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# The Impact of Decrease in Cultural Tourism Visits on Gross Regional Domestic Product of Blitar Regency During the COVID-19 Pandemic

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**ABSTRACT**

The COVID-19 virus has become a global pandemic and has spread to various countries, including Indonesia. The pandemic causes turmoil in the health sector and the economy. The impacts of the pandemic are not only at the national level but also the provincial and district level. The district of Blitar is no exception. Blitar is a district in East Java Province with a diverse cultural heritage. Cultural tourism directly contributes to the regional revenue, which can help the recovery of the local economy. This study examines the impact of the COVID-19 pandemic on the number of cultural tourism visits and its implications on the Gross Regional Domestic Product (GRDP) of Blitar. The results show that while the tourist visits contribute to the GRDP of Blitar, the contribution has been negatively impacted by the pandemic.

## 1. Introduction

The economic sector in the world experienced a significant negative impact due to the COVID-19 pandemic. COVID-19 is a disease caused by a viral infection originating from Wuhan (Mackenzie and Smith, 2020). This virus has become a global pandemic and spread to various countries, including Indonesia. The pandemic caused turmoil in the health and economic sectors. As a result, the global economic growth experienced negative growth of -4.9% in 2020 (IMF, 2020). Meanwhile, Indonesia's 2020 economic growth contracted by 2.07 percent compared to 2019 (BPS, 2021). The negative economic growth was also occurring at the sub-national level. In this case, Blitar Regency in 2020 experienced a growth contraction of 2.29%, larger than the contraction at the national level (BPS Blitar Regency, 2020).

Blitar is an area known for its diverse tourism sector (Lathifaturrohmah et al., 2021). One of the tourist attraction types in Blitar is cultural tourism. There is an intangible cultural heritage in Blitar, such as the tradition of *Larung Sesaji* at Tambakrejo Beach, *Reog Bulkiyo*, *Jamasan Kyai Pradah*, and *Grebeg Pancasila*. The cultural heritage objects in this area include Sawentar Temple, Gedog Temple, Penataran Temple, Simping Temple, Gebang Palace, and the tomb of Soekarno, the proclaimer of Indonesia's independence (Hartono, 2020). In addition, there are various Blitar specialities, including staple foods (*punten* and *ampok* rice), meat-based side dishes (*peyek uceng* and *kuthuk* fish), vegetable side dishes in the form of seasoned tofu, soup (*lodeh tewel* soup), *sepinggan* (*rujak cingur* and *Soto* soup), snacks (*wajik klethik, geti* and *opak gambir*), and drinks in the form of *Pleret* ice.

The diversity of cultural heritage in Blitar has the potential to be utilised by the community and the local government. The utilisation is not only limited to historical and philosophical values but also in terms of economic value through the development of cultural-based tourism. Cultural tourism can create jobs and also contributes to regional revenue. However, the COVID-19 pandemic significantly reduces the tourism sector due to the restrictions to curb the spread of the virus. The tourism sector in Blitar was no exception. This paper examines the impact of the decrease of tourist visits to cultural heritage objects in the Blitar area due to the COVID-19

pandemic on the regional economy of Blitar.

## 2. Literature Review

### Cultural heritage tourism

Cultural heritage has great potential in improving the economy in Indonesia. Various roles of cultural heritage are essential for people's lives, including educational values, religious values, and historical values that can attract domestic and foreign tourists to study and visit them.

Cultural heritage tourism is different from other types of tourism. The condition of the building is the main object that underlies the cultural history-based tourist attraction. The uniqueness of the structure and its physical form is an identification that distinguishes it from other tourist destinations (Shankar, 2015; Bullen and Love, 2011; Sahubawa et al., 2010). Furthermore, Adi and Saputro (2017) study point out that the development and modernity of tourist attractions positively affect tourist attractions based on cultural history.

### The government policy related to Cultural Heritage Development

In general, the development of cultural heritage can be in the form of archaeological tourism or cultural tourism that combines the fields of culture and tourism to complement and support each other sustainably. According to Ardiwidjaja (2018), to develop tourism, including archeotourism, it is necessary to pay attention to several policies that form the basis for its implementation.

The construction and development of cultural heritage sites must always refer to the applicable policies. The development also needs to consider the feasibility of carrying capacity in a holistic spatial (spatial) manner towards the site's linkage with other potential diversity ranging from the potential for sensitive environments (restricted areas); population; development area; infrastructure; and public facilities. Many cases of development in the area of cultural heritage sites fail, especially in conservation efforts that benefit the local community's welfare as part of the owner of the nation's assets. Failures that occur often cause damage to the ecosystem, economy, and values of socio-cultural life in the area.

