

Tourist Visits and Their Impact on Unemployment and Poverty Alleviation in East Java

Sayekti Suindyah Dwiningwarni¹, Syamsiyah Yuli Dwi Andari², Syamsi Nur Hidayatulloh³

¹Economics Development Program Study, Faculty of Economics and Business, University of Dr. Soetomo, Surabaya, East Java

²Accounting Program Study, Faculty of Economics and Business, University of Muhammadiyah Yogyakarta, Indonesia

³Management Program Study, Faculty of Economics and Business, University of Dr. Soetomo, Surabaya, Indonesia

ABSTRACT: Tourism is widely recognized as a strategic sector for promoting economic growth, expanding employment opportunities, and alleviating poverty. However, its contribution to socioeconomic development remains inconsistent across regions. This study aims to examine the direct and indirect effects of tourist visits on poverty through the open unemployment rate in East Java, Indonesia. A quantitative explanatory approach was employed using secondary panel data obtained from Statistics Indonesia (BPS). Path analysis based on multiple linear regression was applied to evaluate the relationships among the study variables. The findings indicate that tourist visits do not significantly influence the open unemployment rate but have a significant direct effect on poverty. In addition, the open unemployment rate does not significantly affect poverty and does not mediate the relationship between tourist visits and poverty. These results suggest that increasing tourist arrivals alone is insufficient to reduce poverty. Therefore, tourism development policies should prioritize inclusive and sustainable strategies by strengthening local employment, enhancing community participation, and ensuring a more equitable distribution of tourism-generated economic benefits.

KEYWORDS: Tourist visits; poverty; open unemployment rate; path analysis; inclusive tourism; sustainable tourism.

I. INTRODUCTION

Tourism has become one of the fastest-growing sectors of the global economy, contributing significantly to economic growth, employment generation, foreign exchange earnings, and regional Development. According to the United Nations World Tourism Organization, international tourism has demonstrated remarkable resilience following the COVID-19 pandemic, with global tourism arrivals recovering to approximately 95% of pre-pandemic levels in 2024. This recovery has reinforced tourism's strategic role in stimulating local economies, particularly in developing countries where tourism-related industries provide extensive employment opportunities and support poverty alleviation through income generation (UN Tourism, 2024). Indonesia recognizes tourism as one of the leading sectors for achieving sustainable economic Development. Through the National Medium-Term Development Plan (RPJMN), the government has prioritized tourism development to promote inclusive economic growth, reduce regional disparities, and create employment opportunities. Among Indonesian provinces, East Java plays a strategic role due to its diverse tourism resources, including natural attractions, cultural heritage, religious tourism, marine tourism, and ecotourism. The province consistently ranks among the regions with the highest domestic tourist arrivals and contributes substantially to Indonesia's tourism revenue. The increasing number of tourist visits has encouraged the expansion of hospitality services, transportation, culinary businesses, creative industries, and micro, small, and medium enterprises (MSMEs), thereby creating multiplier effects across various economic sectors.

The economic contribution of tourism extends beyond direct revenue generation. Tourism stimulates labor-intensive industries that require workers with varying educational backgrounds and skill levels, making it an effective instrument for reducing unemployment. Previous studies indicate that tourism development positively influences labor market performance by creating both direct employment in tourism businesses and indirect employment through supply chain activities. Furthermore, tourism-induced income generation increases household purchasing power, encourages local entrepreneurship, and enhances regional economic resilience (Brida et al., 2016; Croes & Rivera, 2017). Despite these positive contributions, the relationship between tourism development, unemployment reduction, and poverty alleviation remains inconclusive. While tourism

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expansion may increase employment opportunities, the quality and sustainability of tourism-related jobs often vary across destinations. Seasonal employment, informal labor markets, unequal income distribution, and disparities in tourism infrastructure may limit tourism's capacity to reduce Poverty effectively. Consequently, rapid growth in tourist arrivals does not automatically translate into inclusive economic Development, particularly in regions where tourism benefits are concentrated among limited economic actors.

East Java presents an interesting context for examining this issue. Although the province has experienced continuous growth in domestic tourism over the past decade, disparities in unemployment and Poverty persist across its 38 regencies and municipalities. Several districts with high tourism potential continue to report relatively high levels of open unemployment and Poverty, whereas some non-tourism areas have demonstrated better socioeconomic performance. These contrasting conditions suggest that the relationship between tourism development and social welfare is more complex than a simple increase in tourist arrivals. The COVID-19 pandemic has affected all aspects of the economy in various countries. The COVID-19 pandemic is also one of the causes of increasing Poverty and poor people. In most developing countries, the main problem faced is Poverty. Today, Poverty is widely considered a global problem. Poverty affects more than four billion people worldwide. This is a critical phenomenon that requires immediate attention and a solution worldwide. The need to eradicate Poverty arises to improve the quality of life through the creation of employment opportunities (Titilayo Adenike, 2014). The number of poor people in East Java before the COVID-19 pandemic occurred decreased from 5,251,450 people in 2020 to 4,332,590 people in 2024 (BPS East Java Province, 2024). Data on the Poverty Line, Poor Population, and Percentage of Poor Population in East Java are shown in Table 1 below:

Table 1. Poverty Line, Poor Population and Percentage of Poor Population in East Java (2020 – 2024)

Year	Line of Poverty	Poor Population (million)	%
2020	416,001	27.55	
2021	429,133	26.50	-3.96
2022	460,909	26.16	-1.30
2023	507,286	25.90	-1,00
2024	536,122	24.06	-7.65

The problem of Poverty and impoverishment in East Java in particular requires serious handling by both the provincial government. The employment rate in East Java before the COVID-19 pandemic, namely from 2017 to 2019, experienced a decline, namely from 4% in 2017 to 3.82% in 2019. Unemployment in East Java during the period 2017 to 2019 was dominated by young people aged between 15-29 years (BPS East Java Province, 2020). Meanwhile, the number of poor people in East Java is shown in Table 2 below:

Table 2. Number of Poor Population in East Java (2015-2019)

Year	Number of Poor People
2015	38,847,561
2016	39,075,152
2017	39,292,971
2018	39,500,851
2019	39698..631

