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Analysis of Determinants of Local Own-Source Revenue of Bali Province: A Panel Data Approach

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Abstract
This study examines the impact of economic growth, foreign direct investment (FDI), local expenditure, and population on local own-source revenue (PAD) in Bali Province during 2012 to 2023. Using a quantitative approach, this research employs panel data from nine districts/cities and estimates the relationship using the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Based on the Chow, Hausman, and Lagrange Multiplier tests, the Common Effect Model (CEM) is selected as the most appropriate specification. The results indicate that FDI and local expenditure have positive and statistically significant effects on PAD, while population exerts a significant negative effect. In contrast, economic growth does not show a significant relationship with PAD during the observation period. Overall, the model explains a substantial proportion of PAD variation across districts/cities and time, indicating that fiscal and demographic factors play an important role in shaping local revenue performance. In conclusion, enhancing investment inflows and improving the effectiveness of regional spending are crucial to strengthening PAD, whereas population growth requires complementary policies that improve productivity and local revenue capacity. The main contribution of this study is providing empirical evidence on key fiscal and demographic determinants of PAD in a tourism-dependent region during the post-COVID-19 recovery period. The findings imply that local governments should promote economic diversification beyond tourism, streamline investment licensing procedures, prioritize productive expenditure allocation, and strengthen human resource quality through market-oriented vocational education to improve regional fiscal resilience.

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Introduction

National development in Indonesia is directed at increasing the nation's competitiveness to be on par with developed countries by strengthening the education, health, economic, technological, and cultural sectors. In the economic sector, development focuses on developing the quality of human resources, increasing investment and exports, infrastructure development, and implementing sustainable development principles supported by decentralization policies as stipulated in Law Number 23 of 2014 concerning Regional Government. The decentralization policy gives regional governments the authority to manage local potential, create jobs, increase productivity, and encourage sustainable economic growth. The effectiveness of regional autonomy implementation can be evaluated under various development conditions, both during stable and crisis periods. Regional independence is largely determined by the ability of regional governments to optimize Regional Original Income (PAD) sourced from taxes, levies, and management of regional resources to finance public services, improve infrastructure quality, and reduce dependence on transfers from the central government to support sustainable community welfare (Hasanah, 2025; Syahrimi et al., 2025).

Bali is one of the strategic regions in the national economy, mainly because of the tourism sector which contributes substantially to foreign exchange earnings. Tourism not only boosts the number of tourists, but also attracts domestic and foreign investment, which in turn boosts PAD. Bandung and Denpasar had the highest PAD from 2019 to 2023, supported by various sectors such as industry, regional asset management, agriculture, fisheries, and property tax. Nationally, almost all provinces were hit by economic contraction, but 2021 saw the beginning of a rebound, driven by public purchasing power, investment, and high exports.

Even so, Bali and West Papua continued to contract. Bali was chosen as a research location because its PAD is unique-before the pandemic, it ranked 8th nationally with IDR 4.1 trillion, of which 65% was from tourism (Purwoharyono et al., 2023). This is different from other provinces that depend more on industry or natural resources. However, high dependence on tourism makes Bali vulnerable. The COVID-19 pandemic caused its PAD to plummet by 60% in 2020, the worst in Indonesia. Before the pandemic, Bali's PAD to regional income ratio reached 75% (nationally only 30%), but dropped to 15th nationally after the pandemic. This condition makes Bali an interesting case study for analyzing economic factors, investment, regional spending, and population on PAD in areas dependent on tourism.

However, the COVID-19 pandemic in 2020-2021 resulted in a significant decline in PAD in almost all regions of Bali, due to the decline in economic activity, reduced property transactions, and decreased contributions from market levies, parking, and the Micro, Small, and Medium Enterprise (hereinafter referred to as MSME) sector. Economic recovery began to take shape in 2022 with the normalization of economic activity, increased property transactions, recovery of the MSME sector, and optimization of regional asset management. Nonetheless, inequalities in economic development and infrastructure among regions in Bali remain a challenge, potentially creating gaps in access to public services, infrastructure, and economic investment. Therefore, this study is important to analyze the dynamics of PAD as well as the factors that influence it as an effort to support more equitable and sustainable regional economic development (Luthfiyah & Tallo, 2020).

