Research Article

Determinants of Tourism and Labor on Regional Revenue in Yogyakarta Special Region after Yogyakarta International Airport

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Abstract: This study examines the connection between the growth of tourism and the income generated locally in the Special Region of Yogyakarta, focusing on the period before and after the operation of Yogyakarta International Airport in 2019. The research problem lies in understanding whether the expansion of transportation infrastructure has altered the determinants from Regional Own-Source Revenue (PAD), especially derived from the tourism sector. The objective is to analyze the influence of tourist numbers, tourist attractions, labor force participation rate (LFPR), and the number of restaurants on PAD across five districts/cities. The study employs panel data regression using data from 2013–2024 and the EViews 12 statistical tool. The findings reveal that the amount of tourists consistently exerts a positive and substantial impact on PAD in both periods, though its magnitude declined after the airport's operation. Tourist attractions, however, became positively and significantly associated with PAD only in the post-airport period, suggesting a stronger role of destination availability in revenue generation. In contrast, LFPR and the total of restaurants show no significant effect on PAD during either period. These findings highlight a structural shift in PAD sources, with tourism remaining relevant but gradually overshadowed by other emerging sectors such as logistics after the airport's establishment. The study concludes that while the airport contributed to diversifying economic activity, local governments should optimize tourism potential in parallel with new growth sectors to sustain balanced revenue generation.

Keywords: Local Economy; PAD; Tourism Growth; Tourism Infrastructure; Tourism Sector

1.   Introduction

Indonesia is an archipelagic country with diverse cultures and natural resources that hold great potential for tourism. With more than 17,000 islands and abundant natural and cultural wealth, tourism has become a major catalyst for national economic growth. Tourism not only contributes to state revenue through foreign exchange earnings from tourist visits but also increases community income, creates employment opportunities, and stimulates infrastructure development across various regions.

Locally generated revenue (PAD) constitutes one of the important indicators used to measure the economic independence of a region, as well as a primary source of local finance that can support sustainable regional development. PAD not only includes revenues from local economic sectors but also encompasses income derived from wealth and other legiti-

mate sources. According to (Aliansyah & Hermawan, 2019), the tourism sector has a substantial contribution to the growth of PAD. In many countries, including Indonesia, tourism acts as one of the main contributors to foreign exchange earnings. Its contribution is highly significant, particularly in encouraging the expansion and advancement of the national economy. One major form of contribution from tourism is the increase in foreign exchange earnings through both domestic and international tourist visits (Puspa Sari Aceh et al., 2022). This sector has become a top priority in strengthening regional economic structures due to its ability to provide substantial contributions to PAD (Pulu et al., 2023). Therefore, tourism has become a leading sector alongside industry and agroindustry, encouraging many countries to continuously develop their tourism potential(Hsieh & Kung, 2013). By relying on tourist attractions and supporting facilities, many regions have successfully increased their revenue through local taxes and levies generated from tourism-related activities. This indicates that certain local economic sectors can play an essential role in strengthening PAD; thus, efforts to develop potential sectors and improve the effectiveness of their management are strategic steps to enhance regional revenue.
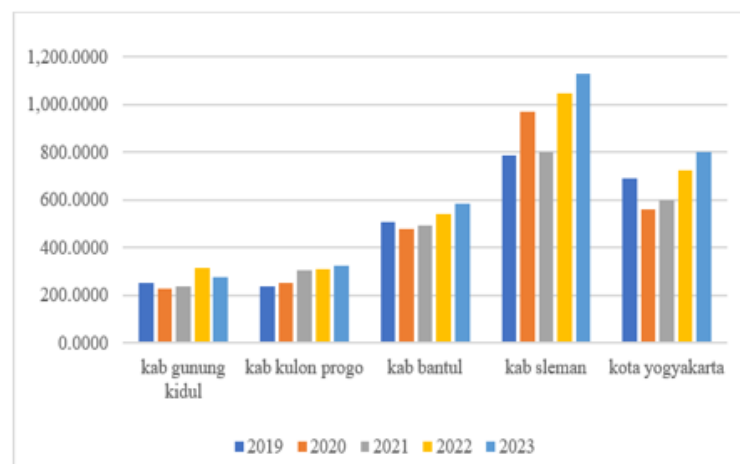
Figure 1.10 PAD (Local Own-Source Revenue) in Regencies/Cities of Yogyakarta Special Region, 2019–2023 (Billion Rupiah).
Source: Yogyakarta Province in BPS Figures 2018–2023

Locally generated revenue (PAD) within the five key regions of Yogyakarta Special Region has shown varying trends. Sleman Regency and Yogyakarta City dominate economic contributions with a significant upward trend, supported by their roles as centers of education, economy, and tourism. Kulon Progo Regency recorded stable growth, indicating the positive impact of tourism sector development. Meanwhile, Bantul Regency showed moderate growth, and Gunung Kidul Regency experienced fluctuations, reflecting dependence on specific sectors that are vulnerable to external factors. Overall, sustainable economic development in these regions requires attention to the unique potential and challenges of each area.

