

DETERMINANTS OF REGIONAL TAX REVENUE REALIZATION IN MAGELANG CITY

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Abstract

Local tax revenue plays a crucial role in financing public facilities and services. However, Magelang City has consistently ranked the lowest in municipal local tax revenue among regencies and cities in Central Java. This study analyzes the influence of population, GRDP, and capital expenditure on local tax revenue in Magelang City from 2010 to 2023. Using secondary time-series data from the Directorate General of Fiscal Balance and the Central Bureau of Statistics, the study employs multiple linear regression analysis with Eviews 12. The results indicate that population and GRDP have a positive and significant impact on local tax revenue, while capital expenditure has a negative and insignificant effect. Simultaneously, these three variables significantly influence local tax revenue. The findings suggest that the government should enhance economic participation through job training in key sectors such as manufacturing, services, and technology, along with entrepreneurial training to support MSMEs. Additionally, local tax revenue can be increased by strengthening leading economic sectors and optimizing capital expenditure for strategic infrastructure development, such as roads, bridges, and markets. These measures can boost economic activity and ultimately improve tax revenue collection in Magelang City.

Keywords: Tax Revenue, Population, GRDP, Government Expenditure

INTRODUCTION

Financial independence is a crucial aspect that reflects a region's ability to manage its finances independently without excessive reliance on central government assistance. This demonstrates the region's capacity to manage and utilize financial resources to support various development programs. In the context of regional autonomy, financial management between the central and regional governments is realized through Regional Revenue, which includes regional taxes, retributions, revenue from the management of regional assets, and other legitimate income. PAD serves as a measure of a region's ability to maximize its economic potential to meet community needs without relying heavily on fund transfers from the central government, such as General Allocation Funds or Special Allocation Funds (Kertapraja, 2015).

The enhancement of Regional Revenue aims to strengthen governance and improve the quality of public services by reducing dependence on funds from the central government. The optimization of PAD serves as a foundation for independently meeting development, operational, and public service needs, while also promoting efficiency and transparency in regional financial management. Strengthening regional autonomy is expected to enable regions to explore and utilize local potential to create sustainable revenue sources, thereby reinforcing regional financial independence. This provides regions with the flexibility to set development priorities that align with

community needs, address local challenges, accelerate development, and enhance competitiveness both nationally and globally (Nawangasasi & Mulyadi, 2020).

There are differences in tax revenue levels among provinces in Java Island. Central Java, Banten, and Yogyakarta are recorded as regions with lower tax revenues compared to other provinces in the area. One of the main reasons for this is the smaller number of regencies/cities compared to West Java, which has 27 regencies/cities and contributes more significantly to tax revenues. This highlights the challenges faced by some regions in maximizing their tax revenue potential, such as taxpayer registration, revenue management, and fiscal resource optimization. Below is a graph showing the realization of regional tax revenues by regency/city in Central Java Province, illustrating the variations across regions:

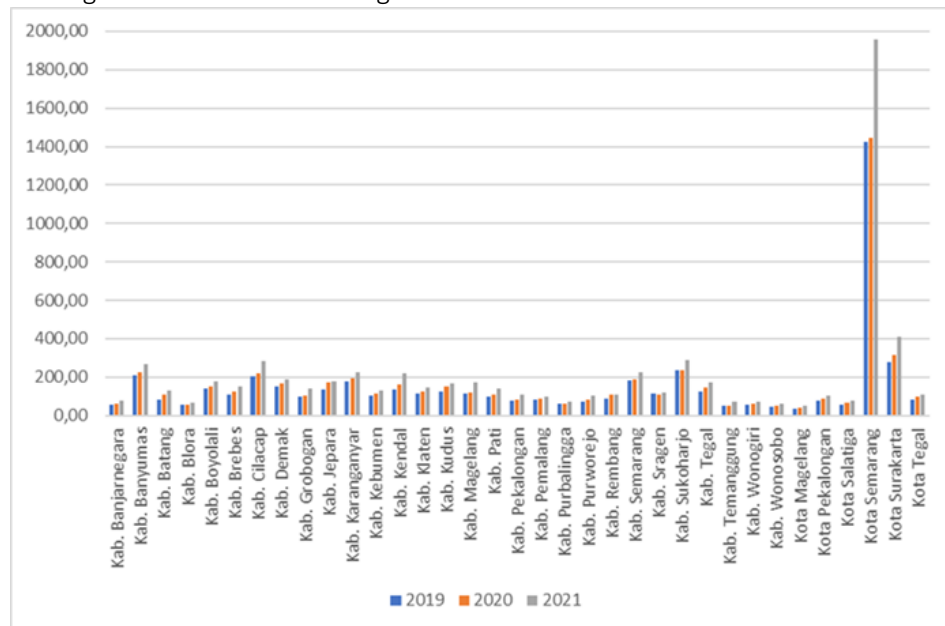


Figure 1. Graph of Regional Tax Revenue Realization in Central Java Province (Billion Rupiah).

Source: Ministry of Finance (2024).

Figure 1 illustrates the realization of regional tax revenues from 2020 to 2022. Semarang City ranks first with the highest regional tax revenue realization during this period. In 2021, Semarang City's tax revenue realization was recorded at 1.43 trillion rupiahs and continued to increase, reaching 1.96 trillion rupiahs in 2022. However, several regencies and cities in Central Java Province, including Magelang City, Wonosobo Regency, and Temanggung Regency, reported lower regional tax revenue realizations.

Table 1. Lowest Regional Tax Revenue Realizations in Central Java Province (Billion Rupiah).

Year	Regional Tax Revenue Realization		
	Magelang City	Wonosobo Regency	Temanggung egency
2010	6,718	6,736	7,389
2011	9,464	8,823	11.213
2012	12,547	9.441	11,470
2013	18,829	26,416	25,583
2014	22,107	26,122	29,622
2015	26,185	27,484	31,523
2016	25,974	30,274	32,480
2017	31,206	38,328	38,291
2018	34,283	41,562	40,401
2019	40,432	44,753	53,424
2020	35,958	43,412	47.887
2021	38,088	52,814	52,832
2022	50,527	59,953	74,191

Source: Ministry of Finance (2024).

Based on Table 1 it can be observed that the realization of regional tax revenues in regencies and cities within Central Java Province varies. In several years, Magelang City ranked last in regional tax revenue. According to Saniah & Murtala (2023) and Difur et al., (2015), tax collection is an effective strategy to increase regional income, as it can serve as the primary source for financing regional governance and development. With optimal tax management, regions can reduce their dependence on funds from the central government and strengthen their financial independence. Efficient tax collection also reflects local economic potential, supports more equitable development, and enhances the quality of public services such as infrastructure, education, and healthcare, ultimately improving community welfare. Below is data on the contribution of regional taxes to PAD in Magelang City.

Table 2. The Contribution of Regional Taxes to PAD in Magelang City (Billion Rupiah).

Year	PAD	Regional Tax	Contribution (%)
2020	290,756	35,958	12
2021	319,391	38,088	12
2022	377,367	50,527	13

Sumber: Ministry of Finance (2024).

Based on the table 2, the contribution of regional tax revenue in Magelang City from 2020 to 2022 is still relatively small, with the contribution of regional taxes ranging from 12-13 percent. According to a study by Indrawati et al., (2017), the contribution of regional taxes to the Regional Original Revenue (PAD) of Magelang City is in the range of 10-15 percent, which is influenced by the income levels of the community and the limitations of local authority in setting taxes. The low contribution is caused by the relatively lower income levels of the community and the limitations faced by the region in determining tax policies. Therefore, the local government needs to be more innovative in exploring tax potential and improving the efficiency of tax management in order to maximize its contribution to development and public services in the city.

According to Musgrave's tax theory, the population size directly influences regional tax revenue. As the population grows, the potential for tax revenue also increases, as the number of individuals or entities subject to tax rises Prasetyo & Bawono (2022). According to Nastiti (2015), a large population is not always an obstacle to regional economic development. With high population growth rates, the capacity for production and consumption of goods will increase, potentially boosting community income.