Factors such as foreign direct investment (hereinafter referred to as FDI), local expenditure, and population have significant contributions to regional economic growth and own-source revenue (PAD). FDI encourages infrastructure development, job creation, and increased local taxes, but its effect on PAD depends on effective fiscal policy (Basuki et al., 2020).

Economic growth is considered a key indicator of development success because it reflects a region's ability to sustainably increase economic output and production activities, which in turn can improve welfare, create jobs, and contribute to poverty alleviation. For example, research in Indonesia shows that local revenue (PAD) is positively correlated with economic growth at the

district/city level when governance quality supports effective fiscal management (Fauji & Syafitri, 2024). However, PAD's dependence on the tourism sector in key tourist destinations such as Bali or West Nusa Tenggara demonstrates its vulnerability to global fluctuations. A study in West Nusa Tenggara (NTB) even confirmed that PAD growth is more influenced by infrastructure supporting tourism economic activity than by the number of tourist visits alone (Khaerunnesya & Permatacita, 2026). To mitigate this volatility, economic diversification into the agriculture, fisheries, and creative industries sectors is an important strategy to ensure that local revenue sources are not solely dependent on a single sector. Although PAD is often viewed as an indicator of economic performance due to its role in financing capital expenditures and regional development, empirical findings show that the relationship between PAD and economic growth is not always consistent across regions, and the results are influenced by other factors such as investment quality and regional fiscal policy (Farida et al., 2021). Thus, while PAD reflects a region's ability to generate its own revenue, successful sustainable economic development also requires attention to investment, the structure of the economic sector, and fiscal policy that is responsive to external conditions.

FDI has an important contribution to driving the development of infrastructure and industrial sectors that support local economic activity. FDI has a positive effect on overall economic growth, but its effect on local revenue is often suboptimal without strategic fiscal policy management (Basuki et al., 2020). In Bali Province, tertiary sectors such as tourism and trade are the main destinations for FDI flows, absorbing more than 97% of total foreign investment. This shows the great potential of the tourism sector in increasing local taxes, which in turn supports PAD. However, to maximize the benefits of FDI, economic diversification and fiscal policies that support sustainable development are required.

Regional expenditure acts as government investment in enhancing the quality of public services and promoting economic growth. The allocation of local expenditure in Bali to strategic sectors, such as infrastructure, education, and tourism, has stimulated economic activity and increased PAD. In the first quarter of 2023, Bali's regional expenditure reached IDR 8.70 trillion, a significant increase compared to the previous year. Research by Ramadhani et al. (2024) emphasizes the importance of effective regional expenditure planning to spur economic growth and production efficiency. Local governments need to prioritize sectors with the largest multiplier effects and improve cross-sector coordination to optimize the impact of local spending on PAD.

Population has a significant influence on PAD through increasing aggregate demand and broadening the tax base. A large population can be a potential market that drives regional economic growth, but it also brings challenges in the provision of public services. Without improving the quality of human resources, population growth can put pressure on local budgets (Suryadi et al., 2024). To maximize the contribution of population to PAD, local governments need to increase investment in education, skills, and infrastructure. This approach will ensure that population growth is not only a burden but also supports sustainable economic development in Bali.

The selection of Bali Province as the research location is based on the complex economic dynamics in this region, where variables such as economic growth, investment, regional spending, population growth, and urbanization interact to determine the level of fiscal independence and the ability to generate Regional Original Income (PAD). Empirical research shows that PAD and other sources of income significantly influence the financial performance of local governments and economic growth in Bali, although the region still shows a high dependence on the tourism sector, which is vulnerable to global economic turmoil (Paulina & Supadmi, 2025). At the same time, population growth and urbanization broaden the local tax base but may also increase fiscal pressure through higher demand for public services, making efficient fiscal policy and investment allocation crucial for sustaining Bali's fiscal stability amid global economic volatility.

This study uses Seemingly Unrelated Regression (SUR) method with Feasible Generalized Least Squares (FGLS), which is able to overcome autocorrelation between equations and provide more

accurate estimates than simple linear regression (OARC Stats, 2021). In addition, this study provides new insights regarding PAD optimization strategies in addressing regional economic challenges, especially in the context of regions with high levels of investment, regional spending, and population growth (Hasri, 2021).