### The role of tourism on the economy

The ability of tourism to boost growth is known as the "tourism-led growth hypothesis" (TLGH), which was proposed by Balaguer and Cantavella-Jorda (2002). According to this idea, international tourism is a strategic factor that benefits economic growth. As a result, this theory provides both a theoretical and empirical connection between incoming tourists and economic development. The TLGH was derived from the export-led growth hypothesis (ELGH), which states that economic growth can be achieved not only by increasing labour and capital within the economy but also by increasing exports.

Various studies have tried to confirm the relationship between tourism and economic growth empirically. Balaguer and Cantavella-Jorda (2002) discovered a unidirectional causality running from tourism to economic growth in Spain using Johansen's cointegration and granger causality tests, offering evidence in favour of the tourism-led growth hypothesis. Brida et al. (2010) discovered a positive effect of tourism expenditure on GDP per capita in Uruguay, while Dritsakis (2012) confirmed the influence of tourism on economic growth in seven Mediterranean nations. Lanza et al. (2003) found more evidence supporting the tourism-led economic growth theory for 13 countries in the Organization for Economic Cooperation and Development (OECD).

### The impact of COVID-19 on tourism employment

A recent regional analysis by Sun et al. (2021) shows an uneven impact of COVID-19 on tourism employment across provinces in Indonesia. The effect was particularly devastating on the vulnerable groups, including females, youth (15–27 years old) and low-education workers (with the highest education being elementary school). The study estimated the tourism-related job loss of 1.63 million jobs were held by women; 755,000 jobs were for youth; 1.12 million jobs were for low-education workers, and 541,000 jobs were for low-wage occupations.

## 3. Research Method

The variables employed in this study include the gross regional domestic product (GRDP), which is the indicator of the regional economic size. The independent variables are the total number of tourist visits (TOTTOUR), both domestic and international tourists to the cultural heritage destinations in Blitar and the inflation rate (INF). The inflation rate partially captures the relative prices that the people and tourists will pay at the tourism destinations. In

addition, the COVID-19 pandemic is included as a dummy variable, where the periods prior to the emergence of COVID-19 is coded 0 and 1 for the periods after the emergence of COVID-19 at the end of 2019. We model the relationships into two simple models:

$$\ln GRDP_t = \alpha_0 + \alpha_1 \ln TOTTOUR_t + \alpha_2 INF_t + \alpha_3 Pandemic + \ell_t \quad ... (1)$$

where, αs and βs are coefficients to be estimated, while ε and ω are a stationary process representing the error term. As the number of tourists increases, their expenditure at the tourism destinations would increase the GRDP, a positive sign is expected for α1. Meanwhile, the inflation rate might have a negative effect on the GRDP. Equation (1) is often referred to as the long-run relationship between the variables, where the coefficients indicate the long-run effect of the independent variables on the dependent variables. In this study, we are focusing on these long-run relationships.

Monthly data on the number of domestic and foreign visitors to the cultural heritage destinations around Blitar from 2015 through early 2020 is obtained from the tourism and cultural office of Blitar regency. The data of monthly inflation rate for the same period is obtained from Bank Indonesia. It is necessary to note that, for Blitar regency, the inflation data is calculated together with other districts around the Bank Indonesia office. The data of the GRDP at constant price 2010 is gathered from the Blitar Statistics office (BPS) website (https://blitarkab.bps.go.id/). The data is available in an annual format. So, we interpolate the annual data into monthly data to conform to the frequency of data available for other variables. For the interpolation, we employ the linear interpolation method in Eviews version 10. Thus we have 61 observations for each of the variables.

Ordinary least squares (OLS) estimation can produce an asymptotically biased estimator when estimating a long-run relationship. However, as the data is time series, using the OLS might lead to the issue of spurious regression. Thus, we estimate the models using the time series method. First, we test the stationary of the data of the variables. Then, we carry out the cointegration test of the variables included in each model. Then, we estimate the relationship of the variables using the Vector Error Correction Model (VECM) method.

In addition, we also gather qualitative information by interviewing the head of the tourism and cultural office of Blitar regency and some small sellers around the cultural heritage destinations in Blitar.

## 4. Results and Discussion

Prior to the estimation, we test the differences of the tourist visits to the cultural heritage in Blitar before and after the emergence of the COVID-19 pandemic. In this case, the t-test in this study includes the test for domestic tourists and foreign tourists.

**Table 1. The t-test for differences in tourist visits before and during the COVID-19 pandemic**

| Tourists origin | Monthly Mean 2015-2019 | Monthly Mean 2020 | Diff. | t-stat. | p-val. |
|---|---|---|---|---|---|
| Domestic tourists | 19,489 | 6906 | 12,584 | 4.85 | 0.00 |
| International tourists | 83.3 | 5.7 | 77.65 | 7.78 | 0.00 |

Based on Table 1, we can see that there has been a significant drop in the number of visitors, both domestic and international tourists, before and during the COVID-19 pandemic. Understandably, this is due to the prolonged COVID-19 mobility measures to reduce the spread of the virus.