In 2023, the PAD of Yogyakarta Special Region ranked 19th out of 38 provinces, with a total value of IDR 2,368,685,041,004, placing it in the medium PAD category. Interestingly, Yogyakarta recorded a remarkably high number of tourist visits, reaching 30,437,069 people, ranking 7th nationally. This contrast between medium-level PAD and high tourism activity raises important questions concerning the degree to which the tourism sector contributes directly to PAD. This phenomenon provides a strong basis for examining the relationship

between tourism and PAD in Yogyakarta, particularly in exploring the potential for optimizing tourism as a source of regional revenue (BPS, 2025).

Tourism has become a leading global industry and a key supporting sector for the economy in many countries. In recent years, this sector has shown consistent escalation and significant diversification, positioning it as one of the largest and most rapidly expanding economic sectors globally. For many countries, tourism serves as a crucial source of income that supports national development agendas.

The Tourism-Led Growth Theory posits that tourism may act as a major catalyst for economic growth in a region or country. This theory emphasizes that tourism development can generate broad impacts on other sectors such as trade, investment, and infrastructure (Maulana & Prasetyia, 2023). Moreover, improvements in tourism facilities and infrastructure not only stimulate economic growth but also increase PAD. As a reference, the Growth Pole Theory developed by François Perroux explains that economic growth does not occur evenly across regions but is concentrated in certain points with strategic infrastructure and economic strength as growth centers. These areas become hubs of innovation, investment, and growth, which then spread their effects to surrounding regions through economic and social linkages. Furthermore, the Multiplier Effect Theory explains how an increase in economic activity in one sector can create a ripple effect on income, subsequent spending, and eventually on other sectors. In the context of tourism, each expenditure by tourists—such as shopping for souvenirs, dining at restaurants, staying at hotels, or paying entrance fees—generates additional income for local economic actors. This income is then re-spent by the community, creating a broader economic cycle.

As one of the key drivers of PAD growth, the tourism sector makes a tangible contribution by leveraging local potential. A study by (Aliansyah & Hermawan, 2019) notes that an increase in tourist visits can stimulate regional economic growth, which in turn raises PAD through various taxes and levies. Alongside this, adequate facilities and infrastructure can attract more tourists, thereby boosting local government revenue. In other words, strategies to increase PAD must include strengthening priority sectors and improving public services. Overall, it is essential for regions to identify potential sources of PAD and implement policies that optimize these resources, enabling fiscal independence and contributing positively to regional development.

Yogyakarta Special Region (DIY) is one of Indonesia's premier tourism destinations, attracting both domestic and international visitors. Its strengths lie in its rich cultural heritage, strong historical values, and captivating natural beauty. Iconic attractions such as Borobudur Temple, Prambanan Temple, the Yogyakarta Palace, and the southern coastal beaches serve as major tourist magnets. A tourist is defined as a person who travels outside their place of residence for recreation or visitation purposes, without the intention to settle or seek employment at the destination. The increase in tourist arrivals is believed to drive foreign exchange earnings. Moreover, the diversity of culture, local traditions, and unique culinary offerings enriches the overall tourism experience. In this context, tourism playss a crucial rolee in driving regional economic growth, particularly through its contribution to enhancing PAD.
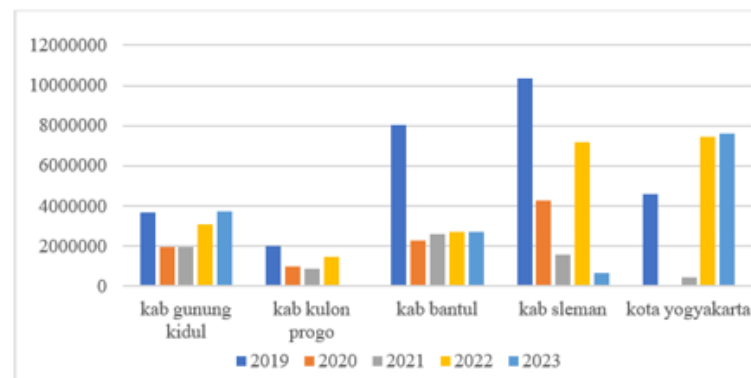
Figure 2. presents the development of the number of tourists visiting the regencies/cities of Yogyakarta Special Region from 2019 to 2023.

Source: Yogyakarta Province in Figures 2019–2024 (BPS) & Yogyakarta Tourism Statistics 2018–2023

Yogyakarta City and Gunung Kidul Regency show significant recovery, with a stable upward trend through 2023. In contrast, Kulon Progo Regency experienced a sharp decline, indicating major challenges in sustaining its economy. Sleman Regency, despite dominating in 2019, faced sharp fluctuations with a significant decrease in 2023. Meanwhile, Bantul Regency continued to provide a stable contribution, although with a slightly downward trend. Overall, Yogyakarta City and Gunung Kidul demonstrate strong potential, while Kulon Progo and Sleman require greater attention to address their economic challenges.

