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The Influence of Local Taxes and Regional Levies on Infrastructure Development in Semarang City Government

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ABSTRACT

This study aims to: assess the influence of regional taxes on the development of road infrastructure, networks, and irrigation in the Semarang city government; to assess the influence of regional levies on the development of road infrastructure, networks, and irrigation in the Semarang city government; to assess the influence of regional taxes and regional levies simultaneously on developing road infrastructure, networks, and irrigation in the Semarang city government. The sample used in this study was purposive sampling, meaning that the sample was chosen selectively, based on specific criteria that had been determined by the researcher, not randomly. Data collection was carried out by using documentation techniques. Data analysis techniques used multiple regression techniques. The results of data analysis with a significance of 0.05 showed that: Regional taxes had a positive and significant influence on the development of road infrastructure, networks, and irrigation in the Semarang city government. Regional levies did not significantly influence the development of road infrastructure, networks, and irrigation in the Semarang city government. Regional tax revenue and levies simultaneously influenced positive and significance toward the development of road infrastructure, networks, and irrigation in the Semarang city government. The correlation and contribution between regional taxes and regional levies to road, network, and irrigation infrastructure development is 0.468, or a percentage contribution of 46.80%.

Keywords: development; levies; infrastructure; taxes.

INTRODUCTION

Regional taxes and levies are important instruments for the City of Semarang to finance infrastructure capital expenditures. The local government must continue to improve collection efficiency and educate the public to increase their participation in paying taxes and levies to support the city's infrastructure development. The low quality of urban infrastructure in facing the threat of climate change is one of the five main strategic issues facing the city of Semarang over the next 20 years. Improving the quality of infrastructure, starting with completing the carrying capacity and capacity of the city, is expected to be able to drive economic growth and improve the quality of life of the people of Semarang City. The provision of quality infrastructure is also encouraged to be able to adapt to the potential impacts of climate change (Semarang City Regional Regulation No. 7 of 2024).

According to the Draft RPJMD of Semarang City 2021-2026, there is one mission/program of the Semarang City Public Works Department, namely: "Creating Quality Infrastructure that is environmentally friendly to support the progress of the city". Meanwhile, the targets to be achieved in the infrastructure planning of the Semarang City Public Works Department are (1) Increasing the performance of flood and tidal control facilities and infrastructure, so that Semarang City is free from

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floods and tidal floods, becoming a resilient, productive and sustainable city, (2) Increasing the function and benefits of road infrastructure, so that community activities become more resilient and productive.

The percentage of flooded areas in Semarang city in 2020 was 3.73%, in 2021 it reached 3.40%, in 2022 it reached 2.37%, in 2023 it reached 2.34%, in 2024 it reached 2.23%. While the percentage of tidal areas in 2020 reached 2.00%, in 2021 it reached 2.00%, in 2022 it reached 1.11%, in 2023 it reached 1.09%, in 2024 it reached 1.06%. Meanwhile the percentage of roads in good condition in 2020 reached 92.38%, in 2021 it reached 92.38%, in 2022 it reached 92.52%, in 2023 it reached 93.004%, in 2024 it reached 93.27%. Good road conditions are defined as roads in good to moderate condition. Semarang City targets achieving 99.64% of its roads in good condition by 2045 (Semarang City Regional Regulation No. 7 of 2024).