According to Mamonto et al., (2015), Gross Regional Domestic Product (GRDP) is a key indicator used to measure the economic growth of a region, reflecting the total value of goods and services produced. An increase in GRDP signifies a rise in economic activities, such as production, consumption, and investment, which contribute to higher regional income through taxes and retributions. This revenue can then be used to build infrastructure, improve public services, and support social welfare programs, making GRDP an important factor in sustainable regional development.

According to Sukirno (2021), increased government spending on capital investment and infrastructure development, such as roads and public facilities, plays a crucial role in driving more effective economic growth. Improved infrastructure enhances economic efficiency and community productivity, which ultimately contributes to increased government revenue through taxes, including street lighting taxes.

LITERATURE REVIEW AND HYPOTHESIS FORMULATION

The research results on the variables of GRDP (Gross Regional Domestic Product) and Capital Expenditure show differing findings. According to the study by Akbar & Juliannisa (2022), the GRDP variable does not have an impact on regional taxes, while the study by Simbolon & Herijawati (2023) indicates that GRDP has a positive influence on regional taxes. There is also inconsistency in the findings related to the Capital Expenditure variable. According to Prasetyo & Bawono (2022), capital expenditure has a positive impact on regional taxes, whereas the study by Akbar & Juliannisa (2022) found no such effect. Additionally, the subject of this research, which has not been studied before, is Magelang City from 2010 to 2022.

The increase in population leads to higher consumption of goods and services in a region, such as the use of restaurants, hotels, and public transportation, which are taxed by the local government. According to Musgrave's taxation theory, tax revenue is significantly influenced by the population size, meaning that the larger the population, the greater the potential for local tax revenue. Population size serves as a crucial indicator in assessing a region's ability to generate income from taxes, which in turn can fund development and improve community welfare (Prasetyo & Bawono, 2022).

H1: The population has a positive influence on local tax revenue in Magelang City.

An increase in GRDP strengthens local tax revenue by reflecting economic growth and community activities. With higher GRDP, consumption, business investment, and property values rise, thereby increasing tax potential from the consumption sector, business taxes, and property taxes. Fischer's theory states that taxes are collected from three main bases: income and corporations, consumption, and wealth, all of which contribute to expanding local tax revenue (Yogyandaru, 2013).

H2: GRDP has a positive influence on the realization of local tax revenue in Magelang City.

According to Sukirno (2021), the level of government expenditure, which includes capital formation and the development of facilities and infrastructure, has a positive impact on the smooth progress of regional economic development. The improvement in infrastructure quality not only accelerates the development process but also stimulates community economic activities, which in turn increases government revenue. One of the impacts of increased economic activity is the growth in local tax revenue, including street lighting tax. With adequate infrastructure

development, more economic resources can be utilized, expanding the tax revenue base and strengthening regional finances to support development programs and public services.

H3: Government expenditure has a positive influence on the realization of local tax revenue in Magelang City.

RESEARCH METHODS

This study investigates the city with the lowest regional tax revenue realization in Central Java Province, namely Magelang City, using secondary data in the form of time series data from 2010 to 2022. This research utilizes secondary data, which is obtained from existing sources rather than directly from the research subjects. The secondary data sources used include the Directorate General of Fiscal Balance (DJPK) of the Ministry of Finance, DataGo of Magelang City, and the Central Statistics Agency (BPS). In this study, the data used was collected through the documentation collection technique. This technique involves gathering information that has been previously documented, whether in the form of written materials, images, or photos created by individuals or institutions. Documentation can include various types of sources such as archives, official reports, publications, or other materials that record specific events or phenomena.

The testing in this study uses multiple linear regression, conducted to determine the effect of independent variables on the dependent variable using the OLS (Ordinary Least Squares) method. OLS has an unbiased estimator and is optimal because it has minimal variance. The data used must meet the criteria of normality, no autocorrelation, no heteroscedasticity, and (Iswati et al., 2014).

