1080/13683500.2021.1965554>
- Arellano, M. & O. Bover. (1995). Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics* 68(1), 29-51. [https://doi.org/10.1016/0304-4076\(94\)01642-D](https://doi.org/10.1016/0304-4076(94)01642-D)
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment. *Review of Economic Studies Limited*, 58, 277-297. <https://doi.org/10.2307/2297968>
- Athukorala, P.P.A.W. (2003). *The impact of foreign direct investment for economic growth: A case study in Sri Lanka* (Full Paper Number 092). 9th International Conference on Sri Lanka Studies, Matara, Sri Lanka
- Baklouti, N., & Boujelbene, Y. (2016). Foreign direct investment-economic growth nexus. *Acta Universitatis Danubius: Oeconomica*, 12(2), 136-145.

- Blundell, R. & Bond, S.R. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87, 115–144. [https://doi.org/10.1016/S0304-4076\(98\)00009-8](https://doi.org/10.1016/S0304-4076(98)00009-8)
- Borensztein, E., De Gregorio, J., & Lee, J.W. (1998). How does foreign direct investment affect economic growth? *Journal of International Economics*, 45(1), 115-135. [https://doi.org/10.1016/S0022-1996\(97\)00033-0](https://doi.org/10.1016/S0022-1996(97)00033-0)
- Bramley, G. (2012). Affordability, poverty, and housing need: Triangulating measures and standards. *Journal of Housing and the Built Environment*, 27(2), 133–151. <https://doi.org/10.1007/s10901-011-9255-4>
- Brida, J.G., Lanzilotta, B., Pereyra, J.S., & Pizzolon, F. (2015). A nonlinear approach to the tourism-led growth hypothesis: The case of the MERCOSUR. *Current Issues in Tourism*, 18(7), 647-666. <https://doi.org/10.1080/13683500.2013.802765>
- Brida, J.G., Matesanz Gómez, D., & Segarra, V. (2020). On the empirical relationship between tourism and economic growth. *Tourism Management*, 81, Article 104131. <https://doi.org/10.1016/j.tourman.2020.104131>
- Bull, A. (1990). Australian tourism: Effects of foreign investment. *Tourism Management*, 11(4), 325–331. [https://doi.org/10.1016/0261-5177\(90\)90067-J](https://doi.org/10.1016/0261-5177(90)90067-J)
- Campos, N.F., & Kinoshita, Y. (2002). Foreign direct investment as technology transferred: Some panel evidence from the transition economies. *The Manchester School*, 70(3), 398-419. <https://doi.org/10.1111/1467-9957.00309>
- Carkovic, M., & Levine, R. (2002). *Does FDI accelerate economic growth?* [Unpublished manuscript]. University of Minnesota.
- Chen, Y.W. (2017). China's tourism-led foreign direct investment inflows: An empirical study. *Modern Economy*, 8, 39-50. <https://doi.org/10.4236/me.2017.81004>
- Choe, J. (2003). Do foreign direct investment and gross domestic investment promote economic growth? *Review of Development Economics*, 7(1), 44-57. <https://doi.org/10.1111/1467-9361.00174>
- Choong, C.K., Baharumshah, A.Z., Yusop, Z., & Habibullah, M.S. (2010). Private capital flows, stock market and economic growth in developed and developing countries: A comparative analysis. *Japan and the World Economy*, 22(2), 107-117. <https://doi.org/10.1016/j.japwor.2009.07.001>
- Chowdhury, A., & Mavrotas, G. (2006). FDI and growth: What causes what? *World Economy*, 29(1), 9–19. <https://doi.org/10.1111/j.1467-9701.2006.00755.x>
- Craigwell, R., & Moore, W. (2008). Foreign direct investment and tourism in SIDS: Evidence from panel causality tests. *Tourism Analysis*, 13(4), 427-432.
- Cruz, P.C.R. (2008). Transaction costs and housing affordability in Asia. *International Real Estate Review*, 11(1), 128–150.
