



# Tourism and the livelihood of the people of a residential community in Vietnam's tourism

destination

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## Abstract

This paper investigates the long-term relationship between factors affecting people's livelihoods after tourism investment in the tourism sub-region south of the Red River in Vietnam. The study used survey data and multiple linear regression econometric models from the three provinces of Ninh Binh, Nam Dinh and Thai Binh in the South Red River tourism sub-region from February 2023 to August 2023. Research results show that all eight factors are statistically significant and impact people's livelihoods. These seven factors have a positive impact while one factor harms their livelihoods. The three factors that have the most positive impact on livelihoods are (1) employment in the tourist destination, (2) local government policies and (3) agricultural land quality. The remaining factors such as (4) social culture, (5) infrastructure, (6) jobs outside tourist destinations and (7) social welfare have the same impact but less impact. Meanwhile, the factor that harms their livelihoods is the amount of agricultural land. In addition, employers in the tourism destination and local government policies continue to have an important impact on the livelihoods of the local population to assess the sustainability of the impact factors while less impact variables are excluded. The research results are the basis for proposing recommendations to diversify people's livelihoods after tourism develops in the southern Red River tourism sub-region.

Keywords: Investment, Livelihood, Policies, Tourist destination, Tourism, Vietnam.

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### **1. Introduction**

Research has shown that tourists and tourism-related investments significantly contribute to the socioeconomic development of countries. Tourism investment policies and the role of state management agencies will create many different investment opportunities for investors such as investing in public transportation, communications and infrastructure [1]. Investors have the opportunity to invest in a variety of local accommodation services. In the process of developing tourism, countries need to invest in different resources from human resources, infrastructure and information technology to diversifying products and services [2]. This investment process increases tourism income but countries also receive other remarkable positive aspects such as reducing CO2 emissions. Therefore, a series of policies to further increase tourism investment are implemented in EU countries. Increased investment in tourism will enable the industry to grow further and ensure sustainable tourism development across EU member states [3]. The growth of economic sectors in general and tourism in particular greatly requires the role of private investment [4]. Countries increase private investment from domestic and foreign businesses. Private investment from international sources brings certain benefits in terms of technology, international linkages and international market entry. Therefore, countries have strongly attracted foreign investors into the tourism sector through preferential policies to create sustainable and long-term investment capital. Private sector funding, especially from foreign sources is essential for the development of sustainable tourism. The investments reflect how private tourism businesses operate. The contribution of tourism to economic growth has been recognized in many economies [5]. Countries develop their tourism industry by adopting many strategies to attract a large number of tourists both domestically and internationally. One of those strategies is that private capital investment in travel and tourism and government spending on travel and tourism services are important factors in promoting the competitiveness of the tourism industry. Therefore, the appropriate distribution of government spending and investment capital in the tourist sector will enhance the industry's competitiveness and investment environment.

Maintaining and developing tourist destinations to become attractive and attract a large number of tourists cannot be ignored when investing in infrastructure. According to Hai's research, the hotel and restaurant business, entertainment venues and communication and transportation networks constitute the infrastructure of tourism in the long term [6-8]. This investment in tourism infrastructure will have a huge impact on attracting tourists especially international visitors. Several research projects conducted in Vietnam have also demonstrated the contribution of tourism investments to residents' increased income and economic growth [9]. It has a great impact on people's income, employment and livelihood when people switch occupations due to agricultural land acquisition [10, 11].

Land is a means of generating income for people. Land plays an important role in the livelihoods of rural households and land fluctuations have an impact on their livelihoods [12]. The loss of agricultural land and its detrimental effects on rural life have been faced by the people of India [13]. This study points out that many countries significantly generate income for rural households besides agricultural production activities, off-farm activities also generate significant income for them [14]. They also hold the view that the primary barrier to people's ability to support themselves is not the loss of agricultural land [15]. Their income can still increase due to more off-farm activity. Land is associated with livelihood and income for the many Vietnamese who are employed in agriculture. When planning and promoting tourism development, many agricultural land areas have been acquired. Local people have to change careers, so their own and their families' livelihoods also change. According to statistics from the Ministry of Agriculture and Rural Development of Vietnam, for every 1 hectare of land acquired, 10 people will lose their jobs [11]. Numerous changes have occurred in people's lives and some have adapted to these changes. Many people were unable to do so in time which resulted in numerous losses to their livelihood.

