


Exploring the linkage between tourism, governance quality, and poverty reduction in Latin America

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Abstract

It has been of great concern for policymakers and government officials to increase the economic trajectory of living standards. Tourism development over the years is outlined in the extant literature as an alternative pathway to sustainable development. However, there has been no consensus on the combined impact of institutional quality and key macroeconomic indicators and how they moderate tourism development and eradicate poverty. Thus, there is a need to eradicate extreme poverty and achieve Sustainable Development Goals (SDGs) by the end of 2030 to remain focused on areas for policymakers and researchers. To achieve this goal, this study examines the moderating effect of governance quality on the relationship between tourism and poverty alleviation using a panel of 15 Latin American countries over the period 2003–2015 using fixed effect (FE) as an estimation technique. For soundness of analysis, we applied the Panel Corrected Standard Errors (PCSE) model estimation, the two-system generalized method of moment (GMM) model estimation in this study. Our findings show that governance quality contributes to poverty reduction, while tourism development exacerbates poverty. Interestingly, the results reveal that tourism and governance quality have complementary impacts in alleviating poverty. Further, policy prescriptions are outlined in the concluding section.

Keywords

Sustainable tourism, governance quality, poverty reduction, fixed effect, Latin America

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Introduction

Several studies (Adedoyin et al., 2021; Balcilar et al., 2020; Benkraiem et al., 2020; Chiu and Yeh, 2017; Chou, 2013; Odhiambo and Nyasha, 2020; Pan and Dossou, 2020; Pulido-Fernández and Cárdenas-García, 2020; Tecel et al., 2020; Wu and Wu, 2019) have examined the contribution of tourism development to economic growth in both developed and developing countries and found that tourism contributes to promoting economic growth. According to Folarin and Adeniyi (2019) and Nguyen et al. (2020a), several channels have been identified through which tourism development significantly contributes to economic growth. Notable channels include foreign exchange earnings, jobs creation, tax revenue, investment in physical infrastructure, and human capital development.

Recently, Zhao and Xia (2020) and Folarin and Adeniyi (2019) have documented that the positive effect of tourism on economic development can affect poverty reduction through the trickle-down effect of growth. However, an empirical study on the relationship between tourism development and poverty alleviation remains highly limited (Zhao, 2020; Zhao and Xia, 2020). Moreover, the findings of these few empirical studies remain mixed and inconclusive. Over two decades, the United Nations World Tourism Organization (UNWTO) has launched the so-called Sustainable Tourism Eliminating Poverty (ST-EP), which considers tourism as a tool to reduce poverty in developing countries. Based on this policy, 80% of 56 developing countries have tackled tourism as a tool to promote economic growth (Kim et al., 2016). As Ponce et al. (2020) documented, tourism has been considered an essential source of development and employment for groups including women, youth, immigrant workers, and rural populations to have access to labor markets. According to Folarin and Adeniyi (2019), several channels could be identified through which tourism significantly contributes to poverty alleviation. Notable channels include income channel, tax channel, price channel, and risk channel. According to Koens and Thomas (2016), tourism could reduce poverty by promoting micro-enterprises. To be precise, Liang and Bao (2018) detailed that poverty can be reduced by promoting small tourism industries. In the same context, Islam and Carlsen (2012) documented that to overcome the seasonality of agricultural production, the poor are often engaged in non-agricultural activities. Moreover, Folarin and Adeniyi (2019) and Scheyvens and Hughes (2019) argued that tourism is part of these non-agricultural activities.

Those mixed results call for further investigation, especially by considering the new factors that can influence our economies. Therefore, the current study examines the moderating effect of governance quality on the relationship between tourism development and poverty reduction. It is essential to highlight that previous studies have failed to incorporate governance quality in the tourism-poverty nexus. A recent exception is Zhao (2020) who examined the moderating effect of institutional quality on the influence of tourism development on poverty reduction in China. For instance, Acemoglu et al. (2004) highlighted that institutions remain a key determinant of economic growth. According to the authors, the institutions could be categorized into two types: economic institutions (existence of perfect markets and organization of property rights) and political institutions (political power, types of government, i.e., autocracy, democracy, or dictatorship). In September 2015, the United Nations documented that institutional quality remains an essential factor for achieving Sustainable Development Goals (SDGs) by 2030. Recently, Siakwah et al. (2020) noted that improving tourism governance can contribute to socio-economic development, which can help to achieve SDGs. Likewise, Zhao and Xia (2020) indicate that tourism governance can help to reduce poverty in developing countries.

The choice of Latin America is due to its substantial poverty dynamics and massive tourism potential. More specifically, we focus on Latin America for two reasons. First, according to the

United Nations, the number of people living in extreme poverty in Latin America has increased from 9.9% in 2016 to 10.2% in 2017 (62 million people).¹ Moreover, according to the same source, in 2020, people in Latin America living in extreme poverty have reached 83 million due to the COVID-19 pandemic.² Additionally, Latin America remains the unequal continent in the world (Shimeles and Nabassaga, 2018; Xu et al., 2021). Consequently, Xu et al. (2021) documented that severe inequality could cause social instability, which will negatively affect the tourism sector (Fang et al., 2020). As reported by Chisadza et al. (2020), tourists are reluctant to visit an uncertain country. Second, according to the UNWTO (2020), Latin America has received 207 million tourists, contributing to the gross domestic product by 9%. Unfortunately, according to the World Travel Tourism Council, due to the COVID-19 pandemic the tourism industry in Latin America and the Caribbean is expected to trigger 12.4 million job cuts and lose a worth of \$230 billion.³

The contributions of this study are fourfold. First, this is the first study to examine the influence of tourism on poverty reduction in Latin America with theoretical backing anchored on the Pro-Poor Tourism (PPT) argument for a panel of 15 Latin American countries over the period 2003–2015. This study draws strength on the PPT argument. This phenomenon outlined the rationale between tourism and poverty alleviation, where tourism development is perceived as a panacea for poverty reduction (Medina-Muñoz et al., 2016)⁴. For instance, in the Gambia, tourism is considered as “Manna from Heaven.” Thus, tourism is generating a net benefit, which has the latent potential to reduce the poverty gap. This is achieved through the tricking effect of job creation, increased income, foreign exchange earning of tourism development on economic development, and a reduction in the poverty divide (Chifon, 2010; Njoya and Seetaram, 2018). It is important to highlight that most previous studies have focused on Africa and Asia (Folarin and Adeniyi, 2019; Zhao, 2020; Zhao and Xia, 2020). Second, the current study extended previous studies by examining the moderating effect of governance quality on the relationship between tourism development and poverty reduction. Third, unlike previous studies, we use the Pesaran (2004) cross-sectional dependence (CD) test to investigate whether the data series have cross-sectional dependence. Adeola and Evans (2020) argued that ignoring the CD test might produce meaningless results. Moreover, based on the results of the CD test, we employ the Pesaran (2007) cross-sectionally augmented Im-Pesaran-Shin (CIPS) unit root test, which assumes cross-sectional dependence. Fourth, unlike previous studies, in addition to fixed-effect estimation and two-step generalized method of moment (GMM) model estimation, the current study uses the panel corrected standard errors (PCSE) to examine the moderating effect of governance quality on the relationship between tourism development and poverty reduction. Recently, the PCSE has been used in the tourism literature. For example, Nguyen et al. (2020a) used the PCSE to examine the moderating effect of governance quality on the relationship between tourism and income inequality. Similarly, using the PCSE, Canh and Thanh (2020) examined the effect of domestic tourism spending on economic vulnerability. In the same context, Nguyen et al. (2020b) used the PCSE to investigate the influence of economic uncertainty on tourism consumption. Unfortunately, no study uses the PCSE to examine the moderating effect of governance quality on the relationship between tourism development and poverty reduction.