The increases in the numbers of tourits visits strongly influences the utilization and popularity of available tourist attractions. This phenomenon indicates that the growing number of attractions from year to year has the potential to generate a positive impact on Local Own-Source Revenue (PAD). A tourist attraction can be defined as any form of place, building, or natural phenomenon that has a special appeal and serves as a destination for tourists (Ananto, 2018). Tourists visiting Yogyakarta Special Region often allocate their time to explore various interesting attractions. The increasing number of tourist attractions also holds the potential to enhance PAD through levies or taxes.
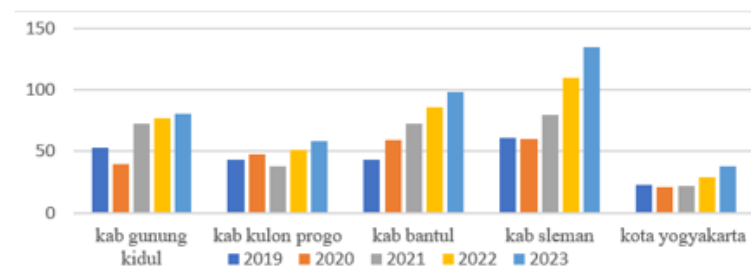

Figure 3. illustrates that the number of tourist attractions in Yogyakarta Special Region from 2019–2023 shows an increasing trend in most areas.

Source: BPS (2019–2024), Yogyakarta Tourism Statistics (2018–2023)

Gunung Kidul, Bantul, and Sleman Regencies recorded significant growth, particularly Sleman, which rose from 61 units in 2019 to 135 units in 2023. Yogyakarta City also showed a gradual increase from 23 to 38 units. In contrast, Kulon Progo Regency experienced fluctuations, with a decline in 2021 but recovering to 58 units in 2023. Overall, this trend reflects rapid tourism development, especially in Bantul and Sleman, although some areas still face challenges.

The substantial rise in the number of tourist attractions in several regions of Yogyakarta not only impacts the tourism sector but also has the potential to influence the Labor Force Participation Rate (LFPR). This development can create new employment opportunities in the tourism sector and its supporting industries, such as transportation services, culinary businesses, local handicrafts, and other tourism services. It is expected to enhance LFPR in the region, particularly in areas experiencing rapid tourism growth, such as Sleman and Bantul. However, to ensure a positive impact on LFPR, targeted management and the provision of relevant skill training for local communities are required.

An increase in LFPR in the tourism sector not only creates new jobs for local communities but also directly contributes to the growth of Local Own-Source Revenue (PAD). For local governments, higher community productivity means more productive workers and more job creation, which ultimately supports regional development. The greater the number of people involved in tourism-related activities—such as managing attractions, providing transportation, culinary services, or handicrafts—the larger the economic contribution generated. These activities increase community income, which in turn leads to higher local taxes and levies collected by the government, thereby contributing positively to PAD. This indicates that developing LFPR in the tourism sector is one of the key strategies in supporting regional economic growth.
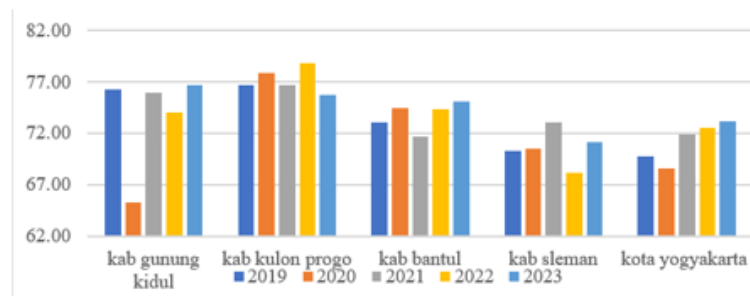
Figure 4. illustrates that the Labor Force Participation Rate (LFPR) in Yogyakarta Special Region during the 2019–2023 period shows varying trends across different areas.
Source: Yogyakarta Province in Figures 2018–2023

Gunung Kidul Regency experienced fluctuations, with a decline in 2020 to 65.30% but later increasing to 76.66% in 2023. Kulon Progo Regency recorded a relatively stable LFPR, peaking at 78.83% in 2022, although it slightly decreased to 75.75% in 2023. Bantul Regency demonstrated a gradual increase from 73.01% in 2019 to 75.06% in 2023. Sleman Regency experienced sharp fluctuations, particularly a decline in 2022 to 68.12%, though it rebounded to 71.18% in 2023. Meanwhile, Yogyakarta City showed a steady increase from 69.75% in 2019 to 73.20% in 2023. These data reflect differences in labor force participation patterns across regions, which may be influenced by various economic and social factors.