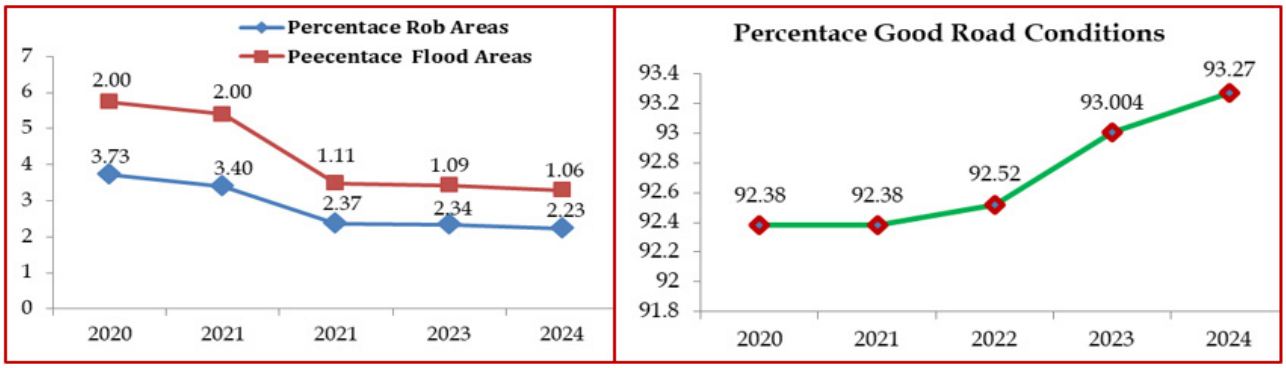

Figure 1. Percentage Achievements of Rob Areas, Flood Areas, and Good Road Conditions in Semarang City for 2020-2024
Source: : LKJIP Dinas Pekerjaan Umum Kota Semarang

The relationship between the state and taxes is intertwined. Taxes are the primary source of revenue for the state, and tax revenues are used by the state to fund various programs necessary to run the government and provide public services. (Purba et al., 2024). Law Number 28 of 2009 concerning Regional Taxes and Regional Levies, among other things, regulates the types of taxes and levies that can be collected by regional governments. This law makes regional taxes and levies a source of revenue and can be developed according to the conditions of each region (Erizal N & Listi, 2024). One of the objectives of the existence of regional original income (PAD) is to improve the quality of public services and infrastructure development in the region, including the construction of roads, bridges, public buildings, and other public facilities (Jatnika, Suryadi, & Suryadi, 2024).

Taxes and levies are sources of revenue for a region. Regions can manage their own finances by the principles of fiscal decentralisation. Taxes are mandatory contributions imposed by local governments, while levies are levies for particular services or permits granted by local governments to the public (Yakin, 2025). Of the various sources of regional revenue, the tax sector is one of the elements that significantly influences regional income (Kamaroellah, 2021). The largest contributor to local revenue (PAD) comes from the tax sector. Tax contributions are very significant in supporting local government programs, compared to non-tax sectors each fiscal year (Irianto & Jurdi, 2021).

Taxes are a significant source of revenue within the public financial structure, playing a crucial role in supporting development and providing public services. Taxes play a crucial role in infrastructure, providing funding for developing critical infrastructure such as roads, bridges, and transportation networks. These investments improve connectivity, facilitate the movement of goods and people, and increase economic efficiency (Pradityo, 2023).

Taxes play a crucial role in national development and the national economy because they are the primary source of state revenue. Through tax revenue, the government can finance various development programs, such as infrastructure, education, health, and other social programs to improve public welfare (Afifah et al., 2025). Revenue from regional levies contributes directly to development funding, covering various sectors, such as infrastructure, education, health, and improving the quality of other public services. Development funds are derived from regional revenues from legitimate sources, one of which is levies. This revenue is used to finance projects that contribute to public welfare (Adi & Aziz, 2025).

Continuously improved road infrastructure will become reliable roads, which will support regional economic growth and foster competitive advantage in the national and global economies. Road infrastructure development facilitates the distribution of goods and services (Wahyuni, Darma, & Gusty, 2024). The aspirations for infrastructure development are related to improving connectivity at the local, national, and international levels. With good connectivity, a country or region can more easily integrate into the global economy and increase its attractiveness to investment. Infrastructure, such as internet and telecommunications networks, is now crucial in facing the challenges of digitalization and economic transformation. Good infrastructure development is a key driver for increasing a country's competitiveness, reducing poverty, and accelerating development processes in various areas of life (Dj Proper infrastructure development, such as roads, irrigation, and other basic facilities, supports village economic progress. Good roads facilitate market access, facilitate distribution of goods, and reduce transportation costs for farmers and local businesses. Efficient irrigation also plays a crucial role in supporting the agricultural sector, particularly those that rely on agricultural products for income (Nurhayati et al., 2025).afar, 2024).

With the increase in the Semarang city government's local revenue (PAD), primarily derived from taxes and levies, it is hoped that there will be an improvement in the development of roads, networks, and irrigation infrastructure through investment spending.