The rest of this study is organized as follows: the following section focuses on the literature related to the relevant research. The third section provides the method strategy, data used, and methodology for the relevant study. The fourth section analyses and discuss the findings. The final section provides the conclusion.

Literature review

Folarin and Adeniyi (2019) argued that the contribution of tourism development to poverty reduction could be observed through income distribution. Therefore, we divide this section into two sections. First, we provide a literature review on the relationship between tourism development and income inequality. Second, we provide a literature review on tourism development and poverty reduction.

Tourism development-income inequality nexus

A vast literature has investigated the influence of tourism on income inequality (Lv, 2019; Nguyen et al., 2020a). However, the findings of these studies remain mixed and inconclusive (Uzar and Eyuboglu, 2019). On the one hand, some studies show that tourism development contributes to increasing income inequality. For example, Alam and Paramati (2016) used tourism revenue as a tourism indicator to examine the influence of tourism on income inequality in 49 developing countries over the period 1991–2012. Using the FMOLS model, their findings unveiled that tourism contributes to exacerbating income inequality. In the same context, the relationship between tourism and income inequality has been assessed by Uzar and Eyuboglu (2019). The result of the autoregressive distributed lag (ARDL) model shows that tourism contributes to worsening income inequality. Similar results were found by Mahadevan and Suardi (2019) who used the VAR model to examine the relationship between tourism and income inequality in 13 tourism earnings countries over the period 1995–2012. Mahadevan et al. (2016) revealed that tourism contributes to exacerbating income inequality using a simulation technique. Also, Muchapondwa and Stage (2013), with three countries (Namibia, South Africa, and Botswana), investigated how the revenue issued from the tourism sector is distributed among the population. Their results show that tourism contributes to exacerbating income inequality. Moreover, Chi (2020) has used two econometrics techniques, namely, the FMOLS model and the DOLS model, to examine the relationship between tourism and income inequality in developing and developed countries. The author unveiled that tourism contributes to exacerbating income inequality in developing countries but, tourism development has no effect on income inequality in developed countries.

On the other hand, other studies show that tourism development contributes to reducing income inequality. For instance, Kim and Kang (2020) revealed that tourism contributes to reducing income inequality in China. Likewise, using a panel of 113 countries, Lv (2019) applied the FMOLS model to examine the relationship between tourism and income inequality. The author unveiled that tourism contributes to reducing income inequality. It is important to note that Lv (2019) has used the tourism development index, which is constructed through the principal component analysis (PCA) of three tourism indicators, namely, international tourism receipts, international tourism expenditures, and international tourist arrivals. Similarly, using quarterly data (1991q1–2017q4), Shahbaz et al. (2019) scrutinized the tie between tourism and income distribution in Malaysia. Their findings show that tourism contributes to the equal distribution of income. Likewise, Li et al. (2016) used two tourism indicators, namely, international tourism and domestic tourism, to investigate the nexus between tourism and regional income inequality for 30 Chinese provinces over the period 1997–2010. Using a spatiotemporal autoregressive model and spatial heterogeneity, they found that tourism reduces regional income inequality in China. In the same context, Fang et al. (2020) used five tourism indicators, namely, direct tourism contribution, domestic tourism spending, leisure tourism spending, total tourism contribution, and total internal tourism expenses, to examine the effect of tourism development on income inequality. It is

important to note that their empirical work has focused on 102 countries divided into 71 developing countries and 31 developed countries. The empirical evidence of FMOLS model shows that tourism contributes to reducing income inequality in developing countries, but tourism has no effect on income inequality in developed countries. In the same vein, using eight tourism indicators, namely, domestic tourism spending, business tourism spending, internal travel and tourism consumption, leisure tourism spending, foreign tourism spending, international tourism receipts, international tourism receipts form travel item, and international tourist arrivals, Nguyen et al. (2020) examined the effect of tourism on income inequality for a panel of 97 countries over the period 2002–2014. The empirical results of various econometric techniques suggest that foreign tourism spending, international tourist arrivals, international tourism receipts for travel items, and international tourism receipts contribute to reducing income inequality, while domestic tourism spending, business tourism spending, internal travel and tourism consumption, and leisure tourism spending contributes to increasing income inequality.

Tourism development–poverty reduction nexus

In the 1990s, Great Britain implemented the “PPTpolicy,” which consists of promoting and strengthening the relationship between tourism businesses and poor people (Zhao, 2014). Based on this policy, developing countries have considered tourism to promote economic growth and reduce poverty. Theoretically, Balassa (1978) and Enilov and Wang (2021) documented that the tourism-economic growth nexus is rooted in international trade theories. Consistent with international trade theories, Blake et al. (2008) highlighted that tourism could contribute to poverty reduction through international trade. In the same context, Zhao and Xia (2020) documented that the pro-poor tourism effect is based on international theory. Similarly, Folarin & Adeniyi (2019) argued that the openness of developing countries could be profitable to the poor through tourism development. Additionally, Medina-Muñoz et al. (2016) argued that the PPT effect could be observed in terms of the tourism sector through accommodation, food and beverage, leisure, transport, and travel organization. Also, Erskine and Meyer (2012) documented that tourism can contribute to poverty reduction through agriculture, manufacturing, other service sectors.

Recently, Folarin and Adeniyi (2019) argued that the positive contribution of tourism development to economic growth could be translated into economic development. Therefore, the recent studies try to examine the influence of tourism development on poverty reduction. As argued by Kim et al. (2016), previous studies on the impact of tourism development on poverty alleviation can be categorized into two types. On the one hand, due to the lack of data on poverty, some studies use a qualitative approach to explain the influence of tourism on poverty reduction (e.g., Harrison and Schipani, 2007; Medina et al. 2016; Scheyvens and Russell, 2012; Truong et al., 2014; Zhao and Ritchie, 2007). However, Saayman et al. (2012) argued that to comprehend the significant effect of tourism on poverty reduction, methodology development must be considered.

On the other hand, some studies have used a macroeconomic approach to examine the influence of tourism on poverty reduction (Folarin and Adeniyi, 2019; N. Kim et al., 2016; Zhao, 2020; Zhao and Xia, 2020). Unfortunately, Zhao (2020) documents that the empirical evidence on the relationship between tourism and poverty reduction remains limited. Moreover, there are two contrasting views regarding the relationship between tourism development and poverty reduction. The first view argues that tourism development may significantly contribute to a reduction of poverty. For instance, Houghton and Khandhar (2009) demonstrated that tourism could reduce poverty, but it contributes to exacerbating income inequality. Similarly, the relationship between tourism development and poverty reduction in Nicaragua has been assessed by Croes and Vanegas (2008).

