

Analysis of Factors Affecting Regency/City Regional Financial Independence in West Nusa Tenggara Province 2016-2023

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ABSTRACT: This study aims to analyze the financial independence of Regency/City regions in West Nusa Tenggara Province and analyze the factors that affect the financial independence of Regency/City regions in West Nusa Tenggara Province in 2016-2023. Using descriptive analysis methods with a quantitative approach to secondary data. The data sources in this research are all obtained from the Directorate General of Fiscal Balance of the Ministry of Finance (DJP) and the Central Statistics Agency (BPS) Regency / city in West Nusa Tenggara. The results of the research on the ratio of regional financial independence of districts / cities in NTB are still very low with an instructive pattern, the ratio of the degree of fiscal desentralization is included in the financial capability with less criteria and the dependency ratio is included in a very high level of dependence. Partially, GRDP, Balance Fund, and Capital Expenditure affect regional financial independence, while Population Density and Human Development Index (HDI) have no effect on regional financial independence and simultaneously GRDP, Balance Fund, Population Density, Human Development Index and Capital Expenditure affect regional financial independence in Regency/City in West Nusa Tenggara province.

KEYWORDS: Independence, GRDP, Balance Fund, Population Density, Capital Expenditure

I. INTRODUCTION

Regional autonomy is the right, authority of autonomous regions to make their own decisions based on the needs of the community, based on applicable regulations (Ullo et al., 2023). In the implementation of regional autonomy, districts and cities are given greater discretion in regulating the use of their own regional budgets (Ardiansyah, 2023). Regional autonomy cannot be separated from fiscal decentralization, fiscal decentralization as a concrete form of regional autonomy policy implementation (Nazikha & Rahmawati, 2021). The concept of fiscal decentralization autonomy is the ability of local governments to manage and increase sources of Regional Original Revenue (PAD) which is very important in regional autonomy in order to achieve regional financial independence so that the regions prosper in the economy (Syahputra, 2017).

Regional financial independence is when the local government has its own ability to finance government activities, development, and services to the community by relying on local revenue derived from taxes or levies of the region itself (Yahya & Diah Widajantie, 2023). An independent region will certainly be able to improve the welfare of its people, equitable development in all sectors and the creation of justice in the community (Silondae et al., 2024). Referring to West Nusa Tenggara Province with 8 districts and 2 cities, where each district/city has local revenue that fluctuates from 2019-2023 while the balancing funds received by each district/city have an upward trend from 2019-2023 (DJP Kemenkeu, n.d.).

The Balancing Fund, which should be complementary in nature, if it becomes the main foundation of a region's Regional Budget, will potentially weaken financial independence (Abdulfatah & Mulyani, 2024). Therefore, understanding the factors that can influence regional financial independence in the Regency/City in West Nusa Tenggara is crucial, because various aspects such as economic, social, and fiscal policy can play an important role. Such as the level of regional economic activity reflected in Gross Regional Domestic Product (GRDP), demographic conditions such as population density, the quality of human resources also has an important role in this case is the HDI, and regional fiscal policy especially in balancing funds and capital expenditure.

Based on the description above, this study will analyze more deeply the relationship between the factors described, to the independence of Regency/City regional finances in West Nusa Tenggara Province

II. LITERATURE REVIEW

A. Regional Financial Independence

Regional financial independence is a condition in which a region has the ability to explore and optimally utilize the potential of local resources, by not relying on central transfer funds in running the wheels of government and regional development (Sumual et al., 2017). The level of independence of a region can be seen from the amount of PAD contribution to total regional income, which means that the region is able to finance its own development and operational needs without relying on the central government or loans (Malau & Parapat, 2020).

B. Gross Regional Domestic Product

Gross Regional Domestic Product is defined as the amount of added value generated by all business units in a region, or is the total value of final goods and services produced by all economic units in a region (Prasetyani & Sumardi, 2015). Gross Regional Domestic Product is the total value of services and goods produced in a particular region with a predetermined period of time, usually one year. Gross Regional Domestic Product is the total value added from the results of all businesses in a region, it can also mean the total final value of services and goods produced by all economic units in a region (Reza & Sopiana, 2023).

Gross Regional Domestic Product illustrates how a region's ability to manage its natural resources. Therefore, the amount of GRDP generated in each region is highly dependent on the potential of natural resources and production factors of a region (Valiant Kevin et al., 2022).

