Exploring governance effectiveness, tourism development and poverty reduction relationship in SAARC countries using panel dynamic estimation

Imtiyaz Ahmad Shah

Abstract

Purpose – *The present study aims to examine the moderating impact of governance quality on the tourism poverty nexus using a panel of six South Asian Association for Regional Cooperation (SAARC) countries during the period 2002 to 2019.*

Design/methodology/approach – *For the soundness of the results, fully modified ordinary least square (FMOLS) and dynamic ordinary least square (DOLS) econometric models were applied to determine the long-run relationship.*

Findings – *The findings confirmed the positive and significant impact of tourism development (international tourism arrival) and governance quality (effectiveness of governmental services) on poverty (per capita household consumption) reduction. Interestingly results confirm that governance quality and tourism development have complementary impacts on poverty reduction.*

Originality/value – *The present study has twofold contributions; First, despite the high potential of SAARC tourism, research remains limited in studies examining the role of tourism and governance quality on poverty reduction within the SAARC region. As a result, the present paper presents critical insights into the impact of tourism inflow and governance quality on poverty reduction in South Asian countries. Second, to the best of the author's knowledge, this is the first attempt to conduct an econometric analysis to examine the role of governance quality on the relationship between tourism inflow and poverty reduction in SAARC countries.*

Keywords SAARC, FMOLS, DOLS, Tourism, Poverty, Governance

Paper type Research paper

Imtiyaz Ahmad Shah is based at the University of Kashmir, Srinagar, India.

1. Introduction

Eradication of poverty, the first agenda in the United Nation's sustainable development goals (SDGs), represents one of the most critical global challenges people face. Achieving greater human development requires reducing extreme poverty. Through various efforts, global poverty reduction has seen significant progress—but poverty is far from being eliminated. Notably, the COVID-19 pandemic has taken large restrictions on international initiatives around poverty eradication (Zhang *et al.*, 2023). The domestic supply and demand shocks brought on by the Covid-19 epidemic have had devastating impacts in South Asia. This resulted in a decrease in domestic employment bringing falling consumer demand for manufactured goods, agricultural products like fruits and vegetables and the stoppage of building and other construction projects (Makun and Jayaraman,

2022). Tourism development has long been considered a potential tool to alleviate poverty (Zhang et al., 2023). Further, tourism requires less infrastructure and technology than manufacturing, thus many developing countries have expressed enthusiasm about fostering the tourism industry.

The pro-poor tourism (PPT) concept has been adopted by several scholars, including Ashley et al. (2001) and Roe et al. (2001). The concept calls for increased participation of low-income households in tourism activities, which will offer up new opportunities (Ashley et al., 2001). While some studies support the idea that tourism promotes job creation and interconnection with other industries, it can also play a significant role in engaging the poor, resulting in a pro-poor relationship (Croes and Rivera, 2015). Others contend that tourism increases the price of non-tradable commodities. Poor individuals suffer when certain items are included in their consumption baskets (Blake et al., 2008). More tourism inflows, according to Hazari and Nowak (2003), enhance the value of the currency, rendering exports incompatible on the world market. If poor individuals work in other export-oriented businesses, the increase in the exchange rate may have an impact on them. According to Wattanakuljarus and Coxhead (2008), if the tourism industry is labour-intensive, it can help alleviate poverty. Furthermore, tourism earnings can be used for development purposes, such as the construction of social infrastructures such as health care and education (Croes and Rivera, 2015; Sharma et al., 2021). As a result, the emphasis has turned away from the relationship between tourism development and economic growth and towards a more dynamic aspect of the tourism industry, such as how it relates to poverty reduction.

Several researchers, including Chou (2013), Chiu and Yeh (2017), Wu and Wu (2019, Balcilar et al. (2020), Pan and Dossou (2020), Tecel et al. (2020), Adedoyin et al. (2021) have identified the role of tourism inflow to the economic development of both developing and developed countries and found tourism significantly promotes the economic growth. Scholars recently advocated that governments in developing countries promote tourism to increase human development and sustainable development (Sharma et al., 2021). It helps to alleviate poverty since this sector has a huge multiplier effect in terms of increasing foreign exchange income, job creation and promoting tourism-related supply industries. These initiatives help to alleviate poverty in the country (Croes and Vanegas, 2008; Sharma et al., 2021). However, academic research on the relationship between poverty reduction and tourism development is still lacking in depth. There is conflicting information regarding whether or not tourism development benefits the poor (Sharma et al., 2021).