Using the cointegration techniques, the findings unveiled a one-way causal relationship from tourism to poverty reduction. Using an autoregressive distributed lag bounds testing approach, [Vanegas et al. \(2015\)](#) examined the nexus between tourism development and poverty reduction in Costa Rica and Nicaragua. They found that tourism contributes to poverty reduction.

Recently, [Garza-Rodriguez \(2019\)](#) uses an ARDL and cointegration model to examine the influence of tourism on poverty reduction in Mexico over the period 1980–2017. The study shows that tourism significantly contributes to poverty reduction. It is important to highlight that [Garza-Rodriguez \(2019\)](#) used household consumption per capita to proxy poverty. In the same context, [Folarin and Adeniyi \(2019\)](#), investigating panel data of 36 Sub-Saharan African countries over the period 1996–2015, unveiled that tourism contributes to poverty alleviation. Likewise, using a simulation computable general equilibrium model, [Njoya and Seetaram \(2018\)](#) revealed that tourism reduces poverty headcount. In the same vein, using three poverty indicators, namely, poverty headcount, poverty gap, and severity of poverty, [Zhao and Xia \(2020\)](#) examined the influence of tourism development on poverty reduction in 29 Chinese provinces over the period 1999–2014. Using the GMM model, their findings show that tourism development contributes to poverty reduction. Similar results were found by [Zhao \(2020\)](#) who investigated the moderating effect of institutional quality on the relationship between tourism and poverty reduction in 29 Chinese provinces over the period 1999–2014. In the same context, using a social accounting matrix approach, [Croes and Rivera \(2017\)](#) investigated the influence of tourism development on poverty reduction in Ecuador and found that tourism significantly contributes to the alleviation of poverty. Likewise, focusing on 198 contiguous Ecuadorian cantons, [Ponce et al. \(2020\)](#) used ordinary least squares (OLS) and spatial approaches to examine the influence of tourism on poverty reduction. As a result, they found that a one percent increase in tourism development decreases poverty by 4.31%. On the other hand, [Blake et al. \(2008\)](#), while examining the influence of tourism development on poverty reduction using the Brazilian economy, found that the effect of tourism development differs among the groups. It means that the lowest-income households benefit but by less than some higher-income groups.

Unlike the first view, the second view argues that tourism development contributes to the exacerbation of poverty. For example, [Kim et al. \(2016\)](#), investigating a panel of 69 developing countries over the period 1995–2012, found that tourism has a mixed effect on poverty. Likewise, using a panel of 13 tourism earnings countries and the vector auto-regression method, [Mahadevan and Suardi \(2019\)](#) showed that tourism has failed to reduce headcount poverty but successfully reduce poverty gap. In the same context, similar results were found by [Oviedo-García et al. \(2019\)](#), who studied the effect of tourism on poverty in the Dominican Republic. While using the viability of the community-based tourism (CBT) model to examine the impact of tourism on poverty reduction, [Zapata et al. \(2011\)](#) found that tourism has a low impact on the Nicaraguan economy in terms of jobs and income.

Model specification, data, and methodology

Model specification

To unearth the relationship between tourism development and poverty reduction, we followed [Folarin and Adeniyi \(2019\)](#) and [Zhao and Xia \(2020\)](#) who have recently examined the effect of tourism development on poverty reduction. Therefore, equation (1) can be written as follows

$$POV_{i,t} = \beta_0 + \beta_1 TR_{i,t} + \beta_2 GOV_{i,t} + \beta_3 Z_{i,t} + \varepsilon_i \quad (1)$$

where POV= poverty reduction proxied by three poverty indicators, namely, poverty headcount (POVH), poverty gap index (POVG), and severity of poverty (SPOVG); TR= tourism development proxied by international tourism receipts (TR1), international tourist arrivals (TR2); Z= control variables (gross domestic product per capita (GDPpc) human capital (HC), trade openness (TOP), population (Pop), inflation (INF) and Gini coefficient (Gini)); and country and time, respectively, and is error term.

The purpose of this study is to examine the moderating effect of governance quality on the relationship between tourism development and poverty reduction. Moreover, this study is anchored on the PPT argument that links poverty and tourism. Therefore, the study uses a battery of poverty measures for soundness of empirical analysis on the theme under consideration. The baseline equation (1) can be extended as follows

$$POV_{i,t} = \beta_0 + \beta_1 TR_{i,t} + \beta_2 GOV_{i,t} + \beta_3 (TR*GOV)_{i,t} + \beta_4 Z_{i,t} + \varepsilon_i \quad (2)$$

where TR*GOV= the interaction of tourism development and governance quality. All variables are in natural logarithm.

Data

This study uses unbalanced panel data for 15 Latin American countries over the period 2003–2015.⁵ The periodicity is due to data availability constraints. Following recent tourism-poverty literature [Zhao \(2020\)](#), [Zhao and Xia \(2020\)](#), and [Folarin and Adeniyi \(2019\)](#), three poverty indicators, namely, poverty headcount, poverty gap index, and severity of poverty SPOVG, have been used to proxy poverty reduction. According to the world bank, (i) the poverty headcount index is measured as a percentage of the population living below the poverty line. The world bank defines the poverty line as \$1.9 per person per day (in 2011 international purchasing power parity (PPP)). However, the main drawback of the indicator is that it fails to capture extreme values in the poverty headcount ([Folarin and Adeniyi, 2019](#)). Hence, in order to control for tails of the poverty reduction, poverty headcount index is complemented with two more poverty indicators that are designed to capture extreme values in poverty headcount index, poverty gap index, and severity of poverty. (ii) Poverty gap index is an indicator of poverty which measures the percentage of the poor fall short of the poverty line. (iii) severity of poverty denotes the square of poverty gap index.

Consistent with tourism literature that examined the influence of tourism on poverty reduction, we use two tourism indicators, namely, international tourism receipts and international tourist arrivals. For example, [Folarin and Adeniyi \(2019\)](#) used international tourism receipts as a proxy of tourism development to examine the effect of tourism on poverty reduction. Likewise, [Zhao \(2020\)](#), [Kim et al. \(2016\)](#) and [Zhao and Xia \(2020\)](#) used both tourism indicators, namely, international tourism receipts and international tourist arrivals, to examine the effect of tourism on poverty reduction.

Following institutions-tourism literature, we use six governance indicators: political stability, rule of law, voice accountability, regulatory quality, control of corruption, and governance effectiveness. However, to avoid multicollinearity problems, we use PCA to construct a governance quality index (GOV) ([Table1](#)). For instance, [Ghalia et al. \(2019\)](#) used six governance indicators to examine the influence of institutional quality on tourism development. Following previous studies that examined the relationship between tourism and poverty, the current study uses six control variables: trade openness, inflation, population growth, Gini coefficient, human capital, and gross domestic product per capita. [Folarin and Adeniyi \(2019\)](#) argued that based on the pro-poor theory, as

Table 1. Principal component analysis for governance quality index (GOV).