One of the problems of Poverty and deprivation in East Java is related to the effectiveness of implementing poverty reduction programs and the provision of employment or business opportunities, which are still not optimal (Nasution *et al.*, 2014). The theoretical foundation of this study is supported by the Tourism-Led Growth Hypothesis (TLGH), which argues that tourism serves as an engine of economic growth by increasing income, investment, employment, and productivity (Balaguer & Cantavella-Jordá, 2002). Furthermore, the Pro-Poor Tourism (PPT) framework emphasizes that tourism can reduce Poverty when tourism-generated benefits are distributed equitably among local communities through employment, entrepreneurship, and community participation (Ashley *et al.*, 2001). Human Capital Theory also suggests that improvements in labor quality and workforce participation enhance the capacity of local communities to benefit from tourism-related economic activities (Becker, 1993). These theoretical perspectives imply that tourism contributes to poverty reduction both directly through employment generation and indirectly through broader economic Development. Previous empirical studies have produced mixed findings regarding the impact of tourism on unemployment and Poverty. Croes and Rivera (2017) found that tourism significantly

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reduces Poverty through income redistribution and employment expansion in developing economies. Likewise, Croes (2014) demonstrated that tourism contributes positively to inclusive economic growth when supported by effective governance and institutional quality. Conversely, Lee and Syah (2018) argued that tourism's poverty-reduction effect depends heavily on regional characteristics, local economic structures, and public policy. More recent studies have emphasized that tourism alone cannot eliminate Poverty without complementary investments in education, infrastructure, and institutional capacity.

This study addresses these research gaps by examining the effect of tourist visits on open unemployment and poverty alleviation across the 38 regencies and municipalities of East Java using panel data analysis. Unlike previous studies, this research simultaneously evaluates tourism's role in employment creation and poverty reduction while controlling for regional economic characteristics. The use of panel data enables the analysis of both cross-sectional and temporal variations, providing more robust empirical evidence regarding the socioeconomic impacts of tourism. The novelty of this study lies in three main aspects. First, it develops an integrated analytical framework linking tourist visits, labor market performance, and poverty reduction within a regional development perspective. Second, it provides district-level evidence for East Java, allowing the identification of heterogeneous tourism impacts across local governments. Third, the study generates policy recommendations for sustainable tourism development that not only enhance economic growth but also promote inclusive employment and poverty alleviation.

Therefore, the objectives of this study are threefold: (1) to analyze the effect of tourist visits on open unemployment in East Java; (2) to examine the influence of tourist visits on poverty alleviation; and (3) to provide evidence-based policy recommendations for strengthening tourism as an instrument of inclusive regional Development. The findings are expected to contribute to the growing literature on tourism economics while offering practical implications for policymakers in designing tourism strategies that simultaneously promote economic growth, employment generation, and poverty reduction in East Java.

II. LITERATURE REVIEW AND HYPOTHESIS

2.1 Literature Review

2.1.1 Tourism-Led Growth Hypothesis (TLGH)

The Tourism-Led Growth Hypothesis (TLGH) has become one of the dominant theoretical paradigms in tourism economics, proposing that tourism acts as an engine of economic growth by increasing foreign exchange earnings, investment, employment, productivity, and regional competitiveness. Since the seminal work of Balaguer and Cantavella-Jordá (2002), a substantial body of empirical evidence has supported the hypothesis across developed and developing economies. More recent evidence further confirms that tourism contributes significantly to long-run economic growth, although its magnitude depends on country-specific structural characteristics, institutional quality, and methodological approaches (Alcalá-Ordóñez et al., 2024; Panagiotidis et al., 2024). Earlier reviews demonstrated that tourism generally stimulates economic growth; however, recent systematic literature reviews reveal that the research agenda has evolved considerably. Contemporary tourism studies increasingly emphasize tourism's contribution to employment creation, poverty reduction, income distribution, social inclusion, destination competitiveness, and sustainable regional Development rather than focusing solely on GDP growth (Alcalá-Ordóñez et al., 2024; Bhatt et al., 2024; Costa et al., 2026). Within the Tourism-Led Growth framework, increasing tourist arrivals stimulates demand for accommodation, transportation, food services, retail trade, creative industries, and other tourism-related sectors. This increase in tourism demand encourages business expansion, strengthens local production networks, creates employment opportunities, and generates substantial multiplier effects throughout the regional economy. Consequently, higher tourist arrivals are expected to improve labor market performance, increase household income, and contribute to inclusive economic Development and poverty alleviation (Panagiotidis et al., 2024; Bhatt et al., 2024). Furthermore, recent meta-analytic evidence confirms that tourism development has a statistically significant negative effect on Poverty, although the magnitude varies across countries and institutional settings.

2.1.2. Pro-Poor Tourism Theory

While tourism has traditionally been assessed primarily through its contribution to economic growth and foreign exchange earnings, contemporary tourism development literature increasingly emphasizes its capacity to promote inclusive Development and poverty reduction. The Pro-Poor Tourism (PPT) approach argues that tourism should generate net economic benefits for low-income communities by creating employment opportunities, encouraging local entrepreneurship, strengthening local procurement systems, and increasing community participation in tourism development. Recent studies further emphasize that tourism contributes to the achievement of the Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities), when tourism policies prioritize social inclusion and equitable benefit distribution (Scheyvens et al., 2023; Bhatt et al., 2024; UN Tourism, 2024). Unlike conventional tourism development, which primarily focuses on increasing tourist arrivals, tourism receipts, and investment, the Pro-Poor Tourism

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approach emphasizes the equitable distribution of tourism benefits among vulnerable populations. Tourism contributes to poverty alleviation by expanding employment opportunities, supporting micro, small, and medium-sized enterprises (MSMEs), strengthening local value chains, increasing household income, and promoting community-based enterprises. Recent empirical evidence indicates that tourism generates stronger poverty reduction effects when local communities actively participate in tourism planning and decision-making, and when tourism businesses establish stronger backward linkages with local suppliers. Inclusive governance, institutional quality, and community empowerment therefore become critical determinants of successful pro-poor tourism strategies (Bhatt et al., 2024; Dolezal & Novelli, 2023; Scheyvens et al., 2023).

Nevertheless, the effectiveness of tourism in reducing Poverty depends largely on the strength of economic linkages between tourism enterprises and local economies. Tourism generates substantial local multiplier effects when hotels, restaurants, and tourism operators procure goods and services from local producers, employ local workers, and collaborate with community-based enterprises. Conversely, weak backward linkages, high import dependency, economic leakage, and the dominance of external investors may substantially reduce the local economic benefits generated by tourism. Recent empirical studies suggest that sustainable tourism policies should prioritize local ownership, community-based tourism, human capital development, and stronger integration between tourism and local production systems to maximize poverty reduction and inclusive regional Development (Rasoolimanesh et al., 2024; Scheyvens et al., 2023; UN Tourism, 2024).

