



## **TOURISM AND HUMAN DEVELOPMENT INDEX IMPACT ON GROSS REGIONAL DOMESTIC PRODUCT**

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### **ABSTRACT**

In addition to the Human Development Index, tourism is now one of the factors considered when promoting economic development. Tourism is a kind of worldwide cultural phenomena that has an inextricable impact on socioeconomic activity. This research intends to examine the impact of tourism and the Human Development Index on economic development in the province of Central Java Indonesia from 2012 to 2021. This study is an associational study. The objective of associative study is to examine the link between two variables. The data used are secondary data from the Central Bureau of Statistics, including information on the number of foreign and domestic tourists in Central Java Province from 2012 to 2021, the Human Development Index for Central Java Province from 2012 to 2021, and the Gross Regional Domestic Product for Central Java Province from 2012 to 2021. Multiple linear regression was used to evaluate the data. Tourism and the human development index have a good and considerable effect on Central Java's economic growth from 2012 to 2021, either concurrently or partly.

Keywords: tourism, HDI, GRDP

### **INTRODUCTION**

The tourist industry is an industrial sector with potential for the regional economy, since its growth will attract other industries that can support the regional economy. The tourist industry may offer good fortune to locations with assets, including cultural assets, human resources, and natural resources that can be optimized to assist economic elements. Economically, tourism may be utilized to generate revenue, both personal income for tourism business players and regional income via the imposition of taxes or levies.

Human development is a process that tries to provide people greater options, particularly in terms of money, health, and education. According to the United Nations, the primary objective of development is to establish an environment in which people may live long, healthy, and productive lives. The Central Bureau of Statistics (BPS) has developed a Human Development Index (HDI) that describes how the people might have access to development in order to produce income, health, and so on. The HDI is comprised of three fundamental dimensions: a long and healthy life, education, and a reasonable level of living.

HDI is a crucial metric for gauging the effectiveness of efforts to improve people's quality of life. HDI may assess strategic data or a region's or country's degree of development. HDI is critical data for Indonesia since, in addition to being a measure of government performance. The success of a country's growth is measured not only by its Gross Domestic Product (GDP), but also by the quality of its human resources, as measured by the Human Development Index (HDI).

Economic growth is the expansion of an economy's capacity to create products and services. In other terms, economic growth refers to quantifiable increases that are often quantified using statistics on gross domestic product or output income per capita. This economic growth may be used as a measure of the country's success and the consequences of its development over that time period. If the government's development efforts are successful, society will see considerable expansion. This rise also demonstrates how per-capita income or the average income of a country's population reflects the wealth of its people.

Central Java Province is an Indonesian province set in the middle of Java Island. Semarang City is the capital. The province is bounded to the west by West Java Province, to the south by the Indian Ocean and the Special Region of Yogyakarta, to the east by East Java, and to the north by the Java Sea. As one of the most stunning tourist sites in Indonesia, Central Java Province provides a wide array of natural, cultural, and man-made attractions.

Initially, tourism in Central Java tended to expand, with as many as 25.6 million tourists in 2012 and as much as 58.59 million visitors in 2019. Even though the number of visits reduced during the Covid-19 pandemic, from 58.59 million in 2019 to 22.71 million during the epidemic, the consequences of the pandemic are still seen in 2021 since there are still 21.33 million visitors.

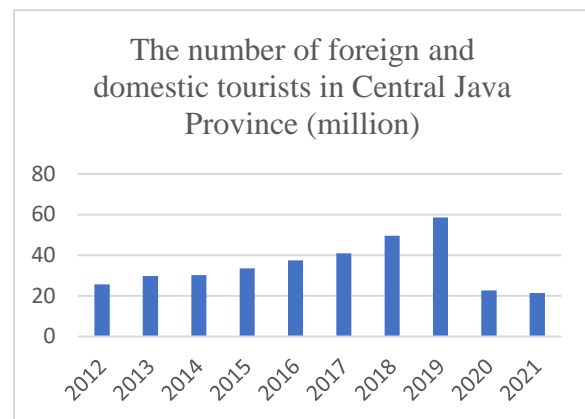


Figure 1. The number of foreign and domestic tourist in Central Java 2012-2021.

In the meanwhile, the Human Development Index in the province of Central Java tends to rise. The Central Java Development Index was 67.21 in 2012 and is projected to improve by 72.16 between 2013 and 2021.