The expansion of the tourism sector in Yogyakarta Special Region not only increased the number of tourist visits but also stimulated the expansion of supporting businesses such as restaurants and food outlets. The continuous development of tourist attractions has created high demand for culinary services, encouraging local communities to establish and expand food and beverage businesses.

Restaurants play an essential role in the tourism economy as they provide distinctive local culinary experiences sought after by tourists. The growth in the number of restaurants

not only generates employment opportunities but also enhances PAD potential through restaurant taxes, business levies, and operational permits. The more the local culinary industry develops, the greater its contribution to PAD. Therefore, the linkage between tourism and the culinary sector needs to be managed synergistically to maximize its economic impact on the region, as observed in high-tourism areas such as Yogyakarta City, Sleman Regency, and Bantul Regency.

2. Literature Review
2.1. Tourism Led Growth Theory

Tourism-Led Growth (TLG) Theory is an economic theory which states that the tourism sector can act as a primary engine of economic growth in a region or country. This theory emphasizes that the development of tourism has the potential to generate broad impacts on other sectors, such as trade, investment, and infrastructure(Maulana & Prasetyia, 2023).

Tourism has become a major global industry and a vital supporting sector for many economies. In recent years, the tourism sector has shown rapid growth and extensive diversification, positioning it among the world's largest economic contributors with the fastest growth rate. For many countries, tourism serves as a primary source of income, playing an essential role in supporting national and regional development processes (Dwyer et al., 2020).

Tourism contributes significantly to revenue through tourist expenditures on services such as accommodation, transportation, food and beverages, and other supporting services. These expenditures create a multiplier effect that strengthens the economy. Furthermore, tourism generates employment opportunities both directly, such as in hotels and restaurants, and indirectly, such as in construction and local handicrafts. The sector also promotes economic diversification, particularly in regions previously dependent on a single sector, and enhances foreign exchange earnings through international tourism.

Tourism development also contributes to increasing local government revenues through various sources, such as restaurant taxes, hotel taxes, tourism levies, and entrance fees to tourist attractions. Local Own-Source Revenue (PAD) can grow significantly with effective tourism management, providing greater fiscal space for governments to finance infrastructure development, public services, and cultural or environmental preservation programs. Additionally, tourism-driven infrastructure investments—such as airports, highways, and tourism facilities—often generate long-term benefits for multiple sectors of the economy.

However, dependence on tourism also entails risks, such as vulnerability to global crises, pandemics, or fluctuations in tourist arrivals. Therefore, strategic and sustainable tourism management is required to ensure that economic benefits are maximized without harming the environment or local culture. In the context of the connection between tourism and regional own-source revenue in Yogyakarta Special Region, the TLG concept can be applied to evaluate how the tourism sector contributes to local economic growth and how optimizing tourism management can sustainably increase regional revenues.

2.2 Employment Theory

Labor Theory in the Tourism Sector emphasizes the importance of labor as one of the main determinants in the development and growth of tourism. Skilled and sufficient workers are considered essential human capital to ensure quality services and satisfying experiences for tourists (Smith & Robinson, 2021). Within the tourism sector, labor contributes not only

through direct operations such as hotels, restaurants, tour guiding, and transportation, but also contributes indirectly through supporting industries such as handicrafts, agriculture, and other service sectors (Baum, 2019).

The tourism sector is one of the most significant absorbers of labor, particularly in developing countries and regions with high tourism potential. The development of labor in this sector provides wide-ranging employment opportunities, from formal to informal jobs, with various levels of skills and education (Bachri, 2024). Moreover, the tourism sector tends to absorb a diverse workforce, including women and youth, thus playing an important role in empowering local communities economically(Rahmawati & Darwis, 2023).

The presence of competent and productive labor can enhance the competitiveness of tourist destinations and drive economic growth through improved service quality, tourism product innovation, and operational efficiency (Cooper et al., 2020). Investment in training and tourism education is also crucial to address global challenges, such as changing tourist preferences and the adoption of digital technologies(Gössling et al., 2021).

At the regional level, increased employment opportunities in the tourism sector contribute to reducing unemployment and poverty while raising the income of local communities, which in turn impacts regional revenue. This also strengthens socio-economic resilience by improving the welfare of workers and their families. However, excessive dependence on unorganized or low-skilled tourism labor can create challenges such as low productivity and vulnerability to fluctuations in tourist arrivals (WTTC, 2023).

In the context of tourism development in Yogyakarta Province, strengthening labor capacity through training and skill improvement is key to maximizing the economic and social benefits of the tourism industry. Thus, the labor theory within the tourism sector helps explain how the quality and quantity of labor play a role in supporting local economic growth and the creation of sustainable employment.

