

IMPACT OF TOURISM ON POVERTY REDUCTION IN UPPER MIDDLE-INCOME COUNTRIES

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ABSTRACT

The objectives of this study were twofold: Firstly, to investigate the impact of tourism on poverty alleviation in upper middle-income countries. Secondly, to find out the influence of the complementarity between tourism and economic growth on poverty alleviation in upper middle-income countries. The study used dynamic GMM approach econometric estimation tool with panel data ranging from 2003 to 2016. Earlier research on the influence of tourism on poverty reduction produced mixed results and never focused on upper middle-income countries, which mainly over rely on tourism to turn around its economic fortunes. The study introduced financial development in order to deal with the missing variable bias. Using all the three proxies of poverty, this study noted that the vicious cycle of poverty exists in the case of middle-income countries. Both tourism and financial development individually reduced poverty in upper middle-income group of countries, in line with available literature. As predicted, the complementarity between tourism and financial development had a significant impact on poverty reduction under all the three measures of poverty used in this study. Upper middle-income countries are therefore urged to develop and implement policies that concurrently enhances both tourism and financial development in order to significantly reduce poverty.

Keywords: Tourism, Financial Development, Poverty, Panel Data, Upper Middle-Income Countries.

INTRODUCTION

Introduction of the Study and a Discussion of the Research Gaps and Problem Statement

According to Rewilak (2017), one of the most prominent millennium development goals of the United Nations is poverty eradication. Consistent with several empirical studies such as Saayman et al., (2012), Scheyvens & Momsen (2008), Garza-Rodriguez (2019), Mthembu & Mutambara (2018), Suardana & Sudiarta (2016) and Yang (2015), tourism is one of the ways poverty reduction can be achieved.

Earlier research on the influence of tourism on poverty reduction produced mixed results. For example, the other group noted that tourism reduces poverty whilst others are of the view that poverty reduction is one of the factors that enhances tourism. Other researchers on a similar topic found out that tourism and poverty reduction affect each other, others noted that there is no relationship at all between tourism and poverty alleviation whereas another group of researchers on a similar study argue that the relationship between tourism and poverty reduction is non-linear. This means that there are factors that must be available in the tourists' receiving country before tourism receipts can have a significant positive effect on poverty reduction. It is for this reason that this study investigated whether the complementarity between tourism and financial development is a panacea for poverty reduction in upper middle-income countries. The author also noted that there is currently no study on tourism and poverty which exclusively focused on

upper middle-income countries. It is based on these arguments that the tourism-poverty nexus is not only an unsettled matter but also not yet conclusive. The findings of the study help the upper middle-income countries to enact tourism related policies that significantly contribute not only towards poverty alleviation but unemployment and income inequality reduction.

Contribution of the Paper

Although there are other similar empirical studies which acknowledges the existence of a non-linear relationship between tourism and poverty reduction such as Lei et al., (2014), Croes & Vanegas (2008) and Frenzel (2013), the author is not aware of any research that has attempted to examine the complementarity between tourism and financial development on poverty alleviation. The author is also not aware of the existence of any empirical research that exclusively investigated the influence of tourism on poverty alleviation in upper middle-income countries let alone the influence of the complementarity between tourism and financial development on poverty using upper middle-income countries as a unit of analysis. In other words, this study is the first of its kind to find out if the complementarity between tourism and financial development is the panacea for addressing poverty problem in the context of upper middle-income group of countries.

Organization of the Research

Section 2 discusses the review of related literature. Both theoretical and empirical literature is discussed in this section. Section 3 is the trend analysis of tourism and poverty variables of upper middle-income countries (2003-2016). Section 4 presents the research methodological framework, performs data analysis and interprets the results. Section 5 concludes the paper.

LITERATURE REVIEW

According to Medina-Munoz et al., (2016), tourism is an important source of economic advantages which includes income generation, increase in gross domestic product and employment generation. Their study noted that the economic impacts of tourism is divided into the following three categories, namely the direct effect, indirect effect and the dynamic influence.