Table 1. Local Taxes, Regional Levies, and Road, Network, and Irrigation Infrastructure Development in the Semarang City Government 2010-2024

Number	Year	Local Taxes	Regional Levies	Development of Road, Network, and Irrigation Infra structure
1	2010	177.680.372.947	80.559.886.995	74.630.986.642
2	2011	361.471.100.496	84.412.071.935	90.455.410.723
3	2012	598.872.260.463	84.877.260.948	219.801.691.184
4	2013	683.708.489.950	102.033.526.493	253.658.407.864
5	2014	791.509.586.089	110.488.302.793	175.596.020.355
6	2015	816.208.853.780	88.329.210.805	288.277.979.701
7	2016	1.066.487.472.780	122.893.496.520	477.889.286.679
8	2017	1.231.515.123.563	85.744.858.357	449.509.524.058
9	2018	1.331.817.746.450	107.791.109.630	396.319.622.776
10	2019	1.561.698.569.340	113.680.849.539	279.970.188.459
11	2020	1.425.695.913.644	88.681.866.360	114.191.564.885
12	2021	1.445.171.299.551	96.448.844.019	391.427.601.259
13	2022	1.956.226.658.076	101.044.938.813	416.883.937.675
14	2023	2.134.352.914.529	128.708.007.029	465.608.870.162
15	2024	2.198.600.674.075	539.631.409.978	501.661.302.009

Source: BPS (Kota Semarang dalam Angka 2010-2025) dan Laporan Keuangan Daerah Kota Semarang (2010-2024)

It can be seen that tax revenue in 2010-2019 increased from Rp 177,680,372,947 in 2010 to Rp 1,561,698,569,340 in 2019, in 2020-2021 it decreased to Rp 1,425,695,913.64 and Rp 1,445,171,299,551, in 2022-2024 it increased from Rp 1,956,226,658,076 in 2022 to Rp 2,198,600,674 in 2024. Retribution revenue in 2010-2014 increased from Rp 80,559,886,995 in 2010 to Rp 110,488,302,793 in 2021. 2014, in 2015 it decreased to Rp. 88,329,210,805, in 2016 it increased to Rp. 122,893,496,520, in 2017-2022 it decreased to Rp. 85,744,858,357 in 2017 and Rp. 101,044,938,813 in 2022, in 2023-2024 it increased to Rp. 128,708,007,029 and Rp. 539,631,409,978 in 2023-2024. The capital cost of infrastructure development in 2010-2013 increased from Rp 74,630,986,642 to Rp 253,658,407,864, in 2014 it decreased to Rp 175,596,020,355, in 2015-2016 it increased to Rp 288,277,979,701 and Rp 477,889,286,679, in 2017-2023 it decreased to Rp 449,509,524,058 in 2017 and Rp 465,608,870,162 in 2023, in 2024 it increased to Rp 501,661,302,009. Fluctuations in the rise and fall of tax revenues, levies and capital costs for infrastructure development indicate differences in the relationship between the research variables, so this research is interesting to re-examine regarding the relationship between the variables studied in the Semarang City Government.

The objectives of this study are: (1) To assess the influence of regional taxes on the development of road, network, and irrigation infrastructure in the Semarang city government. (2) To assess the influence of regional levies on the development of road, network, and irrigation infrastructure in the Semarang city government. (3) To assess the influence of regional taxes and regional levies simultaneously on developing road, network, and irrigation infrastructure in the Semarang city government.

According to Thian (2022), regional taxes are collected by the regional government and managed by the Regional Revenue Service. Regional taxes are regulated by law and the results are reported in the Regional Revenue and Expenditure Budget (APBD). (Santoso, Putri, and Kristianto, 2024) Law Number 28 of 2009 concerning regional taxes and regional levies states that regional taxes are mandatory contributions to the region owed by individuals or entities required by law, without receiving direct compensation, and used for regional needs for the greatest prosperity of the people. Regional taxes are one component of the regional revenue budget collected by the regional government. Regional governments set these tax rates in accordance with their own regional regulations (Satriya et al., 2024).

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Previous empirical research on the relationship between related variables has been conducted by Purba, Nababan, Muda, and Ginting (2018) and Azzahra, Sitanggang, Nainggolan, & Sitanggang, (2022); found and stated that regional taxes have a positive and significant effect on the allocation of infrastructure capital expenditure in Regencies/Cities in North Sumatra Province, research by Adrian (2024); found and stated that the distribution of regional tax revenue has a positive and significant effect on the quality of road infrastructure in Medan City, research by Matius (2024) found and stated that regional taxes have a positive and significant effect on capital expenditure in Regency and City Governments in South Sumatra Province, and Budiyono (2025) found and stated that regional taxes have

a positive and significant effect on capital expenditure in Regency and City Governments in Central Java Province. Different research was conducted by Solikin & Saffana (2023); found and stated that regional taxes have a positive effect on capital expenditure in Regency/City Governments in Java, Meanwhile, research conducted by Mulyadi, Abdullah, & Nadirsya (2023) found and stated that regional taxes significantly influence capital expenditures in Aceh's district/city governments. A different study by Agustina & Widajantie (2024) also found and stated that regional taxes had no effect on local revenue in the Bojonegoro Regency government.