- Dinh, T.T., Vo, D.H., Vo, A.T., & Nguyen, T.C.N. (2019). Foreign direct investment and economic growth in the short run and long run: Empirical evidence from developing countries. *Journal of Risk and Financial Management*, 12(4), Article 176. <https://doi.org/10.3390/jrfm12040176>
- Driscoll, J.C., & Kraay, A.C., (1998). Consistent covariance matrix estimation with spatially dependent panel data. *Review of Economics and Statistics*, 80, 549-560. <https://doi.org/10.1162/003465398557825>
- Dritsakis, N. (2012). Tourism development and economic growth in seven Mediterranean countries: A panel data approach. *Tourism Economics*, 18(4), 801-816. <https://doi.org/10.5367/te.2012.0140>
- Durham, B. (2004). Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European Economic Review*, 48(2), 285-306. [https://doi.org/10.1016/S0014-2921\(02\)00264-7](https://doi.org/10.1016/S0014-2921(02)00264-7)
- Ekanayake, E.M., & Long, A.E. (2012). Tourism development and economic growth in developing countries. *The International Journal of Business and Finance Research*, 6(1), 61-63. <https://ssrn.com/abstract=1948704>
- Erjavec, N., & Devčić, K. (2022). Accommodation capacity, trade openness, and international tourism demand in Croatia: Evidence from a dynamic panel model. *Tourism: An International Interdisciplinary Journal*, 70(1), 43-52. <https://doi.org/10.37741/t.70.1.3>
- Eugenio-Martin, J.L., Martín Morales, N., & Scarpa, R. (2004). *Tourism and economic growth in Latin American countries: A panel data approach* (FEEM Working Paper No. 26). <http://dx.doi.org/10.2139/ssrn.504482>

- Fauzel, S. (2020). FDI and tourism futures: A dynamic investigation for a panel of small island economies. *Journal of Tourism Futures*, 7(1), 98-110. <https://doi.org/10.1108/JTF-05-2018-0026>.
- Fauzel, S., Seetanah, B., & Sannassee, R.V. (2017). Analyzing the impact of tourism foreign direct investment on economic growth: Evidence from a small island developing state. *Tourism Economics*, 23(5), 1042-1055. <https://doi.org/10.1177/1354816616664249>
- Fayissa, B., Nsiah, C., & Tadasse, B. (2008). Impact of tourism on economic growth and development in Africa. *Tourism Economics*, 14, 807–818. <https://doi.org/10.5367/000000008786440229>
- Fayissa, B., Nsiah, C., & Tadesse, B. (2011). Research note: Tourism and economic growth in Latin American countries – Further empirical evidence. *Tourism Economics*, 17(6), 1365-1373. <https://doi.org/10.5367/te.2011.0095>
- Fleischer, A., & Rivlin, J. (2009). More or better? Quantity and quality issues in tourism consumption. *Journal of Travel Research*, 47(3), 285-294. <https://doi.org/10.1177/0047287508321204>
- Flexner, N. (2000). *Foreign direct investment and economic growth in Bolivia, 1990-1998* (Central Bank of Bolivia Research Paper). La Paz.
- Forsyth, P., & Dwyer, L. (1992). *Impacts of foreign investment in Australian tourism* (Occasional Paper No.10). Bureau of Tourism Research, Canberra. <https://doi.org/10.1.1.603.2311>
- Garcia-Flores, F., Pérez-Cirera, V., Martin, P., Alanis, G. & Guadarrama, L. (2008). *Tourism, trade and the environment: Tourism and coastal development in the Mexican portion of the Mesoamerican Reef*. Fourth North American Symposium on Assessing the Environmental Effects of Trade, Commission for Environmental Cooperation, Montreal.
- Haller, A.-P., Butnaru, G.I., Hârșan, G.-D.T., & Ștefănică, M. (2020). The relationship between tourism and economic growth in the EU-28. Is there a tendency towards convergence? *Economic Research-Ekonomska Istraživanja*, 34(1), 1121-1145. <https://doi:10.1080/1331677x.2020.1819852>
- Halpern, L., & Muraközy, B. (2007). Does distance matter in spillover? *Economics of Transition*, 15(4), 781–805. <https://doi.org/10.1111/j.1468-0351.2007.00308.x>
- Helpman, E., & Krugman, P.R. (1985). *Market structure and foreign trade: Increasing returns, imperfect competition, and the international economy*. MIT Press.