Firstly, the direct effect is when the expenditure in tourism increases tourism related income generation, gross domestic product of the country and improves employment levels in the economy (Mitchell, 2012). Secondly, the indirect effect is when the economy benefits from (1) the induced influence of spending of business profits and tourism wages and (2) the purchase of inputs from other related companies to supply tourists and tourism related firms. According to Blake et al., (2008), tourism is not only an important source of export earnings and foreign currency generation but leads to increased investment in tourism infrastructure, skills levels and a spur in the general level of economic activities in the country.

A sample of recent empirical research work that focused on the impact of tourism on poverty are discussed in Table 1 below.

Author	Country/Countries of study	Period	Methodology	Results
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Saayman et al., (2012)	South Africa	2001-2015	General equilibrium model	Both international and domestic tourism expenditure contributed towards poverty alleviation in South Africa. The study also revealed that tourism should be complemented by policies which enhances human capital development if its impact on poverty alleviation is to be significant.
Scheyvens & Momsen (2008)	Small Island States	25 year period	Panel data analysis	Tourism had a significant positive influence towards poverty reduction.
Garza-Rodriguez (2019)	Mexico	1980-2017	Autoregressive Distributive Lag (ARDL) Co-integration Approach	Using both ARDL and Toda Yamamoto Granger causality approaches, the study noted that poverty reduction was accelerated by increase in international tourism in Mexico.
Yang (2015)	China	Past two decades	Critical analysis of literature	Tourism provided supplementary income and new job opportunities to the rural area of Yunnan province of China.
Mthembu & Mutambara(2018)	South Africa	2001-2016	Quantitative data analysis	Both domestic and international tourism positively contributed towards increase in job opportunities, income generation and job opportunities in South Africa.
Suardana & Sudiarta (2016)	Tulamben, Candidasa and Karangasem district in Indonesia	2014/2015	Quantitative descriptive analysis	International tourism enhanced opportunities to secure employment across all the three districts of Indonesia.
Toerien (2020)	South Africa	2015/2016	Descriptive data analysis	Poverty alleviation was enhanced by the increase in international tourism inflows.
Njoya & Seetaram (2018)	Kenya	2018	Quantitative data analysis	The impact of tourism on poverty reduction was found to be uneven. The study also noted that the influence of tourism on poverty reduction in Kenya was marginal.
Neri and Soares (2012)	Brazil	1991 and 2000 microdata	Quantitative data analysis	The influence of tourism on poverty eradication efforts was found to be very minimal in Brazil.
Muchapondwa (2013)	Botswana, South Africa and Namibia	2011 microdata	Descriptive analysis	Although tourism was found to have had a positive impact on poverty alleviation in all the three countries, its influence on poverty reduction was more pronounced in South Africa in comparison to in Namibia and Botswana.
Rotarou (2014)	Zanzibar	1985-2014	Descriptive analysis	The study revealed that the impact of tourism on poverty reduction was very minimal in Zanzibar.
Wasudawan & Ab-Rahim (2017)	Malaysia	2015 Microdata	Quantitative data analysis	Tourism development was found to have enhanced entrepreneurial activities, employment generation and increased household income.
Kuuda and Adongo	Ghana	Microdata	Descriptive	The study noted that tourism in Ghana

(2012)		for different years	analysis	contributed to poverty reduction through employment creation.
Ondicho (2017)	Kenya	Survey data	Descriptive analysis	The benefits of tourism were found to be quite minimal in Kenya although tourism was acknowledged to be a central pillar towards poverty eradication.
Frenzel (2013)	German	Literature review analysis	Literature review analysis	Consistent with existing literature, tourism was found to have a positive effect on poverty reduction through expanding gross domestic product, enhancing employment opportunities and entrepreneurial activities.
Harrison (2008)	Not focused on a single or group of countries	Literature review analysis	Literature review analysis	The study found out that tourism is very beneficial towards enhancing poverty reduction efforts such as job creating and entrepreneurial activities.
Vanegas (2014)	Central America	1980-2012	Panel data analysis	Tourism was found to have had a significant positive effect on poverty alleviation in Central America.
Lei et al (2018)	China	Survey data for different years	Descriptive analysis	Poverty was found to have a negative relationship with tourism development and growth in China.
Garidzirai and Moyo (2020)	Newly Industrialized countries	1995-2017	Panel data analysis	Poverty was found to have been alleviated by tourism activities both in the short and long run.
Croes and Vanegas (2008)	Nicaragua	1980-2004	Vector Error Correction Model	Tourism had a significant positive effect on poverty reduction efforts through helping both private and public sector to efficiently allocate resources in the Nicaraguan economy.
Source: Author compilation				