2.1.3 Human Capital Theory

Human Capital Theory, originally developed by Becker (1993), posits that investments in education, training, skills, and knowledge enhance individual productivity and improve labor market competitiveness. In the tourism sector, human capital has become increasingly important because tourism services are highly labor-intensive and depend on employees' technical competencies, communication abilities, digital literacy, foreign language proficiency, hospitality skills, and service quality. Recent studies emphasize that the quality of human resources strongly influences the competitiveness and sustainability of tourism destinations, as skilled workers improve visitor satisfaction, innovation, and organizational performance (Baum, 2024; OECD, 2024; UN Tourism, 2024). Regions with higher-quality human capital are generally better positioned to capture the economic opportunities generated by tourism expansion. Improvements in education, vocational training, professional certification, and digital competencies enable local workers to access higher-quality employment in hotels, restaurants, transportation services, travel agencies, destination management organizations, and creative tourism industries. Furthermore, workforce upskilling enhances labor productivity and strengthens tourism competitiveness, thereby increasing household income and reducing open unemployment. Recent empirical studies indicate that tourism destinations investing in human capital development experience stronger employment growth and more inclusive economic outcomes than destinations relying solely on physical infrastructure development (Baum, 2024; OECD, 2024; Figueroa-Domecq et al., 2023).

Conversely, insufficient workforce capacity may limit the ability of local communities to participate effectively in tourism-related industries, resulting in employment opportunities being filled by workers from outside the destination. Such conditions reduce the local economic multiplier effects of tourism and may weaken its contribution to poverty reduction and inclusive Development. Recent studies emphasize that investments in education, vocational training, entrepreneurship, and lifelong learning are fundamental for strengthening local participation, improving labor productivity, and ensuring that tourism-generated economic benefits are broadly distributed among host communities. Therefore, human capital development should be integrated into tourism policies to support sustainable and inclusive regional Development (Scheyvens et al., 2023; UN Tourism, 2024; OECD, 2024).

2.1.4 Tourism and Employment Generation

Tourism is widely recognized as one of the world's most labor-intensive industries, generating employment opportunities across a broad spectrum of occupations, ranging from highly skilled professionals to low-skilled service workers. Unlike capital-intensive sectors, tourism creates both direct employment in accommodation, food and beverage services, transportation, travel agencies, and recreation, as well as indirect employment through agriculture, handicrafts, construction, retail trade, creative industries, and financial services. The labor-intensive nature of tourism enables the sector to absorb a diverse workforce, making it an important contributor to inclusive economic Development, particularly in developing countries (Baum, 2024; UN Tourism, 2024; World Travel & Tourism Council, 2024). According to employment multiplier theory, increases in tourist arrivals stimulate demand for tourism-related goods and services, encouraging business expansion and higher labor demand throughout the regional economy. Hotels recruit additional housekeeping and front-office staff, restaurants employ more service workers, transportation companies increase driver recruitment, while local producers expand agricultural, handicraft, and food production to satisfy tourism demand. These backward and forward linkages generate significant multiplier effects that extend beyond the tourism sector and stimulate employment across multiple industries (Dwyer, 2023; World Travel & Tourism Council, 2024; Rasoolimanesh et al., 2024).

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Recent meta-analytical and systematic review studies consistently demonstrate a statistically significant positive relationship between tourism development and employment creation, although the magnitude of the effect varies across countries depending on institutional quality, labor market flexibility, tourism specialization, and regional economic structures. Tourism therefore represents an effective mechanism for reducing open unemployment, particularly in developing economies where labor-intensive service industries play a central role in employment generation (Alcalá-Ordóñez et al., 2024; Bhatt et al., 2024; Panagiotidis et al., 2024). Despite its considerable contribution to employment generation, tourism employment faces several structural challenges. Seasonal fluctuations in tourist demand, the prevalence of informal employment, temporary and part-time contracts, relatively low wages, and limited career advancement opportunities may constrain tourism's capacity to provide sustainable livelihoods. Consequently, contemporary tourism research argues that employment quality—including job security, income stability, skills development, social protection, and decent working conditions—should be evaluated alongside employment quantity when assessing tourism's socioeconomic contribution and its role in achieving sustainable Development (Baum, 2024; Figueroa-Domecq et al., 2023; International Labour Organization, 2024).

2.1.5 Tourism and Poverty Alleviation

The relationship between tourism and Poverty has attracted increasing scholarly attention over the past two decades as tourism has become an important instrument for achieving sustainable and inclusive Development. Tourism contributes to poverty reduction through multiple transmission channels, including employment generation, entrepreneurship development, income diversification, local business creation, and government revenues that finance public infrastructure and social services. Furthermore, tourism stimulates rural Development by expanding markets for agricultural products, handicrafts, cultural performances, transportation services, and other locally produced goods, thereby strengthening local economic resilience and improving household livelihoods (Scheyvens et al., 2023; UN Tourism, 2024; Rasoolimanesh et al., 2024). Most empirical studies conclude that tourism contributes positively to poverty reduction by increasing household income, expanding employment opportunities, and stimulating local entrepreneurship. Nevertheless, the distribution of tourism benefits is often uneven. Tourism may simultaneously increase regional income while widening income inequality when economic gains are concentrated among large investors, urban destinations, or tourism enterprises with limited linkages to local communities. Evidence from Indonesia using dynamic computable general equilibrium (CGE) models demonstrates that tourism expansion reduces Poverty but may also increase income inequality, highlighting the need for complementary public policies that strengthen local participation, improve human capital, and promote equitable benefit distribution (Mahadevan et al., 2017; *Tourism Management*, 2023; Bhatt et al., 2024).

Recent tourism literature increasingly emphasizes the concept of tourism-led inclusive growth, which combines economic expansion with social equity and sustainable Development. Inclusive tourism aims not only to increase tourist arrivals and economic output but also to ensure that tourism-generated benefits are broadly distributed among local communities. Achieving inclusive tourism development requires stronger local supply chains, greater participation of micro, small, and medium-sized enterprises (MSMEs), workforce development, institutional capacity building, and collaborative governance. These elements strengthen local economic multipliers and enhance tourism's contribution to poverty reduction and regional resilience (Bhatt et al., 2024; Rasoolimanesh et al., 2024; Scheyvens et al., 2023).