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The theoretical argument for the importance of good governance in poverty reduction is not conclusive in the literature. There is no proper acceptable definition and different authors used

different concepts and mechanisms while arguing the importance of good governance (Jindra and Vaz, 2019). Some of the nonexhaustive arguments in the literature suggest that increased public service accountability and efficiency indirectly lead to better economic outcomes and poverty reduction (Earle and Scott, 2010). Another mechanism is that more efficient public institutions provide an environment that is more conducive to private sector development and indirectly leads to inclusive growth (Earle and Scott, 2010; Jindra and Vaz, 2019). Generally, it is argued that countries that follow certain rules of good governance can use resources more efficiently and develop faster to help the most vulnerable section of society (Dellepiane-Avellaneda, 2010). Governments have simultaneously acknowledged the potential of tourism to promote economic growth and potential to alleviate poverty in tourist regions (Mowforth and Munt, 1998; Sharpley and Telfer, 2002). Tourism is an open industry with low barriers to entry, and it is subject to a number of social, political, environmental, socioeconomic and technological trends that bring both risks and opportunities (Vanegas Sr and Croes, 2015). Tourism is also considered a fragmented industry, with only a few big businesses capable of giving leadership. Tourism services are mainly provided by micro, small and medium-sized businesses, while huge multinational corporations control some areas, such as aviation (Dredge, 2006). In the absence of private leadership, governments at the federal and state levels frequently act as a link between the many private sector firms that operate within a region (Scott et al., 2008). However, when governments become involved in tourism, competing agendas create another obstacle to efficient governance. Governments have an impact on the tourism industry in a variety of ways, including aviation market regulation, border security, control of tourist destinations like national parks and beaches and support infrastructures like convention centres and motorways (Burns, 2004). Each of these roles may be administered by separate government sectors, with conflicting goals, resulting in conflict or the exercise of power.

Tourism is typically overlooked as a key issue requiring excellent policy and governance, therefore little attention is devoted to its coordination within the government (Scott and Marzano, 2015). The necessity of cooperation and coordination in the planning and growth of the tourism industry is thus widely acknowledged. One of the main reasons for the necessity to coordinate the requirements and interests of various stakeholders in the development of tourism is the recognised high level of fragmentation that characterises the tourism industry. Stakeholder communication regarding decisions made throughout the tourism planning process is crucial if tourism is to act as a catalyst for poverty alleviation (Slocum and Backman, 2011). Further good governance can eliminate rural-urban dualism and optimise tourist resource allocation in an economy. It also boosts tourist growth by eliminating local protectionism and expanding market access for tourism inflows. Increased tourism inflow, on the other hand, generates domestic currency appreciation as a manifestation of market failure, erodes the market competitiveness of tradable commodities and inhibits the capacity to produce employment possibilities for lower-income people. According to Zhao (2020), governance and tourism may have either replacing or complementing effects on poverty reduction. When tourism and governance complement one another, the poverty-relieving effect of tourism inflow is enhanced. On the other hand, if governance and tourism are substitutes, then effective government institutions erode tourist development's pro-poor effect. Few research in the tourism literature has investigated the moderating mechanism of government quality on the tourism-poverty relationship. As a result, further research is needed to determine how the impact of tourist growth differs depending on the quality of institutions in a country, particularly in the SAARC region.

With this in mind, the current study aims to analyse the relationship between governance, tourism and poverty alleviation in SAARC countries. The SAARC region was chosen because of its high tourism potential and significant poverty dynamics. SAARC countries depend heavily on the tourism industry to generate jobs. It employs one out of every 10 people in the economy, with the tourism industry employing approximately 296 million in 2019 (World Bank, 2020). It provides an opportunity for export earnings at a time when SAARC exports are nearly flat and South Asian countries face intense competition from China in the consumer goods industry (Makun and Jayaraman, 2022). SAARC countries accounted for around 18% of worldwide tourism arrivals in 2019, with 262 million tourists (UNWTO, 2020). The tourist industry is viewed as a job creator and contributor to aggregate demand, suggesting that national income rises (Nowak et al., 2007).

The following are the contributions that the current paper seeks to make. First, despite the region's great tourism potential, tourism research remains inadequate in terms of studies exploring the effect of tourism and governance quality on poverty reduction. As a result, the current paper provides vital insights into the impact of tourism inflow and governance quality on poverty reduction in emerging economies. Second, to the best of the author's knowledge, this is the first attempt to do an econometric analysis of the role of governance quality in the relationship between tourism inflow and poverty reduction in SAARC nations. The major goal of this study is to investigate the impact of governance quality and tourist inflow on poverty reduction in selected SAARC countries using annual data from 2002 to 2019. The further study examines the moderating role of governance effectiveness on the tourism–poverty relationship using interactive terms between governance effectiveness and tourism inflow. To estimate long-run relations between the interested variables, the current study used dynamic ordinary least squares (DOLS) and fully modified ordinary least squares (FMOLS). The rest of the paper is structured as follows: Section 2 provides a summary of past empirical investigations; Section 3 examines data and technique sources; Section 4 presents the results and discussions; and Section 5 concludes the paper.