Although many studies have discussed local own-source revenue (PAD), evidence is still limited for tourism-dependent regions like Bali, especially during the post-COVID-19 recovery period. Most previous research either focuses on different regions, uses shorter time periods, or only examines a few factors, so the results are still not clear for Bali's case. Therefore, this study aims to analyze the effects of economic growth, foreign direct investment (FDI), local government expenditure, and population on PAD in nine districts/cities in Bali Province from 2012 to 2023 using panel data analysis. This study contributes by providing updated evidence for Bali as a tourism-based economy after COVID-19, combining macroeconomic, fiscal, and demographic factors in one model, and offering policy suggestions to improve PAD through better investment policies, effective spending, and economic diversification.

Literature Review

Regional Original Revenue (PAD)

Regional original revenue (PAD) is revenue from local sources such as taxes, levies, and the results of regional asset management aimed to support the enactment of regional autonomy in accordance with the principles of decentralization. Regional Original Revenue (PAD) is all revenue derived from a region's local economic potential and collected in accordance with applicable laws and regulations. PAD reflects a region's level of fiscal independence and serves as an indicator of the local government's ability to sustainably finance governance and development without heavy reliance on transfer funds from the central government (Dinata et al., 2024; Indiraswari, 2025).

Efforts to increase PAD are required to support local government operations and the development of various sectors, aiming to improve community welfare through optimizing local potential. Revenue from the Regional Budget (hereinafter referred to as APBD) serves as a source of funding for all regional government and economic activities. The more PAD funds are collected and utilized to finance regional development and economic activity, the better the regional economy performs. Previous studies have yielded mixed results regarding factors affecting PAD.

Jama et al. (2024) found that economic growth positively influences local revenue in developing economies, while Gam et al. (2023) discovered FDI has a significant positive impact on regional income through job creation and technology transfer. However, Indriani (2022) revealed economic growth had an insignificant effect on local revenue in tourism-dependent regions during economic downturns. Similarly, Tankus et al. (2025) found population growth negatively affected local revenue in tourist destinations due to increased public service costs without proportional tax revenue increases.

While some earlier studies identified a positive link between regional expenditure and local revenue generation, more recent empirical research suggests that this relationship can vary depending on fiscal context and governance practices. For example, an analysis of Indonesian provincial data found that strategically targeted regional government spending particularly on productive services and infrastructure can enhance local revenue by stimulating economic activity and improving the efficiency of tax and levy collection (Wardana & Firmansyah, 2025).

Economic Growth

Economic growth is the primary indicator used to evaluate the development of a region's economic performance over time. Conceptually, economic growth reflects an increase in production capacity, reflected in an increase in real national income, influenced by capital accumulation, savings, and demographic dynamics as providers of productive labor (Çolak & Bölükbaşı, 2025). In empirical

practice, economic growth is generally measured through changes in Gross Domestic Product (GDP) or Gross Regional Domestic Product (GRDP) between specific periods, thus reflecting progress in economic activity and improvements in aggregate societal welfare (Marcal et al., 2024).

Prior studies have produced mixed results regarding the relationship between economic growth and PAD. Chen et al. (2023) found a positive relationship between economic growth and local revenue in Chinese provinces, where a 1% increase in GDP led to a 1.3% increase in local tax revenue through expanded business activities. Conversely, Nair et al. (2025) discovered a negative relationship in tourism-dependent regions during economic transitions, attributing this to the time lag between growth and tax collection capacity. Meanwhile, Anan et al. (2025) revealed an insignificant relationship in regions with high informal economic activities, suggesting that economic growth might not inherently correspond with an increase in local revenue. These contradictory findings indicate a research gap in understanding how economic growth affects local revenue, particularly in regions with different economic structures and development stages.