2.2 Previous Empirical Studies

A growing body of empirical literature has investigated the socioeconomic impacts of tourism across developed and developing economies. While early studies established tourism as a driver of long-term economic growth, more recent research has expanded the analysis to include employment creation, poverty reduction, income distribution, and inclusive regional Development. Updated systematic reviews confirm that the Tourism-Led Growth Hypothesis (TLGH) continues to receive substantial empirical support, although the magnitude of tourism's economic contribution varies according to institutional quality, governance, tourism specialization, and regional characteristics (Alcalá-Ordóñez et al., 2024; Panagiotidis et al., 2024; Bhatt et al., 2024). Evidence from Indonesia indicates that tourism expansion contributes significantly to poverty reduction through employment creation, income diversification, and regional economic growth. However, tourism may also widen income inequality when tourism-generated benefits are concentrated among capital owners or urban destinations. Recent systematic reviews and meta-analyses further demonstrate that tourism contributes not only to GDP growth but also to employment generation, improvements in living standards, community well-being, and social inclusion, provided that institutional quality, governance effectiveness, and local participation are adequately strengthened (Rasoolimanesh et al., 2024; Bhatt et al., 2024; *Tourism Management*, 2023).

Despite these advances, several important research gaps remain. First, most previous studies primarily examine the relationship between tourism and economic growth, whereas relatively few simultaneously investigate the effects of tourism on

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open unemployment and Poverty within an integrated analytical framework. Second, many empirical studies rely on national-level datasets, limiting understanding of regional heterogeneity and local development dynamics. Third, empirical evidence from East Java remains limited despite the province's strategic importance as one of Indonesia's leading tourism destinations. Finally, few studies employ district-level panel data capable of capturing both cross-sectional and temporal variations in tourism development and socioeconomic outcomes, thereby limiting the formulation of evidence-based regional tourism policies (Alcalá-Ordóñez et al., 2024; Costa et al., 2026; Bhatt et al., 2024).

2.3 Conceptual Framework

Based on the Tourism-Led Growth Hypothesis, Pro-Poor Tourism Theory, Human Capital Theory, and previous empirical findings, this study proposes that increasing tourist visits stimulates tourism-related business activities, expands employment opportunities, increases household income, and ultimately contributes to poverty alleviation. Tourist arrivals are therefore expected to influence Poverty both directly and indirectly through reductions in open unemployment. This framework positions tourism as a strategic instrument for promoting inclusive regional Development in East Java by simultaneously enhancing economic performance and improving social welfare.

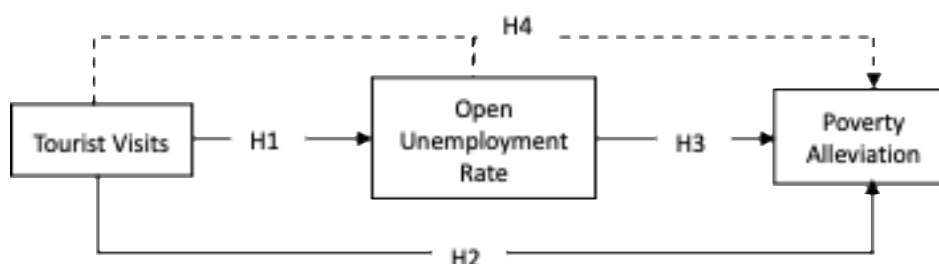


Figure 1. Conceptual Framework

Information:

- Direct Effect
- - - → Indirect Effect

2.4 Hypotheses Development

Accordingly, this study develops the following hypotheses:

Table 3. Hypotheses Development

Hypotheses	Statemnet
H1	: Tourist visits have a significant negative effect on the Open Unemployment Rate in East Java.
H2	: Tourist visits have a significant negative effect on the Poverty Rate in East Java.
H3	: The reduction in the Open Unemployment Rate contributes significantly to poverty alleviation in East Java.
H4	: Tourist visits indirectly reduce Poverty through their effect on lowering the Open Unemployment Rate.

III. METHOD

3.1 Research Design

3.1.1 Quantitative Explanatory Research and Panel Data

This study employed a quantitative explanatory research design to investigate the effect of tourist visits on open unemployment and poverty alleviation in East Java Province. The study aims to explain the causal relationships among tourism development, labor market outcomes, and Poverty using secondary panel data. Panel data analysis combines cross-sectional and time-series observations, allowing researchers to control for unobserved heterogeneity, improve estimation efficiency, reduce omitted-variable bias, and produce more robust statistical inference than purely cross-sectional or time-series models (Baltagi, 2021; Wooldridge, 2021; Hsiao, 2022).

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3.1.2 Causal Research and Tourism Economics

The study adopted a causal explanatory approach to examine both the direct effect of tourist visits on Poverty and the indirect effect mediated by the Open Unemployment Rate (OUR). The analytical framework integrates perspectives from tourism economics, labor economics, and regional Development to explain how tourism contributes to employment generation, poverty reduction, and inclusive economic Development. Recent empirical studies increasingly employ panel data models to estimate the causal effects of tourism on regional socioeconomic outcomes because they allow researchers to capture spatial heterogeneity and temporal dynamics across regions (Alcalá-Ordóñez et al., 2024; Panagiotidis et al., 2024; Rasoolimanesh et al., 2024).

Panel data estimation has become one of the most widely adopted analytical techniques in tourism economics because it enables researchers to simultaneously account for cross-sectional differences among regions and temporal changes over time. Compared with conventional cross-sectional analysis, panel regression provides more degrees of freedom, reduces multicollinearity, controls for unobservable regional characteristics, and improves the consistency and efficiency of parameter estimates. Consequently, panel data models are extensively applied in empirical studies investigating the relationships between tourism, employment, economic growth, and Poverty across regions (Baltagi, 2021; Wooldridge, 2021; Alcalá-Ordóñez et al., 2024).

3.2 Study Area and Period

The study was conducted in East Java Province, Indonesia, one of the country's leading tourism destinations characterized by diverse natural, cultural, religious, and marine tourism attractions. East Java consists of 38 regencies and municipalities, which represent the cross-sectional units of analysis. The observation period covers 2019–2024, allowing the analysis to capture tourism recovery following the COVID-19 pandemic and recent regional economic dynamics. Consequently, the balanced panel dataset consists of: Cross-sectional units (N): 38 regencies/municipalities. Time periods (T): 5 years (2020–2024). Total observations: 190 panel observations.

3.3 Data Sources

This study utilized secondary data collected from official government institutions to ensure data reliability and consistency. The data sources include: (a) Statistics Indonesia (Badan Pusat Statistik/BPS); (b) East Java Provincial Tourism Office; (c) Ministry of Tourism and Creative Economy; (d) Bank Indonesia; and (e) Ministry of Finance (for regional fiscal indicators). All variables were compiled annually for each regency and municipality in East Java.