2. Literature review

There is a variety of research on the PPT approach. The approach advocates fostering relationships between tourism inflows and poverty reduction (Zhao, 2014). Developing countries have considered tourism to boost economic growth and eradicate poverty based on this approach. According to Folarin and Adeniyi (2019), emerging economies' openness could aid in poverty reduction through tourism expansion. According to Medina-Muñoz et al. (2016), the PPT impact can be observed in the tourist industry through leisure, food, transportation and accommodations. Tourism, on the other hand, according to Erskine and Meyer (2012), can help to eliminate poverty by supporting manufacturing, agriculture and other service industries. Tourism has a substantial positive impact on other areas of the economy (Brida et al., 2016). It helps in the reduction of income inequality and unemployment (Blake et al., 2008). Scholars such as Akama and Kieti (2007), Agarwal (2012), and Pratt (2014), on the other hand, have validated the negative impact of tourism inflows on economic growth and poverty reduction. The main explanations for the negative impact of tourism inflow on economic growth and poverty are ineffective government policies and environmental issues. Profits from the tourism industry do not exceed net losses sustained by local residents, resulting in a general loss of well-being (Lindberg et al., 2001). Other research, such as Oh (2005) and Akama and Kieti (2007), confirmed that tourism inflows have an insignificant impact on economic growth and poverty.

Empirically, Garza-Rodrguez (2019) employed an autoregressive distributed lags (ARDL) cointegration model with a structural break to examine the relationship between global tourism and the severity of poverty between 1980 and 2017 in Mexico. The study confirms the long-run relationship between tourism inflow and poverty reduction. It was discovered that household consumption increased by 0.46% for every 1% rise in international tourism (and, therefore, poverty decreases). Further Toda-Yamamoto Granger causality confirms a unidirectional causal relationship between tourism inflow and poverty reduction. Croes and Vanegas (2008) examine the relationship between tourism inflow, and economic growth in Nicaragua using cointegration and causality tests. The findings show that there is a long-run relationship between the variables. Further study found a causal relationship between tourism to poverty reduction and a bidirectional relationship between GDP and poverty. Using the system generalised method of moments (system GMM) estimation technique Folarin and Adeniyi (2019) examine the effects of tourism on poverty reduction in Sub-Saharan African countries. The authors validate the pro-poor effect of tourism.

Jiang et al. (2011) investigate the relationship between GDP per capita and tourist intensity in small island developing states (SIDS) in the Asia Pacific, the Caribbean and Africa. Tourism intensity, which is the ratio of tourist inflow to local residents, is used as a proxy for the tourism industry, and human development index (HDI) is used as a proxy for poverty. The study discovered a correlation

between tourist intensity and HDI as well as a positive correlation between tourism intensity and GDP per capita. In Nicaragua, Croes and Vanegas (2008) examined the long-term relationship between poverty, economic growth and tourism from 1980 to 2004 using the VAR model. They used the headcount ratio as a proxy for poverty, GDP as a proxy for economic growth, and tourism receipt as a proxy for tourism development. Their research reveals a causal relationship between tourism and reduced poverty as well as a causal relationship between economic growth and poverty. However, the short-term effects of the variables were not taken into account in their analysis.

However, the authors discover that income disparity is increasing due to tourism in both urban and rural areas. Similarly, Njoya and Seetaram (2018) similarly investigated the effects of tourism on the Kenyan economy using a computable general equilibrium (CGE) model. The results show that tourism effectively lowers poverty in both urban and rural areas. Urban regions experience a higher influence.

Sharma et al. (2021) used annual data from 1970 to 2018 to analyse the relationship between the tourism inflow and the alleviation of poverty in India. The Granger causality test was to test the direction of causality, and the ARDL bound testing was used to investigate the existence of the long-run relationship. The results of the ARDL test indicate that economic growth and tourism development reduce poverty in both the short- and long-run. The causality test confirms the unidirectional causal relationship between tourism development and poverty alleviation in India. Shah et al. (2022) examine the impact of tourism development on poverty reduction in South Asia during 1995–2019. Household consumption expenditure was used as a proxy for poverty measures. Using three variants of the panel ARDL model, the study confirms that tourism inflow has a positive and significant impact on household consumption and therefore reduces poverty.

Governance has recently been identified as a major determinant of poverty reduction. Sacks and Levi (2010) examined the role of government effectiveness in poverty reduction in 17 Sub-African models using a multi-level model in 2005. Poverty was measured by the infant mortality rate. The authors confirmed that excellent governance has a positive impact on reducing infant mortality rates. The author also discovered that countries with effective governance have higher adult literacy, higher per capita income, and better water quality. Henderson et al. (2003) examined the relationship between public institutions and poverty reduction for 29 middle-income and developing countries during 1970–90 using Evans-Rauch data. The author discovered that more efficient governmental institutions result in faster poverty reduction.