- Hermes, N., & Lensink, R. (2003). Foreign direct investment, financial development, and economic growth. *Journal of Development Studies*, 40, 142-163. <https://doi.org/10.1080/00220380412331293707>
- Javorcik, B.S., & Spatareanu, M. (2008). To share or not to share: Does local participation matter for spillovers from the foreign direct investment? *Journal of Development Economics*, 85, 194–217. <https://doi.org/10.1016/j.jdeveco.2006.08.005>
- Jebli, M.B., Youssef, S.B., & Apergis, N. (2019). The dynamic linkage between renewable energy, tourism, CO 2 emissions, economic growth, foreign direct investment, and trade. *Latin American Economic Review*, 28(1), 1-19. <https://doi.org/10.1186/s40503-019-0063-7>
- Kamal, M.A., Qayyum, U., Khan, S., & Adeleye, B.N. (2021). Who is trading well with China? A gravity and constant market share analysis of exports of Pakistan and ASEAN in the Chinese market. *Journal of Asian and African Studies*, 57(6), 1089–1108. <https://doi.org/10.1177/00219096211045098>
- Khawar, M. (2005). Foreign direct investment and economic growth: A cross-country analysis. *Global Economic Journal*, 5(1). <https://doi.org/10.2202/1524-5861.1057>
- Khoshnevis Yazdi, S., Homa Salehi, K., & Soheilzad, M. (2017). The relationship between tourism, foreign direct investment, and economic growth: Evidence from Iran. *Current Issues in Tourism*, 20(1), 15–26. <https://doi.org/10.1080/13683500.2015.1046820>
- Khoshnevis Yazdi, S., Nateghian, N., & Sheikh Rezaie, N. (2017). The causality relationships between tourism development and foreign direct investment: An empirical study in EU countries. *Journal of Policy Research in Tourism, Leisure & Events*, 9(3), 247–263. <https://doi.org/10.1080/19407963.2017.1297310>
- Kulendran, N., & Wilson, K. (2000). Modelling business travel. *Tourism Economics*, 6(1), 47–59. <https://doi.org/10.5367/000000000101297460>

- Lee, C.C., & Chang, C.P. (2008). Tourism development and economic growth: A closer look at panels. *Tourism Management*, 29(1), 180-192. <https://doi.org/10.1016/j.tourman.2007.02.013>
- Li, X., & Liu, X. (2005). Foreign direct investment and economic growth: An increasingly endogenous relationship. *World Development*, 33(3), 393-407. <https://doi.org/10.1016/j.worlddev.2004.11.001>
- Lim, C. (1997). An econometric classification and review of international tourism demand models. *Tourism Economics*, 3(1), 69-81. [https://doi.org/10.1016/S0160-7383\(97\)00049-2](https://doi.org/10.1016/S0160-7383(97)00049-2)
- Ludosean, B.M. (2012). A VAR analysis of the connection between FDI and economic growth in Romania. *Theoretical and Applied Economics*, 19, 115-130.
- Luffman, J. (2004). Measuring housing affordability. *Perspectives. Statistics Canada*, 16-25.
- Mariotti, S., Mutinelli, M., Nicolini, M., & Piscitello, L. (2015). Productivity spillovers from foreign multinational enterprises to domestic manufacturing firms: To what extent does spatial proximity matter? *Regional Studies*, 49(10), 1639-1653. <https://doi.org/10.1080/00343404.2013.867428>
- Merlevede, B., & Purice, V. (2016). Distance, time since foreign entry, and productivity spillovers from foreign direct investment. *Papers in Regional Science*, 95(4), 775-800. <https://doi.org/10.1111/pirs.12159>
- Mikulić, J., Vizek, M., Stojčić, N., Payne, J.E., Časni, A.Č., & Barbić, T. (2021). The effect of tourism activity on housing affordability. *Annals of Tourism Research*, 90, Article 103264. <https://doi.org/10.1016/j.annals.2021.103264>
- Narayan, P.K., Narayan, S., Prasad, A., & Prasad, B.C. (2010). Tourism and economic growth: A panel data analysis for Pacific island countries. *Tourism Economics*, 16(1), 169-183. <https://doi.org/10.5367/000000010790872006>
- Newey, W.K., & West, K.D. (1987). Hypothesis testing with the efficient method of moments estimation. *International Economic Review*, 28(3), 777-787. <https://doi.org/10.2307/2526578>
- Niebel, T. (2018). ICT and economic growth – Comparing developing, emerging, and developed countries. *World Development*, 104, 197-211. <https://doi.org/10.1016/j.worlddev.2017.11.024>
- Nwuba, C.C., Kalu, I.U., & Umeh, J.A. (2015). Determinants of homeownership affordability in Nigeria's urban housing markets. *International Journal of Housing Markets and Analysis*, 8(2), 189-206. <https://doi.org/10.1108/IJHMA-06-2014-0020>
- Ofori, I.K., & Asongu, S.A. (2021). ICT diffusion, foreign direct investment and inclusive growth in Sub-Saharan Africa. *Telematics and Informatics*, 65, Article 101718. <https://doi.org/10.1016/j.tele.2021.101718>
- Oh, C. (2005). The contribution of tourism development to economic growth in the Korean economy. *Tourism Management*, 26(1), 39-44. <https://doi.org/10.1016/j.tourman.2003.09.014>
- Othman, R., Salleh, N.H. M., & Sarmidi, T. (2012). Growth and foreign direct investment: An ARDL approach. *Journal of Applied Sciences*, 12(12), 1245-1254. <https://doi.org/10.3923/jas.2012.1245.1254>
- Owusu-Nantwi, V., & Erickson, C. (2019). Foreign direct investment and economic growth in South America. *Journal of Economic Studies*, 46(2), 383-398. <https://doi.org/10.1108/JES-11-2017-0323>
- Peric, J., & Nikšić Radic, M. (2010). Impact of foreign direct investment in tourism on economic growth in developing countries. In *Tourism & hospitality management conference proceedings* (pp. 537-549).