Theoretical and empirical literature discussed in this section clearly shows that the influence of tourism on poverty is mixed and far from being conclusive. For example, the other literature says that tourism has a positive impact on poverty reduction, the other says that tourism does not have a direct effect on poverty reduction whilst the other argues that there is a feedback relationship between tourism and poverty reduction. Other literature says that tourism positive influence poverty reduction in a non-significant manner. These conflicting results proves that the literature on the influence of tourism on poverty alleviation is far from being over and conclusive. It is against this background that this study is further probing the influence of tourism on poverty reduction within the context of upper middle-income group of countries.

TOURISM AND POVERTY TRENDS IN UPPER MIDDLE-INCOME COUNTRIES

Table 2 shows the mean trends of tourism and poverty in upper middle-income countries during the period from 2003 to 2016.

Table 2 MEAN TOURISM AND POVERTY TRENDS IN EMERGING MARKETS (2003-2016)								
	PGAPI	TOUR	GROWTH	HCAP	FIN	FDI	INFR	OPEN

Argentina	2.93	6.82	10 002.22	0.82	14.16	1.77	23.30	32.44
Brazil	5.39	2.79	8 507.88	0.76	52.47	2.86	21.32	25.64
China	4.54	2.88	4 545.58	0.72	53.25	3.33	21.80	50.51
Colombia	6.71	8.05	5 466.59	0.74	43.75	3.98	16.40	36.79
Czech Republic	0.001	5.94	17 653.20	0.87	20.88	3.85	23.93	133.05
Greece	0.87	25.42	23 776.11	0.88	37.92	0.86	50.52	56.85
Indonesia	13.87	5.49	2 561.04	0.68	38.35	1.80	9.64	51.12
Mexico	2.60	4.64	8 807.97	0.78	33.60	2.61	16.73	61.21
Peru	8.04	7.76	4 638.23	0.74	43.50	4.37	9.86	48.23
Poland	0.47	5.85	11 331.03	0.84	32.13	3.43	24.64	83.42
Portugal	0.44	17.81	20 876.00	0.84	34.71	4.00	41.88	70.70
Russia	0.28	3.31	9 430.51	0.79	54.20	2.71	28.49	52.46
Thailand	0.16	12.38	4 599.90	0.73	77.24	2.82	9.71	130.11
Turkey	1.04	16.49	9 163.00	0.75	29.20	1.89	22.22	51.44
Overall mean	3.38	8.97	10 097.09	0.78	40.38	2.88	22.89	63.14

Source: Author's compilation

Brazil, China, Colombia, Indonesia and Peru had a mean poverty head count ratio which was above the overall mean poverty head count ratio of 3.38 whilst Turkey, Thailand, Russia, Portugal, Poland, Mexico, Greece, Czech Republic and Argentina had their poverty head count ratios which were lower than the overall mean poverty head count ratio. Thailand, Russia, Poland, Peru, Indonesia, Greece, Czech Republic and Colombia were outliers because their mean poverty head count ratios were far away from the overall mean poverty head count ratio of 3.38.

Argentina, Brazil, China, Colombia, Czech Republic, Indonesia, Mexico, Peru, Poland and Russia had their mean tourism receipts (TOUR) below the overall mean tourism receipts of 8.97% of GDP. The remaining countries, namely, Turkey, Thailand, Portugal and Greece had their mean tourism receipts (TOUR) higher than the overall mean tourism receipts. It is evident that Turkey, Russia, Portugal, Greece and Brazil are outliers because their mean tourism receipts deviated too much from the overall mean tourist receipts of 8.97% of GDP.

Regarding other variables such as economic growth, human capital development, financial development, foreign direct investment, infrastructural development and trade openness, the data also shows the existence of some outlier countries. In order to deal away with outliers, all the data was first transformed into natural logarithms before main data analysis, consistent with Aye & Edoja (2017).