Daoud et al. (2016) explored the impact of natural disasters and quality institutions on child poverty in 67 middle and low-income countries. The study confirms the positive significant impact of good governance on poverty reduction. The further negative impact of natural disasters on child poverty disaster is independent of the level of the institution. Using the multilevel Probit model, Jindra and Vaz (2019) investigated the relationship between governance quality and poverty in 71 countries during 2009–2014. Poverty was defined by the global multi-poverty index and governance was proxied by the government effectiveness index. The author found that governance had a direct positive impact on poverty reduction for the entire sample. When the sample was separated by medium and low-income countries, the author discovered that poverty reduction was primarily driven by middle-income countries. In contrast, poverty levels in low-middle-income countries were stable.

Governance is viewed not just as a significant determinant of poverty alleviation, but also as a catalyst for the tourism–poverty relationship. Using the fixed effect model (FE) and generalised method of moments (GMM), Dossou et al. (2021) examined the role of governance quality on the tourism–poverty relationship in Latin America during 2003–2005. Authors found that governance quality reduces the poverty and tourism development increases the poverty level. Further, the study confirmed the complementary effects of tourism and governance quality on poverty reduction. Zhao (2020) investigates the impact of tourism inflow as well as the interactive effect of institutional quality on tourism–poverty relationships in 29 Chinese provinces. The author

discovered a negative and significant effect of tourism and institutional quality on both absolute and relative measures of poverty. However, the study confirms the substitutability nature of governance and tourism in poverty reduction. the positive moderating effect of institutional on the tourism–poverty relationship using the sys GMM approach. Further research reveals that tourism and institutional quality have a negative and considerable impact on both absolute and relative poverty.

The literature review revealed that the impacts of both tourism and governance quality on poverty reduction are inclusive. The findings vary across panels and the nature of proxies. Thus, it is improper to extrapolate findings from one country to another. Given the inclusiveness, the empirical investigation of the relationship between tourism development, governance institutions and poverty reduction in the SAARC region can offer additional insights. Further, no study on the SAARC region examines the role of the institution in the tourism–poverty nexus in the SAARC region. Therefore, the results of this study are novel and allow us to frame important policy implications for the SAARC region.

3. Methods and data

The present study examined the influence of tourist development and governance effectiveness, as well as their combined impact on poverty reduction in the selected SAARC countries (India, Pakistan, Nepal, Bangladesh, Sri Lanka and Nepal) from 2002 to 2019. The sample time was chosen due to the availability of continuous time series data for these countries, particularly for the governance index. In this study, the major variables of interest are poverty, tourism and governance quality.

3.1 Poverty

Measuring poverty is a difficult task. Poverty is defined by the World Bank as "the inability to obtain a minimal standard of life as measured in terms of basic consumption needs" (World Bank, 1990). Simply put, a person is poor if he or she is unable to meet the basic necessities of existence (Sharma et al., 2022). Although to date researchers are still debating on the best poverty measure, with some advocating for a multidimensional measure as the best poverty measure, no agreement has been reached. Taking this continuous debate into account, this study employs household consumption expenditure. Household consumption expenditure measures income poverty. Although other indexes could be used to measure poverty in a multidimensional form, such as the HDI. Such measures could not be used in the current study due to insufficient time-series data. The same applies to other income poverty measures, such as poverty headcount, poverty gap and poverty gap squared. The idea behind this proxy is that increasing household consumption directly impacts the poor. The same proxy is used by Odhiambo and Nyasha (2020), Ho and Iyke (2018), Garza-Rodriguez (2019), Sharma et al. (2021) and Shah et al., (2022) while measuring poverty.

3.2 Tourism development

In literature two proxies are used for tourism development namely tourism expenditures and the number of tourists inflow in the country. In the present study, the number of visitor arrivals was utilised as a proxy for tourism development. Folarin and Adeniyi (2020), and Sharma et al. (2021) used the same proxy.

3.2.1 Governance quality. There is no universally acknowledged definition of good governance. One of the most common definitions is related to the World Bank. Governance is defined as "(1) the process by which governments are selected, monitored and replaced, (2) the capacity of the government to effectively formulate and implement sound policies and (3) citizens' and the state's respect for the institutions that govern economic and social interactions amongst them" (Kaufmann et al., 2010; Jindra and Vaz, 2019). This concept, however, has been attacked for being

extremely broad, encompassing the entire area of politics and for failing to distinguish between good governance and liberal democracies (Jindra and Vaz, 2019). Given the current disagreement, this article focusses on one specific component of the World Bank's definition: the government's ability to successfully create and implement solid policies (Jindra and Vaz, 2019). Based on this, the study utilised one widely used indicator of good governance, government effectiveness as measured by the worldwide governance indicators (WGIs). The government effectiveness indicator is designed to measure perceptions of the credibility of the government's commitment to such policies, the quality of public services, the civil service's performance and degree of independence from political pressures and the formulation and implementation of policies (Jindra and Vaz, 2019). Jindra and Vaz (2019) used this proxy to examine the relationship between governance and poverty. Further, Andlib and Salcedo- Castro (2021) utilise the same proxy to investigate the influence of tourism and governance on carbon dioxide emissions in selected South Asian nations.