Table 2 provides the summary statistics of the data of each variable employed in the estimation.

**Table 2. Summary statistics**

| | GRDP (IDR Million) | INF (%) | TOTTOUR (Visitor) |
|---|---|---|---|
| Mean | 23,560 | 3.9 | 20,190 |
| Max. | 25,530 | 7.3 | 44,697 |
| Min. | 20,928 | 2.5 | 8,130 |
| Std. Dev. | 1,478 | 1.4 | 6,553 |

Table 3 provides the unit root test results using the Augmented Dickey-Fuller test to identify the stationary level of the data of each variable. As we can see, only ln TOTTOUR is stationary at level or I(0). On the other hand, INF is stationary at the first difference or I(1). Meanwhile, both LNGRDP and GRDPGR are stationary at the second difference of I(2).

**Table 3. The ADF unit root test results**

| Series | ADF Level | ADF 1st diff. | ADF 2nd diff. |
|---|---|---|---|
| LNGRDP | 0.9904 | 0.7823 | 0.0000 |
| INF | 0.5937 | 0.0001 | 0.0000 |
| LNTOTTOUR | 0.0000 | 0.0000 | 0.0000 |

Table 4 provides the results of the cointegration test using the Johansen method. According to Asteriou and Hall (2015), the Johansen method is preferred over the Engle-Granger method as it has two major advantages with respect to the Engle-Granger procedure. First, the Johansen method testing for the number of cointegrating vectors when N>2. Secondly, the Johansen method carries out a joint procedure: testing and maximum likelihood estimation of the vector error correction model and long-run equilibrium relations.

**Table 4. Johansen cointegration test**

| Hypothesised No. of CE(s) | Trace Statistic | 0.05 Critical Value | Prob.** |
|---|---|---|---|
| None | 28.561 | 29.797 | 0.069 |
| At most 1 | 9.278 | 15.495 | 0.340 |
| At most 2 | 4.153 | 3.841 | 0.041 |

| Hypothesised No. of CE(s) | Max-Eigen Statistic | 0.05 Critical Value | Prob.** |
|---|---|---|---|
| None | 19.283 | 21.132 | 0.089 |
| At most 1 | 5.124 | 14.265 | 0.726 |
| At most 2 | 4.153 | 3.841 | 0.041 |

**MacKinnon-Haug-Michelis (1999) p-values

The results show that one cointegration relationship exists at most, both based on Trace and Max-Eigen statistics. This result means that long-run relationships among the variable exist.

Based on the results of the unit root tests, both LNGRDP is integrated at order two or I(2). This condition is often considered problematic. According to Kurita (2013), with the advances of I(1) VAR analysis, I(2) cointegrated VAR models are also investigated in the literature. A theoretical framework for I(2) cointegrated VAR models have been developed by the following researchers: Johansen (1995, 1997, 2006), Paruolo (1996, 2000), Boswijk (2000, 2010), and Nielsen and Rahbek (2007), among others.

According to Majsterek (2013), the cointegration relationship in the I(2) domain mostly is the dependency between levels of variables. Usually, it is long-run; however, also medium-run cointegration is considered. In the case of cointegration between I(2) variables, the cointegrating vector estimator is super-consistent. The cointegration tests show that long-run relationships exist, we decided to estimate using the VECM method.

**Table 5. Estimation results**

*Dependent variable: LNGRDP*

| Variable | Coefficient | Std. Error | t-stat. |
|---|---|---|---|
| LNTOTTOUR | 2.858 | 0.623 | 4.590 |
| INF | -0.149 | 0.088 | -1.686 |
| PANDEMIC[a] | -0.001 | 0.000 | -0.305 |
| C | -10.589 | | |

[a] Pandemic is set as an exogenous variable. The results are obtained from the short-run estimation.

Table 5 show the results of the estimation. Based on the results, we can see that tourism (LNTOTTOUR) has an essential contribution to the GRDP of the Blitar regency. A 1% increase in tourists might contribute to a 2.8% increase in the GRDP of Blitar, *ceteris paribus.* This correlation is statistically significant at a 1% level of significance. Meanwhile, inflation (INF) has a negative relation to the GRDP and is significant at a 10% level of significance. Both of these relationships are obtained from the long-run estimation. As for the effect of the COVID-19 pandemic on GRDP is obtained from the short-run estimation. In this case, the COVID-19 pandemic negatively affected the GRDP of Blitar. However, the relation is not statistically significant. This case is due to the data available for the pandemic period being only available up to the first month of 2020.

**Qualitative Study of Cultural Heritage Management Strategy in Blitar Regency**

Interviews with some sellers around the cultural tourism destination show that before the pandemic, the average revenue per day was around IDR 300,000 to IDR 400,000. Meanwhile, during the COVID-19 pandemic, the sellers' income dropped to IDR 100,000 per day

(if there were visitors).