RESULTS AND DISCUSSION

Multiple linear regression

Table 3 Regression linear output			
Variable	Coefficient	t-Statistic	Prob.
C	-25.38174	-4,265187	0,0021
LnP	0,043089	6,112715	0,0002
LnGDP	0,296131	2,868058	0,0185
LnGE	-0,276206	-2,070401	0,0683

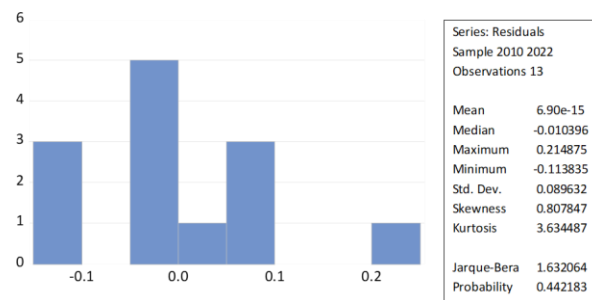
Source: output Eviews (2024).

The coefficient for population size is 0.043 percent, meaning that if the population variable increases by 1 percent, regional tax revenue will increase by 0.043 percent. The coefficient for GRDP (Gross Regional Domestic Product) is 0.296 percent, meaning that if the GRDP variable increases by 1 percent, regional tax revenue will increase by 0.296 percent. The coefficient for capital expenditure is -0.276 percent, meaning that if capital expenditure decreases by 1 percent, regional tax revenue will decrease by 0.276 percent.

Classical Assumption Test

One of the requirements that must be met in conducting regression analysis using Ordinary Least Squares (OLS) is the classical assumption test. OLS involves only one dependent variable, while there are multiple independent variables.

1. Normality Test



Source: output Eviews (2024).

Figure 2. normality test output

Based on Figure 4.5, it can be seen that the Jarque-Bera value is 1.632 with a probability of 0.442183. This indicates that the value is greater than $\alpha = 0.05$. Therefore, the residuals are considered to be normally distributed.

2. Multicollinearity Test

Table 4. multicollinearity test output

Variable	VIF
LnP	8,221407
LnGDP	6,045771
LnGE	5,168048

Source: Output Eviews (2024).

Multicollinearity symptoms can be identified by looking at the Variance Inflation Factor (VIF) value. A VIF value < 10.00 concludes that there is no multicollinearity.

3. Heteroscedasticity test

Table 5. Heteroscedasticity test

<i>F-statistic</i>	0.508738	<i>Probability F(2, 12)</i>	0.6219
<i>Obs*R-squared</i>	1.649798	<i>Probability</i>	0.4383

Source: Output Eviews (2024).

Based on Table 5, the probability value is greater than $\alpha = 0.05$, which is 0.25. Therefore, it can be concluded that there are no signs of heteroscedasticity.

4. Autocorrelation Test

Table 6. Autocorrelation Test

<i>F-statistic</i>	0.508738	<i>Probability F(2, 12)</i>	0.6219
<i>Obs*R-squared</i>	1.649798	<i>Probability</i>	0.4383

Source: Output Eviews (2024).

Based on Table 6, the probability value obtained is 0.438. Since this value is greater than 0.05, it can be concluded that there is no autocorrelation issue.

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1. Coefficient Determination

Table 7. Coefficient Determination

R-square	0.937995
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Source: Coefficient Determination Output(2024).

2. F Test

The F-statistic test is performed to measure the joint effect of independent variables on the dependent variable. Based on the output from the multiple linear regression in Table 7, the calculated F-value is 133.33. To find the F-table value, it can be calculated using the formula $F(\alpha;$

$df_1; df_2) = F(\alpha; k-1; n-k)$, where k is the number of dependent and independent variables in the study, and n is the total sample size. After consulting the F-table, the F-table value is found to be 3.71. After comparing the calculated F-value and F-table, it can be concluded that the calculated $F\text{-value} > F\text{-table}$, and the p-value is less than 0.05. Therefore, it can be concluded that population size, GRDP, and capital expenditure together have an impact on regional tax revenue.