	PCA1	PCA2	PCA3	PCA4	PCA5	PCA6
Eigenvalue	4.319	0.927	0.478	0.121	0.084	0.069
% of variance	0.720	0.154	0.079	0.020	0.014	0.011
Cumulative%	0.720	0.874	0.954	0.974	0.988	1.000
Variable	Vector 1	Vector 2	Vector 3	Vector 4	Vector 5	Vector 6
GE	0.439	0.071	-0.429	0.769	0.114	0.10
RQ	-0.1478	0.987	0.044	0.01	0.022	0.016
VA	0.464	0.085	0.1065	-0.05	-0.285	-0.825
RL	0.461	0.08	-0.127	-0.316	-0.645	0.496
CC	0.454	0.07	-0.268	-0.519	0.667	0.032
PS	0.387	0.008	0.844	0.184	0.207	0.243

Note: GE: governance effectiveness; RQ: regulatory quality; VA: voice accountability; RL: the rule of law; CC: control of corruption; PS: political stability, PCA: principal component analysis.

GDPpc increases, the different poverty measures are expected to reduce. Likewise, [Vo and Nguyen \(2020\)](#) documented that trade openness can be an essential factor in promoting economic growth. Moreover, [Folarin and Adeniyi \(2019\)](#) argued that the poor are expected to benefit from trade gain as the country becomes more open. TOP is measured as the sum of imports and export divided by gross domestic product. [Folarin and Adeniyi \(2019\)](#) argued that inflation (INFL) represents the macroeconomic stability of countries, so increasing inflation might contribute to exacerbating poverty. Human capital development (HC) is another control variable. As [Zhao and Xia \(2020\)](#) explained, an improvement in human capital development is expected to reduce poverty. Another control variable is the Gini coefficient (Gini index). As argued by [Zhao \(2020\)](#), to reduce poverty, inequality must be targeted and reduced. Therefore, an increase in the Gini index is expected to worsen poverty. Values range from 0 to 100, with 0 implying inequality in income distribution and 100 denoting absolute equality in income distribution. The other control variable is population growth (Pop). As documented by [Chakravarty et al. \(2006\)](#), population growth is likely to reduce per capita income growth and well-being; therefore, it is expected to increase poverty.

The required data on both tourism indicators (international tourist arrivals and international tourism receipts), three poverty indicators (poverty headcount index (POVH), POVG, and SPOVG), TOP, inflation (INFL), and GDPpc was sourced from the World Development Indicators (WDI) of the World Bank. While data on political stability, the rule of law, voice accountability, regulatory quality, control of corruption, and governance effectiveness were collected from the World Governance Indicators (WDIs) of the World Bank. Moreover, data on human capital index (HC) was collected from the Penn World Table version 9.0.

Theoretically, this new index for governance quality captures most of the information in the original data set, which consists of six governance indicators. The results from the principal component analysis are exhibited in [Table 1](#). As shown by eigenvalue, the first factor of principal component is 72% of the standardized variance, 15.4%, 7.9%, 2%, 1.4%, and 1.1% account for the second, third, fourth, fifth, and sixth factors of the principal component. This means that the first principal component explains the variations better and therefore is the better measure of governance quality in this case.

Methodology

According to the nature of the data, which is a panel of 15 Latin American countries over the period 2003–2015, this study follows econometric panel techniques that are suitable for panels with large N and small T. We proceed with cross-sectional dependence (CD) tests, then conduct a unit root and cointegration tests, before carrying out the panel long-run estimates. As argued by [Ahmed et al. \(2021\)](#), several issues are associated with panel data. Moreover, the authors documented that CD must be addressed before applying the estimation techniques. [Adeola and Evans \(2020\)](#) highlighted that ignoring the CD can yield a meaningless outcome. For CD analysis, [Pesaran \(2004\)](#) method is used, as reported in [Table 2](#). The estimation results show the presence of CD in our data. Next, this study employs [Pesaran's \(2004\)](#) cross-sectional augmented Dickey-Fuller test to examine the unit root properties of the variables. As documented by [Ahmed et al. \(2021\)](#), this test is used to avoid spurious regression. As exhibited in [Table 3](#), the estimation revealed that the variables have unit root properties at first difference. As argued by recent studies (see, for instance, [Canh et al., 2020](#); [Canh and Thanh, 2020](#); [Khan et al., 2020](#); [Le and Nguyen, 2020](#); [Nguyen et al., 2020](#)), the existence of cross-sectional dependence requires the use of the PCSE model estimation. It is vital to notice that PCSE is widely documented as the most appropriate approach in such context ([Jönsson, 2005](#); [Marques and Fuinhas, 2012](#)). Moreover, the PCSE model estimation has been used in recent tourism literature. For example, [Canh and Thanh \(2020\)](#) used the PCSE model estimation to examine the effect of domestic tourism on economic vulnerability. Likewise, the PCSE model estimation has been used by [Nguyen et al. \(2020\)](#) to examine the effect of tourism on income inequality. Similarly, [Le and Nguyen \(2020\)](#) used the PCSE model estimation to investigate the impact of tourism on carbon dioxide emissions.

As argued by [Zhao \(2020\)](#) and [Zhao and Xia \(2020\)](#), the persistence of poverty may result in an endogeneity problem that requires a dynamic model. Therefore, we convert our baseline model into a dynamic model using the two-system GMM estimation approach. As documented by [Adusei and Adeleye \(2021\)](#), the two-system GMM estimation approach has been proposed by [Arellano and Bover \(1995\)](#) and [Blundell and Bond \(1998\)](#). The two-system GMM estimation approach uses

Table 2. [Pesaran \(2004\)](#) cross-sectional dependence test.

Variables	Statistics	p-value
Poverty headcount (POVHC)	11.64***	0.000
Poverty gap index (POVG)	11.21***	0.000
Severity of poverty (SPOVG)	12.07***	0.000
Gini coefficient (Gini)	4.88***	0.000
TR1	8.59***	0.000
TR2	8.65***	0.000
Governance quality index (GOV)	5.22***	0.000
Gross domestic product per capita (GDPpc)	11.95***	0.000
Human capital (HC)	7.76***	0.000
Trade openness (TOP)	4.32***	0.000
Population (Pop)	6.19***	0.000
Inflation (INF)	3.72***	0.000

***Indicates 1% level of significance.

Note: TR: tourism receipts; TR1: International tourism receipts; TR2: International tourism, number of arrivals.

Table 3. Pesaran's cross-sectional augmented Dickey–Fuller.