RESEARCH METHODOLOGY, DATA ANALYSIS AND INTEPRETATION

The impact of tourism on poverty is generally modelled by equation 1.

$$POVERTY_{i,t} = \beta_0 + \beta_1 TOUR_{i,t} + \beta_2 X_{i,t} + \mu_{i,t} + \varepsilon_{it} \quad [1]$$

Where POVERTY is measured by poverty headcount ratio at US1.90 a day (2011 PPP) (% of population) whilst X stands for the control variables. β_0 , β_1 and β_2 are the intercept, co-efficient of tourism and control variables respectively. Error term is shown by ε_{it} whilst $\mu_{i,t}$ is the time invariant and unobserved country specific effect.

In order to address the second aim of whether financial development is a channel through which tourism reduces poverty in upper middle-income countries, the study employed the econometric model (see equation 2)

$$POVERTY_{i,t} = \beta_0 + \beta_1 TOUR_{i,t} + \beta_2 FIN_{i,t} + \beta_3 (TOUR_{i,t} \cdot FIN_{i,t}) + \beta_4 HCAP_{i,t} + \beta_5 GROWTH_{i,t} + \beta_6 FDI_{i,t} + \beta_7 INFR_{i,t} + \beta_8 OPEN_{i,t} + \mu + \varepsilon \quad [2]$$

β_3 is the co-efficient of the interaction term ($TOUR_{i,t} \cdot FIN_{i,t}$). If the co-efficient β_3 is negative and significant, it implies that the complementarity between tourism and financial development reduces the number of people living below the poverty datum line (reduced poverty).

In order to take into account the vicious cycle of poverty in line with Vanegas (2014), the lag of poverty was introduced (see equation 3).

$$POVERTY_{i,t} = \beta_0 + \beta_1 POVERTY_{i,t-1} + \beta_2 TOUR_{i,t} + \beta_3 FIN_{i,t} + \beta_4 (TOUR_{i,t} \cdot FIN_{i,t}) + \beta_5 HCAP_{i,t} + \beta_6 GROWTH_{i,t} + \beta_7 FDI_{i,t} + \beta_8 INFR_{i,t} + \beta_9 OPEN_{i,t} + \mu + \varepsilon \quad [3]$$

The dynamic GMM approach was used to estimate equation 3. Financial development (FIN), human capital development (HCAP), economic growth (GROWTH), foreign direct investment (FDI), infrastructure development (INFR) and trade openness (OPEN) is the list of control variables employed in the study, in line with other similar empirical research work done by (Soumare & Tchana. 2015) and Pradhan & Mahesh (2014). Stock market capitalization (% of GDP), human capital development index, GDP per capita, net FDI inflows (% of GDP), fixed telephone subscriptions (per 100 people) and total exports and imports (% of GDP) were used as measures of financial development, human capital development, economic growth, foreign direct investment, infrastructural development and trade openness respectively. These proxies of the variables were chosen in line with prior empirical research work on poverty alleviation. The independent variable (TOUR) is measured by international tourism receipts (% of exports), in line with Frenzel (2013).

This study used panel data ranging from 2003 to 2016. The data was obtained from reputable international sources such as international monetary fund, World Development Indicators, International Financial Statistics and African Development Bank. Panel unit root testing, panel co-integration tests and dynamic GMM analysis are the three consecutive data analysis procedures that were followed in this study.

The data analysis chronological order followed in this study is (1) correlation analysis, (2) panel unit root tests, (3) panel co-integration analysis and finally (4) main data analysis using the dynamic GMM analysis.

	PGAPI	TOUR	GROWTH	HCAP	FIN	FDI	INFR	OPEN
PGAPI	1.00							
TOUR	-0.654*	1.00						
GROWTH	-0.223	0.064	1.00					
HCAP	-0.439	0.342	0.234***	1.00				
FIN	-0.193*	0.653	0.012**	0.02*	1.00			
FDI	-0.148*	0.086	0.435***	0.003***	-0.345	1.00		
INFR	-.018	0.374	0.349***	0.391*	0.039	0.038**	1.00	

OPEN	-0.428	0.437	0.013***	0.038	-0.253	0.023**	0.009**	1.00
Source: Author's compilation from E-Views								
Note: ***, ** and * denote 1%, 5% and 10% levels of significance, respectively.								