Contemporary public economics literature emphasizes that economic growth plays a crucial role in expanding the tax base through increased economic activity, business activity, and public consumption. Growth in output and per capita income drives increased tax revenue as more economic sectors enter the formal tax system (Benkejjane et al., 2024). One such theory is the Harrod-Domar theory, which states that investment spending affects aggregate demand and supply, increasing production capacity (Hochstein, 2020). Furthermore, the ability of individuals and businesses to fulfill their tax obligations also increases as economic conditions improve, thus strengthening the government's fiscal capacity by increasing tax compliance and awareness (Sekianti & Nuraini, 2025). From the perspective of modern economic growth theory, investment is seen as a key factor in driving long-term increases in productive capacity. Public and private investment contribute to capital accumulation, ultimately increasing aggregate output and expanding the potential for regional tax revenues (Sakar et al., 2025).

Foreign Direct Investment

Foreign direct investment (FDI) is a strategy to improve the regional economy by utilizing external support (Sukarsa et al., 2024). FDI refers to investment activities in Indonesia by foreign investors, whether in cooperation with domestic investors or using foreign capital exclusively, which is regulated under the Law of the Republic of Indonesia Number 25 of 2007. The government is authorized to determine certain areas and business sectors for investment, with the aim of protecting national interests, safeguarding natural resources, supporting MSMEs and cooperatives, and encouraging domestic investment and cooperation with business entities appointed by the government.

Recent empirical studies have shown varying impacts of FDI on local revenue generation. Zheng & Sun (2025) found a significant positive relationship between FDI and local revenue in coastal provinces of China, where a 10% increase in FDI led to a 7.2% increase in tax revenue through job creation and technology spillovers. However, Indriyani et al. (2021) discovered a negative relationship in tourism-dependent regions, as tax incentives offered to attract FDI reduced the effective tax base. These contrasting findings reveal a research gap in understanding how FDI impacts local revenue across different institutional contexts and economic structures.

Local Expenditure

Research on the relationship between local government expenditure and PAD in Indonesia shows mixed results. Some studies find a positive correlation, while others find a negative or insignificant relationship. This inconsistency reflects the research gap in understanding the specific conditions that make local expenditure effective in increasing PAD. A study by Wiryawan & Otchia (2022) found that an increase in regional capital expenditure was positively associated with an increase in PAD,

particularly through the development of the industrial sector in Indonesia. This study indicates that regions that allocate more funds for capital expenditure experience an increase in PAD because the developing industrial sector is able to make a greater contribution to local revenue.

Research by Basuki et al. (2020) showed the effect of various components of local government expenditure on PAD in 18 Indonesian provinces during the 2010-2015 period and found that government spending on the education sector and foreign investment did not have a significant impact on increasing PAD. This suggests that increasing expenditure in these sectors without improving fundamental structural aspects may not be sufficient for increasing PAD.

These varying results in these studies highlight the importance of further research to investigate the factors that mediate the effectiveness of local expenditure on increasing PAD. Some aspects that need further research include the efficiency of expenditure allocation in sectors that have the potential to increase PAD, the role of governance and transparency in optimizing the use of regional funds, and how regional economic structure, resources, and demographic factors affect the impact of regional expenditure on PAD. A thorough examination of these aspects is expected to contribute to the formulation of an optimal management strategy of regional expenditure to increase PAD sustainably in Indonesia.

Total population

Total population includes all individuals who have lived and reside in the territory of the Republic of Indonesia for six months or more, according to Statistics Indonesia. This definition also includes people who have lived in the area for less than six months, provided they have the intention to stay longer. Unemployment significantly affects PAD, particularly in regions dependent on the tourism sector, such as Bali. A rising unemployment rate leads to a decline in people's purchasing power, which subsequently reduces the demand for goods and services. This decline directly impacts local tax revenues, including restaurant, hotel, and entertainment taxes, which are key contributors to Bali's PAD. Moreover, high unemployment rates can discourage investment and slow regional economic growth, ultimately limiting future tax revenue potential. A study by Fu et al. (2023) found that population growth without corresponding job creation negatively affects local government revenue. Similarly, the empirical evidence suggests that the population–performance relationship is not automatic: Eldeib et al. (2025), for example, find that population does not significantly affect GRDP at the district/city level in Central Java, implying that population growth alone may not translate into stronger economic outcomes and fiscal capacity. In Bali's context, an increase in tourist arrivals or population migration that is not accompanied by sufficient employment opportunities in the tourism sector can contribute to rising unemployment and a decline in PAD. Furthermore, Ahmad & Satrovic (2023) emphasized the importance of fiscal decentralization in shaping local government revenue. In Bali, this suggests that the effectiveness of PAD management depends on the local government's capacity to generate employment opportunities and mitigate unemployment. The population, the majority of which is within the productive age (15-64 years), has great potential as a workforce, but without improving the quality of human resources, a large population can become an obstacle to economic growth (Purba et al., 2022).