Variables	Intercept	Intercept and trend
	t bar	t bar
Level		
POVHC	−4.57***	0.36
POVG	−6.32***	−3.16***
SPOVG	−8.09***	−6.08***
Gini	−3.73***	3.090
TRI	−6.02***	2.94
TR2	−4.98***	0.14
GDPpc	−4.78***	1.59
GOV	−2.06***	−3.69***
HC	1.92***	5.98
TOP	−5.41***	−0.16
Pop	−6.78***	−2.15**
INF	−7.66***	−6.06***
First difference		
POVHC	−8.28***	−9.32***
POVG	5.89***	8.91***
SPOVG	4.81***	4.51***
Gini	−6.66***	−1.25***
TRI	7.54***	3.98***
TR2	9.67***	7.33***
GDPpc	6.60***	2.57***
GOV	−10.08***	−6.62***
HC	2.67***	2.06***
TOP	2.75***	1.06***
Pop	1.25***	1.04***
INF	−2.45***	−1.32***

***Indicates 1% level of significance.

Note: POVHC: poverty headcount; POVG: poverty gap index; SPOVG: severity of poverty; Gini: Gini coefficient; TR: tourism receipts; POP: population; GDPpc: gross domestic product per capita; GOV: governance quality index; TOP: trade openness; INF: inflation; TRI: International tourism receipts; TR2: International tourism, number of arrivals.

moment conditions (instruments) that do not correlate with the regressors in the adopted model. The use of many instruments results in high asymptotic efficiency.

Tables 4 and 5 report the descriptive statistics and Pearson's correlation coefficients among the variables for our sample.⁶ As exhibited in Table 4, the poverty headcount of our sample is diverse, and it is between 0 and 28%. According to Figures 1 and 2, Honduras seems to be the poorest country followed by Venezuela. Furthermore, the mean average of the Gini coefficient is 48%, ranging from 39% to 59%, meaning severe income inequality in Latin America. This has been shown by recent studies (Shimeles and Nabassaga, 2018). According to Figures 1 and 2, Mexico has recorded the highest value in international tourism receipts, followed by Brazil, while Uruguay has witnessed the lowest value.

The correlation coefficients reported in Table 5 show that tourism development (international tourism arrivals and international tourism receipts) is negatively correlated with all poverty

Table 4. The results of the descriptive.

stats	POHC	POVG	SPOVG	TRI	TR2	GDPpc	GOV	TOP	HC	Pop	Gini	INFL
Mean	0.069	0.027	0.001	21.275	14.488	9.316	0.000	4.114	0.922	1.210	3.817	9.416
Median	0.054	0.017	0.000	21.515	14.470	9.4078	-0.357	4.135	0.941	1.234	3.826	6.389
Maximum	0.281	0.133	0.017	23.653	17.284	10.010	4.977	5.116	1.121	2.523	3.966	182.731
Minimum	0.001	0	0	18.209	12.498	8.133	-4.218	3.095	0.652	-0.071	3.594	-4.620
SD	0.056	.0283	0.003	1.151	1.024	0.476	2.078	0.440	0.111	0.497	0.086	15.047
Skewness	1.472	1.975	3.414	-0.326	0.614	-0.776	0.633	-0.076	-0.630	-0.225	-0.6041	8.254
Kurtosis	5.163	6.886	14.658	2.66	3.191	2.657	3.016	2.877	2.780	3.148	2.929	92.035

Table 5. The results of the correlation analysis.

	POVG	POVHC	SPOVG	Gini	TRI	TR2	GDPpc	HC	Pop	INF	TOP	GOV
POVG	1											
POVHC	0.927***	1										
SPOVG	0.941***	0.825***	1									
Gini	0.465***	0.544***	0.350***	1								
TRI	-0.394***	-0.435***	-0.350***	-0.202**	1							
TR2	-0.427***	-0.459***	-0.377***	-0.340***	0.613***	1						
GDPpc	-0.543***	-0.674***	-0.412***	-0.337***	0.662***	0.614***	1					
HC	-0.349***	-0.427***	-0.337***	-0.0968	0.414***	0.361***	0.631***	1				
Pop	0.546***	0.575***	0.475***	0.563***	-0.271***	-0.352***	-0.363***	-0.0859	1			
INF	0.260***	0.142	0.289***	-0.129	0.0277	0.0679	0.200*	0.0659	0.103	1		
TOP	0.233**	0.298***	0.231**	0.338***	-0.370***	-0.477***	-0.366***	-0.205**	0.595***	-0.171*	1	
GOV	-0.536***	-0.581***	-0.403***	-0.227**	0.390***	0.392***	0.523***	0.367***	-0.409***	-0.108	0.0446	1

*p < 0.05, **p < 0.01, *** p < 0.001.

Note: POVHC: poverty headcount; POVG: poverty gap index; SPOVG: severity of poverty; Gini: Gini coefficient; TR: tourism receipts; POP: population; GDPpc: gross domestic product per capita; GOV: governance quality index; TOP: trade openness; INF: inflation; TRI: International tourism receipts; TR2: International tourism, number of arrivals.

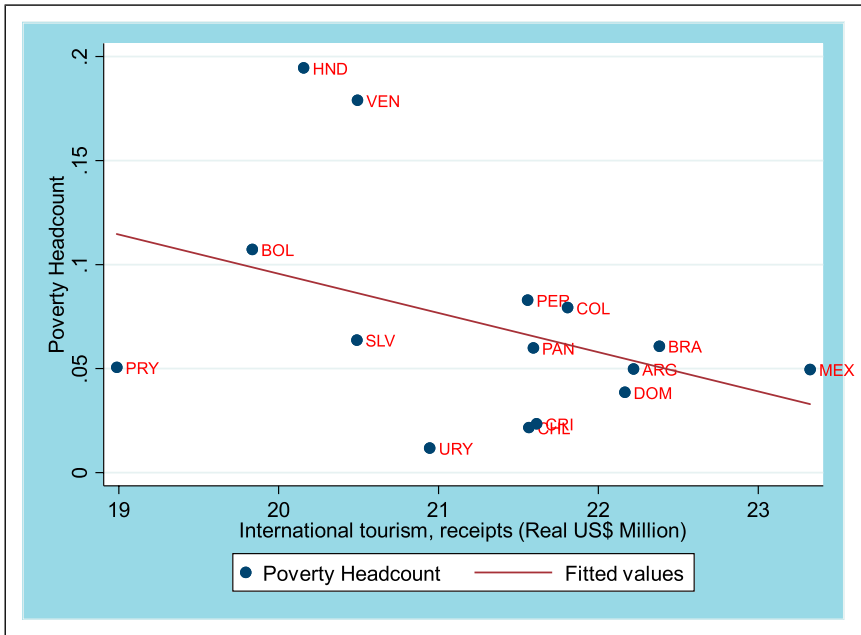


Figure 1. The relationship between tourism and poverty headcount index. Source: Authors' computation based on data set from world development indicators of the world bank.

indicators. It means that tourism can be used to reduce poverty in Latin America. Furthermore, the governance indicator is negatively correlated with all poverty indicators, showing that governance quality can reduce poverty. Interestingly, there is a positive correlation between tourism development (international tourism arrivals and international tourism receipts) and the governance quality index. This means that as governance quality increases, tourism development also increases.