C. Balance Fund

The Balance Fund is an allocation of funds provided by the central government to local governments with the aim of supporting the implementation of fiscal decentralization and reducing the financial gap between the center and the regions (Musfirati & Sugiyanto, 2021). Balancing funds are generally sourced from the State Budget (APBN) and transferred to regions in the form of regional transfers. These transfers have a strategic role in supporting regional development, strengthening public services, and becoming the main source of income for most regions, especially regions that have not been able to optimally utilize the potential of Regional Original Revenue (PAD) (Musgrave & Musgrave, 1989) ..

D. Population Density

Population density means a situation where the denser the number of people or population in a certain space or area compared to the space or area itself. Adam Smith argued that population growth will drive economic development. Supported by empirical evidence that high population density will be able to increase output through additional levels and expansion of markets both domestic and foreign markets (Arib, 2024).

(Halim, 2007) explains that a high population density can increase the potential for PAD because the large number of residents in a region can increase the local tax and levy base. In other words,

E. Human Development Index

The concept of human development sees people as a tool or input to the production process, not as an end goal. The concept of welfare sees humans as recipients and not as agents of change in the development process. The concept of human development has a broader scope than the conventional theory of economic development. Thus, human development is a process of increasing the choices that humans have. Among others, the most important are the choice to live long and healthy, the choice to be knowledgeable, the choice to have access to the resources needed to live properly (Patadang et al., 2021).

F. Capital expenditure

Capital Expenditure is used for expenditures made in order to purchase/procure or construct tangible fixed assets that have a useful value of more than 12 (twelve) months to be used in government activities, such as in the form of land, equipment and machinery, buildings and structures, roads, irrigation and networks, and other fixed assets. The value of the purchase/procurement or construction of tangible fixed assets budgeted in capital expenditure is only the purchase price of the asset. Expenditures for the honorarium of the procurement committee and the purchase/development administration to acquire each asset budgeted in capital expenditure are budgeted in personnel expenditure and/or goods and services expenditure (Ambya, 2023)

III. METHODOLOGY

This research uses a descriptive analysis method with a quantitative approach. This research was conducted in all districts / cities in West Nusa Tenggara Province and was carried out in 2024. The data collection method in this study used documentation. Documentation is a method used by recording or documenting research-related data sourced from relevant agencies (Damayanti

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et al., 2022) . The data sources in this research are all obtained from the Directorate General of Fiscal Balance of the Ministry of Finance (DJPK) and the Central Statistics Agency (BPS) of districts / cities in West Nusa Tenggara. Data analysis in this study is divided into two, namely the analysis of regional financial independence ratios, to find the level of regional financial independence and panel data statistical analysis, to test the hypothesis in the study.

A. REGIONAL FINANCIAL INDEPENDENCE

1. Independence Ratio

The regional financial independence ratio formula based on Permendagri Number 19 of 2020 is as follows:

$$\text{Financial Independence} = \frac{\text{PAD}}{\text{Central Government Assistance}} \times 100\%$$

Table 1. Criteria for Regional Financial Independence

Financial Capability	independence	Relationship Pattern
Very Low	>0 – 25%	Instructive
Low	>25 – 50 %	Constructive
Medium	>50 – 75 %	Partisipatory
High	>75%	Delegate

Source: (Halim, 2007)

2. Fiscal Decentralization Degree Ratio

The formula for calculating the fiscal decentralization ratio based on Permendagri Number 38 of 2020 is as follows:

$$\text{Fiscal Decentralization} = \frac{\text{PAD}}{\text{Regional Revenue}} \times 100\%$$

Table 2. Fiscal Decentralization Criteria

Percentase	Financial Capability
0,00 – 10,00	Very Less
10,01 – 20,00	Less
20,01 – 30,00	Medium
30,01 – 40,00	Simply
40,01 – 50,00	Good
>50,00%	Very Good

Source: (Mahmudi, 2016)

3. Regional Financial Dependency Ratio

The Regional dependency ratio formula is as follows:

$$\text{Dependency Ratio} = \frac{\text{Transfer Revenue}}{\text{Total Regional Revenue}} \times 100\%$$

Table 3. Regional Financial Dependency Ratio Criteria

Percentase	Dependency Level
0,00 – 10,00	Very Low
10,01 – 20,00	Low
20,01 – 30,00	Medium
30,01 – 40,00	Simply
40,01 – 50,00	High
>50,01	Very High