3. Proposed Method

The research variables consist of independent variables, including the total of tourists, the total of tourism sites, the labor force participation rate (LFPR), along with the total of restaurants, whereas the dependent variable is Local Own Source Revenue (PAD). This research utilizes a quantitative approach focusing on the five districts/cities of the Special Region of Yogyakarta (Sleman, Bantul, Kulon Progo, Gunungkidul, and Yogyakarta City) over the period 2013 to 2024. the quantitative method entails the application of numerical data and statistical techniques to objectively and measurably examine relationships between variables. This research is specifically aimed at analyzing the contribution of the tourism sector to the rise of Local Own-Source Revenue (PAD), both before the operation of Yogyakarta International Airport (YIA) in the period 2013–2018 and after its operation in the period 2019–2024, by considering the role of tourists, tourism objects, labor participation, and restaurants as the main supporting factors in the regional economy.

The entire population of districts/cities is used as the sample through a saturated sampling technique, ensuring comprehensive representation of the research area. Data were obtained from secondary sources, including Statistics Indonesia (BPS DIY), Yogyakarta Tourism Statistics, and reports from the Regional Financial and Asset Management Agency (BPKAD DIY). These annual datasets enable a longitudinal analysis of tourism dynamics and

Local Own Source Revenue (PAD), both before the operation of Yogyakarta International Airport (2013–2018) and after its operation (2019–2024).

The study utilizes dimensions to capture both temporal changes and inter-district differences. This method enables an in-depth analysis of how tourism and labor-related indicators contribute to the growth of PAD before and after the establishment of Yogyakarta International Airport (YIA). Model estimation is conducted using Common Effect Model, Fixed Effect Model, and Random Effect Model, with model selection determined through Chow, Hausman, and Lagrange Multiplier tests. The empirical model is specified as follows:

$$PAD_{it} = \alpha_i + \beta_1 TOUR_{it} + \beta_2 OBJW_{it} + \beta_3 TPAK_{it} + \beta_4 REST_{it} + \varepsilon_{it}$$

Where:
- PAD_{it} = Local Own Source Revenue of region i in year t
- $TOUR_{it}$ = Number of Tourists of region i in year t
- $OBJW_{it}$ = Number of Tourism Objects of region i in year t
- $TPAK_{it}$ = Labor Force Participation Rate of region i in year t
- $REST_{it}$ = Number of Restaurants of region i in year t
- α_i = Constant
- $\beta_1, \beta_2, \beta_3, \beta_4$ = Coefficients
- ε_{it} = Error term of region i in year t

4. Results and Discussion
4.1 Multiple Linear Regression Equation

Table 1. Fixed Effect Model Regression before the airport was established.

Variabel	Koef.	Std. error	t-Statistic	Prob.
C	11,2804	4,586461	2,459515	0,0227
Jumlah Wisatawan (lnJW)	0,71878	0,192739	3,729305	0,0012
Jumlah Objek Wisata (lnOW)	-0,21908	0,126502	-1,731873	0,0980
TPAK (lnTPAK)	-0,43087	1,221624	-0,352706	0,7278
Jumlah Restaurant (lnRM)	0,02091	0,084782	0,246679	0,8076

The results of the data processing are presented in Table and can be summarized in the following regression equation:

$PAD\_it = 11.2804 + 0.71878lnJW\_it - 0.21908lnOW\_it - 0.43087lnTPAK\_it + 0.02091lnRM\_it + \varepsilon\_it$

Based on this regression equation, several interpretations can be made: (1) The constatn value of 11.2804 indictaes that when all independent varialbes (Number of Tourists, Number of Tourist Attractions, Labor Force Participation Rate, and Number of Restaurants) are equal to zero, the baseline value of PAD is 11.2804. (2) The coefficient of the Number of Tourists (lnJW) is 0.71878 and significant at the 5% level (Prob. 0.0012 < 0.05), suggesting that a 1% incraese in the number of tourists leads to an increase in PAD by approximately 0.71878%, assuming other variables remain constant. (3) The coefficient of the Number of Tourist Attractions (lnOW) is -0.21908 and significant at the 10% level (Prob. 0.0980 < 0.10), indicating that a 1% increase in the number of tourist attractions actually decreases PAD by about 0.21908%, ceteris paribus. (4) The coefficient of the Labor Force Participation Rate (lnTPAK) is -0.43087 with a probability value of 0.7278 (not significant), meaning it has no statistically significant effect on PAD. However, theoretically, a 1% incraese in TPAK is as-

socitaed with a decrease in PAD by 0.43087%. (5) The coefficient of the Number of Restaurants (lnRM) is 0.02091 with a probability value of 0.8076 (not significant), showing that statistically the number of restaurants does not affect PAD. Nevertheless, mathematically, a 1% incraese in the numbre of restaurants is associated with an incraese in PAD by 0.02091%.

Table 2. Fixed Effect Model Regression after the airport was established.