3. t test

- a The results of the t-test on the population variable show that the calculated t-value is 6.11, which is greater than the table value of 1.833, and the significance value is 0.002, which is less than 0.05. Therefore, the population variable has a positive and significant effect on the realization of regional tax revenue in Magelang City.
- b The results of the t-test on the GRDP (Gross Regional Domestic Product) variable show that the calculated t-value is 2.868, which is greater than the table value of 1.833, and the significance value is 0.0185, which is less than 0.05. Therefore, it can be concluded that the GRDP variable has a positive and significant effect on the realization of regional tax revenue in Magelang City.
- c The results of the t-test on the capital expenditure variable show that the calculated t-value is -2.070, which is less than the table value of 1.833 (in absolute value), and the significance value is 0.0683, which is less than 0.010. Therefore, it can be concluded that the capital expenditure variable has a significant negative effect on the realization of regional tax revenue in Magelang City.

CONCLUSION

The government can increase regional tax revenue by utilizing demographic potential through labor market-oriented training, entrepreneurship training for the development of MSMEs (Micro, Small, and Medium Enterprises), and supporting leading economic sectors such as tourism and hospitality. The development of quality tourism infrastructure, promotion of attractive destinations, and improvements in hotel facilities can attract more tourists, thereby increasing related tax revenue. Additionally, capital expenditure for the development of strategic infrastructure such as roads, bridges, and markets can support economic activities, accelerate goods distribution, reduce logistics costs, and open up new access points for entrepreneurs. These measures are expected to increase tax revenue from sectors such as hotels, restaurants, entertainment, billboards, and other levies.

Equation

$$\ln Y = \beta_0 + \beta_1 \ln P_t + \beta_2 \ln GDP_t + \beta_3 \ln GE_t + e \quad (1)$$

$$\ln Y = -25,38174_t + 0,043 \ln P_t + 0.296 \ln GDP_t - 0,278 \ln GE_t \quad (2)$$

Figures and Tables

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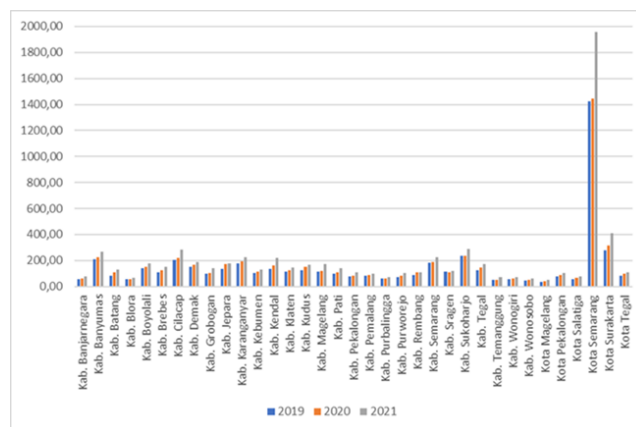
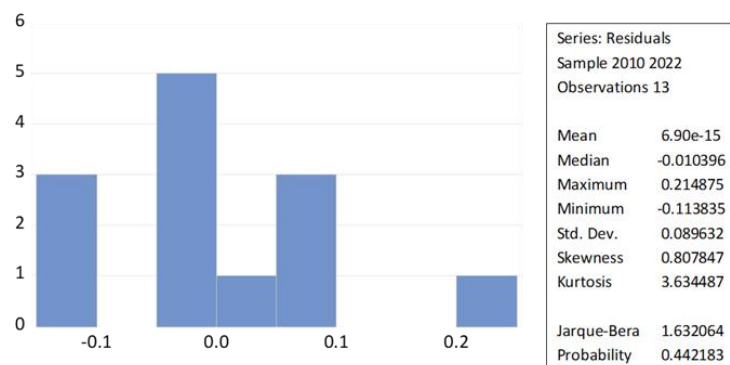


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Figure 2. normality test output

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