- Peric, J., & Niksic Radic, M. (2011). Sustainable foreign direct investment in the tourism sector of developing countries. *Tourism in South East Europe*, 263-278.
- Pham, T.M.L., & Tran, T.P.P. (2015). The granger causality relationship between international tourist arrivals and foreign direct investment: Empirical evidence from Turkey. In *The 9th international days of statistics and economics, conference proceedings* (pp. 1291-1300).
- Po, W.C., & Huang, B.N. (2008). Tourism development and economic growth – A nonlinear approach. *Physica A: Statistical Mechanics and Its Applications*, 387(22), 5535-5542. <https://doi.org/10.1016/j.physa.2008.05.037>
- Purcell, W., & Nicholas, S. (2001). Japanese tourism investment in Australia: Entry choice, parent control and management practice. *Tourism Management*, 22(3), 245-257. [https://doi.org/10.1016/S0261-5177\(00\)00055-8](https://doi.org/10.1016/S0261-5177(00)00055-8)

- Rajapakse, C.R. (2016). The relationship between foreign direct investment and tourism development: Evidence from Sri Lanka. *International Journal of Research in Economics and Social Sciences*, 6(5), 183-193.
- Roodman, D. (2014). *xtabond2: Stata module to extend xtabond dynamic panel data estimator*. Statistical Software Components.
- Roudi, S., Arasli, H., & Akadiri, S.S. (2018). New insights into an old issue – Examining the influence of tourism on economic growth: Evidence from selected small island developing states. *Current Issues in Tourism*, 22(11), 1280-1300. <https://doi.org/10.1080/13683500.2018.1431207>
- Salleh, N.H.M., Othman, R., & Sarmidi, T. (2011). An analysis of the relationships between tourism development and foreign direct investment: An empirical study in elected major Asian countries. *International Journal of Business and Social Science*, 2(17), 250–257.
- Samimi, A.J., Sadeghi, S., & Sadeghi, S. (2013). The relationship between foreign direct investment and tourism development: Evidence from developing countries. *Institutions and Economies*, 5(2), 59-68.
- Sanford, D.M.Jr., & Dong, H. (2000). Investment in familiar territory: Tourism and new foreign direct investment. *Tourism Economics*, 6(3), 205-219. <https://doi.org/10.5367/000000000101297596>
- Satrovic, E., & Muslija, A. (2018). Causality relationship between foreign direct investment and tourism. *Uluslararası İktisadi ve İdari İncelemeler Dergisi*, (22), 65-76. <https://doi.org/10.18092/ulikidince.418132>
- Seghir, G.M., Mostéfa, B., Abbes, S.M., & Zakarya, G.Y. (2015). Tourism spending-economic growth causality in 49 countries: A dynamic panel data approach. *Procedia Economics and Finance*, 23, 1613-1623. [https://doi.org/10.1016/S2212-5671\(15\)00402-5](https://doi.org/10.1016/S2212-5671(15)00402-5)
- Selvanathan, S., Selvanathan, E.A., & Viswanathan, B. (2012). Causality between foreign direct investment and tourism: Empirical evidence from India. *Tourism Analysis*, 17(1), 91-98. <https://doi.org/10.3727/108354212X13330406124296>
- Sequeira, T., & Campos, C. (2005). International tourism and economic growth: A panel data approach. *Fondazione Eni Enrico Mattei*, 141, 1-14. <http://dx.doi.org/10.2139/ssrn.855985>
- Simundic, B., Kulis, Z., & Seric, N. (2016). Tourism and economic growth: Evidence for Latin American and Caribbean countries. In I. Milohnić & D. Smolčić Jurdana (Eds.), *Tourism and hospitality industry 2016 - Congress proceedings* (pp. 457-469). University of Rijeka, Faculty of Tourism and Hospitality Management in Opatija.