Method

The research methodology employed in this study is a quantitative method, particularly panel data analysis. Panel data represents an integration of cross-sectional as well as time-series data. The variables considered in this research based on equation (1) that include both cross-sectional and time-series dimensions, namely Y: regional original revenue (PAD), X1: economic growth (PE), X2: foreign direct investment (FDI), X3: local expenditure (BD), X4: total population (JP) over a 12-year period (2012-2023) from 9 districts/cities of Bali Province. The study utilized secondary data sourced from Statistics Indonesia (BPS).

Panel Data Analysis

This study analyzes the effect of independent variables (X) on the dependent (Y) using panel data regression to ensure consistency between theory, testing, and estimation, with econometric models as a tool to draw conclusions (Borensztein et al., 1998):

$$PAD_{it} = \alpha + \beta_1 (PE)_{it} + \beta_2 (FDI)_{it} + \beta_3 (BD)_{it} + \beta_4 (JP)_{it} + et \quad (1)$$

Where α is constant, β_{1234} is the coefficient values of variables 1, 2, 3, and 4, i is 9 districts/cities of Bali Province (Jembrana, Tabanan, Badung, Gianyar, Klungkung, Bangli, Karangasem, Buleleng, and Denpasar), t is the time period (2012-2023) and e is the error term.

Static Panel Data Regression

In predicting regression models using panel data, there are three approaches that can be employed, as described by Gujarati & Porter (2009).

a. Common Effect Model
   This model is a panel data regression that assumes no differences between entities or time, with uniform parameter estimation using the ordinary least square (OLS) approach.
b. Fixed Effect Model (FEM)
   This model captures the specific characteristics of each entity that are considered unchanged over time, using dummy variables to control variation between entities and prevent bias.
c. Random Effect Model (REM)
   This model considers the variation between entities as random elements without correlation with the independent variables and is estimated with generalized least squares (GLS) for a more efficient and representative analysis.

In panel data regression analysis, selecting an appropriate estimation model is an important step to ensure valid estimation results, and several statistical tests are often used to determine the best model (Maylani & Sari, 2025). Each entity has different internal and external conditions, so testing is needed to select the most appropriate model. Below is a more detailed explanation:

a. The Chow test is used to choose between the FEM and CEM. If the probability of the F test or Chow test is greater than 0.05, CEM is selected; if it is less than 0.05, FEM is selected.
b. The Hausman test compares the FEM and REM. If the probability of the random cross-section is greater than 0.05, REM is selected; if it is less than 0.05, FEM is selected.
c. The LM test is used to choose between CEM and REM. If the LM value is smaller than the chi-square, REM is selected; if it is larger, CEM is more suitable.

Panel Data Seemingly Unrelated Regression (SUR)

In panel data regression analysis, challenges such as heteroskedasticity and multicollinearity frequently arise. To address these issues, the SUR method, introduced by Arnold Zellner in 1962, is commonly applied. This model integrates multiple regression equations within a single framework, even when error terms across equations are correlated. When heteroskedasticity is present, estimation can be conducted using feasible generalized least squares (FGLS), which is particularly effective when correlations exist between units and the residual variance-covariance matrix exhibits heteroskedasticity. Furthermore, the SUR model enhances estimation efficiency by considering error term correlations across equations, thereby reducing multicollinearity problems and increasing the accuracy of coefficient estimates. It also facilitates more reliable hypothesis testing, captures interdependencies between equations, offers computational advantages for large datasets, accommodates various panel data structures including unbalanced panels, and provides a unified analytical framework for examining complex economic relationships, making it a powerful tool for

analyzing multiple interrelated dependent variables simultaneously.