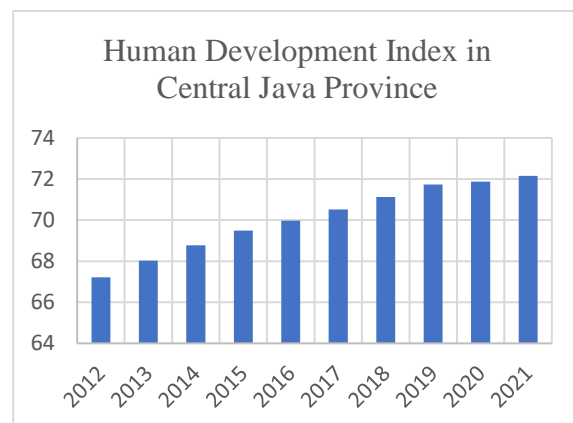


Figure 2. Human Development Index in Central Java Province 2012-2021.

In terms of economic growth, Central Java Province experienced fluctuations. In 2012, the economic growth rate of Central Java Province was 5.34, in 2013 it decreased to 5.11, and in the following year, despite a decline due to the Covid-19 pandemic, it tended to increase, reaching a value of minus 2.60.

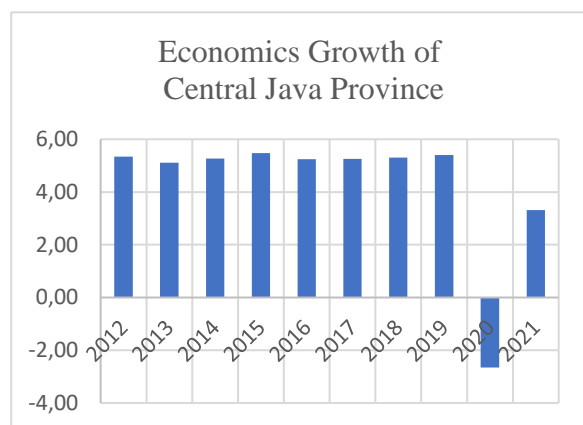


Figure 2. Economics Growth of Central Java Province 2012-2021.

## LITERATURE REVIEW

### Tourism and Economic Growth

Why tourism is an impetus to promoting economic growth was analysis by Li, Jin, and Shi (2018) which concludes that: First, past research has established the favorable economic effects of tourism in most, but not all, instances. Second, tourism may help to poverty reduction via channels of pricing, incomes, and government revenues. Thirdly, significant drivers of tourist efficiency and productivity include labor,

capital, technology, the environment, expenditures, revenues, and a number of external economic issues. Cárdenas-García, Sánchez-Rivero, and Pulido-Fernández (2015) which concludes that The economic growth achieved in several nations over the last two decades as a consequence of the expansion of tourist activities affects a rise in the degree of economic development. All nations since tourism is growing and has become a multinational phenomena involving new ideas and actors. Although some countries and places may feel blessed by tourism, others may feel cursed because they have been negatively impacted by the negative aspects of tourism and overtourism, the majority of which include environmental, resource, and cultural estrangement (Ahmad et al., 2020). Calero and Turner (2020) analysis that regional economics and economic geography, in relation to tourism, to discover theoretical models that aim to explain the role of tourism in regional development and growth, and their empirical applications. Early theories of regional development did not include tourism, primarily because the regional economics and location research community did not consider tourism significant enough to influence economic development. In order to increase the number of tourists and tourism revenues, which would have a positive impact on the economic growth and development of the Republic of Serbia, it is necessary to consider all aspects, establish priorities, and develop concrete proposals for strategic projects that can be implemented within the next period (Dimitrijevic, 2018)

According to Gwenhure and Odhiambo (2017), economic expansion may

stimulate tourism via the development of tourist amenities and infrastructures. Tourism has a unidirectional causal relationship with economic development. Second, a unidirectional causal flow exists between economic development and tourism. Thirdly, a feedback hypothesis described bidirectional causal link exists between tourism and economic development. Fayissa, Nsiah, and Tadasse (2008) who discovered that a 10 percent rise in foreign tourist expenditure results in a 0.4% increase in GDP per capita income. Economic growth as measured by GRDP in the Regency / City of West Java Province is affected by the amount of visitors staying in hotels and dining in restaurants (Hakim et al., 2021). Comerio and Strozzi (2019) conclude favorable impact on the economy as a whole, tourism is seen as a means of spurring economic development in nations. include trade policy, migration, climate change, carbon trading, food pricing, and pro-poor economic growth policies. All of these methods have become standard in the applied economic policy analysis area of tourist research. Inbound tourism may be seen as an alternate kind of capital import that has the ability to support a country's economic prosperity. In order to increase the number of tourists and tourism revenues, which would have a positive impact on the economic growth and development of the Republic of Serbia, it is necessary to consider all aspects, establish priorities, and develop concrete proposals for strategic projects that can be implemented within the next period (Pulido-Fernandez, Cardenas-Garcia, and Sanchez-Rivero, 2014).