Source: (Mahmudi, 2016)

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B. PANEL DATA REGRESSION

Panel data (*pooled data*) is data that combines *time series* data and *cross section* data. *Time series* data is a collection of data obtained from repeated observations of the same research object in a fixed time interval (Murad, 2019) . Panel data analysis in this study uses the Eviews 12 application, the following is a model of panel data as follows:

$$RFI_{it} = \beta_0 + \ln\beta_1GRDPX1 + \ln\beta_2BFX2 + \ln\beta_3PDX3 + \beta_4HDI(X4) + \ln\beta_5CE(X5) + \varepsilon$$

Description:

RFI (Y)	: Regional Financial Independence
β_0	: Constant
$\ln GRDP (X1)$	: Natural logarithm of Gross Regional Domestic Product
$\ln BF (X2)$	: Natural logarithm of Balance Fund
$\ln PD (X3)$	: Natural Logarithm of Population Density
HDI (X4)	: Human Development Index
$\ln CE (X5)$	: Natural logarithm of Capital Expenditure
ε	: Error term

1. Hypothesis Testing

T-Statistic Test (Partial)

Testing of the regression results is carried out using the t test at a confidence level of 95% or $\alpha = 5\%$ with the following conditions:

1. If the significance level is smaller than 5% (0.05), it can be concluded that H_0 is rejected and H_a is accepted.
2. If the significance level is greater than 5% (0.05), it can be concluded that H_0 is accepted and H_a is rejected.

Statistical F Test (Simultaneous)

The f statistic (simultaneous) test is carried out with the following criteria:

1. If the significance value < 0.05 then H_0 is rejected and H_a is accepted, meaning that there is a joint influence on financial independence in districts / cities in NTB.
2. If the significance value > 0.05 then H_0 is accepted and H_a is rejected, meaning that there is no joint influence on financial independence in districts / cities in NTB.

Test Coefficient of Determination (R^2)

The value of R^2 ranges from 0 to 1. If R^2 is getting bigger (closer to 1), it can be said that the independent variable has a great influence on the dependent variable. Conversely, if R^2 is getting smaller (closer to 0), it can be said that the influence of the independent variable is small on the dependent variable.

IV. RESULTS AND DISCUSSION

A. Analysis of Regional Financial Independence

1. Regional Financial Independence Ratio

Table 4. Ratio of Financial Independence of Regency/City in NTB in 2016-2023

District/City	Rasio Kemandirian Keuangan Daerah									inancial capabiliy	Relationsh ip Pattern
Year	2016	2017	2018	2019	2020	2021	2022	2023	Rata-rata		
East Lombok district	12,34	19,40	12,70	13,32	16,76	18,60	14,34	16,67	15,52	Very low	Instructive
Central Lombok District	9,96	18,44	11,56	11,72	12,17	9,50	13,07	12,33	12,34	Very low	Instructive
West Lombok district	16,70	22,35	17,05	17,05	16,87	23,19	19,61	25,55	19,80	Very low	Instructive
North Lombok district	22,96	24,77	21,72	17,82	15,40	12,71	20,74	28,96	20,64	Very low	Instructive
Mataram City	29,38	41,10	39,05	40,27	40,96	44,52	45,85	44,52	40,71	Low	Constructive
Sumbawa district	10,04	18,28	10,70	11,06	15,53	15,59	12,25	10,31	12,97	Very low	Instructive
West Sumbawa district	5,39	18,97	7,47	9,52	17,79	17,22	9,85	9,99	12,03	Very low	Instructive
Dompu district	8,88	15,67	10,44	10,90	13,46	14,81	12,68	8,60	11,93	Very low	Instructive
Bima district	8,17	14,82	9,05	8,85	8,84	9,47	7,84	8,05	9,39	Very low	Instructive

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Bima City	4,34	7,34	6,90	7,67	7,79	7,53	7,11	7,87	7,07	Very low	Instructive
Average									16,24	Very low	Instructive

Source: Analysis results, 2024

Based on the results of the analysis of the financial independence ratio of districts / cities in West Nusa Tenggara (NTB) in the table above from 2016 to 2023, Mataram City has the highest achievement with an average of 40.71% with a constructive relationship pattern and most districts and cities still have very low ratios, such as Bima City (average 7.07 percent) and Bima Regency (average 9.39 percent). In general, the instructive relationship pattern of most districts/cities shows that local governments are still very dependent on central government assistance and have very low financial independence.