Results and Discussion

Descriptive Analysis of Variable Data

Table 1. Descriptive Statistics Results

Variable	Obs	Mean	Min	Max	Std. Dev
PAD	108	9.63e+08	4.08e+07	5.79e+09	1.19e+09
PE	108	4.075.463	-16.55	11.29	4.358.845
FDI	108	655652	140	6587903	1183471
BD	108	1.64e+09	1.17e+08	5.80e+09	9.95e+08
JP	108	4.711.676	172.9	957.8	210.344

This study used 108 sample observations. Table 1 shows that PAD has an average of IDR 9.63 billion with a standard deviation of IDR 1.19 billion, the lowest value of IDR 40.8 million, and the highest value of IDR 5.79 billion, showing large disparities between regions. Economic growth has an average of 4.07% with a standard deviation of 4.35, a low of -16.55%, and a high of 11.29%, showing significant variation, including negative growth. FDI has an average of USD 655,652 with a standard deviation of USD 1183, a low of USD 140,000, and a high of USD 6.5 million, reflecting large disparities in foreign investment. Local expenditure has an average value of IDR 1.64 billion with a standard deviation of IDR 9.95 billion, a low value of IDR 117 million, and a high value of IDR 5.8 billion, reflecting large variations in expenditure. Population has an average of 4711 thousand with a standard deviation of 210 thousand, a low of 172 thousand, and a high of 957 thousand, indicating moderate differences between regions.

Panel Data Regression Model

In this research, three approaches are utilized to determine the regression estimation method: the Common Effect Model (CEM), the Fixed Effect Model (FEM), and the Random Effect Model (REM).

Table 2. Regression Estimation Model

Variables	CEM		FEM		REM	
	Coefficient	Probability	Coefficient	Probability	Coefficient	Probability
PE	8207962	0.483	7146101	0.526	7767992	0.492
FDI	142.11	0.007	6.279.229	0.288	1.181.872	0.024
BD	1.034.722	0.000	.8711226	0.000	.9982755	0.000
JP	-7439776	0.007	437125.9	0.710	-5879899	0.108

In determining the best regression model in Table 2, three models were compared: CEM, FEM, and REM. The comparison results show that the CEM performs best with three variables significant at the 1% level, FDI (p = 0.007), local expenditure (p = 0.000), and total population (p = 0.007). In contrast, FEM only shows local expenditure as significant (p = 0.000), while in REM, only FDI and local expenditure are significant (p = 0.024) and p = 0.000, respectively. Therefore, CEM is chosen as the best model because it better explains the effect of independent variables on PAD.

Selection of The Best Model

Based on the Chow test results presented in Table 3, the probability value (Prob > F) is 0.0537, which is greater than the 5% significance level (0.05). Therefore, the null hypothesis (H_0) is accepted, indicating that the Common Effect Model (CEM) is more appropriate than the Fixed Effect Model (FEM) for this panel data estimation.

Table 3. The Chow Test

Statistic	Value
F(8.95)	2.01
Prob>F	0.0537

Table 4 reports the Hausman test results, showing a probability value (Prob > Chi^2) of 0.6571, which is higher than 0.05. This implies that the null hypothesis (H_0) cannot be rejected, meaning there is no systematic difference between the Fixed Effect Model (FEM) and the Random Effect Model (REM) estimators. Hence, the Random Effect Model (REM) is preferred over the FEM.

Table 4. The Hausman Test

Statistic	Value
Chi2(2)	0.84
Prob>Chi2	0.6571

The Lagrange Multiplier (LM) test in Table 5 produces a probability value (Prob > $chibar^2$) of 0.3488, which exceeds the 5% significance level. This result suggests that the panel effects are not statistically significant. Therefore, the Common Effect Model (CEM) is considered more suitable than the Random Effect Model (REM) for the panel data analysis in this study.

Table 5. The Langrange Multiplier (LM) Test

Statistic	Value
Chibar2(01)	0.15
Prob>Chibar2	0.3488

Panel SUR Test

This study requires a SUR panel test because the static panel test shows inefficient coefficients and standard errors. Thus, a dynamic panel test is required to enhance efficiency and eliminate bias in the research variables. The advantage of the SUR panel test lies in its efficiency in estimating parameters by considering all regression equations as well as contemporaneous errors.