Regional Levies

According to Dilapanga & Firdiansjah (2020), regional levies are regional levies on certain services or permits specifically provided and granted by the regional government for the benefit of individuals or bodies, measured in rupiah. Law Number 28 of 2009 concerning regional taxes and levies states that regional levies are collected as payment for certain services or permits specifically provided and/or granted by the regional government for the benefit of individuals or bodies (Santoso, Putri, and Kristianto, 2024). Article 1 paragraph (20) of Law Number 1 of 2022 states that regional levies are collected from the community who benefit from certain services or permits provided by the regional government (Matius, 2024).

Previous empirical research on the relationship between related variables has been conducted by: Azzahra, Sitanggang, Nainggolan, & Sitanggang (2022): found and stated that regional levies have a positive and significant effect on the allocation of infrastructure capital expenditure in Regencies/Cities in North Sumatra Province. Matius' (2024) research; found and stated that regional levies have a positive and significant effect on infrastructure capital expenditure in Regency and City Governments in South Sumatra Province. Meanwhile, Solikin & Saffana's (2023) research: found and stated that regional levies have a positive effect on infrastructure capital expenditure in regency/city governments in Java. Different research results were conducted by Purba, Nababan, Muda, & Ginting (2018): found and stated that regional levies have a negative effect on the allocation of infrastructure capital expenditure in Regencies/ Cities in North Sumatra Province, Dilapanga & Firdiansjah's (2020) research: found and stated that regional levies do not have a significant effect on infrastructure capital expenditure in Regencies/Cities in North Sulawesi Province, Dhevianti & Arsteria's (2024) research; found and stated that regional levies had no effect on infrastructure capital expenditure in regencies and cities in Central Java, Budiyono's research (2025): found and stated that regional levies had no significant effect on infrastructure capital expenditure in district and city governments in Central Java Province.

Road, Network, and Irrigation Infrastructure Development

The road infrastructure in Semarang City consists of a network of arterial and collector roads that serve the main traffic for population mobility and connect economic and trade activities. According to Ariana, as quoted in Fitri et al. (2023), road infrastructure plays a crucial role in life. In addition to being a means of transportation, roads also function to support the distribution of goods and services, which in turn influences the increase in productivity of a region's production sector. As stated in Law No. 38 of 2004, roads, as part of the national transportation system, play a very important role, especially in supporting the economic, socio-cultural, and environmental sectors to realize community welfare (Azis & Andri, 2023).

Network and irrigation infrastructure to address flooding and tidal flooding in Semarang City includes the construction and normalization of coastal embankments and polders, the revitalization and cleaning of drainage channels, and the development of retention ponds. Infiltration wells are also being constructed. In Semarang City Regulation No. 7 (2014) it is explained that a coastal embankment is a flood-retaining structure made of embankments of soil/other materials that functions to protect the land/coast from the effects of tidal flooding/sea tides, a polder system is a system that is hydrologically separated from its surroundings, either naturally or artificially, equipped with embankments, internal drainage systems, pumps and/or reservoirs, and water gates, a drainage system is an urban drainage network consisting of main/primary channels, secondary channels, tertiary channels, infiltration structures, reservoir structures and their complementary facilities that are systematically connected to one another and environmentally friendly, a retention pond is a drainage infrastructure that functions to accommodate and absorb rainwater in an area, an infiltration well is a drainage infrastructure that functions to absorb rainwater from the roof of a building into the ground through a well hole

Semarang Mayoral Regulation No. 41 of 2024 allocates capital expenditures to finance the development of Semarang's road, network, and irrigation infrastructure. Capital expenditures are expenses used for procurement, additions, replacements, repairs, construction, and maintenance, and include planning, supervision, and management of roads and irrigation networks to increase their capacity until they are ready for use (Ariadi, 2021).