3.2.2 Control variables. Following previous works that identified poverty reduction and tourist development, the current paper used four control variables: GDP per capita income, population, inflation and trade openness. Folarin and Adeniyi (2020) identified that an increase in the GDP per capita of a country reduces all forms of poverty. Chakravarty *et al*. (2006) argued that an increase in population reduces the per capita income growth of the country and therefore is expected to increase the poverty of the country. Folarin and Adeniyi (2020) documented that inflation represents the macroeconomic stability of a nation, and an increase in inflation might increase the poverty of the nation. Likewise, Folarin and Adeniyi (2020) and Vo *et al*. (2020) argued that trade is essential in promoting economic growth and that the poor are expected to gain from more open economies.

3.2.3 Model specification. The model specification of the present study follows Zhao and Xia (2020) and Dossou *et al*. (2021) but differs with the variables included. The general specification is as,

$$POV_{it} = \alpha_0 + \alpha_1 TOR_{it} + \alpha_2 GOR_{it} + \alpha_3 PCY_{it} + \alpha_4 TRADE_{it} + \alpha_5 INF_{it} + \alpha_6 POP_{it} + \mu_{it} \qquad (1)$$

POV is the independent variable of the study and indicates poverty reduction in SAARC countries. Poverty was assessed by household consumption expenditure. GOR signifies the level of government quality. The current study used governance effectiveness as a measure of governance quality, which included the quality of public services. The expected sign of governance quality is expected to be positive showing that an increase in governance performance in South Asian countries increases household consumption and therefore reduces the poverty. TOR represents tourist development. The expected sign of tourism development is to be positive on household consumption (or negative on poverty reduction). PCY denotes economic development and is proxied by GDP per capita income. It is expected that an increase in economic development reduces all types of poverty and therefore the expected sign of PCY is expected to be positive on household expenditure. INF is inflation and represents macroeconomic stability. An increase in inflation is expected to increase poverty in the country. Therefore the expected sign of inflation is negative on household consumption. POP shows the population of the country. The expected sign of population is negative on household consumption as an increase in population reduces the GDP per capita of the country. TRADE shows the total trade of the country and is expected to positively impact household consumption.

Further, the paper aims to examine the moderating impact of governance quality on the poverty tourism relationship. Following Dossou *et al*. (2021), the baseline equation (1) can be modified to capture the impact of governance quality on the tourism poverty relationship as;

$$POV_{it} = \alpha_0 + \alpha_1 (GOR*TOR)_{it} + +\alpha_2 PCY_{it} + \alpha_3 TRADE_{it} + \alpha_4 INF_{it} + \alpha_5 POP_{it} + \mu_{it} \qquad (2)$$

Where *GOR * TOR* is an interaction between governance quality and tourism inflow, the interaction term examines the collective impact of tourism inflows and governance quality on poverty

reduction. If the sign of interaction term is positive, it shows that governance quality and tourism complement each other in increasing household consumption. On the other hand, a negative coefficient implies that governance quality and tourism act as substitutes for increasing household consumption (Zhao and Xia, 2020).

The description of variables is given in Table 1. The required data on international tourism inflow, poverty reduction measured by household per capita consumption, GDP per capita, population, inflation and total trade as a percentage of GDP (a proxy for trade openness) was sourced from world development indicators (WDI). In contrast, the quality of public services as a measure of governance quality was obtained from WGIs.

3.2.4 Methodology. Because of the structure of the data, which is a balanced panel of six SAARC countries from 2002 to 2019, this paper employs robust econometric panel DOLS and FMOLS techniques. The first study conducted panel unit root tests using IPS and LLC to investigate the order of integration and data stationarity. For each variable, the tests are employed to determine the order of integration or number of differencing operations to make the variable stationery.

After the unit root test, the cointegration test is used to determine the long-run relationship between variables with long-term characteristics. The study uses Pedroni (2004) and the Kao Residual cointegration test (1999) to investigate long-run cointegration amongst variables. The Pedroni test permits slope coefficients to differ between countries and presented seven different types of tests to ensure slope heterogeneity across the countries. The Kao Residual cointegration test assumes panel homogeneity and cross-sectional independence (Tian *et al*., 2021). Pedroni and Kao's test is based on the null hypothesis of no cointegration and the alternative hypothesis of panel cointegration.

