



Impact of Tourism on Poverty Reduction: Evidence from an Emerging Tourism Market

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ABSTRACT

There are few studies focusing on the effect of tourism on poverty in the emerging tourism markets, however, there is no empirical evidence in Vietnam. Our paper is the first one that aims to investigate the impact of tourism on poverty with a new database collected from 61 provinces in Vietnam over the period 2010–2018. The empirical result strongly shows that tourism has a negative and significant impact on poverty in all estimated models. It means that a higher in tourism revenue can lead to a lower poverty rate in the provinces. Besides, labour force and education are found to have a negative and significant effect on poverty. Although foreign direct investment has a negative impact on poverty, however, the coefficients are not significant. Finally, we have some conclusions and implications for policymakers to sustainably reduce the poverty rate of households in the future.

INTRODUCTION

According to the common definition of the World Tourist Organization, tourism is defined as the movement of people out of their regular place of residence for no more than one consecutive year for leisure, business or other purposes (UNWTO, 1995). Tourism is one of the fastest-growing economic sectors in many countries worldwide. In 2018, tourism played an important role when generating 10% of the global GDP and nearly 10% of employment (as 292 million jobs). Tourist growth has popularly offered huge benefits, from increases in gross-output and employment creation to local economic development for far and poor communities. In 2018, according to the statistics of World Economic Forum (WEF, 2019), given a rapid speeding-up of growth, the number of international tourists worldwide reached 1.4 billion and overreach over two years compared to the previous prediction. Especially, this year also noted as the seventh year in a row where the growth in tourism exports (as 4%) exceeded the growth in merchandise exports (as 3%). Tourism is under-

stood as a "smokeless industry" that has helped tens of millions of people in many regions out of poverty.

In recent years, besides a blooming economic growth (Tung, 2019), Vietnam has been considered one of the emerging tourism markets with rapid growth as well as recognized as a "rising star" on the world tourism map. Located in the Southeast Asia region, Vietnam has some strengths need for booming tourism. Firstly, this country has a long development history of over 4000 years with many dynasties. Secondly, Vietnam has a population is over 97 million people (2019) including 54 ethnic communities with many rich and diverse cultural heritage in many different locations. Thirdly, located in the tropical region, this country has a long coastline nearly 3300 km having many scenic spots, beautiful bays and natural islands. Finally, Vietnam has recognized 24 natural tangibles and 12 intangible cultural heritages and 4 heritage sites by the United Nations Educational Scientific and Cultural Organization (UNESCO). Besides, this tourism industry has more than 3000 national heritage sites and 7500 community heritage sites (Sieu, 2018). Specifically, in 2019, Vietnamese tourism continues to achieve the Asian Leading Destination title for the second consecutive year voted by the World Tourism Awards (WTA). Based on many strengths, the tourism sector has developed strongly over the past two decades and has an important role in socio-economic developing strategy and reducing the poverty targets in Vietnam. Over the years, foreign tourists coming to Vietnam have increased by a double-digit rate and brought tremendous benefits in improving the socio-economic indicators.