Some empirical studies on the relationship between relevant related variables: are research conducted by Mulyadi, Abdullah, & Nadirsya, (2023); found and stated that regional taxes and regional levies, together influence infrastructure capital expenditure in Aceh province, research conducted by, Azzahra, Sitanggang, Nainggolan, D., & Sitanggang, N.D. (2022); found and stated that regional taxes and regional levies have a positive and significant influence on infrastructure capital expenditure simultaneously in North Sumatra province, research conducted by Matius (2024); shows and states that regional taxes and regional levies have a positive and significant influence on infrastructure capital expenditure simultaneously in district and city governments in South Sumatra province. Research by Alfiana & Anwar (2023); found and stated that regional taxes and regional levies significantly increase infrastructure capital expenditure in Bogor city.

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After conducting a theoretical review and empirical study, the following hypotheses are proposed: Hypothesis 1 (H_1), Hypothesis 2 (H_2), and Hypothesis 3 (H_3).

H_1: Regional taxes have a positive and significant effect on the development of road, network, and irrigation infrastructure in the Semarang City Government.

H_2: Regional levies have a positive and significant effect on the development of road, network, and irrigation infrastructure in the Semarang City Government.

H_3: Regional taxes and levies have a positive and significant effect on the development of road, network, and irrigation infrastructure in the Semarang City Government.

METHOD, DATA, AND ANALYSIS

The data source in this study is secondary data. The secondary data used is time series data for the last 15 years of the regional autonomy era. Data were obtained from the Semarang City Central Statistics Agency. Data was collected by taking documented data. The sample was determined using purposive sampling, where researchers select samples based on specific criteria deemed relevant to the research objectives (Sudaryana & Agusiady, 2022).

This study uses multiple regression analysis techniques with the equation Y = a + b1X1 + b2X2 + e. Where Y is the development of road infrastructure, networks, and irrigation, X1 is regional taxes and X2 is regional levies, e = error. Classical assumption testing is a series of statistical tests conducted to ensure that the linear regression model used meets specific criteria so that the analysis results are valid and reliable. The classical assumption tests in this study include data normality tests, linearity tests, multicollinearity tests, homoscedasticity tests, and autocorrelation tests. Data normality tests use the one-sample Kolmogorov-Smirnov test. Data linearity tests use a graphical approach. Homoscedasticity tests use the Glejer test. Multicollinearity tests look at the tolerance or VIF results. Autocorrelation tests use the Durbin-Watson test. The Durbin-Watson test tests the linear regression model between the nuisance error in period t and the nuisance error in period t-1 (Ghozali, 2021: 162). One of the measures to determine whether there is autocorrelation is the Durbin-Watson (DW) test with the following provisions: (1) Positive autocorrelation occurs if the DW value is < -2, (2) No autocorrelation occurs if the DW value is between -2 and +2 (passes the autocorrelation test), (3) Negative autocorrelation occurs if the DW value is > +2 (Yoda, 2024: 129). Furthermore, a multivariate analysis application is used with the IBM SPSS 25 program to simplify data analysis.

RESULTS AND DISCUSSION

Results

Descriptive Statistical Test

According to Ghozali (2021), "descriptive statistics provide an overview or description of data seen from the average value (mean), standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness (distribution skewness).

Table 2. Statistical Description

Variabel	Minimum	Maximum	Mean
Local Taxes	177.680.372.947	2.198.600.674.075	1.185.401.135.715,53
Regional Levies	80.559.886.995	539.631.409.978	129.021.709.347,60
Development of Road, network, and Irrigation Infrastructure	74.630.986.642	501.661.302.009	306.392.159.528,73

Semarang city government received an average annual regional tax revenue of Rp1,185,401,135,715.53, with the lowest revenue of Rp177,680,373.94 in the 2010 period, and the highest revenue of Rp2,198,600,674,075 in the 2024 period. The average annual retribution revenue was Rp129,021,709,347.60,

with the lowest revenue of Rp in the 2010 period, and the highest revenue of Rp539,631,409,978 in the 2024 period. The capital expenditure budget for the development of road, network, and irrigation infrastructure averaged Rp306,392,159,528.73, with the lowest budget of Rp74,630,986,642 in the 2010 period, the highest budget of Rp 501,661,302,009 in the 2024 period.