Where PGAP1, TOUR, GROWTH, HCAP, FIN, FDI, INFR and OPEN represents poverty headcount ratio at US1.90 a day (2011 PPP) (% of population), tourism receipts, economic growth, human capital development, financial development, foreign direct investment, infrastructural development and trade openness respectively. Tourism, financial development and foreign direct investment were found to have a significant negative relationship with poverty headcount ratio at US1.90 a day (2011 PPP) (% of population), in line with available literature review. On the other hand, the individual relationship between poverty headcount ratio at US1.90 a day (2011 PPP) (% of population) and trade openness, infrastructural development, economic growth and human capital development was negative but non-significant. This generally agrees with theory which says that these variables have a potential to reduce poverty. Consistent with Stead (1996), there is no multi-collinearity problem because no co-efficient (ignoring the signs) in Table 2 exceed 0.7. Table 4 shows the results from panel unit root testing.

Table 4				
PANEL ROOT TESTS-INDIVIDUAL INTERCEPT				
Level				
	LLC	IPS	ADF	PP
POVERTY	-1.6494	-0.2177	2.2458	1.5693
TOUR	-2.7427	-2.7634	4.8431	3.8439
FIN	-2.7528*	-2.4527**	8.8423**	11.2783***
HCAP	1.7854	2.7543	1.1105	0.9537
GROWTH	-2.8532	-1.7854	3.9754	5.9065
FDI	-2.5643**	-3.7653***	10.8764***	8.09432***
INFR	-0.0045	-1.4539	-2.4320	-1.3848
OPEN	-1.7625	-5.380*	9.1167**	12.8729
First difference				
POVERTY	-5.6528**	-4.8726***	27.5328***	4.8634***
TOUR	-6.7823***	-5.6739***	8.7429***	9.2549***
FIN	-1.5115*	-3.8958***	15.8402***	17.8524***
HCAP	-4.0747**	-4.9880**	18.6653**	28.3737***
GROWTH	-4.8746***	-6.8734***	33.5672***	19.7853***
FDI	-5.1298***	-6.8532***	18.0095***	19.6743***
INFR	-3.5547***	-4.7842***	-5.0009***	-6.4321***
OPEN	-4.9420***	-3.0045***	18.9982**	17.0054**
Source: Author's compilation from E-Views				
Note: LLC, IPS, ADF and PP stands for Levin, Lin and Chu; Im, Pesaran and Shin; ADF Fisher Chi Square and PP Fisher Chi Square tests respectively. *, ** and *** denote 10%, 5% and 1% levels of significance, respectively.				

At level, not all variables were found to be stationary, in line with Aye & Edoja (2017). However, all the variables were found to be stationary at first difference, consistent with Garidzirai & Moyo (2020). In other words, all the variables used in this study were found to be integrated of order 1 (see Table 4 results). The nature of the panel unit root tests' results paved way for panel co-integration tests, whose results are presented in Table 5.

Hypothesised No. of CE(s)	Fisher Statistic (from trace test)	Probability	Fisher Statistic (from max-eigen test)	Probability
None	7.8530	0.7145	5.7634	0.7539
At most 1	7.8530	0.7145	6.9534	0.7539
At most 2	2.8880	0.7603	59.3456	0.0000
At most 3	88.16	0.0000	54.67	0.0000
At most 4	185.45	0.0000	108.67	0.0000
At most 5	85.05	0.0000	86.03	0.0000
At most 6	22.74	0.0002	56.93	0.0002

Source: Author's compilation from E-Views

At most 6 co-integrating vectors among the variables employed in this study were observed (see results in Table 5). The panel co-integration results mean that there is a long run relationship between and or among the variables employed in this study or the variables used in this research are co-integrated, in line with Scheyvens & Momsen (2008). These results allowed for main data analysis using the dynamic GMM methodology to take place.

Table 6 shows the research's dynamic GMM results.