3.4 Variables and Measurement

The study consists of one independent variable, one mediating variable, one dependent variable, and several control variables:

Table 4. Variables and measurement

Variable	Symbol	Measurement	Source
Tourist Visits	TV	Number of domestic and international tourist arrivals (persons/year)	East Java Tourism Office
Open Unemployment Rate	OUR	Percentage (%) of labor force unemployed	BPS
Poverty Rate	POV	Percentage (%) of Population below poverty line	BPS

3.5 Research Model

To estimate the direct effect of tourist visits on unemployment and Poverty, two panel regression equations were specified.

Model 1: Effect of Tourist Visits on Open Unemployment

$$OUR = \alpha_1 TV + \varepsilon_i \tag{1}$$

where:

- OUR = Open Unemployment Rate
- TV = Tourist Visits
- α_1 = regression coefficient
- ε_i = standard error

Model 2: Effect of Tourist Visits on Poverty Alleviation

$$PR = \alpha_2 TV + \varepsilon_i \tag{2}$$

where:

- PR = Poverty Rate

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TV = Tourist Visits
 α_2 = regression coefficient
 ϵ_i = standard error

Model 3. Effect of unemployment rate on poverty alleviation

$$PR = \alpha_3 OUR + \epsilon_i \quad (3)$$

where:

PR = Poverty Rate
OUR = Open Unemployment Rate
 α_3 = regression coefficient
 ϵ_i = standard error

Model 4. Tourist visits indirectly reduce Poverty through their effect on lowering the Open Unemployment Rate

$$PR = \alpha_4 TV + \alpha_5 OUR + \epsilon_i \quad (4)$$

where:

PR = Poverty Rate
OUR = Open Unemployment Rate
TV = Tourism Visits
 α_4 & α_5 = regression coefficient
 ϵ_i = standard error

3.6 Hypothesis Testing

Hypothesis testing was conducted at the 5% significance level. The statistical procedures included: (a) t-test, to examine the significance of individual regression coefficients. (b) F-test, to assess the joint significance of the explanatory variables. (c) Coefficient of Determination (R^2), to evaluate the explanatory power of the regression models. (d) Indirect Effect Test (Sobel Test), to determine the mediating role of Open Unemployment. (e) Statistical analyses were performed using SPSS, all of which are widely used in panel data econometrics and tourism economics research.

IV. RESULT AND DISCUSSION

RESULT

To examine the causal relationships among the research variables, a series of linear regression analyses were performed as part of the path analysis framework. The analysis was conducted to assess the direct effects of tourist visits on the open unemployment rate and Poverty, as well as to examine the mediating role of the open unemployment rate in the relationship between tourist visits and Poverty. The analysis was performed using SPSS with a significance level of 5% ($\alpha = 0.05$). The estimated parameters included the unstandardized regression coefficient (B), standardized coefficient (β), t -statistics, p -values, coefficient of determination (R^2), and the overall model significance (F -test). The regression results for each structural path are presented in Tables 5 to 8.

The Effect of Tourist Visit on Open Unemployment Rate

To examine the effect of tourist visits on the open unemployment rate, a simple linear regression analysis was performed using Tourist Visits as the independent variable and the Open Unemployment Rate as the dependent variable. This analysis aims to determine whether an increase in tourism activities contributes to job creation, thereby reducing the level of open unemployment. From a theoretical perspective, higher tourist arrivals stimulate demand for tourism-related goods and services, encouraging business expansion and employment opportunities in accommodation, transportation, food and beverage services, retail trade, and other supporting industries. Consequently, the relationship between tourist visits and the open unemployment rate represents an important indicator for assessing the contribution of the tourism sector to regional economic Development and labor market performance. The regression results presented in Table 5 provide the estimated unstandardized coefficient (B), standardized coefficient (β), t -statistics, significance level (p -value), coefficient of determination (R^2), and overall model significance (F -test). These statistical indicators are used to evaluate the direction, magnitude, and significance of the relationship between tourist visits and the open unemployment rate. The findings presented in the table serve as the basis for determining whether the proposed hypothesis regarding the effect of tourist visits on the open unemployment rate is supported by the empirical evidence.

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Table 5. Path analysis calculation results

Model	Standardize Coefficient (β)	t	sig
Constant		154.980	0.000
Tourist Visit	-0.121	-1.667	0.097
R ²	= 0.015		
F-test	= 2.778		

a. Dependent Variable: Open Unemployment Rate

The regression results showed that Tourist Visit did not significantly affect the Open Unemployment Rate. The regression coefficient was $B = -1.344E-6$, with a standardized beta coefficient $\beta = -0.121$ and a significance level of 0.097 (> 0.05). The R^2 was 0.015, indicating that tourist visits explained about 1.5% of the variation in the open unemployment rate, with the rest explained by other factors outside the model. The F-test showed $F = 2.778$ with $p = 0.097$, so the overall regression model was not significant. Thus, the hypothesis that an increase in tourist visits can reduce the open unemployment rate is not supported by the research data.

The Influence of Tourist Visits on Poverty

To examine the influence of tourist visits on Poverty, a simple linear regression analysis was conducted using **Tourist Visits** as the independent variable and Poverty as the dependent variable. This analysis aims to determine whether an increase in tourist arrivals contributes to poverty reduction through economic growth, employment generation, and increased income opportunities for local communities. According to the tourism-led development perspective, tourism is expected to stimulate local economic activities, create multiplier effects across various sectors, and improve household welfare by expanding employment and business opportunities. Consequently, the relationship between tourist visits and Poverty serves as an important indicator for evaluating the inclusiveness of tourism development and its contribution to sustainable economic Development. The regression results presented in Table 6 provide the estimated unstandardized coefficient (B), standardized coefficient (β), t -statistics, significance level (p -value), coefficient of determination (R^2), and overall model significance (F -test). These statistical measures are used to assess the direction, magnitude, and statistical significance of the relationship between tourist visits and Poverty. The empirical findings presented in the table provide evidence for determining whether the data support the proposed hypothesis regarding the influence of tourist visits on Poverty.

Table 6. Path analysis calculation results

Model	Standardize Coefficient (β)	t	sig
Constant		9.835	0.000
Tourist Visit	0.331	4.805	0.000
R ²	= 0.019		
F-test	= 23.090		

a. Dependent Variable: Poverty

The regression results show that Tourist Visit has a positive and significant association with Poverty. The regression coefficient value was $B = 6.758E-5$ with a standardized beta coefficient of $\beta = 0.331$ and a significance value of 0.000 (< 0.05). The R^2 value of 0.109 indicates that the Tourist Visit variable explains 10.9% of the variation in poverty levels. The results of the F-test also indicated that the model was significant, with $F = 23,090$ ($p < 0.001$). These findings indicate that higher tourist visits are associated with higher poverty rates in the observation area. These results indicate that the growth of the tourism sector has not fully provided inclusive economic benefits for people experiencing Poverty, so policies are needed to strengthen the linkages between tourism activities and local job creation and increased community income.