Classical Assumption

According to Ghozali (2021), non-parametric statistics using the Kolmogorov-Smirnov (KS) test can be used to detect data normality. The method is to first determine the test hypothesis, namely: Hypothesis 0 (H_0): data is normally distributed. The K-S value for the regional tax variable is 0.124 with a significance probability of 0.200, the value is greater than α=0.05, so the research data is normally distributed. For the K-S variable for regional levies is 0.434 with a significance probability of 0.000, the value is much smaller than α=0.05, so the research data is not normally distributed. The K-S variable for road, network, and irrigation infrastructure development is 0.184 with a significance probability value of 0.184 > α=0.05, so the research data is normally distributed.

The autocorrelation test is carried out to track the presence of autocorrelation or the influence of data from previous observations in the regression model. Based on the results of the autocorrelation test obtained a D-W value of 1.300 which is in the range of -2 to +2, meaning there is no autocorrelation (Yoda, 2024: 129).

Multicollinearity test is used in multiple regression in parametric statistics to identify whether there is a high correlation between two or more independent (free) variables in the regression model ((Hartoyo, et al., 2025). Multicollinearity test to determine whether or not there are symptoms of multicollinearity in the regression model as seen from the correlation matrix between independent variables. The method used is the Variance Inflation Factor (VIF). VIF value > 10 (or 5). Based on the result show that for the regional tax variable, the tolerance value is 0.735 (> 0.1) and the VIF value is 1.361 (<10). For the regional retribution variable, the tolerance value is 0.735 (> 0.1) and the VIF value is 1.361 (<10), this indicates that there are no symptoms of multicollinearity in the regression model.

Homoscedasticity testing indicates that the residual variance (prediction error) is constant across the range of predictor values. This is one of the main assumptions in linear regression. The Glejer test was used to test for homoscedasticity in this study. If the data does not show a specific value in the residual scatterplot, or if the p-value or significance (sig) of the Glejer test is >0.05, then the data is considered to meet the homoscedasticity assumption (Hartoyo et al., 2025). Based on the output, the significance value (Sig.) for the Regional Tax variable (X1) is 0.978. Meanwhile, the significance value (Sig.) for the Regional Retribution variable (X2) is 0.441. Because the significance value of both variables above is > 0.05, based on the basis for decision making in the Glejer test, it can be concluded that the test results meet the assumption of homoscedasticity.

Multiple Linear Regression Test

The purpose of multiple linear regression testing is to measure the strength and direction of the relationship between the dependent and independent variables. Ghozali emphasized that this analysis not only measures the strength of the relationship but also indicates the direction of the relationship between these variables (Ghozali, 2021). The results of this test are presented in the following table.

Table 3. Multiple Linear Regression Test

Variable	B	Std Error	Beta	t	Sig
Local Taxes	.166	.054	.697	3.067	.010
Regional Levies	.094	.294	.073	.321	.754

The multiple linear regression test results for regional taxes, the t value is obtained = 3.067 with a Sig. t value = 0.010. The Sig. t = 0.010 < 0.05 means the regional tax regression coefficient is significant. This means that regional taxes significantly influence on the development of road infrastructure, networks, and irrigation in the Semarang city government.

Anova F Test

According to Ghozali (2021), the purpose of the Anova F Test is to find out or test whether the regression model equation can be used to see the effect of independent variables on dependent variables. The results of the F test between regional taxes and regional levies on the development of road infrastructure, networks, and irrigation in the Semarang city government are presented in the following table.

Table 4. Anova F Test

F	Sig
7.162	.009

The F test results show an F value of 7.162 and a Sig. F value of 0.009. The Sig. F value of 0.009 <0.05 indicates that the regression coefficient of regional taxes and regional levies is significant. This means that regional taxes and levies significantly and simultaneously influence the development of road, network, and irrigation infrastructure in the Semarang city government.

To determine the magnitude of the influence of regional taxes and levies on the development of road, network and irrigation infrastructure and their contribution, a correlation test is presented in the following table.

Table 5. Correlation Test Results

R	R Square	Adjust R Square
.738	.544	.468

The results of the correlation test show that the correlation figure between regional taxes and levies simultaneously on the development of road, network, and irrigation infrastructure is 0.468, which is included in the strong category.

