

The Role of Tourism to Increasing GDP (Evidence From Indonesia & Republic of Korea)

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Abstract. The tourism sector has a multiplier effect that is able to help economic growth. This study aims to analyze the influence of the number of foreign tourists, foreign tourist spending, and tourism sector labor on economic growth in Indonesia and Republic of Korea based on time series data with a period of 15 years, namely the period 2005-2019. This researcher uses a quantitative method and Secondary data taken is sourced from the World Bank. Indonesia and Republic of Korea are G20-members. This study compares data on the tourism sector of developing countries from Indonesia and the tourism sector of developed countries from the Republic of Korea. The results of the analysis found that the variables of the number of foreign tourists, foreign tourist spending, and in the labor tourism sector has a positive influence on economic growth in Indonesia and Korea.

Keywords: Foreign Tourists, Tourism Sector Labor, Economic Growth, Foreign Tourist Expenditure.

1. Introduction

The term economic growth is used to describe the progress or development of the economy in a country. Economic growth refers to the sustained increase in per capita output over an extended period. A country will try to change its economic conditions to achieve a state that is considered better within a certain period of time, economic growth has become the standard in determining the economy of the community. Economic growth happens when a country or region can supply economic goods to its population by utilizing production factors over the long term, ultimately leading to a rise in per capita income. The development of economic growth needs to be supported by efforts to find new sources of growth that are increasing, one of these sources is the tourism sector [1][2][3][4].

Indonesia and the Republic of Korea are both members of the G20. Tourism is a significant sector for Indonesia, as its vast tourism potential serves as a powerful draw for international visitors. The development of tourism also encourages accelerating economic growth in Indonesia. Tourism is increasingly regarded as a promising avenue for development in many regions of the developing world. Therefore, researchers compared data from Indonesia with the Republic of Korea to see how much influence the tourism sector of developing countries and the tourism sector of developed countries has on economic growth and to see policies from the Republic of Korea that can be implemented by Indonesia to improve its tourism sector. Comparisons can also be made between the country's success in controlling and building its economy when compared to that of other countries [5][6][7][2].



Fig. 1. Tourist Expenditure Indonesia and Republic of Korea
Source : World Bank, 2005-2019

Based on Figure 1, the amount of foreign tourist expenditure in Indonesia and Republic of Korea has increased from the period 2005-2019. However, in Indonesia there was a fluctuation in 2008, while in the Republic of Korea there was a fluctuation in the amount of foreign tourist spending in 2008 and 2019. The revenue received from the tourism sector has a huge impact on the per capita income of a country, it is undeniable that the tourism sector is one of the sectors that supports the economy in a country [8].

The swift expansion of tourism has boosted household income and government revenue both directly and indirectly through the multiplier effect, enhanced the balance of payments, and encouraged the implementation of government policies to promote tourism. Tourism creates demand, both consumption and investment, both of which will give rise to the production of goods and services [9][6].

Tourism has become a significant contributor to international trade and a crucial source of foreign exchange revenue for many nations. As part of the service industry, the tourism sector plays a pivotal role in driving economic growth across the globe. Tourism is expected to be a sector that continues to grow as people today become more mobile and prosperous. Indonesia has a strategic geographical location in the form of an archipelago, this provides many opportunities in the tourism sector [10][11][12].

2. Theoretical Foundations and Literature Review

Tourism refers to temporary travel from one's place of residence to a destination area, not for the purpose of settling or earning a livelihood, but to fulfill curiosity, enjoy leisure time or holidays, and pursue other recreational objectives. Traveling is a personal journey that allows individuals to savor moments in life. Tourism has an important role in increasing the absorption of labor, encouraging the equal distribution of business opportunities, encouraging the equitable distribution of national development, and playing a role in alleviating poverty which will ultimately improve the welfare of the people [8], [13], [14][15][16].

The study showed that tourist visit numbers significantly influence the development of the tourism sector and local revenue, fostering interest among both domestic and international travelers. Arguing that, archipelagic countries have many tourist attractions so that revenue from taxes and levies obtained from tourist attractions can boost regional economic growth. [17][18], [19].

Referring to the results of the study from, it is explained that the tourism sector has a positive relationship with economic growth with a coefficient of determination (R^2) = 0.812 or 81.2%. As well as research from, explaining that the contribution of the tourism sector to Indonesia's GDP in 2004-2009, the development of tourism has a positive and significant influence on GDP revenue [20], [21], [22].