Table 6. Panel SUR Test

Variables	Coefficient	Standard Error	Z	P>[z]
C	-5.04e+08	1.41e+08	-3.57	0.000
PE	7125057	2.26e+07	0.32	0.752
FDI	145.3648	66.95275	2.17	0.030
BD	1.036957	.0995914	10.41	0.000
JP	-757101.4	277645.9	-2.73	0.006

Based on the SUR results (Table 6), several key variables demonstrate varying degrees of influence on PAD in Bali Province. The analysis reveals complex relationships between foreign investment, local expenditure, population dynamics, and economic growth, each contributing differently to regional financial performance. Despite the large coefficient (7,125,057), economic growth lacks statistical significance (p = 0.752). This corresponds with Sadekin (2025) which found that traditional economic growth metrics often fail to capture the true economic dynamics of tourism-dependent regions. Similar conclusions were reached by Alsahafi et al. (2023).

FDI is statistically significance (p = 0.030, coefficient = 145.3648). This aligns with research in tourism-dependent regions By Rahman et al. (2019), which found that foreign direct investment in tourism regions shows a positive but moderate correlation with local revenue ($r = 0.34$, $p < 0.05$). Similarly, Yan et al. (2023), demonstrated that regulatory frameworks often moderate the impact of foreign investment on local revenue generation.

Local expenditure emerges as highly significant (p = 0.000, coefficient = 1.036957). This strong relationship is supported by Indriyani et al. (2021) analysis of 45 tourism-dependent regions, showing that strategic local government spending has a direct multiplier effect on revenue generation. Song et al. (2023) found that tourism-focused regions show higher returns on local government expenditure compared to industrial regions.

The negative population coefficient (-757101.4, p = 0.006) aligns with recent demographic studies, as supported by Muhammed & Musa (2025) study of island economies. These findings collectively depict a complex regional economy where traditional economic indicators interact in unique ways with local revenue generation. The tourism-dependent nature of Bali's economy appears to create distinctive challenges, particularly in how conventional economic metrics relate to local revenue. The strong positive impact of local expenditure, coupled with the negative population effect and moderate foreign investment influence, suggests the need for carefully balanced policy approaches that consider these interrelationships in regional financial management

Conclusion

This study aimed to examine the effects of economic growth, foreign direct investment (FDI), regional expenditure, and population on local own-source revenue (PAD) in Bali Province. Based on the findings, this study concludes that Bali needs economic diversification beyond the tourism sector, considering that economic growth alone has a minimal impact on PAD, with every 1% increase only able to increase PAD by IDR 7,125,057, while FDI and regional expenditure show a positive and significant influence, where each unit increase in FDI increases PAD by IDR 145.3648 million (14.53%) and each IDR 1 increase in regional expenditure increases PAD by IDR 1.036957 million (103.69%). Meanwhile, population growth without quality improvement has a negative impact with each additional person decreasing PAD by IDR 757,101.40 (75.71%). The study recommends five main strategies: diversification into creative and digital industries (targeting a 30% increase in the non-tourism sector's contribution within five years), simplification of investment procedures through a one-stop integrated service system, optimization of productive regional spending on infrastructure supporting the digital economy, improving the quality of human resources through vocational education relevant to market needs (targeting a 25% increase in the skilled workforce ratio within three years), and strengthening the information technology-based regional revenue management system, with the aim of reducing dependence on tourism, optimizing regional spending, attracting foreign investment, and developing quality human resources to build a more resilient and sustainable regional economy. Future studies are encouraged to include additional determinants such as governance quality, tax compliance, tourism intensity, and infrastructure development, and to apply alternative econometric approaches (e.g., dynamic panel models) to capture long-run effects more accurately.

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Declarations

Author contribution	:	Wahyu Tri Wibowo was responsible for the planning and development of the research design and led the writing of the main manuscript. Nolla Billa Nasokha contributed to data collection and processing, including transcription and preliminary activities. Rifki Khoirudin participated in further analysis and was responsible for editing and finalizing the manuscript. The third author read and approved the final manuscript for publication.
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