Discussion

The Influence of Regional Taxes on the Development of Road, Network, and Irrigation Infrastructure

Based on the results of the multiple linear regression test, for regional taxes, the calculated t value was 3.067 with a Sig. t value of 0.010. The result of Sig. t = 0.010 < 0.05 means that the regional tax regression

coefficient is significant. This means that regional taxes have a significant effect on the development of road, network, and irrigation infrastructure in the Semarang City Government. The regression coefficient is positive, so it can be concluded that regional taxes have a positive effect on the development of road, network, and irrigation infrastructure in the Semarang City Government. This means that if regional taxes increase, the development of road, network, and irrigation infrastructure will also increase. Thus, hypothesis 1 (H1): that regional taxes have a positive and significant effect on the development of road, network, and irrigation infrastructure in the Semarang City Government can be accepted.

Bapeda as a tax agency in Semarang City, is tasked with managing and increasing regional revenue through various types of regional taxes such as Hotel Tax, Restaurant Tax, Advertising Tax, Parking Tax, and others, with the vision of becoming a driving force for professional regional financial management. The Semarang City Government also seeks to increase revenue through various policies, including providing certain tax payment relief to help the community. The quality of infrastructure development is highly dependent on the size of the Regional Revenue and Expenditure Budget (APBD), which is one of its main sources. If tax revenue is not optimal, the quality and quantity of infrastructure will be hampered. Rapid population growth in Semarang City also increases the need for infrastructure, which of course requires greater funding. The results of this study are relevant to previous research conducted by Purba, Nababan, Muda, & Ginting (2018), research by Solikin & Saffana (2023), research by Matius (2024), research by Budiyono (2025) which found and stated that regional taxes have a positive and significant effect on infrastructure capital expenditure, and research by Adrian (2024) which found and stated that the allocation of regional tax funds has a significant and positive effect on the quality of road infrastructure.

Regional levies influence the quality and sustainability of infrastructure by providing funds for maintenance and repairs, encouraging transparency and accountability in the management of public funds, and enabling the government to regulate and supervise the use of such infrastructure, thereby creating optimal and sustainable infrastructure conditions in the long term.

The Influence of Regional Retributions on the Development of Road, Network, and Irrigation Infrastructure

Based on the results of multiple linear regression tests, for regional levies it is known that t = 0.321 with Sig. t = 0.754. The result of Sig. t = 0.754 is greater than 0.05, meaning that the regression coefficient of regional levies does not have a statistically significant effect on capital expenditures for road, network, and irrigation infrastructure in the Semarang City Government. This means that the amount of regional levies does not have a significant impact on the development of road, network, and irrigation infrastructure in the Semarang City Government. This study also proves that not all regional capital expenditures in the Semarang City Government have been used to meet the welfare of the community, because the management of regional capital expenditures, especially the increase in regional levies, does not cause an increase in capital expenditures for the development of public infrastructure, especially roads, networks, and irrigation.

The results of this study are relevant to research conducted by: Dilapanga, & Firdiansjah (2020), Dhevianti & Aresteria (2024), who found and stated that regional levies had no significant effect on infrastructure capital expenditure, Simbolon, Daulay, & Nainggolan (2023), who found and stated that regional levies had no significant effect on infrastructure capital expenditure, a decrease in regional levies revenue will reduce infrastructure capital expenditure. During the COVID-19 pandemic, Semarang

City experienced a decline in retribution revenue, but began to recover in 2021, especially after the implementation of eRetribusi and improvements to related policies (KEMENKEU, 2022). Another cause is that the exploration of regional retribution potential by the Semarang City Government has not been maximized, so there are still regional retribution objects that need to be managed better. In addition, public knowledge regarding regional levies is still very minimal, thus affecting the receipt of regional levies themselves.

Regional levies influence the quality and sustainability of infrastructure by providing funds for maintenance and repairs, encouraging transparency and accountability in the management of public funds, and enabling the government to regulate and supervise the use of such infrastructure, thereby creating optimal and sustainable infrastructure conditions in the long term. Regional levies influence the quality and sustainability of infrastructure by providing funds for maintenance and repairs, encouraging transparency and accountability in the management of public funds, and enabling the government to regulate and supervise the use of such infrastructure, thereby creating optimal and sustainable infrastructure conditions in the long term. Regional levies influence the quality and sustainability of infrastructure by providing funds for maintenance and repairs, encouraging transparency and accountability in the management of public funds, and enabling the government to regulate and supervise the use of such infrastructure, thereby creating optimal and sustainable infrastructure conditions in the long term.