Variabel	Koef.	Std. error	t-Statistic	Prob.
C	17,2982	2,1827	7,9252	0,0000
Jumlah Wisatawan (lnJW)	0,0313	0,0104	3,0023	0,0068
Jumlah Objek Wisata (lnOW)	0,2044	0,0649	3,1490	0,0048
TPAK (lnTPAK)	0,2721	0,5237	0,5194	0,6089
Jumlah Restaurant (lnRM)	0,0434	0,0403	1,0783	0,2931

$$PAD\_it = 17.2982 + 0.0313lnJW\_it + 0.2044lnOW\_it + 0.2721lnTPAK\_it + 0.0434lnRM\_it + \varepsilon\_it$$

Based on this regression equation, several interpretations can be made: (1) The consatnt value of 17.2982 indicaets that when all predictor variables (Number of Tourists, Number of Tourist Attractions, Labor Force Participation Rate, and Number of Restaurants) are equal to zero, the baseline value of PAD is 17.2982. (2) The coefficient of the Number of Tourists (lnJW) is 0.0313 and significant at the 1% level (Prob. 0.0068 < 0.01). This implies that a 1% a rise in the number of tourists results in a rise in PAD by approximately 0.0313%, assuming other the variables stay unchanged. (3) The parameter of the Number of Tourist Attractions (lnOW) is 0.2044 and significant at the 1% level (Prob. 0.0048 < 0.01). This indicates that a 1% rise in the number of tourist attractions increases PAD by about 0.2044%, ceteris paribus. (4) The coefficient of the Labor Force Participation Rate (lnTPAK) is 0.2721 with a probability value of 0.6089 (not significant), indicating that statistically TPAK does not affect PAD. However, mathematically, a 1% increase in TPAK is associated with an increase in PAD by 0.2721%. (5) The coefficient of the Number of Restaurants (lnRM) is 0.0434 with a probability value of 0.2931 (not significant), meaning that the quantity of restaurants does not exhibit a statistically significant impact on PAD. Nevertheless, mathematically, a 1% increase in the number of restaurants is associated with an increase in PAD by 0.0434%.

4.2 T-Test

Table 3. t- Test Result before the airport was established.

Variabel	Koef.	Std. error	t-Statistic	Prob.
C	11,2804	4,586461	2,459515	0,0227
Jumlah Wisatawan (lnJW)	0,71878	0,192739	3,729305	0,0012
Jumlah Objek Wisata (lnOW)	-0,21908	0,126502	-1,731873	0,0980
TPAK (lnTPAK)	-0,43087	1,221624	-0,352706	0,7278
Jumlah Restaurant (lnRM)	0,02091	0,084782	0,246679	0,8076

According to the regression test outcomes shown in the table above, the probability values for each variable are as follows: (1) The Number of Tourists (lnJW) has a probability

value of 0.0012, which is less than the significance level of 0.05. Therefore, H0 is rejected and H1 is accepted. This indicates that the Number of Tourists has a statistically significant positive effect on PAD in Yogyakarta Province. (2) The Number of Tourist Attractions (lnOW) has a probabiilty valeu of 0.0980, that exceeds 0.05but less than 0.10. Thus, H0 is rejected and H1 is accepted at the 10% significance level. This suggests that the Number of Tourist Attractions has a statistically significant negative effect on PAD in Yogyakarta Province. (3) The Labor Force Participation Rate (lnTPAK) has a probability value of 0.7278, which is greater than the significance level of 0.05. Therefore, H1 is rejected and H0 is accepted. This means that the Labor Force Participation Rate does not have a statistically significant effect on PAD in Yogyakarta Province. (4) The Number of Restaurants (lnRM) shows a probability value of 0.8076, which is also greater than the significance level of 0.05. Accordingly, H1 is rejected and H0 is accepted. This indicates that the Number of Restaurants does not have a statistically significant effect on PAD in Yogyakarta Province.

Table 4. t- Test Result after the airport was establishe.

Variabel	Koef.	Std. error	t-Statistic	Prob.
C	17,2982	2,1827	7,9252	0,0000
Jumlah Wisatawan (lnJW)	0,0313	0,0104	3,0023	0,0068
Jumlah Objek Wisata (lnOW)	0,2044	0,0649	3,1490	0,0048
TPAK (lnTPAK)	0,2721	0,5237	0,5194	0,6089
Jumlah Restaurant (lnRM)	0,0434	0,0403	1,0783	0,2931

Based on the regression test results presented in the table above, the probability values for each variable are as follows: (1) The Number of Tourists (lnJW) has a probability value of 0.0068, which is less than the significance level of 0.05. Therefore, H0 is rejected and H1 is accepted. This indicates that the Number of Tourists has a statistically significant positive effect on PAD in Yogyakarta Province. (2) The Number of Tourist Attractions (lnOW) has a probability value of 0.0048, which is also less than the significance level of 0.05. Thus, H0 is rejected and H1 is accepted. This means that the Number of Tourist Attractions has a statistically significant positive effect on PAD in Yogyakarta Province. (3) The Labor Force Participation Rate (lnTPAK) has a probability value of 0.6089, which is greater than the significance level of 0.05. Therefore, H1 is rejected and H0 is accepted. This shows that the Labor Force Participation Rate does not have a statistically significant effect on PAD in Yogyakarta Province. (4) The Number of Restaurants (lnRM) has a probability value of 0.2931, which is also greater than the significance level of 0.05. Accordingly, H1 is rejected and H0 is accepted. This indicates that the Number of Restaurants does not have a statistically significant effect on PAD in Yogyakarta Province.