2. Fiscal Decentralization Ratio

Table 5. Fiscal Decentralization Ratio of Regency/City in NTB 2016-2023

District/City	Fiscal Decentralization Ratio									Financial Capability
Year	2016	2017	2018	2019	2020	2021	2022	2023	Average	
East Lombok Regency	10,62	15,64	10,30	10,74	12,93	14,13	11,81	13,53	12,46	Less
Central Lombok Regency	8,60	14,60	9,48	9,52	9,84	7,73	10,80	11,87	10,31	Less
West Lombok Regency	13,61	17,12	13,13	12,95	12,98	17,25	15,52	19,19	15,22	Less
North Lombok Regency	16,10	16,57	14,46	13,99	12,03	10,24	16,04	20,93	15,05	Less
Mataram City	20,65	27,17	25,30	25,56	26,01	27,65	28,75	34,90	27,00	Simply
Sumbawa Regency	8,85	14,90	8,97	9,20	11,12	12,36	10,23	8,77	10,55	Less
West Sumbawa Regency	4,89	13,85	6,16	7,14	12,66	13,40	8,24	8,79	9,39	Very Less
Dompu Regency	7,87	12,98	8,78	9,07	10,89	11,81	10,50	7,42	9,92	Very Less
Bima Regency	6,79	11,16	6,90	7,50	7,55	7,98	6,82	7,34	7,92	Very Less
Bima City	3,91	5,39	6,00	6,51	6,61	6,44	6,15	6,65	5,96	Very Less
Average									12,36	Less

Source: 2024 analysis result

Based on the results of the analysis of the ratio of the degree of fiscal decentralization of the Regency / City in West Nusa Tenggara (NTB) in the table above from 2016 to 2023 shows that, Mataram City has the highest ability to manage its local finances and reduce its dependence on central funds. The average ratio is 27.00%, with a sufficient category. While districts, such as West Lombok, North Lombok, show better ability than other districts, although still categorized as less. While for East Lombok, Central Lombok and Sumbawa the significant fluctuations in the fiscal decentralization ratio over the past 8 years reflect the dependence on economic sectors that are vulnerable to changes and revenue instability. While in some districts such as West Sumbawa, Dompu, Bima, and Bima City recorded very low degrees of fiscal decentralization, categorized as very deficient.

3. Financial Dependency Ratio

Table 6. Dependency Ratio of Regency/City in NTB in 2016-2023

District/City	Dependency Ratio									Dependency Level
Year	2016	2017	2018	2019	2020	2021	2022	2023	Rata-rata	
East Lombok Regency	86,05	80,61	81,13	80,61	77,22	75,99	82,22	81,18	80,63	Very High
Central Lombok Regency	86,33	81,12	82,00	81,19	80,92	81,41	82,68	96,27	83,99	Very High
West Lombok Regency	81,48	76,60	77,02	76,77	77,13	74,37	79,12	75,10	77,20	Very High
North Lombok Regency	70,11	66,89	66,61	78,49	78,10	80,61	77,33	72,28	73,80	Very High
Mataram City	70,30	66,11	64,79	63,48	63,52	62,10	62,70	78,39	66,42	Very High
Sumbawa Regency	88,18	81,49	83,86	83,17	71,61	79,27	83,50	85,09	82,02	Very High
West Sumbawa Regency	90,73	77,11	82,43	75,00	71,16	77,84	83,65	88,02	80,74	Very High
Dompu Regency	88,60	82,84	84,06	83,25	80,89	79,71	82,78	97,57	84,96	Very High

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Bima Regency	83,17	75,27	76,29	84,67	85,37	84,28	87,02	91,20	83,41	Very High
Bima City	90,12	73,46	87,03	84,83	84,85	85,52	86,47	84,61	84,61	Very High
Rata-rata									79,78	Very High

Source: 2024 analysis result

Based on the results of the dependency ratio analysis in the table above, it shows that all districts/cities in NTB are still in the very high category from 2016-2023. This means that more local revenue comes from central transfers than local revenue. The dependency ratio in each district/city in NTB is very high, with some regions reaching 80% or more. This indicates that, while the contribution of own-source revenues is very limited, most of the local revenue comes from central transfers. Dompu and Central Lombok districts have the highest dependency ratios, with peaks reaching more than 95%. This indicates a very heavy reliance on transfer funds, which may limit the ability of regions to be financially independent.