Table 1. Literature Review

Researcher Name	Research Title	Variable	Method	Result
Anggita P. Y., T. H. (2019)	The Influence of Tourism on Economic Growth in Indonesia	Number of Foreign Tourists Economic Growth Exchange Rate Labor Force Life Expectancy Education Level	<i>Two Stages Least Square</i>	The results show that tourism has a positive effect on economic growth and vice versa, economic growth has a positive effect on tourism
Mounir B. (2010)	The Relationship Between Tourism Receipts, Real Effective Exchange Rate and Economic Growth in Tunisia	Gross Domestic Product Tourism Revenue Exchange Rate	Granger Causality	Reveal between tourism and economic growth there is a cointegration relationship
Alina, Daniel, R., S. (2020)	Tourism – Economic Growth Nexus The Case of Romania	Gross Domestic Product International Tourism Tourist Expenditure	Granger Kausality	Results show that the causal effect of the GDP on the international tourist arrivals and on the international tourism receipts is significant in the long run in Romania
Feli R. P., I. V., Heri Y., N. Z., Maya P. (2002)	The Influence of Tourism on Economic Growth in Indonesia in 2019-2021	Tourism Sector Revenue Economic Growth	Descriptive and Simple Regression	In this study, a positive relationship was obtained in the relationship between tourism sector revenue and economic growth

Researcher Name	Research Title	Variable	Method	Result
M. Arif K., Jihad L. P. (2023)	The Influence of International Tourists on Indonesia's Economic Growth	Economic Growth Employment Investment Exchange Rate Number of Foreign Tourists Foreign Tourist Expenditure	Correction Analysis	The results of the analysis show that the working force, exchange rate, and the number of international tourist arrivals have an effect on Indonesia's economic growth

3. Data and Method

This study uses time series data for the period 2005 – 2019. This research method uses a quantitative approach using secondary data obtained through the World Bank, the data obtained is then compared with data from Indonesia and Korea. According to [23], [24], [25], [26], secondary data is a source of research data obtained by researchers indirectly and obtained and recorded from other parties. Quantitative descriptive research is research that is used to look for an image or result of an event, situation, behavior, subject, or phenomenon in society. The regression equations used are as follows:

Model 1 (Indonesia)

$$GDPIDNt = \beta_0 + \beta_1 TRNAIDNt + \beta_2 TRSPIDNt + \beta_3 ESIDNt + \varepsilon \quad (1)$$

Model 2 (Republic of Korea)

$$GDPKORt = \beta_0 + \beta_1 TRNAKORt + \beta_2 TRSPKORt + \beta_3 ESKORt + \varepsilon \quad (2)$$

Table 2. Operational Variable

Variable Type	Variable Code	Variable Name	Variable Definition	Unit
Dependent	GDP	Gross Domestic Product	Total value of goods and services	US\$/Year
Independent	TRNA	International Tourism	Number of Arrivals	Person/Year
Independent	TRSP	Tourist Expenditure	The average amount of money spent by international tourists during their visit	US\$/Year
Independent	ES	Employment in Service	% of total employment	Percentage (%)

4. Result

Descriptives Analysis

The growth of the tourism industry has become a critical concern in many nations, both in theory and practice, through the formulation and implementation of various policies and incentives. The sector has contributed to the development of the world economy and mobilized nearly 700 million people worldwide [27][28].

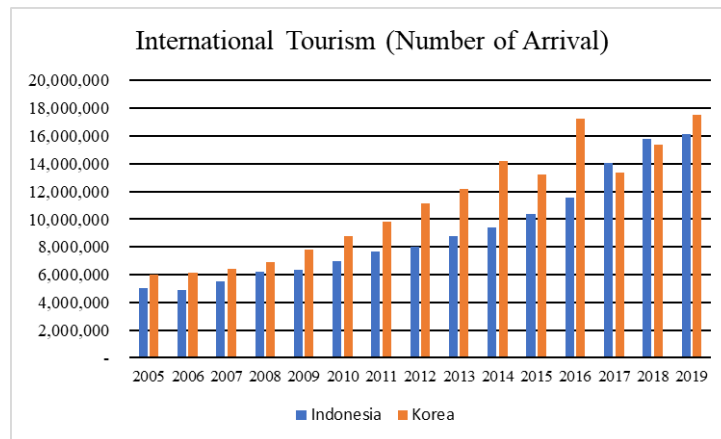


Fig. 2. International Tourism (Number of Arrival) Indonesia and Republic of Korea
Source : World Bank, 2005-2019

Based on figure 2, Indonesia and the Republic of Korea both has increased the number of foreign workers tourists every year based on 2005-2019 data from the World Bank. The highest number of foreign tourists in Indonesia was in 2019 with a total of 16,107,000 visits, while the Republic of Korea had the highest number of foreign tourists in 2019 with a total of 17,503,000 visits.

The impact of tourism on GDP

Table 3. Multiple Linear Regression Results (Indonesia Model)

Variable	Coefficient	t-Statistic	Prob.
C	-3.62E+12	-4.335930	0.0012
TRNA IDN	-50071.54	-2.542610	0.0274 *
TRSP IDN	26.21522	1.048151	0.3171
ES IDN	1.07+11	4.284815	0.0013 **
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			
R-Squared			0.934867
F-Statistic			52.62.851
Prob F			0.000001

$$GDPIDN_t = -3.62E + 12 - 50071.54TRNAIDN_t + 26.21522TRSPIDN_t + 1.07 + 11ESIDN_t + \varepsilon$$

From the results of the regression equation of the 1 Indonesia model, the number of foreign tourists (TRNA IDN) has a significant with a probability of $0.0274 < 0.05$ on economic growth with a coefficient equal to -50071.54. Foreign tourist expenditure (TRSP IDN) has a positive, but not significant effect on economic growth with a probability of $0.3171 > 0.05$ and a coefficient of 26.21522. The tourism sector workforce (ES IDN) has a significant with a probability of $0.0013 < 0.05$ economic growth with a coefficient equal to 1.07+11.