4.3 F Test

Table 5. F Test Result before the airport was established.

Instrumen	Hasil
F-statistik	41,971
Prob. F-statistik	0,000

Based on the results of the F-test, the Prob(F-Statistic) value is 0.000, which is less than the significance level α = 5% (0.05). Therefore, it can be concluded that the Number of Tourists, the Number of Tourist Attractions, the Labor Force Participation Rate, and the Number of Restaurants simultaneously have a significant influence on PAD in Yogyakarta Province.

Table 6. F Test Result after the airport was established.

Instrumen	Hasil
F-statistic	103,985
Prob(F-statistic)	0,000

Based on the results of the F-test, the Prob(F-Statistic) value is 0.000, which is less than the significance level α = 5% (0.05). Therefore, it can be concluded that the Number of Tourists, the Number of Tourist Attractions, the Labor Force Participation Rate, and the Number of Restaurants simultaneously have a significant influence on PAD in Yogyakarta Province.

4.4 Coefficient of Determination Tes

Table 7. Coefficient of Determination TestResults before the airport was established.

Instrumen	Hasil
R-squared	0.941139
Adjusted R-squared	0.918715
S.E. of regression	0.179947

Based on the results of the coefficient of determination test, the Adjusted R-squared value is 0.918715, indicating that the independent variables (Number of Tourists, Number of Tourist Attractions, Labor Force Participation Rate, and Number of Restaurants) collectively explain 91.87% of the variation in the dependent variable (PAD) in Yogyakarta Province. The remaining 8.13% is influenced by other factors not included in this study.

Table 8. Coefficient of Determination TestResults after the airport was established

Instrumen	Hasil
R-squared	0.975378
Adjusted R-squared	0.965998
S.E. of regression	0.103895

Based on the results of the coefficient of determination test, the Adjusted R-squared value is 0.965998, indicating that the independent variables (Number of Tourists, Number of Tourist Attractions, Labor Force Participation Rate, and Number of Restaurants) collectively explain 96.60% of the variation in the dependent variable (PAD) in Yogyakarta Province. The remaining 3.40% is influenced by other factors not included in this study.

5. Comparison
5.1 Before the airport was established

The Influence of the Number of Tourists on the Regional Original Revenue (PAD) of Yogyakarta Special Region Province, In the estimation before the operation of Yogyakarta International Airport (YIA), the number of tourists (LnJW) had a positive and significant effect on Regional Original Revenue (PAD) in Yogyakarta Special Region, with a coefficient of 0.7187 and a probability value of 0.0012. A 1% increase in tourists raised PAD by 0.7187%. This finding supports the Tourism-Led Growth Hypothesis (TLGH) and the concept of the multiplier effect, indicating that tourist spending generates chain economic impacts on local sectors and regional revenue. Consistent with Al Fariz and Arianti (2023)(Suryadana, 2015), tourist arrivals significantly contributed to PAD in Yogyakarta.

The Influence of the Number of Tourist Attractions on the Regional Original Revenue (PAD) of Yogyakarta Special Region Province, Before the operation of Yogyakarta International Airport (YIA), the number of tourist attractions (lnOW) had a coefficient of -0.2190 with a probability of 0.0980, indicating a negative and statistically insignificant effect on Local Own-Source Revenue (PAD) in Yogyakarta. This suggests that the increase in tourist attractions did not yet contribute to PAD due to limited accessibility, promotion, service quality, and infrastructure. In line with Butler's Tourism Area Life Cycle Theory (1980)(Butler, 2025), destinations in the early stages provide limited economic impact. Moreover, without proper management, supporting facilities, and accessibility, the growth of tourist attractions is unlikely to generate significant fiscal benefits(Javed & Tučková, 2020).

The Influence of the Labor Force Participation Rate on Local Own-Source Revenue in the Special Region of Yogyakarta Province, Before the operation of Yogyakarta International Airport (YIA), the Labor Force Participation Rate (lnTPAK) had no significant effect on Local Own-Source Revenue (PAD) in DIY (coefficient -0.4308; probability 0.7278). This is due to the dominance of informal sector workers with limited tax contributions, low minimum wages reducing purchasing power and productivity, and economic leakage from out-of-region workers. Thus, higher labor force participation did not translate into increased PAD.