Tourism investment in Vietnam in recent years has increased very strongly and has a great impact on the economy and people's income. The South Red River Tourist Sub-region is located in the south of the Red River Delta and the north of Vietnam. There are a lot of significant opportunities for the development of tourism in this area including: (1) Nature tourism with activities, cave tourism, river and lake tourism, hot springs, mineral water and forest tourism. (2) Cultural tourism: Historical sites, architectural art, archaeology, folklore festival, cuisine and traditional craft villages. This sub-region has a diversity of resources that can develop many types and products of tourism. According to the General Statistics Office, in recent years, tourism in this sub-region has developed strongly, attracting millions of domestic and foreign tourists. The rapid and continuous growth of tourism has averaged more than 18%. It is inevitable that tourism investment will affect the local people's livelihoods when implementing the development strategy. People also have more diversified livelihood options.

There are many studies on people's livelihoods but currently there are no studies on tourism investment or people's livelihoods in Vietnam. Livelihood studies in Vietnam consider different characteristics of households such as age, gender, education level, assets, infrastructure (distance to health facilities and how to get to school) employment and social benefits. What are people's livelihoods like when tourism is invested? How are people's livelihoods when developing local tourism related to socio-cultural relationships, property, employment, people's security and local policies? This research helps us understand the factors that impact people's livelihoods when taking agricultural land to invest in tourism there.

#### 2. Literature Review

#### 2.1. Tourism Investment

Private tourism should be promoted [16]. The state needs to develop appropriate policies and current regulations to encourage the private sector to do tourism. Newell and Seabrook [17] indicated that to invest in the hotel and tourism sectors, the biggest determining factor is capital and the location of the hotel. In addition, factors such as residential characteristics cannot be ignored when investors decide to invest. Private investors take the needs of tourists and local

government policies into consideration in their investment decisions [1]. The development of the tourism industry will depend on that tourist destination. Investors as funders will be greatly supported if they know that the field they invest in has a development strategy in that locality. Infrastructure must be developed to attract investment. The construction and development of infrastructure will bring benefits not only to tourists but also to local people. Tedla [18] highlighted livelihood opportunities for rural youth. Limited infrastructure (transportation) also reduces the livelihood of rural youth in the study area.

#### 2.2. Factors Affecting Livelihoods

Agriculture, migration, remittances, cross-border trade and self-employment are among the many livelihood methods employed by young people in the research region that Mukwedeya carried out [19]. How young people in the research sample choose their livelihood strategies depends on their social characteristics and livelihood capital. In the past, the main livelihood in rural Zimbabwe was agriculture but now dependence on agriculture is gradually decreasing. This rural livelihood option is expanding into the non-agricultural sector. Socio-economic factors are determinants of the livelihood choices of rural residents in southeastern Nigeria [20]. Social factors such as gender, marital status, age, education level and family size all have an impact on the monthly income of local people. In addition, institutions and land policies are also factors that significantly influence farmers' participation in the local non-agricultural economy [21] which affects their income and livelihoods. When local agriculture is at high risk and people are still poor and small households do not have valuable assets, they will be willing to find alternative income by participating in the non-agricultural economy [22]. Meanwhile, households with assets or areas with more favorable natural conditions make it easier for people to choose a livelihood and increase their income [23, 24]. Therefore, livelihood diversification is associated with survival and difficulties in worsening conditions as well as livelihood improvement in better economic conditions than before [25]. Households can diversify their income which comes from the agricultural and non-agricultural sectors by diversifying their livelihoods [26]. Income from agriculture is quite diverse whether from self-cultivation of land, leasing agricultural land or raising livestock. Diversifying agricultural livelihoods needs to be implemented through local government policies. The institutional and policy factors ensure a significant positive impact on the ability of farmers to participate in off-farm activities. On the other hand, age and education level showed a significant negative impact on the decision to participate in activities to diversify the off-farm livelihoods of farmers.