The R-Squared value obtained of 0.934867 or 93% shows that the independent variable in the model is able to explain 93% of the variation that occurs in the dependent variable. This means that the remaining 7% of the variation is due to other factors outside the model that are not included in this study or under the assumption of *ceteris paribus*.

The variables in this study have been tested through various aspects, including heteroscedasticity tests to ensure variance consistency. The probability value of Obs*R-Square is $0.7143 > 0.05$, it can be concluded that the heteroscedasticity test has been fulfilled or the data has passed the hesterokedasticity test.

Autocorrelation tests to evaluate the relationship between variables and ensure the absence of significant multicollinearity. The probability value of Obs*R-Squared is $0.2782 > 0.05$, then it can be concluded that the autocorrelation assumption test has been fulfilled or data has passed the autocorrelation test.

Table 4. Multiple Linear Regression Results (Korea Model)

Variable	Coefficient	t-Statistic	Prob.
C	-8.27E+11	-0.691920	0.5033
TRNA KOR	19498.46	2.155128	0.0542 *
TRSP KOR	25.65191	6.436969	0.0000 ***
ES KOR	1.84E+10	1.019485	0.3299
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1			
R-Squared			0.966664
F-Statistic			106.3251
Prob F			0.000000

$$GDPKOR_t = -8.27E + 11 + 19498.46TRNAKOR_t + 25.65191TRSPKOR_t + 1.84E + 10ESKOR_t + \varepsilon$$

From the results of the regression equation of the 2-Korea model, the number of foreign tourists (TRNA KOR) has a significant effect with a probability of $0.0542 < 0.05$ economic growth with a coefficient equal to 19498.46. Foreign tourist expenditure (TRSP KOR) has a significant effect with a probability of $0.0000 < 0.05$ economic growth with a coefficient equal to 25.65191. The tourism sector workforce (ES KOR) has a positive, but not significant effect on economic growth with a probability of $0.3299 > 0.05$ and a coefficient of 1.84E+10.

The R-Squared value obtained of 0.966664 or 96% shows that the independent variable in the model is able to explain 96% of the variation that occurs in the dependent variable.

The results of the hesterocysteastivity test indicate that the probability value of Obs*R-Square is $0.3892 > 0.05$, so it can be concluded that the heteroscedasticity test has been fulfilled or data has passed the limit hesterokedasticity test. As well as the autocorrelation test with a probability

value of Obs*R-Squared $0.3189 > 0.05$, it can be concluded that the autocorrelation assumption test has been fulfilled or data has passed the autocorrelation test.

5. Discussion

Based on the results from the analysis, model 1 Indonesia indicates that number of foreign tourist visits with a probability of $0.0274 < 0.05$ and the tourism sector workforce with a probability of $0.0013 < 0.05$ has a significant effect on economic growth. Meanwhile, model 2 Republic of Korea shows that foreign tourist visits with a probability of $0.0542 < 0.05$ and foreign tourist expenditure with a probability of $0.0000 < 0.05$ have a significant influence on economic growth. In developing countries, a primary motivation for promoting themselves as tourist destinations is the anticipation of economic benefits, particularly through foreign exchange income, government revenue contributions, and the generation of employment and business opportunities [29]. Referring to previous research from [5], the number of foreign tourists has a significant influence on economic growth with probability value equal to $0.0121 > 0.05$ so that there is the influence of the number of foreign tourists and economic growth. So if the number of foreign tourists increases, economic growth will also increase and vice versa, if foreign tourists decrease, economic growth will decrease. From the research conducted by [30], Tourism positively impacts economic growth both in the short and long term, providing insight into the effects of foreign tourist arrivals on Indonesia's economic development. Indonesia from developing countries has the opportunity to develop its tourism sector to increase economic growth. The government is expected to continuously enhance the tourism sector by intensifying the promotion of national tourism on an international scale [31].

6. Conclusion and Suggestion

The results of this study can provide useful insights for the government in setting more targeted policies in the tourism sector. More careful policies are expected to increase the contribution of this sector to state revenue. Thus, the government needs to consider the results of this research in the decision-making process.

To improve Indonesia's economy, one of the steps that can be taken is to optimize the tourism sector. This can be done by preparing for the development of tourism as a whole so that the growth of this sector in Indonesia can achieve satisfactory results. Therefore, the government needs to implement community empowerment programs to encourage increased tourism production in various regions in Indonesia. The government needs to formulate an effective policy strategy to boost revenue in the tourism economic sector, so that the growth of this sector as a whole can have a significant impact on economic growth.

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