In certain cases during the covid pandemic, León-Gómez et al. (2021),

conclude that sustainable tourist development is essential for economic expansion. Countries like China and the United States have created this connection, but European nations still need to do further study on this topic. Similarly, particularly in the context of the present problem caused by Covid-19, our results imply that initiatives to support the development of sustainable tourism and so boost economic growth, which is now being hindered by the pandemic, should be examined. Butcher (2021) examines the promotion of degrowth in tourism, focusing primarily on the emergence of arguments in light of the influence of Covid-19. In order to situate the issue in a larger perspective, this section examines the origins and significance of degrowth as a development ideology. It then goes to challenge some of the implicit and frequently explicit economic, environmental, and cultural assumptions behind degrowth advocacy with reference to tourism. The paper argues that economic development – in tourism and in general – is a necessary, but by no means sufficient, prerequisite for tackling the many difficulties confronting contemporary society that are visible in contemporary tourism.

### **HDI and Economic Growth**

The GRDP is unaffected by the number of visitors that visit tourist attractions or the number of hotels and lodgings. HDI is positively affected by GRDP. This indicates that a high GRDP will boost the buying power of individuals. The findings of the investigation indicate that the number of visitors to tourism objects, the number of tourists to the accommodation, the number of

hotels and lodging, and the number of restaurants and restaurants are among the indirect variables impacting the HDI. The greatest indirect impact is the number of visitors to accommodations (Hakim et al., 2021). The tourist competitiveness literature has taught us that evidence concentrates on tourism development growth rather than the idea of skills. This paper proposes an alternate paradigm for unifying competitiveness theory and capabilities, with the unification being anchored in the Tourism Competitiveness Theory Hypothesis. The Tourist Competitiveness Theory Hypothesis presupposes a cyclical link between tourism competitiveness and capabilities as its assumption (Croes et al., 2020). Priambodo (2021) conclude that in Purbalingga Regency, unemployment and poverty impact economic growth and the human development index. Unemployment and poverty have a detrimental impact on economic development and the HDI. According to Pradana and Sumarsono (2018), The human development index (HDI) and capital investment have a large and beneficial effect on economic growth. The increased Human Development Index and capital investment contribute to a higher economic growth rate. However, fiscal decentralization has little impact on economic development, but economic growth has a positive and substantial effect on income disparity. Inter-regional economic development varied, with growing per capita income in certain regions with strong economic growth and decreasing per capita income in other regions with poor economic growth, leading to a rise in income inequality. Although Iskandar (2017) provides that the moderating impact of the special

autonomy fund on the human development index had a considerable negative effect on economic growth. It shows the usage of special autonomy funds for the human development index is still on the rise, thus it is anticipated that future allocations will need to be based on the requirements of the area so that the special autonomy funds may be used effectively and efficiently.

Rivera (2017) research said that additional reasons suggest that tourism may potentially be the vehicle through which to influence human development and economic prosperity. Nonetheless, the research on the relationship between human development, economic progress, and tourism is replete with contradictory findings. This study's findings indicate the existence of three distinct long-term connections. First, tourism does not encourage human growth. Instead, the degree and level of human development boost tourism by generating an asymmetrical connection. Second, there exists a positive cycle between human development and economic expansion. Thirdly, the research discovered a unidirectional causation supporting the economics-driven tourist development, which means that tourism growth is a result of economic expansion but not the other way around. Gulcemal (2020) conclude Human development facilitates economic expansion. In our sample and time period, inflation is considerable and has a negative association with economic growth and development. It can be shown that Labor has a strong and favorable relationship with economic expansion. Government capital is seen as being positively associated with economic growth and also as being important.

Appiah, Amoasi, and Frowne (2019) conclude Human Development Index served as the study's primary variable of interest, with GDP serving as the dependent variable and inflation, capital, investment, and labor serving as control variables. According to the majority of academics, the study also found that labor and foreign assistance have a favorable and substantial association with economic development. It was suggested that more emphasis be focused on improving human capabilities in all sectors. Grubaugh (2015) conclude that Dynamic panel estimates of economic growth using traditional measures of GDP per capita are contrasted with estimates of a United Nations-developed model of growth in the Human Development Index (HDI). Population, population growth, and beginning GDP level are the only independent factors identified to have a meaningful relationship with increase in HDI.

## RESEARCH METHODOLOGY

Research is not just a process of gathering information, as is sometimes suggested and it is about answering questions or creating that which does not currently exist (Goddard & Melville, 2007). The data source used in this study is secondary data that has been processed by the Badan Pusat Statistik (BPS) as central statistics agency in Indonesia, that consisting of:

- a. Number of International and Domestic Tourists in Central Java Province 2012-2022

- b. Human Development Index in Central Java Province 2012-2021
- c. Gross Domestic Regional Bruto in Central Java Province 2012-2021

This study's operationalized research variables are closely connected variables spanning a 10-year period, from 2012 to 2021. The author has obtained time series data or time series. Refers to the conceptual framework and theoretical underpinning in the picture that link the interrelationships of variables. Therefore, this research is supported by various relationships.