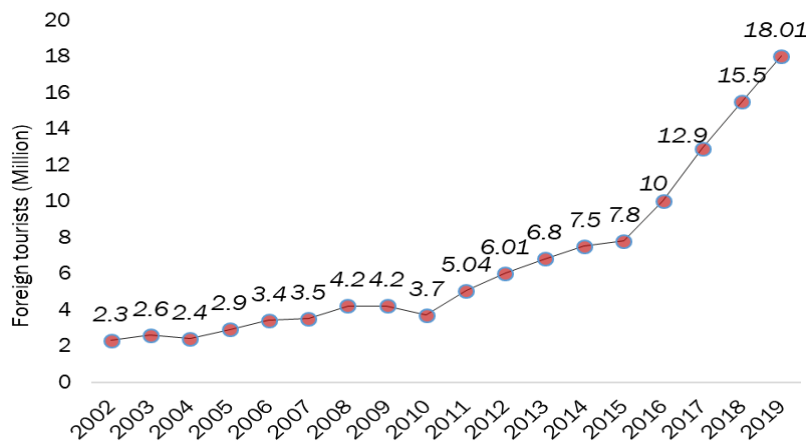


Figure 1. The number of foreign tourists to Vietnam in 2002-2019

Source: General Statistic Office of Vietnam, 2019

The statistics of the Vietnam National Administration of Tourism have clearly demonstrated a strong increase in the number of foreign tourists over time and have been particularly prone to a sharp rise over the past 10 years (see Figure 1). In detail, the number of foreign visitors reached a new record at 18.01 million in 2019 and nearly 4.2 times higher than in 2009 as well as nearly 8 times higher than in 2002. Furthermore, in 2019, tourism revenue reached VND 726 trillion (equivalent to 25 billion USD), accounting for nearly 10% of the GDP of the whole economy. The tourism management agencies also predict that the tourism industry will welcome about 20.5 million international visitors and the total revenue from tourism activities will reach over VND 830 thousand billion by 2020. Besides, based on the newest ranking of WEF, in 2019, the Vietnamese tourism industry was ranked 63rd among 140 countries worldwide and had an increase of twelve places compared to 2017. Vietnam has been continuously put in the list of ten most-improved countries (WEF, 2019). The tourism industry of this country is also predicted to continuously increase in the next years (Tung, 2018).

In terms of socio-economic aspects, besides the key role of tourism in increasing the aggregate demand of the economy, tourism is also a very important service industry in creating more jobs for the labour force, especially for those who are unable to access to labour markets such as older women, young people with low levels of education, migrant workers and rural residents. If policymakers have skills in planning development, tourism sector can make a significant contribution to socio-economic development and poverty reduction. Not only in Vietnam but also in others, tourism is one of the platforms for employment creation and poverty reduction in rural areas.

Along with booming tourism, poverty reduction in Vietnam has also made outstanding achievements. Following the General Statistic Office of Vietnam (GSO), there were many poor people as nearly 60% of the population in 1990, the poverty rate in Vietnam has sharply dropped to 5% by the end of 2019. The highlighted achievements of Vietnam in poverty reduction have been highly appreciated by international institutions as well as other countries. The tourism-poverty nexus is really an interesting relationship to further analysis in Vietnam. There are some research questions in the case of Vietnam. For example, 'Does tourism have any connection with poverty reduction in Vietnam in recent years?' or "Can tourism help poverty reduce in Vietnam?". However, almost no quantitative studies have been conducted relating to the relationship between tourism and poverty reduction in this economy.

There are some studies related to the relationship between tourism and poverty in Vietnam. However, most studies can not clearly answer the tourism-poverty nexus in the current context of Vietnam. In detail, these studies have been carried out with old datasets (Jansen-Verbeke, 1995; Lam, 1997) or qualitative methods (Truong, 2012; Hampton and et al., 2018). Besides, most studies only implemented in a small region in Vietnam such as the Northwest region (Truong et al., 2014) or only in the informal economy (Truong, 2018). Therefore, there is a research gap in quantitative analysis of the impact of tourism on poverty reduction in Vietnam. So our research aims to fill this empirical research gap with a new dataset collected from 61 provinces across the country. Our research results are expected to provide valuable evidence for the policy making process in the relevant field in Vietnam.

Totally, our paper contributes to three main aspects. Firstly, this is the first quantitative study using a provincial dataset to study the impact of tourism on poverty reduction in Vietnam, an emerging tourism market in the Asian region. Secondly, our research results provide further evidence about the important role of tourism in reducing poverty in developing countries thereby contributing to the academic knowledge of economic development. Thirdly, from the perspective of the policy making process, Vietnam has had a successful and booming tourism industry in recent years, so the evidence of tourism-poverty nexus in this country is a useful reference for other developing countries.