Research results show that households diversify their assets in different ways [27]. The extent and diversification of assets and their ability to use them are determined in part by people's status and interests in a particular context [28-30]. The use of social and physical capital can be related to livelihood success by improving various economic activities.

#### 2.3. Livelihood Diversity and Development of Tourism

Many households face changes in their lives due to factors such as policies, planning, etc. [31]. Pressures include longterm stresses such as climate change and income inequality as well as immediate shocks [32]. They must have multiple means of survival, creating various chances for livelihood [33]. Livelihood is not just a way to generate income but a means for people to improve their living standards [34]. Livelihood assets are the resources that households use to implement their livelihood strategies [35]. People's assets are the driving force for them to use and maintain their livelihoods. Such assets generate income or other financial benefits for themselves and their families [36]. Tourism development in rural areas is considered a strategic step to reduce poverty levels through new potential in household livelihoods [37]. This study aimed to investigate tourism development and the impact of livelihood transition in the highlands of Mount Nona, Ambon Island. Neither the government nor the land owner can manage this local land asset but tourism investment will help improve people's livelihoods [38]. Livelihoods are led by tourism and take the first place in supporting livelihood sustainability followed by outsourced, local and subsidized livelihoods. Livelihood includes the capabilities, assets and activities necessary to earn a living [39]. A livelihood is considered sustainable when it can adapt to changes in the living environment such as natural disasters or epidemics. Households also adapt and face those changes themselves. Whether those fluctuations affect their livelihoods and incomes or not [40]. Sustainable livelihood is always a sustainable increase in current assets without reducing the natural resources of future generations. Livelihoods are interdependent. It may depend on existing assets and assets that can be used to access other livelihoods. Assets can be capital (physical, natural and financial) combined with human activities to support each other in the pursuit of sustainable livelihoods [41]. Factors affecting diversification and livelihood choice in Africa such as income level, land ownership and education level [42, 43].

Research has been conducted in this area to understand more about how rural tourism contributes to sustainable livelihoods for older people. The author considered three hypotheses: first, rural tourism changes the livelihoods and assets of households at the research site. Second, rural tourism has brought negligible benefits to households at the research site. (3) Benefits other than income that exceed economic benefits for aging communities and government-led farm households are most likely to transform their livelihoods when they engage in tourism [44, 45]. Four factors such as the number of family members involved in tourism, training opportunities to develop professional skills, the educational attainment of core family members and the type of support allowance households are the main impediments to the livelihood resilience of different farming households.

In recent years, the southern Red River sub-region in particular and the Red River Delta in general have been crowded with people but the region's agricultural efficiency has often remained quite high. The value of products per 1 hectare of cropland and aquaculture in the Red River Delta in the period 2005 - 2020 is much higher than the average of Vietnam [46]. In addition to agriculture, the southern Red River sub region currently has many policies to develop the local

economy and improve people's lives. One of the focuses is to exploit and invest in tourism from agriculture and the advantages of forests, mountains, seas and beliefs [47]. There are many empirical studies in Vietnam investigating the factors that determine people's livelihoods and tourism development such as income, including education level, household land area, loan capital and human resources, exports in families, social groups, policies and infrastructure [10, 48-50]. These studies help us understand the factors underlying the tourism and livelihoods relationship in Vietnam by providing many insightful and compelling results.

#### 3. Research Methods

This study uses a multiple linear regression econometric model to investigate farming households participating in local tourism. It investigates factors that impact the livelihoods of current local people. We removed the variables to continue the regression to see if the remaining factors affecting livelihoods have changed. SO4 (family size) is the first variable to be reduced because currently in rural Vietnam, there has been a significant decline in family size. Nowadays, families often have two generations: parents and children and each family has two children. Therefore, in the long term, family size will not be too different between households. According to the plan, we will remove the variable JO3 (jobs other than tourism) because currently in rural areas in the southern Red River tourism sub-region, people work in the fields at tourist destinations. If they do not work in agriculture or tourism, they will have to go far from home to work in industrial zones. In the long term, if their livelihoods grow locally, they won't want to move far from home to seek other opportunities. The study sheds light on insights into the factors affecting livelihoods after tourism is invested and provides some useful policy implications to promote tourism development in the tourist sub-region south of the Red River.