Empirical findings and discussion

The baseline results are estimated using the fixed-effect (FE) model presented in Table 6. As exhibited in Table 6, the F-test of joint significance of the individual FE model rejects the null hypothesis, indicating that the FE model outperforms pooled OLS. As shown in Table 6, the results show that the Gini coefficient has a positive and statistically significant effect on poverty. This means that the Gini coefficient contributes to exacerbating poverty in Latin America. As Shi et al. (2020) argued, income inequality remains an essential socio-economic indicator that has become a concern for both advanced and emerging countries. According to the United Nations Development Programme, Latin America remains the unequal continent in the world (Shimeles and Nabassaga, 2018). However, Fang et al. (2020) documented that severe income inequality could cause social instability, which will negatively affect tourism development. This corroborates the findings of Folarin and Adeniyi (2019) who examined the influence of tourism development on poverty reduction in 36 Sub-Saharan African countries and used the Gini coefficient as a control variable. The estimated coefficient of gross domestic product per capita was negative and statistically significant. This implies that as economic growth increases,

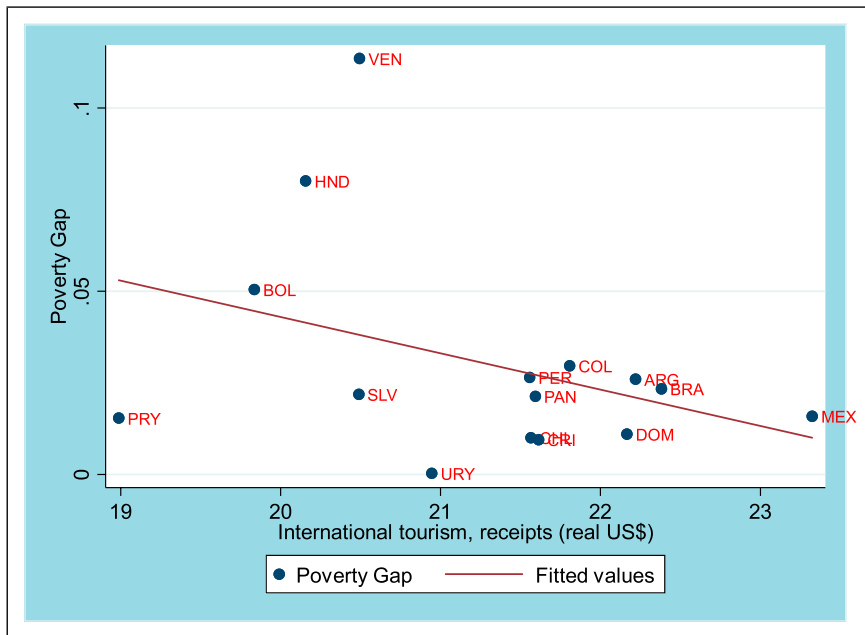


Figure 2. The relationship between tourism and poverty gap index. Source: Authors' computation based on data set from the world development indicators of the world bank.

poverty reduces. This result is consistent with the findings of [Folarin and Adeniyi \(2019\)](#) and [Zhao and Xia \(2020\)](#) who conclude that economic growth significantly contributes to poverty reduction.

The findings also show that human capital appears to have a negative and statistically significant effect on poverty, implying that human capital development increases, poverty reduces. Recently, [Olopade et al. \(2019\)](#) indicate that investing in education and health can help to improve the living standards of people and societal welfare. The findings are consistent with the previous results of [Attanasio et al. \(2017\)](#) and [Olopade et al. \(2019\)](#) who show that a massive investment in education and health can reduce poverty in developing countries.

The estimated coefficient of population growth was positive and statistically significant, signifying that population growth contributes to exacerbating the level of poverty. Our findings are in line with [Chakravarty et al. \(2006\)](#), who indicated that population growth could negatively affect income, which in turn can exacerbate poverty.

Regarding our variable of interest, the study shows that tourism development has a positive and statistically significant effect on poverty, meaning that tourism exacerbates poverty. Furthermore, it means that tourism development benefits more rich people than poor people. This has been explained by [Incera and Fernandez \(2015\)](#) who argued that the contribution of tourism development to poverty reduction depends on how low-income households are involved in tourism activities. Likewise, our findings have been explained by [Chi \(2020\)](#) who documented that if the economies are reliable to tourism activities and profit the low-income households, therefore, tourism can contribute to poverty alleviation. This finding is consistent with the results of [Kim et al. \(2016\)](#) [Oviedo-García et al. \(2019\)](#) who examined the influence of tourism on poverty reduction for 69 developing countries and the Dominican Republic, respectively. However, it is essential to note that our result contradicts many previous empirical findings

Table 6. Results of FE estimations (Baseline).

	Poverty headcount index		Poverty gap index		Severity of poverty	
	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE	(6) FE
Gini	0.049** (0.004)	0.044* (0.012)	0.058** (0.003)	0.011* (0.012)	0.012** (0.002)	0.017*** (0.005)
TR	0.016* (0.002)	0.013* (0.053)	0.012** (0.015)	0.013* (0.073)	0.008** (0.066)	0.021* (0.006)
GOV	-0.019** (0.032)	-0.0015* (0.015)	-0.017** (0.009)	-0.027* (0.008)	-0.019** (0.012)	-0.014* (0.069)
GDPpc	-0.016* (0.017)	-0.022*** (0.016)	-0.013*** (0.029)	-0.026*** (0.014)	-0.029*** (0.018)	-0.015*** (0.027)
HC	-0.017* (0.001)	-0.019** (0.014)	-0.027* (0.017)	-0.018* (0.015)	-0.011* (0.001)	-0.018** (0.005)
Pop	0.019* (0.011)	0.021* (0.008)	0.011* (0.016)	0.016*** (0.015)	0.018* (0.025)	0.004* (0.093)
INF	0.171** (0.029)	0.171** (0.009)	0.160** (0.001)	0.151** (0.026)	-1.480*** (0.001)	-1.400*** (0.002)
TOP	0.023 (0.004)	0.018 (0.011)	0.015 (0.019)	0.007 (0.013)	0.028 (0.033)	0.055 (0.009)
Constant	20.72* (1.190)	23.13** (2.103)	13.80 (1.501)	15.53* (1.712)	159.5** (5.127)	172.0** (7.755)
F-test	13.12***	12.96***	23.91***	24.75***	24.38***	25.19***
N	161	161	154	154	154	154

Note: The results are estimated based on the fixed-effect model. Standard errors are in brackets. *, **, and *** indicate significant levels at 10%, 5%, and 1%, respectively.

(Folarin and Adeniyi, 2019; Zhao, 2020) who support the view that tourism development can help to reduce poverty through increased income. Zhao (2020) argued that the discrepancy among previous empirical studies can be attributed to their data, estimation techniques, model specification, variables, and sample periods.

The results reveal that governance quality has a negative and statistically significant effect on poverty, implying that higher quality of governance would reduce poverty. This finding is consistent with previous studies (see, e.g., Zhao, 2020) who emphasized the role of good governance on poverty reduction.