Our paper is structured into five sections. Section 2 shows the literature review. Section 3 presents the research methodology and data source. Section 4 includes empirical results and discussions. Finally, section 5 provides conclusions and policy implications.

1. LITERATURE REVIEW

Due to the important role of tourism in economic growth as well as the positive impact of tourism on related socio-economic issues such as poverty reduction, there were some empirical studies focusing on the extent and direction of the tourism-poverty nexus that has been conducted in countries worldwide. In particular, the impact of tourism is often reflected and considered by the revenue of tourism (or the number of tourists) come to these regions or countries. Besides, the effect of tourism on poverty also is a popular argument issue of policymakers because there are many empirical results identified on this relationship in some countries, however, the results are not united (or contrary) with much different evidence.

The authors including Balaguer and Cantavella-Jordá (2002) conducted an empirical study and demonstrated that tourism is a factor promoting long-term economic growth in Spain. The economic development made per capita income increase and many people could escape poverty in the long-run. The research was done by Saayman et al. (2012) focused on the impact of tourism on poverty alleviation in South Africa. Their result showed that tourism could help to reduce the poverty rate when poor people had benefited from tourist spending in the region. Medina-Munoz et al. (2016) built a matrix of the effect of tourism on poverty in recipient countries. In this study, the authors have developed a theoretical framework for the overall study of the direct effects of tourism on poverty reduction.

Rakotondramaro and Andriamasy (2016) used a causality test in analysing the cointegration relationship among tourism, poverty and growth in Madagascar. The authors concluded that there was no causal relationship between tourism and poverty reduction in this country over the study period. In another study, Njoya and Seetaram (2017) identified the impact of tourism on poverty reduction in Kenya. The empirical result showed that tourism had a positive impact on poverty reduction in both urban and rural areas. However, the impact level in urban areas was higher than in rural areas. Besides, Pavlic et al. (2019) noted that industrialization and urbanization tourism development was transforming into an unplanned, uncontrolled and unsustainable form. The authors showed that further environmental degradation of natural resources could continue which would influence the destination attractiveness. The implication of the paper was tourism may increase the unsustainable development in the region. More recently, Garza-Rodriguez (2019) concluded that there was a long-term relationship between tourism and poverty reduction in Mexico. In which tourism helped to increase GDP per capita and thereby reduced poverty in this economy.

Overview from previous studies, there were some empirical results related to the relationship between tourism and poverty, however, the evidence was quite diverse and even contradictory results. The diverse results are due to this relationship is highly dependent on the specific macro factors of each country. Therefore, it is inappropriate to refer to research results in other countries and apply them to policy-making and administration in a specific country because of differences from macroeconomic factors among countries.

There were only a few in-depth studies on tourism which have been done in Vietnam. Most studies had not quantitatively analysed and provided quantitative evidence for the arguments. For example, in an early study, Jansen-Verbeke (1995) carried out an overview of tourism development in Vietnam. The author gave a number of qualitative forecasts about the potential development of the tourism market. Besides, Lam (1997) continuously provided an overview of the Vietnamese tourism industry as well as analysis and forecast of the tourism market challenges in the transition period of the Vietnamese economy. The author also had some recommendations for future tourism development in the economy. In addition, Thirumaran et al. (2013) proposed a development strategy for Vietnam's tourism industry by promoting the image of tourist destinations through souvenir products. Truong (2012) examined the relationship between tourism policy and poverty reduction in Vietnam. However, the author only focused on the important role of government in supporting tourism development as well as arguing that tourism growth would benefit poor people in Vietnam. Hampton et al. (2018) analysed the effect of tourism on inclusive growth in Vietnam. The authors concluded that tourism had grown rapidly with partial economic benefits to the local community but did not appear to be part of the inclusive growth model in the case of Vietnam.