#### 4. Research Results

#### 4.1. Description of Data

been examined for errors.

In this study, 140 households were surveyed in the southern Red River sub region. Areas were randomly selected using a multistage stratified sampling technique based on geographic location references. The southern Red River sub-region includes three provinces: Ninh Binh, Nam Dinah and Thai Binh focusing on the sampling areas which are areas with invested and planned tourist attractions. Trang An, Tam Coc - Bich Dong eco-tourism areas (Ninh Binh), beach areas such as Quat Lam, Thinh Long (Nam Dinh) and Dong Chau beach area (Thai Binh) were selected for sampling. In the sampled area, over 90% of households working in agriculture (mainly growing wet rice) were affected when tourism was invested in the locality. The selected areas are Hoa Lu district (Ninh Binh), Hai Hau district (Nam Dinh) and Tien Hai district (Thai Binh) which are districts with tourist destinations that have been invested in recently (Figure 1).



The study was conducted based on survey data from households living in the tourist sub-region south of the Red River. The researchers collected the results according to the online survey with more than 140 votes in three provinces in the South Red River sub-region from February 2023 to June 2023. 140 votes were used to analyse the data after the data had



The education level of those surveyed.

Among the survey participants, the proportions are as follows: 55 women accounted for 39.3% and 85 men accounted for 60.7%. Marital status of respondents: 112 people are married accounting for 80% and 28 people who are single accounting for 20%. The majority of survey participants have secondary and high school degrees accounting for 88.4% (see Figure 2). The age of the survey respondents is 18 years or older and they are all participating in the labor force. Table 1 presents descriptive statistics of the sampled farm households from the survey study.

Table 1.								
Descriptive statistics of sample farms.								
Variable	Definition	Mean	Std. dev.					
TI	Income	2.217	0.601					
AS1	Agricultural land left after tourism investment	0.174	0.380					
AS3	Land quality after tourism investment	3.072	0.948					
LP3	Local policy to encourage participation in tourism activities	0.587	0.494					
SO4	Family size	4.000	1.480					
IN1	The infrastructure system (Transportation)	3.384	1.161					
JO1	Jobs in tourist destinations	0.261	0.441					
JO3	Other jobs	0.391	0.490					
WE4	Security	2.927	1.022					

#### 4.2. Research Model

We propose a research model after reviewing documents, articles and survey results. The model is shown in Figure 3.



The proposed research model.

#### Research hypothesis

 $H_1$ : Remaining agricultural land after tourism investment affects livelihoods (income). H<sub>2</sub>: The quality of agricultural land after tourism investment affects livelihoods (income). *H*<sub>3</sub>: Local policies affect livelihoods (income). *H*<sub>4</sub>: *Family size affects livelihood (income ). H*<sub>5</sub>: Infrastructure impacts livelihoods (income). *H*<sub>6</sub>: *Employment in tourist destinations affects livelihoods (income). H<sub>7</sub>: Off-site employment affects livelihoods (income). H*<sub>8</sub>: *Impact of social security on livelihoods (income).* The model variable description is as follows: Income (TI) Increase = 2, constant = 1, decrease = 0. Agricultural land left after tourism investment (AS1) (1 if yes and 0 if no). Assets (AS) Land quality after tourism investment (AS3) (1 if yes and 0 if no). Local policy (LP) Local policy to encourage participation in tourism activities (LP3) (1 if yes and 0 if no). Socio-cultural (SO) Family size (SO4) (number of family members from 1 to 8 members). Infrastructure Is the infrastructure system (transportation) better? (IN1) (Likert scale from 1 to 5, (transportation) (IN) from very bad to very good). Do you work in a tourist destination (JO1) (1 if yes and 0 if no). Job (JO) Do you work other than the tourist destination? (JO3) (1 if yes and 0 if no). Is the security environment good (WE4) (Likert scale from 1 to 5, from very bad to Social security very good).