To overcome the impact of the COVID-19 pandemic, the local government implemented several policy strategies. The policy strategies of the Tourism Agency of Blitar towards cultural heritage during the pandemic include moving the film sector by providing copyright, promotion on social media, holding online cultural festivals, and creating a *jaranan* catalogue containing the name, registration number, to the price of the *jaranan* performance service. In addition, the Blitar Regency Disparbudpora actively holds cultural-themed competitions and raises Bulkiyo art as the school logo in Nglegok to preserve the art of *reog* in the area. The future strategy that Tourism Agency will implement is to maintain and improve existing programs.

Sustainable tourism development is needed from the various potentials of cultural tourism, both destinations and unique foods, such as virtual tourism, promotion, and cooperation between the City government and the Blitar Regency to make tourist trips. This effort can increase people's income so that the economy in the Blitar Region can be lifted and be able to recover after the recession by utilising the things they have, one of which is cultural tourism. Furthermore, this research is expected to contribute to the local area by providing policy advice to stakeholders.

Based on research conducted (Darmadi and Fauziah, 2021), the concept of virtual tourism implemented by several tourist objects has a good impact on the revival of tourist objects that have been closed during the pandemic. However, this is only felt for managers of tourist objects, while the tourism sector has many other elements. So it is necessary to evaluate the implementation of virtual tourism so that MSMEs can have space to promote their goods and services in these activities.

In addition, Blitar Regency and City have different cultural tourism potentials. For example, Blitar Regency has many temples visited by domestic tourists and foreign tourists. At the same time, the city of Blitar is famous for its historical and culinary tourism. Based on these various potentials, it is possible to collaborate between the Regency and City governments of Blitar to make Blitar cultural tourism trips. This development can simulate the activities of tourists visiting Blitar, first going to Bung Karno's tomb and Gebang Palace. Next to the typical culinary tour of Blitar and continued to see temple tours in Blitar Regency (Afandi, 2015).

## 5. Conclusion

The tourism industry plays an important role in the Indonesian economy at the district, province and national levels. The industry has been the source of revenue generation, employment creation and the development and transfer of human capital, all of which are essential to economic growth. However, little empirical work has been conducted to explore the nature of the relationship between tourism demand and economic growth at the sub-national level in Indonesia. This paper seeks to fill this critical gap in the literature by analysing the relationship of tourism, GRDP, GRDP growth, inflation and also include the shock caused by the COVID-19 pandemic. In this case, we focus our study on the Blitar Regency using the monthly data from 2015 to 2020. We use time series analysis procedures, starting by examining the stationary of the data of the variables, testing the cointegration, and estimating the relationship of the variables using the VECM method.

From the results of this study, it can be concluded that the COVID-19 pandemic has dramatically affected the economic sector and cultural tourism in the Blitar district. The impacts experienced by the cultural tourism sector include a significant decrease in the number of tourist visits, resulting in a reduced turnover of traders and MSMEs. The estimation results show that cultural tourism has a significant impact both on the GDRP and the GRDP growth Blitar district. Meanwhile, the COVID-19 pandemic directly impacts the surrounding community's economy because many destinations and industries have to temporarily close during the pandemic. The negative effect even causes some businesses to have to close permanently. As a result, many people around tourist destinations have lost their livelihood sources. This issue requires sustainable tourism development, such as the procurement of virtual tourism, promotion, and improvement of tourist-related infrastructure to prepare for the tourist return after the pandemic.

The quality of tourist-related infrastructure, such as local amenities like roads, airports, transit systems, heritage sites, national parks,

museums, and other tourism attractions, is an essential predictor of tourism demand. Improving economic growth and real GRDP could help to improve the quality of tourist-related infrastructure and contribute to the tourism sector's long-term growth. At the macro level, the provincial and central governments may choose to emphasize infrastructure-improvement projects to stimulate economic growth, benefiting the tourism industry. Aside from general infrastructure, money allocation priority should include, for example, enhancing the quality of water supply, trash disposal, and energy supply, all of which contribute significantly to economic growth. Focusing on these components of economic growth could also assist boost the tourism sector, as the availability of these public services directly impacts the attractiveness of a tourist destination.

An improving economy is also linked to a more favourable business environment, which encourages the growth of tourism-related companies like hotels, restaurants, and shopping malls, thereby drawing more international visitors to the country. This condition will necessitate government agencies to develop programs that encourage investors to invest in restaurants, bars, and other entertainment venues. In addition, local governments may also choose to consider public-private partnerships, which have been found to boost the efficiency of government investment while simultaneously reducing the problem of underinvestment caused by information asymmetry when left alone to the private sector (Chauhan and Marisetty, 2019). Moreover, given their previous visit, the services supplied by these industries may impact tourists' intention to return.

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