Overview although tourism plays a key role in socio-economic development worldwide, most empirical results are conducted in developed countries with long-established tourism industries. Besides, the quantitative results related to the theme of the impact of tourism on poverty reduction are not really be concerned in developing countries, especially in some highlighted booming tourism markets. Thus, a quantitative study using a panel dataset focus on the impact of tourism on poverty reduction in the emerging tourism industry like Vietnam is really essential. The findings are intended to provide valuable information not only for policymakers in Vietnam but also for policymakers in relevant fields in other countries.

2. METHODOLOGY AND DATA

2.1 Methodology

In order to analyse the impact of tourism on poverty in the Vietnamese provinces, we will present the estimation strategy which includes general function, some specific models and the econometric methodology. Based on the literature review, the poverty equation is shown as the function form:

$$\text{Poverty} = f(\text{Tourism, Labour_force, FDI, Education}) \quad (1)$$

Besides, to deeply identify the effect of tourism on poverty in the sample, we will estimate the econometric function with some forms which have a difference in the number of the independent variables. The poverty function can be represented as some following forms:

$$\text{Poverty}_{i,t} = \beta_{01} + \beta_{11}\text{Tourism}_{i,t} + \varepsilon_{1i,t} \quad (2)$$

$$\text{Poverty}_{i,t} = \beta_{02} + \beta_{12}\text{Tourism}_{i,t} + \beta_{22}\text{Labour_force}_{i,t} + \varepsilon_{2i,t} \quad (3)$$

$$\text{Poverty}_{i,t} = \beta_{03} + \beta_{13}\text{Tourism}_{i,t} + \beta_{23}\text{Labour_force}_{i,t} + \beta_{33}\text{FDI}_{i,t} + \varepsilon_{3i,t} \quad (4)$$

$$\text{Poverty}_{i,t} = \beta_{04} + \beta_{14}\text{Tourism}_{i,t} + \beta_{24}\text{Labour_force}_{i,t} + \beta_{34}\text{FDI}_{i,t} + \beta_{44}\text{Education}_{i,t} + \varepsilon_{4i,t} \quad (5)$$

Where: $\text{Poverty}_{i,t}$ is the poverty rate of the provinces, $\text{Tourism}_{i,t}$ is the tourism revenue, $\text{Labour_force}_{i,t}$ is the people in the range of labour force per total population, $\text{FDI}_{i,t}$ is the foreign direct investment, $\text{Education}_{i,t}$ is the educational quality level and $\varepsilon_{i,t}$ is the error term. Besides, t denotes time periods, and i is cross-sectional units with $i \in [1, N]$. The variables have been defined by some different measuring kinds. The definitions and the unit of variables are reported in the below table.

Table 1. The definition and source of variables

Variable symbol	Definition	Unit
Poverty	The poverty rate of households by province	%
Tourism	Revenue of tourism by provinces	VND thousand billion
Labour force	The number of people who are employed plus the unemployed who are looking for work divided by the total population	%
FDI	Foreign direct investment inflow	USD Billion
Education	Number of the school of general education	Hundred

Source: General Statistic Office of Vietnam, 2019

Our estimation strategy has two main steps. In the first step, the OLS is employed with both the fixed-effects model (FEM) and the random-effects model (REM). In the second step, the Hausman test is used to select which is the better result among the fixed-effects and the random-effects model. If the p-value is less than 0.05, the null hypothesis will be rejected. The testing result confirms that the result of the random-effects is biased and the fixed-effects is the better one, otherwise, the random-effects is chosen. Furthermore, we will estimate the econometric function (1) with some different models and the results will be compared with others to identify the exact effects among variables.

2.2 Data

This paper employs a dataset including 61 provinces in Vietnam. A secondary data of 9 years from 2010 – 2018 of the variables including poverty rate (Poverty), Labour force rate (Labour force), foreign direct investment (FDI) and education (Education). Our data is extracted from the database of the General Statistics Office of Vietnam (GSO). We choose to collect the data from GSO because this database is the best one with a compilation of relevant and high-quality in the case of Vietnam. Table 2 shows a description of the variables in this research.