Finally, the study uses ordinary least squares (DOLS) and fully modified ordinary least squares (FMOLS), to estimate Models 1 and 2. These techniques quantify the long-run relationship amongst variables. DOLS allows for solving the problem of endogeneity and serial correlation present in ordinary least squares (OLS). The OLS, estimates are consistent in the cointegrating panel data series. FMOLS allows residuals to be heterogeneous across countries. It is a non-parametric test and robust to autocorrelation. FMOLS modifies the OLS to remove endogeneity bias from cointegration relationships amongst variables (Saboori and Sulaiman, 2013). Therefore, the results of FMOLS are efficient and unbiased (Alam and Murad, 2020). On the other hand, the DOLS estimator is parametric and takes the lag of the first difference of the lag term. Therefore, it avoids the problem of endogeneity and small sample bias. Also, the DOLS model works well even when variables are available in different orders.

4. Results and discussion

The results start with the descriptive statistics of variables to provide an overview of the variables used in the present study. Table 2 presents the descriptive statistics of the interested variables of

Table 1	Variable description		
Variable	*Symbol*	*Description*	*Source*
Poverty	POV	Households and NPISHs final consumption expenditure per capita (constant 2015 US$)	WDI
Tourism	TOR	International tourism, number of arrivals	WDI
Per capita income	PCY	GDP per capita (constant 2015 US$)	WDI
Governance quality	GOR	Government Effectiveness: Estimate	WGI
Population	POP	Population (total)	WDI
Inflation	INF	Inflation, consumer prices (annual %)	WDI
Trade	TRADE	Trade (percentage of GDP)	WDI

Source(s): Author's Calculation from World Bank

Table 2 Descriptive statistics

Variable	Mean	Median	Maximum	Minimum	Std. Deviation
POV	10.62	10.76	12.21	8.54	1.01
PCY	3.14	3.09	3.62	2.75	0.23
GOR	−0.305	−0.21	0.78	−105	0.47
POP	7.63	7.43	9.13	5.78	1.03
TOR	5.74	5.76	7.25	3.78	0.75
TRADE	1.71	1.66	2.07	1.42	0.168
INF	0.78	0.78	1.42	−0.18	−1.05

Source(s): Authors calculation

the model. The mean value of the log of per capita consumption is 10.62, and the log of tourism inflow is 5.72. Moreover, the mean value of the log of GDP per capita is 3.14, the mean value of governance is −0.305, the mean value of the log of the population is 7.63, the mean value log of trade is 1.71 and the mean value of the log of Inflation is 0.78.

After the descriptive statistics, unit root tests were performed to determine the stationary order of variables. The results of the unit root tests are presented in Table 3. The findings confirm that all variables used in the present study have unit roots and are stationary at first difference except the governance variable. The results confirm that the variables under study are in I(1) and I(0) order; therefore, panel models are suitable for data analysis.

After confirming that all variables in the current study are I(1) and I(0), the next step is to investigate the long-run equilibrium relationship between variables to avoid spurious or biased regression results. Table 4 shows the results of the panel cointegration test. Four Pedroni tests confirm long-run cointegration amongst variables. Further, the Kao test also validates the long-run cointegration. As a result, the variables in the current study have a robust long-run relationship.

After examining that variables have long-run cointegration, the next paper uses DOLSs and fully modified FMOLSs, to estimate Models 1 and 2. The results of DOLS and FMOLS are presented in Table 5. The results confirm the positive and significant impact of tourism inflow on household welfare. The partial regression coefficient of tourism inflow is about 0.10 in both FMOLS and DOLS and confirms that a 1% increase in tourism inflow leads to a 0.10% increase in tourism welfare. The favourable impact of tourism arrivals on household consumption demonstrates the importance of tourism arrivals in poverty reduction. It so verifies the traditional idea that tourism growth is a positive effect in South Asia. Our findings are consistent with those of Kim *et al*. (2016), Oviedo-Garc'a *et al*. (2019), Dossou *et al*. (2021) and Shah *et al*. (2022). Incera and Fernandez (2015) explained this by arguing that the impact of tourism development on poverty reduction is dependent on the extent to which poor people participate in tourism activities. Similarly, Chi (2020) showed how tourism may contribute to poverty alleviation if countries rely on tourism activities and

Table 3 Unit root test

Variable	Levin, lin and chu		Im, pesaran and shin		Decision
	At level	At difference	At level	At difference	
POV	2.155	−2.16**	3.766	−3.847***	I(1)
PCY	0.396	−2.41***	1.758	−1.74**	I(1)
GOR	−3.786***	−8.014***	−2.839***	−5.624***	I(0)
POP	0.298	−3.238***	3.709	−3.282***	I(1)
TOR	3.497	−3.253***	0.192	−2.673***	I(1)
TRADE	0.165	−6.681***	−0.027	−2.889***	I(1)
INF	−0.064	−3.027***	1.681	−1.762**	I(1)

Note(s): *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$
Source(s): Author's calculation