#### 4.3. Hypothesis Testing

Regression between the dependent variable and the variables: Agricultural land after tourism investment (AS1), land quality after tourism investment (AS3), local policies (LP3), scale family (SO4), infrastructure system (IN1), employment in tourist destinations (JO1), employment outside of tourist destinations (JO3) and safe environment (WE4).



Histogram



We will conduct multiple linear regression models with the following variables:

 $TI = \beta 0 + \beta 1 \overline{AS1}_i + \beta 2 \overline{AS3}_i + \beta 3 LP3_i + \beta 4 SO4_i + \beta 5 \overline{IN1}_i + \beta 6 JO1_i + \beta 7 JO3_i + \beta 8 WE4_i$ 

The histogram chart shows the mean value. The mean is close to 3.51E-17 and the standard deviation is close to Std. Dev = 0.970 (see Figure 4), the distribution curve has a bell shape (see Figure 5). We can confirm that the distribution is approximately normal assuming the normal distribution of the residuals is not violated.

Variables were entered to run the multiple regression model (see Table 2).

Variables entered				Variables re	Method	
JO3, SO4, AS1, LP3, WE4, JO1, IN1, AS3 <sup>b</sup>						Enter
ource:	Regression results o	n SPSS				•
	a. Dependent variab	le: TI.				
	b. All requested vari	iables are entered.				
Ta M	ble 3. ultiple linear regres	ssion tests.				
Ta <u>M</u> <u>A</u> N	ble 3. ultiple linear regres NOVA <sup>a</sup> Iodel	ssion tests. Sum of squares	df	Mean square	F	Sig.
Ta Mi Al N	ble 3. ultiple linear regres NOVA <sup>a</sup> Iodel Regression	ssion tests. Sum of squares 16.187	<b>df</b> 8	Mean square 2.023	<b>F</b> 7.840	Sig. 0.000 <sup>b</sup>
Ta <u>M</u> <u>A</u> <u>N</u> 1	ble 3. altiple linear regres NOVA <sup>a</sup> Iodel Regression Residual	Sum of squares           16.187           33.292	<b>df</b> 8 129	Mean square 2.023 0.258	<b>F</b> 7.840	<b>Sig.</b> 0.000 <sup>b</sup>

b. Predictors: (constant ), JO3, SO4, AS1, LP3, WE4, JO1, IN1, AS3.

Table 3 shows that the regression coefficient sig test t of all independent variables is < 0.05. Therefore, the independent variables (JO3, SO4, AS1, LP3, WE4, JO1, IN1 and AS3) are significant. They are all explanatory for the dependent variable and none are excluded from the model. The sig F test is equal to 0.000 < 0.05, so the multiple linear regression model is suitable for the data set and can be used.

Tał	ole 4.										
Res	Results of the regression analysis.										
Model		Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics				
		В	Std. error	Beta		0	Tolerance	VIF			
	(Constant)	1.638	0.189		8.647	0.000					
	SO4	0.066	0.031	0.162	2.124	0.036	0.898	1.114			
	IN1	0.103	0.050	0.202	2.068	0.041	0.547	1.830			
	JO1	0.249	0.117	0.183	2.136	0.035	0.712	1.405			
1	WE4	0.114	0.057	0.197	1.996	0.048	0.538	1.859			
	AS1	-0.404	0.122	-0.256	-3.311	0.001	0.875	1.143			
	AS3	0.191	0.066	0.302	2.912	0.004	0.485	2.060			
	LP3	0.233	0.100	0.190	2.333	0.021	0.787	1.271			
	JO3	0.204	0.099	0.169	2.075	0.040	0.787	1.270			

Thus, all hypotheses are accepted with seven hypotheses from H1 to H7 that we set out initially in the above section. The final model that we choose is:

 $TI = 1.638 - 0.404AS1_i + 0.191AS3_i + 0.233LP3_i + 0.066SO4_i + 0.103IN1_i + 0.249JO1_i + 0.204JO3_i$  $+ 0.114WE4_{i}$ 

Table 4 shows the results of the regression coefficients for the variables SO4, IN1, JO1, JO3, WE4, AS3 and LP3 which are greater than 0 whereas AS1 is less than 0. Thus, the independent variables SO4, IN1, JO1, JO3, WE4, AS3 and LP3 appearing in the analytical model has a positive impact on the TI variable which is the dependent variable of the regression model. On the contrary, the AS1 variable appears to have a negative impact on the TI variable. The groups of factors that have a positive impact on the livelihoods of people in the South Red River sub-region means that if one of the seven factors (SO4, IN1, JO1, JO3, WE4, AS3 and LP3) increases, people's livelihoods will increase. On the other hand, if AS1 decreases, livelihoods will increase. In other words, increases in these variables will result in higher living standards for people in the South Red River sub-region.