Table 2. A statistical summary of the variables

<i>Variable</i>	<i>Max</i>	<i>Min</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Obs</i>
Poverty	50.0	0.02	10.9	8.43	531
Tourism	23.1	0.00	0.45	2.35	531
Labour force	71.3	47.3	58.7	3.94	531
FDI	7.5	0.00	0.39	0.88	531
Education	15.6	1.74	4.66	2.48	531

Source: Authors calculate from the research data

3. RESULT AND DISCUSSION

3.1 Panel Cointegration test

The analysis of long-run cointegrating relationships has been received much attention in modern quantitative analysis. In order to test the integrative relationship among the variables, we employ the Johansen testing method merged the technique of Kao and Chiang (2000) for using panel data. This technique considers various forms of the residual-based panel Fully Modified OLS (FMOLS) estimator that produces asymptotically unbiased, normally distributed coefficient estimates. The null hypothesis (H_0) is no cointegration equation in the long run. The results of the Johansen test are summarized in Table 3.

Table 3. Results of the cointegration test

<i>The null hypothesis (H_0)</i>	<i>Kao-Chiang statistic test</i>
There is no cointegration equation	2.347830 (0.0094)

Source: Author calculated from research data

The testing result concludes that the null hypothesis of no cointegration vector between the variables is rejected at 1% level of significance. This result indicates that there is a long-term relationship between the variables including poverty, tourism, labour force, foreign direct investment (FDI) and education in the Vietnamese provinces. The long-term cointegration relationship between tourism and poverty has been pointed out in some developed countries such as Spain (Balaguer and Cantavella-Jordá, 2002) or Mexico (Garza-Rodriguez, 2019).

3.2 Correlation analysis

The correlation analysis is a statistical method applied to evaluate the direction of the relationship among quantitative variables. Although this testing method is quite simple, it is a useful

statistic to analyse the relationships in a matrix of variables. A positive correlation means that two or more variables have positive relationships with each other, while a negative correlation means that the variables are negatively related. Besides, this method is closely connected to the linear regression analysis that is a statistical approach for modeling the association between a dependent variable. The correlative result is presented in the below table.

Table 4. Correlation matrix result

<i>Variables</i>	<i>Poverty</i>	<i>Tourism</i>	<i>Labour force</i>	<i>FDI</i>	<i>Education</i>
Poverty	1.0000				
Tourism	-0.2199	1.0000			
Labour force	-0.4041	-0.3428	1.0000		
FDI	-0.3265	0.6192	-0.2716	1.0000	
Education	-0.0522	0.4187	-0.0817	0.3366	1.0000

Source: Author calculated from research data

There are some highlighted points that need further discussions. Firstly, the sign of the poverty rate (Poverty) and tourism revenue (Tourism) is negative (-0.2199) which shows a negative relationship between two variables. Based on this evidence, higher tourism revenue leads to a decreasing in the poverty rate in the provinces in Vietnam. Secondly, tourism has positive relationships with both foreign direct investment (0.6192) and education (0.4187) due to the positive sign of the correlative values. Besides, the correlative values of variables are not high, it is possible to imply that there is no obvious evidence of serious multicollinearity problem in the equation. According to the correlative analysis, tourism is really a good macro variable that can help sustainable development in Vietnam in the future. Based on the correlation analysis, we can expect a negative impact of tourism on poverty in the regressive result in the next part.

3.3 Panel regressive result

Following our regressive strategy presented in the previous part, the econometric equation (1) is estimated with two models including fixed effects and random effects, after that, the Hausman testing method is applied to choose which is the better one. The dependent variable is the poverty rate and there are four independent variables including tourism, labour force, foreign direct investment and education. There are 531 observations collected from 61 provinces over the period of 2010-2018. Besides, our econometric function is also estimated with some various forms in order to deeply analysis the impact of tourism on poverty in the provinces. However, the estimated results are in the same direction and quite unite among fixed-effects (FEM) and random-effects (REM). The estimated results are shown in the below table (see Table 5).