The Effect of the Open Unemployment Rate on Poverty

To examine the effect of the Open Unemployment Rate on Poverty, a simple linear regression analysis was conducted using the Open Unemployment Rate as the independent variable and Poverty as the dependent variable. This analysis aims to determine whether changes in the level of open unemployment significantly influence poverty levels. From a theoretical perspective, unemployment is considered one of the primary determinants of Poverty because unemployed individuals generally experience a loss of income, reduced purchasing power, and limited access to economic opportunities. As a result, a

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higher open unemployment rate is expected to increase the incidence of Poverty by reducing household income and weakening overall economic welfare. The regression results presented in Table 7 provide the estimated unstandardized coefficient (B), standardized coefficient (β), *t*-statistics, significance level (*p*-value), coefficient of determination (R^2), and overall model significance (*F*-test). These statistical indicators are used to evaluate the direction, magnitude, and statistical significance of the relationship between the open unemployment rate and Poverty. The findings presented in the table provide empirical evidence for determining whether the proposed hypothesis regarding the effect of the open unemployment rate on Poverty is supported by the data.

Table 7. Path analysis calculation results

Model	Standardize Coefficient (β)	t	sig
Constant		0.887	0.376
Open Unemployment Rate	0.020	0.279	0.781
R^2	= 0.000		
F-test	= 0.078		

a. Dependent Variable: Poverty

The analysis shows that the Open Unemployment Rate has no significant effect on Poverty. The regression coefficient was $B = 0.373$, with a standardized beta coefficient of $\beta = 0.020$ and a significance value of 0.781 (>0.05). An R^2 value of 0.000 indicates that the open unemployment rate explains almost no variation in poverty levels. The *F*-test yielded a *p*-value of 0.781, so the regression model was not significant. Thus, the hypothesis that open unemployment affects Poverty is rejected. These findings indicate that Poverty in the study area is influenced more by factors such as labor productivity, education level, job quality, and income distribution.

The Combined Effect of Tourist Visits and the Open Unemployment Rate on Poverty

To examine the combined effect of Tourist Visits and the Open Unemployment Rate on Poverty, a multiple linear regression analysis was conducted using Tourist Visits and the Open Unemployment Rate as independent variables and Poverty as the dependent variable. This analysis aims to evaluate the simultaneous contribution of tourism development and labor market conditions to poverty reduction. The multiple regression approach enables the assessment of the individual effect of each independent variable while controlling for the influence of the other variable, thereby providing a more comprehensive understanding of the determinants of Poverty. From a theoretical perspective, tourism is expected to contribute to poverty alleviation by generating employment opportunities, increasing household income, and stimulating local economic activities. At the same time, the open unemployment rate reflects the ability of the labor market to absorb the workforce, which is closely associated with household welfare and income distribution. Therefore, examining these variables simultaneously provides a broader understanding of whether tourism development directly influences Poverty or whether its impact is partially associated with labor market performance.

The regression results presented in Table 8 include the estimated unstandardized coefficients (B), standardized coefficients (β), *t*-statistics, significance levels (*p*-values), coefficient of determination (R^2), and the overall model significance (*F*-test). These statistical indicators are used to evaluate both the individual and joint effects of tourist visits and the open unemployment rate on Poverty. The empirical findings reported in the table provide the basis for determining whether the proposed hypothesis concerning the simultaneous influence of tourist visits and the open unemployment rate on Poverty is supported by the data.

Table 8. Path analysis calculation results

Model	Standardize Coefficient (β)	t	sig
Constant		-0.012	0.991
Open Unemployment Rate	0.061	0.881	0.379
Tourist Visit	0.338	4.874	0.000
R^2	= 0.113		
F-test	= 11.920		

a. Dependent Variable: Poverty

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Multiple regression analysis showed that the model including Tourist Visit and Open Unemployment Rate was significant, with $F = 11,920$ ($p < 0.001$). An R^2 value of 0.113 indicates that the two variables together explain 11.3% of the variation in poverty rates, while the remaining 88.7% is influenced by other variables not included in the model. Partially, Tourist Visit still had a positive and significant effect on Poverty, with $\beta = 0.338$, $t = 4.874$, and $p < 0.001$. In contrast, the Open Unemployment Rate had no significant effect on Poverty, with $\beta = 0.061$, $t = 0.881$, and $p = 0.379$. These results show that, when both variables were analyzed simultaneously, only the number of tourist visits made a significant contribution to changes in poverty rates, whereas the open unemployment rate did not.

Direct, Indirect and Total Effect

The decomposition of these effects provides a more comprehensive evaluation of the structural model by distinguishing between direct causal relationships and mediation mechanisms. In this study, the Open Unemployment Rate is specified as the mediating variable linking Tourist Visits to Poverty. Therefore, the direct effects are estimated from the standardized path coefficients obtained through regression analysis, whereas the indirect effect is calculated by multiplying the path coefficients from Tourist Visits to the Open Unemployment Rate and from the Open Unemployment Rate to Poverty. The total effect is subsequently obtained by summing the direct and indirect effects. The results of the decomposition analysis are presented in Table 9, providing empirical evidence regarding the magnitude of both the direct and mediated relationships among the study variables and allowing for the evaluation of the proposed mediation hypothesis.

Table 9. Direct, Indirect and Total Effect

Relationships	Standardized Beta	Direct Effect	Direct Effect	Total Effect
Tourist Visit → Open Unemployment Rate	-0.121	-0.121		
Open Unemployment Rate → Poverty	0.020	0.020		
Tourist Visit → Poverty	0.338	0.338		
Tourist Visit → Poverty through Open Unemployment Rate			-0.002	0.336

Table 9 presents the decomposition of the direct, indirect, and total effects among the variables included in the proposed path model. The results indicate that Tourist Visits have a negative direct effect on the Open Unemployment Rate, with a standardized path coefficient of $\beta = -0.121$. This finding suggests that an increase in tourist arrivals tends to reduce the open unemployment rate; however, as indicated by the previous regression analysis, the relationship is not statistically significant. Therefore, the tourism sector has not yet demonstrated a meaningful contribution to labor absorption in the study area. Furthermore, the Open Unemployment Rate exhibits a positive direct effect on Poverty with a standardized coefficient of $\beta = 0.020$. Although the direction of the relationship is theoretically consistent with the expectation that higher unemployment leads to higher Poverty, the magnitude of the effect is very small and statistically insignificant. This finding implies that variations in Poverty are influenced by factors other than the open unemployment rate, such as income distribution, labor productivity, education, and other socioeconomic conditions. The analysis also reveals that Tourist Visits exert a positive direct effect on Poverty, with a standardized coefficient of $\beta = 0.338$. This coefficient represents the strongest direct relationship in the structural model, indicating that changes in tourist arrivals are directly associated with changes in poverty levels. The positive coefficient suggests that the economic benefits generated by tourism have not been distributed evenly across local communities, implying that tourism growth has not yet translated into inclusive poverty reduction.