Table 4 Cointegration test

. Pedroni Cointegration Test
Common AR coefs. Within dimension

	Statistic	Prob	Statistic	Prob
Panel v-Statistic	−2.067055	0.9806	−1.873720	0.9695
Panel rho-Statistic	−0.467686	0.3200	0.763228	0.7773
Panel PP-Statistic	−7.388488***	0.0000	−4.473403	0.0000***
Panel ADF-Statistic	−1.401773*	0.0805	−2.225251	0.0130**

Individual AR coefs. Between-dimension

	Statistic	Prob
Group rho-Statistic	2.140657	0.9838
Group PP-Statistic	−8.466576***	0.0000
Group ADF-Statistic	−4.358105***	0.0000

Kao's cointegration test

	t-Statistic	Prob
ADF	−3.522243	0.0002

Note(s): *p < 0.10, **p < 0.05, ***p < 0.01
Source(s): Authors calculation

Table 5 Panel long run estimators

	FMOLS				DOLS			
Variable	Coeff	Std error	Coeff	Std error	Coeff	Std error	Coeff	Std error
Cross			0.021*	0.006			0.072*	0.013
TOR	0.102***	0.017			0.101***	0.024		
GoR	0.029*	0.028			0.076**	0.041		
PCY	0.646***	0.088	0.777***	0.112	0.442***	0.159	0.474***	0.169
POP	1.37***	0.356	1.749***	0.476	2.936***	0.849	3.726***	0.881
TRADE	−0.018	0.059	−0.149*	0.075	−0.006	0.106	−0.125	0.113
INF	−0.027	0.017	0.001	0.023	0.004	0.031	−0.003	0.035

Note(s): *p < 0.10, **p < 0.05, ***p < 0.01
Source(s): Authors calculation

profit from low-income households. According to Nguyen *et al*. (2020), better tourism reform could assist developing countries to achieve more equitable income distribution and reduce poverty.

The coefficient of governance quality is positive and statistically significant, implying a higher value of governance quality increases household per capita consumption and reduces poverty in the SAARC region. Zhao (2020) and Dossou *et al*. (2021) also confirm the negative impact of governance quality on household poverty. Kunawotor *et al*. (2020) and Xu *et al*. (2021) stated that stronger institutions could reduce poverty and inequality in developing countries. Governance quality in the present study is measured by government effectiveness which measures the quality of public services delivery, the competence of public officials, the extent to which public servants are free from political pressures, efficiency in the formulation and implementation of public policies and governments commitments to deliver these services on time (Kaufmann *et al*., 2010). According to the findings of our study, improvement in government effectiveness is important for increasing household consumption and reducing poverty. It helps to ensure income for poor people through social services. It increases the better infrastructure in poor areas, enhances educational outcomes for marginalised people and lowers the crimes and corruption affecting the poor. Most importantly, it improves the effectiveness of redistribution policies (Azfar, 2005).

Institutional reforms also reduce the power of special interest groups that control the economy and therefore allow marginalised sections of society to part in policy matters, lower the risk of uncertainty and improve the delivery of public services. In conclusion, a better quality of institutions and efficient bureaucracy is likely to reduce poverty in the SAARC region.

Tourism inflow and governance quality have a positive and statistically significant interaction effect on household per capita consumption, implying that tourism inflow and governance quality have a complementary effect on increasing household consumption and thus help to reduce poverty levels in South Asia. The interaction term results indicate that as government effectiveness improves, the marginal impact of tourism development on household consumption continues to increase. The increased efficiency of rural institutions boosts economic growth, reducing poverty and supporting tourism development. Nguyen et al. (2020) argued that better institutional reforms in the tourism sector could reduce inequality and thus poverty in developing countries. Furthermore, Siakwah et al. (2020) demonstrated how tourist governance could help achieve the SDGs, which continue to be a top priority for policymakers and governments worldwide. The interaction term results are consistent with the findings of Dossou et al. (2021). The authors also discovered a complementary impact of tourism development of institutional quality on Latin American poverty reduction.

In terms of the other control variables, GDP per capita shows that increasing GDP per capita by one per cent increases per capita household consumption by 0.44%–0.66%. Recent research, including Folarin and Adeniyi (2019) and Zhao and Xia (2020), confirmed the same findings. The findings support the pro-poor growth hypothesis in the SAARC region. According to the hypothesis, poor people benefit from the grains of economic growth via the trickle-down effect. Growth is said to be pro-poor if it absorbs labour and is accompanied by programmes and policies that reduce inequalities and increase employment opportunities for the poorest members of society. The population has a significant and positive impact on the welfare of households. Our findings contradict those of Chakravarty et al. (2006) and Dossou et al. (2021). The increase in population may increase the country's labour force, stimulating economic growth and poverty reduction. More research confirms the hypothesis that an increased population leads to increased technological progress (Mankiw, 2010). Inflation and trade have a negative and insignificant impact on household consumption. The disparity between previous empirical studies, according to Zhao (2020), is due to differences in data, model definition, estimate methodology, sample periods, variables and their proxies.