First of all, based on the quantitative results, all our estimated results show a negative and significant impact of tourism on poverty in the Vietnamese provinces. This evidence implies that a higher value in tourism revenue can lead to a lower poverty rate in the provinces. The panel regression result is supported by the correlative result in the previous part. Furthermore, our result is robust evidence of the positive role of tourism in reducing the poverty rate. Besides, our estimated result is in-line with some previous studies in Vietnam (eg., Truong et al., 2014) or other developing countries (e.g., Njoya and Seetaram, 2017; Garza-Rodriguez, 2019). The positive role of tourism on poverty alleviation in Vietnam also is good evidence for developing countries (or poor countries) to use this macro variable to achieve sustainable development targets. Unlike the previous studies in Vietnam only focusing on a small area such as Truong et al. (2014) in Sapa (Lao Cai province) or Truong (2018) in Hanoi, our research result is an improvement because of our data collected from the overall sample of the provinces in Vietnam. On the other hand, our result maybe is the first one

using a provincial database in the poverty-tourism nexus in Vietnam, so our evidence is helpful not only in the academic field but also in the policy making process in this country.

Table 5. The panel estimated result

Variable	Dependent variable: Poverty							
	Model 1		Model 2		Model 3		Model 4	
	FEM	REM	FEM	REM	FEM	REM	FEM	REM
Tourism	-0.32* [-1.88]	-0.53** [-2.10]	-0.38* [-1.82]	-0.67*** [-2.74]	-0.28* [1.87]	-0.51* [-1.96]	-0.09* [-1.77]	-0.46* [-1.66]
Labour force			-0.99*** [-6.83]	-0.32** [-2.55]	-0.99*** [-6.85]	-0.20* [-1.65]	-0.97*** [-6.84]	-0.21* [-1.75]
FDI					-0.26 [-0.67]	-0.53 [-1.31]	-0.45 [-0.12]	-0.51 [-1.26]
Education							-3.96*** [-4.28]	-0.21 [-0.74]
Constant	11.1*** [42.02]	11.2*** [12.50]	69.3*** [8.13]	30.2*** [4.04]	69.7*** [8.15]	24.4*** [3.20]	86.8*** [9.34]	25.2 [3.38]
R-squared	0.0484	0.0484	0.1395	0.0396	0.1350	0.0339	0.1272	0.0447
Hausman test	0.93 (0.3354)		90.30 (0.000)		105.17 (0.000)		142 (0.000)	
Obs (n)	531		531		531		531	

Source: Author calculated from research data.*indicates significance at 0.10 level, ** indicates significance level at 0.05, *** indicates significance level at 0.01. The t statistical values are in parentheses below the coefficients.

Secondly, the estimated results show that there is a positive and significant effect of labour force on poverty in the provinces. This evidence implies that a province having a large labour force would help to decrease the poverty rate in the province. Our result is quite easy to understand, normally, in developing countries, the abundant labour force is an important cause of attracting businesses to invest, which can help reduce poverty rate in regions (see, Alisjahbana and Manning, 2006; Medina-Munoz et al., 2016). In the case of the Vietnamese provinces, the labour force is probably a factor that helps harm poverty. Besides, there is 70% of the population is under 35 years of age, Vietnam is the highest one among countries in the region at similar income levels. From our evidence, policymakers need concern and efficiently use the labour force as an important resource to decrease poverty in the future.