Regarding the mediation analysis, the indirect effect of Tourist Visits on Poverty through the Open Unemployment Rate is -0.002 , which is obtained by multiplying the path coefficients from Tourist Visits to the Open Unemployment Rate (-0.121) and from the Open Unemployment Rate to Poverty (0.020). The indirect effect is substantially smaller than the direct effect, indicating that the mediating role of the open unemployment rate is negligible. Consequently, the total effect of Tourist Visits on Poverty is 0.336 , which is only slightly lower than the direct effect of 0.338 . These findings demonstrate that the influence of tourist visits on Poverty occurs predominantly through a direct pathway, while the indirect pathway through the open unemployment rate contributes only a minimal effect. Overall, the decomposition analysis confirms that the Open Unemployment Rate does not function as an effective mediating variable in the relationship between Tourist Visits and Poverty. The negligible indirect effect and the similarity between the direct effect (0.338) and the total effect (0.336) indicate that the relationship between tourism development and Poverty is largely direct rather than mediated through changes in labor market conditions. These results suggest that increasing tourist arrivals alone is insufficient to reduce Poverty unless accompanied by

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policies that strengthen local employment opportunities, improve workforce quality, and ensure a more equitable distribution of tourism-generated economic benefits.

DISCUSSION

The findings of this study provide important insights into the relationships among tourist visits, the open unemployment rate, and Poverty in East Java. The proposed conceptual model assumes that tourism development contributes to poverty reduction through employment creation and improvements in local economic welfare. However, the empirical findings reveal that these relationships are more complex than suggested by conventional tourism development theories.

The first finding indicates that tourist visits do not significantly affect the open unemployment rate ($\beta = -0.121$; $p = 0.097$). Although the negative coefficient suggests that an increase in tourist arrivals tends to reduce unemployment, the effect is statistically insignificant. This finding implies that tourism development in East Java has not yet generated sufficient employment opportunities to absorb the regional labor force. This result is consistent with recent studies arguing that tourism growth does not automatically translate into employment creation because many tourism-related jobs are seasonal, temporary, informal, and characterized by relatively low labor productivity (Baum, 2022; Gössling & Schweiggart, 2022; Nguyen et al., 2024). Moreover, the increasing adoption of digital technologies and automation within tourism services has reduced labor intensity in several tourism subsectors. As argued by Gössling and Schweiggart (2022), technological transformation has improved tourism efficiency but simultaneously reduced employment elasticity in many destinations. Another explanation relates to the mismatch between labor market qualifications and tourism industry requirements. The tourism sector increasingly demands workers with specialized competencies in hospitality management, digital marketing, foreign languages, and customer service. According to Baum (2022), inadequate human capital remains one of the primary constraints limiting tourism's contribution to employment generation in developing economies.

The second finding reveals that tourist visits have a positive and statistically significant effect on Poverty ($\beta = 0.331$; $p < 0.001$). This result differs from the Tourism-Led Growth Hypothesis, which proposes that tourism stimulates economic growth and subsequently improves community welfare. One possible explanation is that tourism-generated income is concentrated among tourism investors, hotel operators, travel agencies, and other large business entities, while local communities receive only limited economic benefits. This phenomenon is commonly referred to as economic leakage, whereby a considerable proportion of tourism expenditure flows outside the destination economy. Recent evidence suggests that tourism growth can increase regional income while simultaneously widening income inequality if local participation in tourism value chains remains limited (Scheyvens & Biddulph, 2024).

Furthermore, tourism expansion may increase housing prices, land values, transportation costs, and prices of basic commodities, thereby reducing the purchasing power of low-income households. As highlighted by the OECD (2023), destinations experiencing rapid tourism growth frequently encounter rising living costs that disproportionately affect economically vulnerable populations. Consequently, tourism development may coexist with persistent Poverty when inclusive governance mechanisms are absent. These findings also indicate that tourism development in East Java has not fully implemented the principles of pro-poor tourism, which emphasize equitable benefit sharing, community participation, local employment, and the empowerment of micro, small, and medium enterprises (Rasoolimanesh et al., 2023).

This finding supports the argument that tourism growth alone is insufficient to alleviate Poverty unless accompanied by equitable income distribution and strong local participation in tourism value chains (Scheyvens & Biddulph, 2024; Rasoolimanesh et al., 2023). Economic leakage remains one of the principal challenges in developing countries because a substantial proportion of tourism expenditure is captured by multinational corporations and external investors rather than local communities (Croes et al., 2023). Consequently, tourism may stimulate regional economic growth without substantially improving the welfare of poor households.

The third finding demonstrates that the open unemployment rate does not significantly affect Poverty ($\beta = 0.020$; $p = 0.781$). Although unemployment has traditionally been regarded as one of the principal determinants of Poverty, the empirical evidence suggests that Poverty is influenced by broader socioeconomic factors beyond labor market conditions in East Java. One possible explanation is the dominance of informal employment in Indonesia. Many individuals categorized as employed remain economically vulnerable because their jobs generate unstable and insufficient incomes. Therefore, employment status alone cannot adequately explain Poverty. Similar findings were reported by the International Labour Organization (2024), which noted that vulnerable employment remains widespread in developing countries despite declining unemployment rates. In addition, Poverty is influenced by multidimensional factors such as educational attainment, labor productivity, access to productive assets, income inequality, and social protection programs. The World Bank (2024) emphasizes that improving job quality and increasing labor productivity are more effective strategies for poverty reduction than merely reducing unemployment rates.