5. Summary and conclusion

Economic policymakers benefit from studying the economic determinants of regional poverty because they can use empirical data to reduce poverty. Furthermore, it provides sufficient evidence to help in the achievement of the goal of sustainable development, which is to eradicate poverty worldwide. Recently, the tourism industry has been recognised as an important contributor to poverty reduction. However, it is difficult to say whether tourism inflows contribute to poverty reduction (Kim et al., 2016). Furthermore, Saayman et al. (2012) argued that methodology development should be taken into account when studying the tourism–poverty relationship. Zhao (2020) recently confirmed that the empirical literature on the tourism-poverty relationship is limited, and the empirical findings of these few studies are inconclusive and mixed in the poverty–tourism literature (Dossou et al., 2021). To address this gap, the current study sought to conduct an econometric analysis of the moderating effect of governance quality on tourism–poverty relationships. From 2002 to 2019, panel data from six SAARC countries were used in this study. International tourism arrival was used as a proxy for tourism development, which is consistent with tourism literature. Furthermore, given the lack of data on poverty indicators in SAARC countries, the paper uses household consumption to measure poverty reduction. Governance effectiveness was also used as a proxy for governance quality. Furthermore, as control variables, population, trade openness, inflation and GDP per capita were used. The paper's findings confirm that governance quality has a positive and statistically significant effect on per

capita household consumption, and thus contributes to poverty reduction. The findings also show that tourism inflows have a positive and significant impact on household consumption. Further, the results confirm that the interaction effect of governance quality and tourism is negative and statistically significant and confirms that good governance complements tourism in poverty reduction in the SAARC region. Furthermore, the control variables population and GDP per capita have a statistically negative impact on poverty reduction.

5.1 Policy implications

The study recommends the following policy implication to enhance the pro-poor effect of tourism development in the SAARC region. In the recent decade, the region has made significant progress in tourist development and continues to grow at a far quicker rate than any other place in the world. Tourism has made a significant contribution in countries such as the Maldives, Sri Lanka, Nepal, and, to a lesser extent, India. However, much more needs to be done for countries such as Pakistan and Afghanistan, where poverty is widespread and the country is endowed with both natural and man-made resources that encourage tourism development. There is a need for well-developed community-based tourism that offers livelihood opportunities for marginalised sections of society and ensures equitable benefits through efficient local government and decision-making. Although SAARC countries has low governace score as compared to other trading blocks, still empirical findings confirms the positive and significant impact of governance on poverty reduction. Therefore, policymakers should strengthen the quality of institutions to promote tourism development, which creates job opportunities and other trickling effects of increased income and welfare for poor peopleof society. While formulating public policies, policymakers must consider all features of effective government, including prioritisation of public services, free from political pressure and strict policy implementation rules. Authorities who execute public programmes must be accounted for regularly to ensure public power is not misused. The improved overall quality of governance may enhance the marginal impact of tourism development on poverty reduction. Thus, policymakers should recognise the moderating role of the tourism-poverty nexus both at local and national levels. Apart from the determinants of governance and tourism, the other factor that must be addressed to reduce poverty is economic growth. The policymakers should provide heavy investment in health and education to help reduce poverty levels.

5.2 Limitations/future research gap

The current study looks at the direct impact of tourism inflows, governance quality and other control variables on poverty reduction from a macroeconomic standpoint. However, the relationship is a multi-dimensional, including other areas like climate change, moral economy, eithics, political economy can be further research areas. In addition, there is a direct relation between poverty, inequality and economic growth. Therefore, further research should explore the link of inequality in tourism, poverty and governance relationship. Further, present study wholly lie on secondary data and has various limitations. First, due to the lack of time series data for SAARC countries, it was not possible to consider the potential impact of different types of tourism on poverty reduction. Second, the paper fails to address the importance of domestic tourism in these countries. Estimating the impact of international tourism inflows, on the other hand, is critical because global tourism inflows are a significant source of foreign exchange earnings and exogenous growth drivers. Further research should use the impact of both domestic and international tourism on poverty reduction. Third, rather than a poverty variable or multidimensional poverty measure, the current study uses household consumption as a proxy for poverty. However, due to a lack of data within SAARC countries, these variables cannot be used. The study highly recommends the use of other measures of poverty, when data becomes available to check the robustness of results. Fourth, to avoid multicollinearity issues, the current study used government effectiveness as a proxy for governance quality, ignoring other indicators of governance factors such as political stability, the rule of law, corruption control and so on. Future research should focus

on developing a governance quality index to assess governance quality. Lastly, the countries in the SAARC region have different tourism and governance structures, individual country studies can be a further research problem.

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Corresponding author

Imtiyaz Ahmad Shah can be contacted at: shahimtiyazccas@gmail.com