In Table 7, we add the interaction term between governance quality and tourism. The results reveal that the interaction term enters with a negative and significant coefficient, meaning that tourism and governance quality have complementary effects in lessening poverty in Latin America. As Nguyen et al., (2020a) argued, a better reform in the tourism sector could contribute to equal income distribution, reducing poverty in developing countries. Moreover, Siakwah et al. (2020) documented how tourism governance could help to achieve the Sustainable Development Goals (SDGs), which remain the priority of policymakers and governments around the world. Recently, based on the data reported by the world governance indicators, Xu et al. (2021) documented that institutions in developing countries are weak. However, Kunawotor et al.

Table 7. Results of FE estimations (interaction).

	Poverty headcount index		Poverty gap index		Severity of poverty	
	(1) FE	(2) FE	(3) FE	(4) FE	(5) FE	(6) FE
Gini	0.024** (0.005)	0.011* (0.002)	0.039*** (0.003)	0.0025* (0.001)	0.018** (0.006)	0.042** (0.000)
TR	0.012** (0.005)	0.034*** (0.004)	0.028** (0.005)	0.014* (0.009)	0.027*** (0.002)	0.012* (0.005)
GOV	-0.058* (0.025)	-0.065** (0.038)	-0.063** (0.036)	-0.035*** (0.011)	-0.029* (0.014)	-0.035*** (0.012)
TR*GOV	-0.024** (0.002)	-0.036* (0.006)	-0.028** (0.001)	-0.016*** (0.002)	-0.014* (0.007)	-0.021** (0.006)
GDPpc	-0.031* (0.003)	-0.058*** (0.000)	-0.048*** (0.007)	-0.032*** (0.001)	-0.085*** (0.005)	-0.075*** (0.004)
HC	-0.071** (0.005)	-0.025** (0.006)	-0.011* (0.002)	-0.028* (0.005)	-0.016* (0.003)	-0.022** (2.16)
Pop	0.024** (0.004)	0.027* (0.008)	0.022 (0.001)	0.015** (0.003)	0.042 (0.005)	0.011 (0.007)
INFL	0.013** (0.006)	0.011** (0.007)	0.024** (0.001)	0.021** (0.00)	0.027*** (0.002)	0.016*** (0.004)
TOP	-0.016* (0.005)	-0.035** (0.000)	-0.022* (0.001)	-0.025* (0.009)	0.057 (0.007)	0.018 (0.006)
Constant	16.74*** (0.035)	21.53* (0.091)	12.95** (0.045)	15.58** (0.066)	148.9* (0.094)	167.4** (0.022)
F-test	12.03***	11.52***	21.12***	21.83***	21.56***	22.24***
N	161	161	154	154	154	154

Note: The results are estimated based on the fixed-effect model. Standard errors are in brackets. *, **, and *** indicate significant levels at 10%, 5%, and 1%, respectively.

(2020) argued that implementing better institutions in these developing countries could mitigate poverty and inequality.

Regarding other variables, similar results can be deduced in terms of the effects of population growth, human capital, economic growth, Gini coefficient, tourism development, and governance quality on poverty, but the magnitude of the impact differs compared to the results reported in Table 6. In addition, the results show that trade openness seems to have a negative effect and statistically significant effect on poverty, signifying that an increase in trade openness contributes to reducing poverty. However, the result unveils that inflation appears to worsen poverty in Latin American countries.

Robustness check

To ascertain the robustness of our results, we use alternative estimation techniques, namely, the two-system GMM estimation approach and the PCSE approach, which accounts for the issue of endogeneity and the issue of cross-sectional dependence, respectively.

Table 8. Robustness checks using two-step system GMM estimations (with robust standard error).

	Poverty headcount index		Poverty gap index		Severity of poverty	
	TR1	TR2	TR1	TR2	TR1	TR2
L.Poverty	0.393*** (0.000)	0.960*** (0.000)	0.474** (0.000)	0.738* (0.000)	0.733*** (0.002)	0.992*** (0.000)
Gini	0.012*** (0.001)	0.015* (0.021)	0.031* (0.002)	0.018* (0.007)	0.021** (0.009)	0.011* (0.001)
TR	0.0193*** (0.001)	0.065* (0.014)	0.025** (0.001)	0.018* (0.004)	0.014* (0.002)	0.016*** (0.003)
GOV	0.025** (0.003)	-0.015*** (0.012)	-0.091* (0.015)	-0.017** (0.001)	0.025*** (0.009)	-0.027** (0.009)
TR*GOV	-0.021* (0.034)	-0.074*** (0.012)	-0.036** (0.005)	-0.031** (0.001)	-0.039* (0.003)	-0.015* (0.002)
GDPpc	-0.025** (0.007)	-0.032* (0.0023)	-0.018*** (0.001)	-0.076* (0.001)	-0.022** (0.005)	-0.018* (0.003)
HC	-0.022** (0.024)	-0.037* (0.019)	-0.012** (0.003)	-0.023** (0.001)	0.016** (0.001)	-0.023** (0.005)
Pop	0.532* (0.047)	0.128** (0.003)	0.011*** (0.004)	0.013* (0.001)	0.036** (0.019)	0.018* (0.00)
INFL	0.269 (0.004)	0.063 (0.002)	0.021 (0.009)	0.017 (0.002)	0.019* (0.002)	0.018* (0.001)
TOP	0.286 (0.020)	0.024 (0.004)	0.019 (0.008)	0.009 (0.006)	0.015 (0.003)	0.016 (0.002)
Constant	2.386*** (0.007)	31.67** (0.003)	21.95** (0.059)	4.798** (0.054)	27.6** (0.094)	19.2** (0.005)
AR(2) <i>p</i> -value	0.212	0.233	0.156	0.192	0.232	0.156
Hansen test <i>p</i> -value	0.977	0.974	1.000	0.997	0.999	1.000
No. of obs.	134	134	126	126	126	126

Note: The results are estimated based on a two-system GMM model. Standard errors are in brackets. *, **, and *** indicate significant levels at 10%, 5%, and 1%, respectively.

Issue of potential endogeneity

We account for endogeneity in the panel by using the two-system generalized method of moments (GMM) model. The two-system GMM estimation results disclosed in Table 8 are consistent with the fixed-effect estimation results. The results reveal that the estimated coefficient of lagged dependent variable is significant and positive. This means that poverty persists in Latin American countries. Our finding agreed with Folarin and Adeniyi (2019) and Zhao and Xia (2020) who used the same econometric approach to examine the influence of tourism development on poverty reduction and revealed the persistence of poverty in developing countries, especially in Africa and China, respectively. We find that human capital, governance quality, and economic growth enter positively and significantly, implying that human capital development and economic significantly contribute to reducing poverty. We also find that the Gini index, tourism development, and population growth positively and significantly affect poverty. This means that as the Gini index, tourism development and population growth increase, poverty also increases. Moreover, the interaction term between tourism and governance quality is

Table 9. Robustness checks using PCSE estimations.