We remove the variable S04 (family size) which is the least significant variable based on Table 4's findings to assess the stability of the model. Tourist attractions in the South Red River sub-region are mostly in rural areas of Vietnam. Large families with many generations reside in Vietnam's rural areas. However, families become less prevalent gradually as a result of declining birth rates making the composition of families more balanced. Several young people in rural areas are leaving their home country to work in cities which means that there are many different types of livelihoods available to households in these places beyond only tourism. Currently, an increasing number of young people in rural areas are leaving their homeland to work in cities which means that these households' sources of income vary widely and extend beyond local tourism. Therefore, in the long term, family size will be more balanced and the impact on livelihood will be reduced.

Regression results after removing variables show the stability and robustness of the model (see Table 5). The factors that strongly affect the local people's livelihood are still JO1 and LP3 (the employment variable in tourism and policy).

Results of regression analysis after removing SO4.								
Model		Unstandardized coefficients		Standardized coefficients	т	Sig	Collinearity statistics	
		B	Std. error	Beta	-	big.	Tolerance	VIF
	(Constant)	1.808	0.174		10.390	0.000		
	AS1	-0.417	0.123	-0.264	-3.374	0.001	0.877	1.140
	IN1	0.106	0.051	0.207	2.096	0.038	0.547	1.828
1	JO1	0.275	0.118	0.202	2.337	0.021	0.720	1.390
1	JO3	0.196	0.100	0.162	1.965	0.052	0.788	1.268
	WE4	0.118	0.058	0.204	2.046	0.043	0.539	1.857
	AS3	0.172	0.066	0.272	2.615	0.010	0.494	2.023
	LP3	0.254	0.101	0.207	2.516	0.013	0.794	1.259

 $TI = 1.808 - 0.417AS1_i + 0.172AS3_i + 0.254LP3_i + 0.106IN1_i + 0.275J01_i + 0.2$ model: Regression  $0.196/03_i + 0.118WE4_i$ 

Regression analysis is carried out using the removed variable model in order to investigate the effects of variables such as AS1, IN1, JO1, WE4, AS3 and LP3 on livelihoods that are impacted by tourism investment. JO3 (job not related to tourism): Check the regression coefficients sig test of these independent variables whether they are significant and whether the impact on livelihood changes or not (see Table 6).

Table 5.

Tabl Resu	le 6. Ilts of regression an	alysis after re	moving SO4 and J	03.				
	Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity statistics	
		В	Std. error	Beta		U	Tolerance	VIF
	(Constant)	1.750	0.173		10.095	0.000		
	AS1	-0.365	0.122	-0.231	-2.991	0.003	0.919	1.088
	IN1	0.121	0.050	0.237	2.397	0.018	0.560	1.786
1	JO1	0.299	0.118	0.219	2.530	0.013	0.728	1.375
	WE4	0.112	0.058	0.194	1.927	0.056	0.540	1.852
	AS3	0.145	0.065	0.229	2.226	0.028	0.518	1.932
	LP3	0.267	0.102	0.218	2.629	0.010	0.798	1.253

#### Regression model:

 $TI = 1.750 - 0.365AS1_i + 0.145AS3_i + 0.267LP3_i + 0.121IN1_i + 0.299JO1_i + 0.112WE4_i$ 

According to Table 6's results, the two components JO1 and LP3 continue to have the most beneficial effects on people's quality of life due to the regression model's stability. This result is consistent with previous studies.