The Influence of Regional Taxes and Regional Levies on the Development of Road, Network and Irrigation Infrastructure

The results of the F test between regional taxes and regional levies on the development of road, network, and irrigation infrastructure in the Semarang city government obtained an F value of 7.162 and a Sig. F value of 0.009. The Sig. F value of 0.009 <0.05 means that the regression coefficient of regional taxes and levies is significant. This means that regional taxes and levies have a significant and simultaneous effect on the development of road, network, and irrigation infrastructure in the Semarang city government. The regression coefficient is positive, meaning that regional taxes and levies have a positive effect on the development of road, network, and irrigation infrastructure in the Semarang city government. If regional taxes and levies increase simultaneously, the development of road, network, and irrigation infrastructure will increase significantly. Thus, hypothesis 3 (H3) which analyzes that regional taxes and levies have a positive and significant effect on the development of road, network, and irrigation infrastructure in the Semarang city government can be accepted.

Regional taxes and levies are a source of money for the region. Regions can manage their own finances in accordance with the principles of fiscal decentralization. Taxes are mandatory contributions imposed by local governments, while levies are levies for certain services or permits granted by local governments to the public (Yakin, 2025). The results of this study are relevant to research conducted by: Azzahra, Sitanggang, Nainggolan, & Sitanggang (2022); who found and stated that regional taxes and levies have a positive and significant effect on infrastructure capital expenditure simultaneously, research by Matius (2024); who found and stated that regional taxes and levies have a positive and significant effect on infrastructure capital expenditure simultaneously.

Synergy between regional taxes and levies is crucial to supporting infrastructure development, as these two sources of regional revenue serve as the backbone of infrastructure and public service funding. This synergy strengthens regional financial management, optimizes Regional Original Income (PAD),

creates fiscal independence, and enables better allocation of funds for the maintenance and development of transportation, health, and education infrastructure.

Regional taxes and levies are both primary sources of local revenue (PAD), enabling local governments to finance various development programs and activities, including infrastructure development. Funds collected from regional taxes and levies are used to build roads, bridges, and other public facilities, as well as maintain existing infrastructure. In short, taxes and levies form a comprehensive funding system for regional development, with taxes providing broad funding and levies specifically financing services and facilities enjoyed directly by the community.

The correlation between regional taxes and levies simultaneously with the development of road infrastructure, networks and irrigation

The correlation between local taxes and levies simultaneously with the development of road, network, and irrigation infrastructure is 0.738 which is included in the strong category. This means that local taxes and levies together have a strong influence on the development of road, network, and irrigation infrastructure in the Semarang City Government. The contribution of local taxes and levies to the development of road, network, and irrigation infrastructure in the Semarang City Government is 0.468, or the percentage of the simultaneous contribution of local taxes and levies to the development of road, network, and irrigation infrastructure is 46.80% and the remaining 53.20% is influenced by factors not included in this study. Local taxes and levies simultaneously contribute to infrastructure development because both are sources of Local Original Income (PAD) used by local governments to finance the construction of facilities and maintenance of various public facilities and infrastructure, such as roads, bridges, and other public facility buildings, thus directly improving the quality of local infrastructure.

The Correlation of Taxes and Levies Helps in Formulating Resource Management Strategies: (1) Increasing Regional Fiscal Independence, (2) Financing the Implementation of Government and Public Services, (3) Increasing Transparency and Accountability, (4) Optimizing Regional Resource Potential, (5) Supporting Local Economic Growth, (6) Ensuring Flexible and Harmonious Policies.

CONCLUSIONS AND SUGGESTIONS

The research findings indicate that: (1) regional taxes positively and significantly affect the development of roads, networks, and irrigation infrastructure in the Semarang city government. (2) Regional levies do not significantly affect the development of road, network, and irrigation infrastructure in the Semarang city government. (3) Regional taxes and levies simultaneously positive and significant affect the development of road, network, and irrigation infrastructure in the Semarang city government. (4) The correlation between regional taxes and levies simultaneously on the development of road, network, and irrigation infrastructure in the Semarang city government is 0.738 with a contribution percentage of 46.80% and the remaining 53.20% is influenced by other factors not included in this research. Suggestions for follow-up to the research results are: the importance of optimizing regional tax revenue receipts, which requires commitment and cooperation from all related parties, including the regional government, taxpayers, and the community. Fluctuating retribution receipts can be addressed in several ways, including diversifying revenue sources, reviewing rates periodically, increasing collection efficiency, and implementing strict sanctions. In addition, it is also important to conduct routine retribution potential analysis and provide guidance to retribution payers.

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