Dependent variable	Poverty headcount index		Poverty gap index		Poverty of poverty	
	TR1	TR2	TR1	TR2	TR1	TR2
Gini	0.023*** (0.002)	0.034*** (0.01)	0.027** (0.001)	0.024* (0.002)	0.022** (0.017)	0.012** (0.013)
TR	0.042** (0.002)	0.022** (0.007)	0.034* (0.001)	0.034** (0.001)	0.028* (0.012)	0.021** (0.001)
GOV	-0.026* (0.002)	-0.050** (0.022)	-0.026*** (0.009)	-0.044* (0.005)	-0.023** (0.003)	-0.019** (0.002)
TR*GOV	-0.038* (0.001)	-0.0049* (0.013)	-0.047*** (0.003)	-0.034** (0.029)	-0.029** (0.014)	-0.042** (0.007)
GDPpc	-0.052** (0.001)	-0.038* (0.006)	-0.034** (0.012)	-0.023*** (0.002)	-0.026* (0.005)	-0.041** (0.015)
HC	-0.037* (0.009)	-0.019*** (0.004)	-0.031** (0.001)	-0.023*** (0.006)	-0.024*** (0.007)	-0.028** (0.003)
Pop	0.034* (0.005)	0.035** (0.002)	0.013* (0.005)	0.026** (0.012)	0.0028** (0.008)	0.019** (0.001)
INFL	0.027 (0.007)	0.029 (0.005)	0.019 (0.002)	0.011 (0.004)	0.035 (0.001)	0.025 (0.003)
TOP	-0.048 (0.028)	-0.015 (0.009)	-0.037 (0.002)	-0.032 (0.004)	-0.036 (0.007)	-0.039 (0.071)
Constant	5.041*** (0.042)	2.594*** (0.045)	1.967*** (0.062)	0.635** (0.003)	0.124*** (0.008)	0.055*** (0.011)
N	164	164	157	157	157	157
R-squared	0.603	0.626	0.672	0.693	0.452	0.465
Number of countries	15	15	15	15	15	15

Note: The results are estimated based on the PCSE model. Standard errors are in brackets. *, **, and *** indicate significant levels at 10%, 5%, and 1%, respectively.

negative and statistically significant, suggesting that tourism and governance quality have complementary impacts in mitigating poverty. However, trade openness and inflation have no effect on poverty.

The diagnostic test for the study validates the study's findings. The specification test results of the Arellano and Bond test for autocorrelation (AR (2)) reveal that the GMM estimates do not suffer from second-order serial correlation, and the Hansen test results indicate that the instruments used are not over-identified.

Issue of cross-sectional dependence

To account for cross-sectional dependence among the countries in the panel, we employ the PCSE developed by Jönsson (2005). The results exhibited in Table 9 confirm the fixed-effect estimation results. Precisely, the results revealed that economic growth, human capital, and governance quality appear to have a significant and statistically negative effect on poverty. This means that economic growth, human capital development, and governance quality could reduce poverty in Latin American countries. Likewise, the interaction term between tourism and governance quality enters with negative

and significant coefficients, signifying that tourism and governance quality have complementary impacts in diminishing poverty. On the other hand, the estimated coefficients of tourism, population growth, and Gini index were positive and significant, meaning that tourism, population growth, and Gini index significantly contribute to worsening poverty. However, the results unveil that trade openness and inflation do not affect poverty.

Moreover, we exclude Mexico and Nicaragua from the list of Latin American countries. The findings are very similar to the ones reported earlier. For brevity, these results are not reported but are available on request.

Conclusion

According to [Kim et al. \(2016\)](#), it is difficult to answer whether tourism contributes to reducing poverty. Moreover, [Saayman et al. \(2012\)](#) argued that to understand the relationship between tourism and poverty reduction, methodology development should be considered. However, more recently, [Zhao \(2020\)](#) argued that the empirical evidence on the relationship between tourism and poverty reduction is sparse. Moreover, the author argued that the findings of these few studies remain mixed and inconclusive in the extant literature. Against this backdrop of these highlighted studies, the primary aim of this study was to conduct an econometric assessment of the moderating effect of governance quality on the relationship between tourism and poverty reduction in Latin America. This assessment will enable us to understand better the role of governance quality on the tourism-poverty reduction nexus. It is important to highlight that reducing extreme poverty is prioritized by the United Nations.

In this study, we use panel data for 15 Latin American countries from 2003 to 2015. Consistent with tourism literature ([Adeola and Evans, 2020](#); [Folarin and Adeniyi, 2019](#)), international tourism receipts and international tourism arrivals have been used in this study to measure tourism development. Moreover, we use three poverty indicators: poverty headcount, poverty gap index, and severity of poverty. In addition, political stability, governance effectiveness, rule of law, voice accountability, regulatory quality and control of corruption have been used in this study. Moreover, we use PCA to construct a governance quality index to avoid multicollinearity problems. The findings show that governance quality appears to have a negative and statistically significant effect on poverty. However, the findings show that tourism has a positive and statistically significant impact. More interestingly, the result shows that the interaction effect of tourism and governance quality has a negative and statistically significant effect.

Theoretical contributions

Although there is a clear theoretical relationship between tourism development and poverty reduction, the empirical study remains highly limited. As documented by [Zhao \(2020\)](#), there are a few empirical studies on the nexus between tourism and poverty reduction. However, the findings of these studies remain mixed and inconclusive. Those mixed results call for further investigation especially by taking into consideration of the new factors that can influence the Latin American economies. Therefore, the current study extended the inquiry into the moderating effect of governance quality on the relationship between tourism development and poverty alleviation.

Practical contributions

As a recommendation from a policy standpoint, the policymakers and leaders should strengthen their institutions to promote tourism development, which will create jobs opportunity and other trickling

effects of increased income level and better welfarism in the investigated blocs. As argued by Folarin and Adeniyi (2019), the tourism sector is labor-intensive. Given the findings of this study, the governments or policymakers can provide a heavy investment in education and health which can help to curb the level of poverty. Furthermore, to reduce poverty, the governments or policymakers can provide a valuable policy to tackle inequalities issues. As Shi et al. (2020) documented, inequality remains a significant concern for both developed and developing countries. However, the conclusions of the panel data estimations are limited since they are general. Therefore, future studies on this subject can focus on the effects of tourism and governance on poverty in specific countries (e.g., the top tourism nations) using time series techniques once data become available for a more extended period.

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Notes

1. <https://www.reuters.com/article/us-latam-poverty-idUSKCN1P92T0>
2. <https://news.un.org/en/story/2020/06/1066412>
3. <https://www.reuters.com/article/us-latam-tourism-wttcs-idUSKBN26132A>
4. Pro-poor tourism (PPT) is an alternative strategy that outlines the pertinent role of tourism development in alleviating poverty among income divide especially low-income setting across the world.
5. Sample size is restricted to availability of data and for unbalanced dataset for estimation.
6. List of Latin America countries selected for the study: Peru, Argentina, Bolivia, Brazil, Chile, Columbia, Costa Rica, Dominican Republic, El Salvador, Honduras, Mexico, Panama, Paraguay Uruguay, and Venezuela

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