The Influence of the Number of Restaurants on Local Own-Source Revenue in the Special Region of Yogyakarta Province, Before the operation of YIA Airport, the number of restaurants (lnRM) had a coefficient of 0.0209 with a probability value of 0.8076, indicating no significant effect on Local Own-Source Revenue (PAD). This is because Yogyakarta's culinary sector is largely dominated by micro, small, and informal businesses such as food stalls and angkringan, whose tax contributions are limited. Moreover, local tax monitoring was not yet optimal, so the increase in restaurant numbers did not align with PAD growth. This finding is consistent with studies showing that restaurant taxes were insignificant due to the dominance of MSMEs and high competition.

5.2 After the airport was established

The Influence of the Number of Tourists on the Regional Original Revenue (PAD) of Yogyakarta Special Region Province, After the operation of Yogyakarta International Airport (YIA), the number of tourists (lnJW) showed a positive and significant effect on Regional Original Revenue (PAD) in DIY Province, with a coefficient of 0.0313 and a probability value of 0.0068. This indicates that a 1% increase in tourist arrivals is expected to raise PAD by 0.0313%. However, the contribution declined sharply compared to the pre-airport period (0.7187), meaning that although accessibility improved, its economic impact on PAD relatively weakened. Several factors explain this condition, including the COVID-19 pandemic which restricted mobility and reduced tourists' purchasing power, the inefficiency of tax and levy systems as many destinations were not directly managed by the government, and the diversification of the economy after the airport with the growth of logistics, investment, and non-tourism services. In addition, the rise of transit or short-stay tourists also reduced the economic contribution compared to those who stayed longer and spent more locally.

The Influence of the Number of Tourist Attractions on the Regional Original Revenue (PAD) of Yogyakarta Special Region Province, After the operation of YIA Airport, the number of tourist attractions (lnOW) showed a positive and significant effect on Local Own-Source Revenue (PAD), with a coefficient of 0.2044 and a probability value of 0.0048. This

means that a 1% increse in tourist attractions is estimated to raise PAD by 0.2044%. The result indicates that the airport improved accessibility, thereby strengthening the contribution of tourist attractions not only through visits but also through local economic activities. This supports the Tourism-Led Growth Hypothesis (TLGH), which emphasizes that destination development drives economic growth and government revenue, reinforced by the airport's multiplier effect. Thus, in the post-airport phase, tourist attractions act as active fiscal drivers integrated with infrastructure and tourism policies.

The Influence of the Labor Force Participation Rate on Local Own-Source Revenue in the Special Region of Yogyakarta Province, After the operation of YIA Airport, the lnTPAK coefficient turned positive (0.2721) but remained statistically insignificant (p-value = 0.6089). This indicates an improvement in the contribution of the labor force to PAD, though not strong enough. Limitations in skills, certification, and the dominance of the informal sector prevent local workers from fully capitalizing on tourism opportunities. As a result, the economic benefits are mostly captured by external actors or large-scale formal sectors. These findings are consistent with Baker (2014), Suharni and Jaya (2019), and Andriansyah and Athoillah (2023)(Surya Andriansyah & Moh. Athoillah, 2024), who emphasize the importance of improving human resource quality and labor incentives for the tourism sector to contribute significantly to PAD.

The Influence of the Number of Restaurants on Local Own-Source Revenue in the Special Region of Yogyakarta Province, After the operation of YIA Airport, the lnRM coefficient increased to 0.0434 but remained statistically insignificant (p-value 0.2931). This indicates a potential improvement in the contribution of the restaurant sector to local revenue (PAD) along with the growth of tourist flows, although it is not yet optimal. The main obstacle lies in the dominance of small and informal businesses with low tax reporting, resulting in restaurant tax contributions remaining limited at only around 2–9% of PAD (Antoro et al., 2023); BPS & Bapenda DIY). Moreover, intense competition and the dominance of franchise restaurants from outside the region further reduce the fiscal contribution of local restaurants. These findings align with Suprapti & Widyantara (2021), who emphasize that optimizing restaurant tax revenue strongly depends on effective supervision, tax technology integration, and taxpayer compliance.

6. Conclusions

Based on the panel data regression analysis, this study finds thats the numeb r of tourists has a positive and significant effect on PAD in Yogyakarta Special Region, although its impact declined after the airport began operating. Similarly, the number of tourist attractions, which was initially insignificant, became positive and significant after the airport's operation, indicating improved utilization of tourism destinations.

Meanwhile, the labor force participation rate (LFPR) and the number of restaurants did not show a significant effect on PAD either before or after the airport's operation, likely due to the dominance of the informal sector, low wages, and limited integration of small businesses into the tax system. Overall, the presence of YIA Airport has shifted PAD sources from the tourism sector toward non-tourism sectors such as logistics, as reflected in the increase of the estimation constant from 11.280 to 17.298.

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