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The insignificant relationship between unemployment and Poverty suggests that Poverty is multidimensional and cannot be explained solely by labor market indicators. In many developing economies, a large proportion of workers are employed in vulnerable or low-productivity jobs that generate insufficient income to escape Poverty (International Labour Organization, 2024). Similar conclusions were reached by Klasen (2022), who argued that employment quality is a more important determinant of Poverty than employment status alone. Furthermore, the World Bank (2024) emphasized that labor productivity, educational attainment, and access to productive assets explain Poverty more effectively than unemployment rates. Recent evidence from Indonesia also demonstrates that informal employment weakens the statistical relationship between unemployment and Poverty because many individuals classified as employed remain economically vulnerable (Suryahadi et al., 2023).

The multiple regression analysis further demonstrates that tourist visits and the open unemployment rate jointly explain 11.3% of the variation in Poverty, although only tourist visits remain statistically significant in the partial regression model. The decomposition analysis strengthens these findings. The direct effect of tourist visits on Poverty (0.338) is substantially larger than the indirect effect transmitted through the open unemployment rate (-0.002), resulting in a total effect of 0.336. This finding indicates that the open unemployment rate does not function as a mediating variable between tourist visits and Poverty. Instead, tourism appears to influence Poverty through alternative mechanisms, including income distribution, investment concentration, regional economic linkages, and local institutional capacity. From a policy perspective, these findings imply that tourism development strategies should shift from focusing solely on increasing tourist arrivals toward promoting inclusive and sustainable tourism. Policymakers should strengthen vocational education and workforce skills, increase local participation in tourism supply chains, encourage community-based tourism, and expand opportunities for micro, small, and medium enterprises. Furthermore, reducing economic leakage through stronger local procurement policies would enhance the circulation of tourism-generated income within local economies and improve tourism's contribution to employment creation and poverty alleviation.

The decomposition analysis further confirms that the direct effect of tourist visits on Poverty is substantially larger than its indirect effect through the open unemployment rate. This finding indicates the absence of a meaningful mediation mechanism, suggesting that tourism influences Poverty through alternative channels such as income distribution, tourism investment, institutional quality, and local business participation. Similar findings have been reported by Hair et al. (2022), who argued that mediation exists only when the indirect pathway contributes significantly to explaining the relationship between independent and dependent variables. Likewise, Nitzl (2023) emphasized that an insignificant indirect effect indicates that the proposed mediating variable does not transmit the causal influence from the predictor to the outcome variable. Therefore, tourism policies should focus on strengthening the direct socioeconomic benefits of tourism rather than relying solely on employment creation as an intermediary mechanism.

Overall, this study demonstrates that tourism growth alone is insufficient to generate inclusive economic Development. The effectiveness of tourism as an instrument for poverty alleviation depends on institutional quality, human capital development, equitable income distribution, and the integration of local communities into tourism value chains. These findings contribute to the growing body of literature suggesting that the success of tourism-led Development should be evaluated not only by visitor growth but also by its capacity to generate broad-based socioeconomic benefits.

V. CONCLUSION

The findings of this study provide important insights into the relationship between tourist visits, the open unemployment rate, and Poverty in East Java. First, the empirical results reveal that tourist visits do not have a statistically significant effect on the open unemployment rate. This finding indicates that an increase in tourist arrivals has not been accompanied by a significant reduction in unemployment, suggesting that the growth of the tourism sector has not generated sufficient employment opportunities to absorb the available labor force. This may be attributed to the seasonal nature of tourism employment, the dominance of informal jobs, or the limited participation of local workers in tourism-related industries. Second, the analysis demonstrates that tourist visits have a significant positive effect on Poverty.

Contrary to the conventional expectation that tourism contributes to poverty alleviation, the results indicate that higher tourist arrivals are associated with higher poverty levels in the study area. This finding suggests that the economic benefits generated by tourism have not been distributed evenly across local communities. Instead, the gains from tourism may be concentrated among certain business actors or regions, while vulnerable groups receive limited economic benefits. Consequently, tourism growth alone is insufficient to reduce Poverty unless it is accompanied by inclusive development policies that strengthen local participation, employment opportunities, and income distribution.

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Third, the study finds that the open unemployment rate does not significantly affect Poverty. This result implies that variations in Poverty cannot be explained solely by changes in unemployment levels. Broader socioeconomic factors, including income inequality, labor productivity, educational attainment, the quality of employment, and social protection programs, likely influence poverty. Therefore, reducing unemployment alone may not necessarily lead to substantial poverty reduction without improvements in the quality of employment and household income. Finally, the multiple regression analysis indicates that tourist visits and the open unemployment rate jointly have a significant effect on Poverty, although only tourist visits remain statistically significant in the partial analysis. The coefficient of determination shows that these variables explain only a modest proportion of the variation in Poverty, implying that other economic and social determinants also play an important role. Furthermore, because tourist visits do not significantly affect the open unemployment rate and the open unemployment rate does not significantly influence Poverty, the open unemployment rate does not mediate the relationship between tourist visits and Poverty. Thus, the influence of tourist visits on Poverty occurs primarily through a direct effect rather than an indirect effect through labor market conditions.

Furthermore, the decomposition of effects demonstrates that the direct effect of tourist visits on Poverty (0.338) is substantially greater than the indirect effect through the open unemployment rate (-0.002), resulting in a total effect of 0.336. These findings confirm that the influence of tourism on Poverty occurs predominantly through a direct pathway rather than through labor market mechanisms. Consequently, the open unemployment rate cannot be considered an effective mediating variable in the relationship between tourist visits and Poverty. From a theoretical perspective, this study extends the literature on tourism-led Development by demonstrating that increases in tourist arrivals do not necessarily generate inclusive socioeconomic outcomes. The findings highlight the importance of integrating tourism development with human capital enhancement, equitable income distribution, and stronger local economic linkages. Tourism should therefore be viewed not merely as a driver of economic growth but as a development strategy whose effectiveness depends on institutional quality and community participation.

Finally, this study has several limitations. The explanatory power of the proposed model remains relatively modest, indicating that Poverty is influenced by additional determinants that were not incorporated into the analysis. Future research is therefore encouraged to include variables such as income inequality, education, human capital, tourism investment, government expenditure, institutional quality, digital tourism, and green tourism practices to develop a more comprehensive understanding of the mechanisms through which tourism contributes to sustainable and inclusive economic Development. Overall, these findings indicate that tourism development in East Java has not yet translated into inclusive economic outcomes. Future tourism policies should therefore emphasize inclusive and sustainable tourism development by strengthening local labor absorption, enhancing workforce skills, promoting community-based tourism enterprises, and ensuring a more equitable distribution of tourism-generated income. Such strategies are essential for maximizing the contribution of tourism to employment creation and long-term poverty reduction.

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