- Sokhanvar, A. (2019). Does foreign direct investment accelerate tourism and economic growth within Europe? *Tourism Management Perspectives*, 29, 86-96. <https://doi.org/10.1016/j.tmp.2018.10.005>
- Soylu, B.Ö., Adeleye, B.N., Ergül, M., Okur, F., & Lorente, D.B. (2022). Investigating the impact of ICT-trade nexus on competitiveness in Eastern and Western European countries. *Journal of Economic Studies* (Ahead of print). <https://doi.org/10.1108/JES-12-2021-0638>
- Srinivasan, P., Kumar, P.S., & Ganesh, L. (2012). Tourism and economic growth in Sri Lanka: An ARDL bounds testing approach. *Environment and Urbanization Asia*, 3(2), 397-405. <https://doi.org/10.1177/0975425312473234>
- Stojčić, N., & Orlić, E. (2020). Spatial dependence, foreign investment and productivity spillovers in new EU member states. *Regional Studies*, 54(8), 1057-1068, <https://doi.org/10.1080/00343404.2019.1653451>
- Stojčić, N., Mikulić, J., & Vizek, M. (2022). High season, low growth: The impact of tourism seasonality and vulnerability to tourism on the emergence of high-growth firms. *Tourism Management*, 89, Article 104455. <https://doi.org/10.1016/j.tourman.2021.104455>
- Stryzhak, O. (2019). Assessment of the relationship between the tourism sector development and other sectors of the economy. *Economics of Development*, 2, 10-18. [http://dx.doi.org/10.21511/ed.18\(2\).2019.02](http://dx.doi.org/10.21511/ed.18(2).2019.02)
- Tang, S., Selvanathan, E.A., & Selvanathan, S. (2007). The relationship between foreign direct investment and tourism: Empirical evidence from China. *Tourism Economics*, 13(1), 25-39. <https://doi.org/10.5367/000000007779784498>
- Tisdell, C., & Wen, J. (1991). Investment in China's tourism industry: Its scale, nature, and policy issues. *China Economic Review*, 2(2), 175–193. [https://doi.org/10.1016/1043-951X\(91\)90003-Q](https://doi.org/10.1016/1043-951X(91)90003-Q)

- Vogelsang, T.J. (2012). Heteroskedasticity, autocorrelation, and spatial correlation robust inference in linear panel models with fixed-effects. *Journal of Econometrics*, 166(2), 303-319. <https://doi.org/10.1016/j.jeconom.2011.10.001>
- Wang, Y.S. (2014). Effects of budgetary constraints on international tourism expenditures. *Tourism management*, 41, 9-18. <https://doi.org/10.1016/j.tourman.2013.08.006>
- Yalçinkaya, Ö., Daştan, M., & Karabulut, K. (2018). The effects of international tourism receipts on economic growth: Evidence from the first 20 highest income earning countries from tourism in the world (1996-2016). *Montenegrin Journal of Economics*, 14(3), 55-71. <https://doi.org/10.14254/1800-5845/2018.14-3.4>
- Yerdelen Tatođlu, F. (2013). *İleri panel veri analizi stata uygulamalı* [Advanced panel data analysis with stata applied]. Beta Yayınları.
- Zhang, H., Chong, K. & Ap, J. (1999). An analysis of tourism policy development in modern China. *Tourism Management*, 20(4), 471-485. [https://doi.org/10.1016/S0261-5177\(99\)00020-5](https://doi.org/10.1016/S0261-5177(99)00020-5)
- Zhang, K.H., & Song, S. (2001). Promoting exports: The role of inward FDI in China. *China Economic Review*, 11(4), 385-396. [https://doi.org/10.1016/S1043-951X\(01\)00033-5](https://doi.org/10.1016/S1043-951X(01)00033-5)

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