#### **5. Discussion and Conclusion**

The surveyed households can be said to have different changes in their livelihoods when there are local tourism activities. This corresponds with the assertion by Chen, et al. [44], Hahury, et al. [34], Liu, et al. [38] and Xiao, et al. [45] that tourism is invested in and impacts the livelihoods of people at tourist destinations.

The following evaluation of the influencing elements is based on their order of influence and the results of the

aforementioned model regression ranging from strongest to weakest impact:

The strongest positive impact is JO1 (employment in tourist destinations). It is understood that as people's work in local tourist destinations increases, their livelihood tends to increase. This is also consistent with the reality in the South Red River sub-region. People's income and employment in general and workers at tourist destinations in particular have increased significantly in the past period. Although only 26% of the respondents work at the local tourist destination, they think that their income at the tourist destination has increased. According to Bendesa, et al. [1] and Chen, et al. [44] tourism is considered an industry that brings income and improves people's lives. It is necessary to mobilize many resources such as capital, labor and technology to develop tourism at a tourist destination. As tourism develops, it has been changing people's lives and diversifying their livelihoods especially for people living in rural areas.

The second most influential factor is LP3 (the supportive policy of local government). When the government's support is greater, people's livelihoods tend to increase. This result is consistent with the study of Gholipour, et al. [51]. The greater the support of the government through various economic policies such as capital, land, etc., the greater the local people's trust. Thereby, the people's participation in the local economy increases.

The third strongest factor is JO3 (employment outside the tourist destination). When planning a tourist destination, agricultural land will be acquired and farmers will be reduced to arable land. Tourism activities will affect the quality of the remaining agricultural land. The research results show that in addition to working at the tourist site, local people also participate in agricultural and other non-agricultural production which also increases people's livelihood. This result also reflects the real situation in the sub-region. Most people are engaged in agriculture when investing in tourism. More than 82% of the respondents said that they did not lose their land. In the household, there are people participating in tourism, the rest of them still work in agriculture or non-agriculture. This is consistent with Mukwedeya and Mudhara's [19] emphasis that farmers tend to participate in occupations other than traditional local occupations to earn a living [14, 19, 37].

The strong opposite effect is AS1 (amount of agricultural land). As agricultural land decreases, people's livelihoods increase. This result is consistent with Zou and Luo [52] who argue that there is an uncertain relationship between the amount of agricultural land and farmers' income. This is explained in the Southern Red River sub-region as follows: now that agricultural land has been greatly reduced, farmers will focus on developing in depth to increase productivity and income. The income and people's livelihood in the sub-region depend not only on the quantity of agricultural land but also on the quality and increase in labor productivity of the sector.

Other factors such as SO4, IN1, WE4 and AS3 also have a positive impact on livelihoods. Therefore, the authorities in the South Red River sub-region can base their decisions on making appropriate policies. This corresponds [37, 43] with the assertion by Nguyen Hai [7], Deininger and Feder [12], Mai, et al. [9] and Rahman [43] that family size, land, infrastructure and security also affect people's livelihood diversity.

This study evaluates the livelihoods of people in the southern Red River tourism sub-region after tourism is invested. The study concluded that agriculture is a traditional industry in the locality when investing in tourism. People are still willing to change careers. People's sources of income and means of subsistence are more varied due to local tourism. However, participating in tourism is still seen as the primary source of income. Four main factors affecting people's livelihoods after tourism investment in the southern Red River Delta tourism sub-region are employment in tourist destinations, supportive policies of the local government, employment outside the tourist destination and agricultural land. The study concluded that employment at local tourist attractions has the greatest positive impact on people's livelihoods while employment outside the tourist destination has a lesser positive impact. In general, the choice of livelihood strategy is also influenced by local government, Households with larger family sizes have more diverse livelihoods. In addition, the livelihoods of people in the southern Red River sub region also depend on the remaining agricultural land and the quality of that land, the transportation system and social security. People's livelihoods are less varied and they are less likely to engage in local tourist activities as long as they have access to agricultural land. The better the traffic system and social security are, the more people's livelihoods tend to increase.

We recommend that when investing in tourism, people's livelihood programs should prioritize increasing the participation of local people in tourism activities and increasing the support of local communities, investing in developing traffic networks and local social security based on these conclusions.

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