## RESULT & DISCUSSION

Based on the results of the data analysis can be described the impact of number of international and domestic tourists (X1) and Human Development Index (X2) on Gross Domestic Regional Product (Y) as follows:

Mode	R	Adjusted R Square	Std. Error of the Estimate
1	.995 <sup>a</sup>	.991	12155.895

a. Predictors: (Constant), hdi, visitors

Figure 3. Determination R Square

This table also provides the R Square value, which indicates the quality of the regression model created by the interaction of the independent variable and the dependent variable. The calculated R Square value of 99.1% indicates that the X1 and X2 variables have a 99.1% contributing impact on the Y variable, with the remaining 0.9% being affected by factors other than the X1 and X2 variables.

Model		Sum of Square	df	Mean Square	F	Sig.
1	Regression	112040.280	2	56020.140	379.114	.000 <sup>b</sup>
	Residual	103436.0541731	7	14776.5791676		
	Total	113074.580837011	9			

a. Dependent Variable: grdp

b. Predictors: (Constant), hdi, visitors

Figure 3. F Statistic

The F test attempts to determine if the independent factors impact the dependent variable simultaneously. The F test was performed to determine the combined impact of all independent factors on the dependent variable (Gujarati, 2003). If F is less than 0.05 and the threshold utilized is 0.5 or 5%, it may be concluded that the independent variable concurrently impacts the dependent variable or vice versa.

From the results of the analysis of Figure 3, it is concluded that variable number of international and domestic tourists (X1) and Human Development Index (X2) together have a positive and significant effect.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-365637.3478	17074.3024		-21.414	.000
	visitors	.001	.000	.070	1.855	.106
	hdi	64152.016	2478.337	.974	25.885	.000

a. Dependent Variable: grdp

Figure 4. T Test

Next, we assess the significance level or linearity of the regression. The criterion may be established using either the F or significant value test (Sig.). If the value of Sig. is less than 0.05, the regression model is linear, and vice versa.

From the results of the analysis of Figure 4, it is concluded as partially, the variable number of domestic and foreign tourists has a positive but not significant effect on Gross Regional Domestic Product in Central Java and Human Development Index has positive and significant effect on Gross Regional Domestic Product.



This research is in accordance with Tan et al., (2019), proposes that the established connection may serve as a roadmap for policymakers to attain greater social and cultural development in order to stimulate economic growth. The research also shows that the tourism business may contribute to domestic human development through foreign visitors by disseminating information, management skills, and technology from outside. Also in Indonesia, Kuswanto, (2021) focused on the changes in the province of Jambi's HDI from 2004 to 2019. Using the Error Correction Model (ECM) technique, this research intends to estimate the influence of economic growth on the human development index in Jambi Province between 2004 and 2019. This is quantitative study using the error correction model (ECM) technique to fix imbalances. Long-term and short-term findings indicated that economic growth (GRDP) had a favorable and substantial impact on the human development index.

In this case, variable number of domestic and foreign tourists has a positive but not significant effect on Gross Regional Domestic Product in Central Java, due to the covid-19 pandemic, so the increase is not optimal. Liulov et al. (2020) shown that contemporary tourism is a pervasive, dynamic business with a significant influence on economic growth, which was harmed by the COVID-19 crisis. In situations of economic, social, and political turmoil, the established quarantine measures have a substantial influence on reversing the tourist industry's downturn. Consequently, there is a minor recovery trend in tourism. Future academics might use these findings as a

foundation for designing a plan to combat the tourist downturn. (Kumudumali (2020) examines the effects of the COVID-19 pandemic on the global tourist business. The breakout of COVID-19 is a unique pandemic that has had a significant influence on the lifestyles of the majority of the world's population. The most prevalent trait of the new coronavirus is the devastating economic impact on every individual and every business in the majority of nations. Due to quarantines, travel restrictions, and social alienation, COVID-19 has a substantial influence on global economic growth and generates an economic slump.

In Indonesia, according to research Mursalina et al., (2022) Almost all economic sectors have been negatively impacted by the Covid-19 outbreak, but the tourist industry in Indonesia has suffered the most. The Covid-19 epidemic has a negative and considerable influence on tourist arrivals, foreign investment in the tourism industry, and economic development in the tourism sector, as determined by study and debate. The Covid-19 epidemic had a substantial negative impact on domestic investment in the tourist industry.

## CONCLUSION

Number of domestic and foreign tourists has a positive but not significant effect on Gross Regional Domestic Product in Central Java and Human Development Index has positive and significant effect on Gross Regional Domestic Product.

In this case, variable number of domestic and foreign tourists has a positive





but not significant effect on Gross Regional Domestic Product in Central Java, due to the Covid-19 pandemic, so the improvement is not so optimal.

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