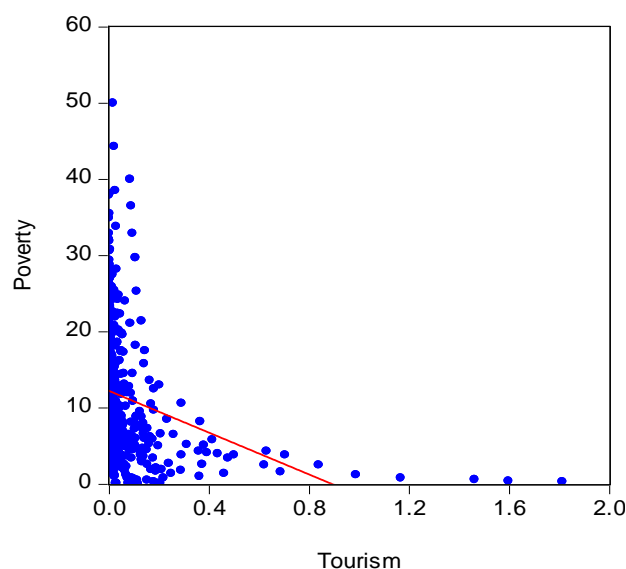
FDI has a negative impact on poverty in all estimative results, however, the coefficients are not significant. The sign of the coefficients indicates that FDI can help to reduce poverty in the provinces. Because of the insignificant of coefficients, so we can not conclude the real impact of FDI on poverty, this problem may come from the unbalance in the FDI attracting results among provinces. In fact, in Vietnam, foreign investment inflows always focus on some leader provinces and much higher than others. Furthermore, the impact of FDI on poverty in a specific country is not conclusive and the benefits of FDI may be is depended on the FDI policy regime of the country (see Sumner, 2005). Our finding confirms a challenge for policymakers to have a more connected and advantaged polices in the link between FDI and poverty in the provinces. Then FDI will reduce the poverty phenomenon more clearly in the future.

Finally, the development of education has a negative and significant impact on poverty in the Vietnamese provinces. In general, Vietnam performs well in general education. However, education development reduces poverty is quite understandable. When the education system improves, it can increase the quality of human resources (see Wikeley et al., 2008). As a result, there are more and more people have the opportunity to contact with higher incomes, so the poverty rate will de-

crease in the next period. Our finding implies that policymakers need to encourage investment in education as an urgent activity to reduce poverty in the provinces.

Furthermore, to have a visual comparison between the above quantitative results and our research statistics, a graph is built by the scatter plot technique is drawn. Where the vertical axis presents the poverty rate and the horizontal axis shows the tourism revenue of the provinces. There is a linear regression line between the two variables that represent the correlative relationship (see Figure 2). Our scatter plot clearly points-out a negative relationship between the poverty rate and the tourism revenue of the provinces over the study period. The graph is completely consistent with the panel regression result in the previous section and the hypothesis about the negative impact of tourism on poverty can be confirmed in the Vietnamese provinces over the study period.

Figure 2. The correlative graph between Poverty and Tourism



Source: Author calculated from research data

CONCLUSION AND POLICY IMPLICATIONS

Our paper maybe is the first quantitative study using the provincial data to examine the impact of tourism on poverty in Vietnam, a new emerging tourism market. Unlike previous studies, our research uses a new database collected from 61 provinces in the period 2010-2018. The cointegration test shows the existence of a long-term relationship among the variables including poverty, tourism, labour force, FDI and education in the provinces in Vietnam. Meanwhile, the panel estimated result confirms a negative and significant impact of tourism on poverty during the study period. Furthermore, labour force and education also have a negative and significant effect on poverty. However, although the coefficients of FDI are a negative sign which implies a negative effect of FDI on poverty, however, the results are not significant.

Following our research results, policymakers need to expand the tourism sector as a key tool to reduce the poverty rate of households in the future. Besides, the expenditure from foreign tourists can be considered as the direct export of the economy, which also can support economic growth. Furthermore, the multiplier mechanic helps to bloom tourism revenue on the aggregate demand and increase the total yield of the economy. Totally, tourism is a good way to reduce poverty in the long-run. Nextly, policymakers need to continue to efficiently use the labour force, edu-

cation and foreign investment inflows to decrease poverty. These solutions can help to curb and reduce poverty in Vietnam in the future.

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