	Model 1	Model 2	Model 3
<i>POVERTY</i> _{<i>i,t-1</i>}	0.1146***	-0.2956***	0.4382***
LTOUR	-0.0684*	0.0453*	-0.0014*
LFIN	-0.6534	0.6754	-0.0423***
INTERACTION TERM	-0.7538***	0.0543*	-0.0208***
LHCAP	-0.0753	0.03428	-0.6392***
LGROWTH	-0.7624	0.0218	-0.2341**
LFDI	-0.7218	0.1856***	-0.0432
LINFR	-0.0083**	0.0083	0.0320**
LOPEN	-0.7295**	0.0342	0.2178*
Adjusted R-squared	0.7104	0.7594	0.6583
J-statistic	172.00	172.00	172.00
Prob (J-statistic)	0.00	0.00	0.00

***, ** and * denote 1%, 5% and 10% levels of significance, respectively.
Source: Author's compilation from E-Views

Model 1 used poverty headcount ratio at US1.90 a day (2011 PPP) (% of population) as a measure of poverty. Model 2 used mean life expectancy at birth, total (years) as a proxy of poverty whilst mean mortality rate (per 1000 births) was employed as a measure of poverty in model 3.

Under model 1, the lag of poverty had a positive impact on poverty, a finding which supports the vicious cycle of poverty explained by Azher (1995). This means that poverty led to more poverty in the upper middle-income countries. Tourism was found to have had a significant negative effect on poverty headcount ratio at US1.90 a day (2011 PPP) (% of population). This means that tourism significantly reduced poverty in the upper middle-income countries during the under study. The results resonate with Muchapondwa (2013) in the case of South Africa, Namibia and Botswana.

Financial development had a non-significant negative effect on poverty headcount ratio at US\$1.90 a day (2011 PPP) (% of population). This means that financial development reduced poverty in a non-significant manner in upper middle-income countries during the period under study. The results generally agree with Kuznets (1955) whose study noted that financial development in middle income countries reduces poverty levels.

In model 1, the complementarity between tourism and financial development had a significant negative impact on poverty headcount ratio at US\$1.90 a day (2011 PPP) (% of population). The results show that the complementarity between tourism and financial development significantly reduced poverty in upper middle-income countries. The finding supports an argument put forward by Croes & Vanegas (2008), Let et al., (2014) and Frenzel (2013) as explained earlier in Section 2.

In model 2, initial poverty was found to have had a significant negative influence on mean life expectancy at birth, total (years), a finding which shows that poverty was exacerbated by poverty (vicious cycle of poverty). The results agree with Azher (1995). Tourism was found to have a significant positive effect on mean life expectancy at birth, total (years) which financial development had a non-significant positive impact on mean life expectancy at birth, total (years) in upper middle-income group of countries. The results imply that both tourism and financial development individually reduced poverty in upper middle-income countries.

However, the complementarity between tourism and financial development was found to have had a significant positive influence on mean life expectancy at birth, total (years) in upper middle-income countries. These results are in line with earlier studies (Lei et al., 2014; Frenzel, 2013) which agrees that the complementarity between tourism and financial development enhances poverty reduction.

In model 3, the lag of poverty was found to have a significant positive impact on mean mortality rate (per 1000 births), a finding which implies that poverty viciously perpetuates more poverty (vicious cycle of poverty by Azher, 1995). Both tourism and financial development under model 3 separately had a significant negative influence on mean mortality rate (per 1000 births), meaning to say the two variables reduced poverty in a significant manner in upper middle-income countries. In support of Frenzel (2013) and Lei et al., (2014) arguments, the mean mortality rate (per 1000 births) proxy of poverty was significantly reduced by the complementarity between tourism and financial development in upper middle-income countries.

CONCLUSION

The objectives of this study were twofold: Firstly, to investigate the impact of tourism on poverty alleviation in upper middle-income countries. Secondly, to find out the influence of the complementarity between tourism and financial development on poverty alleviation in upper middle-income countries. The study used dynamic GMM approach econometric estimation tool with panel data ranging from 2003 to 2016. Earlier research on the influence of tourism on poverty reduction produced mixed results and never focused on upper middle-income countries, which mainly over rely on tourism to turn around its economic fortunes.

Using all the three proxies of poverty, this study noted that the vicious cycle of poverty exists in the case of middle-income countries. Both tourism and financial development individually reduced poverty in upper middle-income group of countries, in line with available literature. As predicted, the complementarity between tourism and financial development had a significant impact on poverty reduction under all the three measures of poverty used in this

study. Upper middle-income countries are therefore urged to develop and implement policies that concurrently enhances both tourism and financial development in order to significantly reduce poverty.

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