B. Panel Data Regression Analysis

1. Panel Data Model Estimation

The best model determination test was conducted to determine which model to use in the study. The following are the results of the chow-test to determine the temporary model and the hausman-test to determine the fixed model.

Table 7. Chow Test

Effects Test	Statistic	d.f	Prob
Cross-section F	34.183202	(9,65)	0.0000
Cross-section Chi-square	139.699936	9	0.0000

Source: results of data analysis 2025, processed

The probability value obtained is 0.0137, where the value is smaller than the significance level $\alpha = 5\%$ ($0.0137 < 0.05$). Thus, the *Fixed Effect Model* is the best choice in this study.

Table 8. Hausman Test

Test Summary	Chi-Sq. statistic	Chi-Sq.d.f	Prob
Cross-section random	14.323264	5	0.0137

Source: results of data analysis 2025, processed

The probability value obtained is 0.0137, where the value is smaller than the significance level $\alpha = 5\%$ ($0.0137 < 0.05$). Thus, the *Fixed Effect Model* is the best choice in this study.

2. Classical Assumption Test

According to (Basuki & Prawoto, 2019) in panel data it is not mandatory to use the autocorrelation test because the panel data is *cross section*, while autocorrelation only occurs in *time series* data. In addition, the normality test is also not required to be used because it is not something that must be fulfilled. So that in this study only uses multicollinearity and heteroscedasticity tests.

Table 9: Multicollinearity Test

	LOG_GRDP	LOG_BF	LOG_PD	HDI	LOG_CE
LOG_GRDP	1.000000	-0.313047	-0.268153	0.455166	-0.132356
LOG_BF	-0.313047	1.000000	0.022920	-0.360567	0.631888
LOG_PD	-0.268153	0.022920	1.000000	0.517983	0.106221
HDI	0.455166	-0.360567	0.517983	1.000000	-0.266592
LOG_CE	-0.132356	0.631888	0.106221	-0.266592	1.000000

Source: results of data analysis 2025, processed

The correlation coefficient value between the independent variables is below 0.80, so that in this study there is no multicollinearity (Gujarati, 2003)

Table 10. Heteroscedasticity Test

Variabel	coefficient	Std. Error	t-Statistic	Prob.
C	-12.28152	28.89463	0.425045	0.6722
LOG_GRDP	-0.827478	2.767193	-0.299032	0.7659
LOG_BF	1.888583	3.305914	0.571274	0.5698
LOG_PD	-2.617854	3.560541	-0.725241	0.4648
HDI	0.019468	0.212793	0.091486	0.9274
LOG_CE	-0.145498	1.001852	-0.145229	0.8850

Source: results of data analysis 2025, processed

The results of the Heteroscedacity test using the Gletjer test showed that all independent variables had a significance value above 0.05. This means that in this study there is no heteroscedacity.

3. Regression Equation Analysis

Table 11. Fixed Effect Model Regression Results

Variabel	coefficient	Std. Error	t-Statistic	Prob
C	-48.62348	47.15572	-1.031126	0.3063
LOG_GRDP	17.86944	4.516028	3.956894	0.0002
LOG_BF	-28.45934	5.395215	-5.274923	0.0000
LOG_PD	9.676185	5.810763	1.665218	0.1007
HDI	0.080788	0.347277	0.232634	0.8168
LOG_CE	3.333014	1.635011	2.038527	0.0456
Effects Spesification				
R-squared	0.922627	Mean dependent var		16.21000
Adjusted R-squared	0.905962	S.D. dependent var		9.757926
S.E. of regression	2.992330	Akaike info criterion		5.197343
Sum squared resid	582.0127	Schwarz Criterion		5.643973
Log likelihod	-192.8937	Hannan-Quinn Criter		5.376409
F-statistic	55.36316	Durbin-Watson stat		2.024271
Prob(F-statistic)	0.000000			

Source: results of data analysis 2025, processed

$$\text{Independence} = -48.62348 + 17.86944\text{LnPDRB} - 28.45934\text{LnDP} + 9.676185\text{LnKP} + 0.080788\text{IPM} + 3.333014\text{LnBM} + \varepsilon$$

Interpretation:

1. The constant coefficient value obtained is -48.62%, which means that all independent variables, namely GRDP (X1), BF (X2), PD (X3), HDI (X4), and CE (X5), if they are zero, then the dependent variable (Y) will have a value of -48.62%.
2. The regression coefficient value of the GRDP variable (X1) has a positive value of 17.86%, which indicates that each increase in X1 by one thousand rupiah will cause an increase in variable Y by 17.86%, assuming other variables remain constant.
3. The regression coefficient value of the BF variable (X2) has a negative value of -28.45%, which means that every one billion rupiah increase in X2 will cause a decrease in Y by 28.45%, assuming other variables remain constant.
4. The regression coefficient value of the PD (X3) variable has a positive value of 9.67%, which means that if PD (X3) increases by one thousand people, the Y variable will also increase by 9.67%, assuming other variables remain constant.
5. The regression coefficient value of the HDI variable (X4) has a positive value of 0.08%, which indicates that every one percent increase in the HDI variable (X4) will cause an increase in variable Y by 0.08%, assuming other variables remain constant.
6. The regression coefficient value of the CE variable (X5) has a positive value of 3.33%, which means that every one billion rupiah increase in the CE variable (X5) will cause an increase in variable Y by 3.33%, assuming other variables remain constant.

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4. Hypothesis Test

A. Test t (Partial)

Based on the results of the t test that has been carried out in table 11, it can be concluded as follows:

1. The GRDP variable (X1) obtained a probability value of $0.0002 < 0.05$. So that H_0 is rejected and H_a is accepted, which means that there is an influence of the GRDP variable on financial independence in the Regency / City in NTB.
2. BF variable (X2) obtained a probability value of $0.0000 < 0.05$. So that H_0 is rejected and H_a is accepted, which means that there is an influence of the BF variable on financial independence in the Regency / City in NTB.
3. PD variable (X3) obtained a probability value of $0.1007 > 0.05$. So that H_0 is accepted and H_a is rejected, which means that there is no effect of the PD variable on financial independence in the Regency / City in NTB.
4. HDI variable (X4) obtained a probability value of $0.8168 > 0.05$. So that H_0 is accepted and H_a is rejected, which means that there is no influence of HDI variables on financial independence in the Regency / City in NTB.
5. CE variable (X5) obtained a probability value of $0.0456 < 0.05$. So that H_0 is rejected and H_a is accepted, which means that there is an influence of the BM variable on financial independence in the Regency / City in NTB.

B. F Test (Simultaneous)

The F test in this study was conducted with a confidence level of 95% or $\alpha = 0.05$. Based on table 11, the estimation results show the prob(F-statistic) value of $0.000000 < 0.05$, which means, there is an influence between the variables of GRDP, DP, KP, HDI, and BM on financial independence in all districts and cities in NTB.

C. Test Coefficient of Determination (R²)

The Adjusted R-Square value in table 11 of the regression results shows a value of 0.905962, which means that the independent variable can explain the dependent variable by 90.59%, while the remaining 9.41% is explained by other variables not examined in this study.

DISCUSSION

A. Analysis of Regional Financial Independence of Regency / City in NTB 2016-2023

The results of the analysis of the financial independence of districts / cities in NTB in 2016-2023: The results of the analysis of the financial independence of districts/cities in NTB, in table 4, that most districts / cities in West Nusa Tenggara Province fall into the criteria of very low financial capability with an instructive pattern. This shows that the majority of districts / cities in West Nusa Tenggara Province are still very dependent on the financial fulfillment of the central government. if connected to research conducted by (Prakoso et al., 2019) on districts / cities of West Java Province, which also have very very low financial capability with instructive patterns. This means that, Regency/City governments in NTB and Regency/City governments in West Java in accordance with research conducted by Prakoso, have not been able to carry out regional autonomy tasks.

The results of the financial independence ratio analysis show that the Regency / City governments in NTB have not been able to run their development and governance independently. This is evidenced by the fact that the ratio of regional financial independence is very low, so that the Regency / City government in financing the implementation of regional government and development still requires assistance from the central government.

Fiscal Decentralization of Regency / City in NTB 2016-2023: The results of the analysis of the degree of decentralization in table 5 show that the ratio of local own-source revenue and total local revenue is very high, so the degree of fiscal decentralization is considered insufficient. The increase and decrease in local revenue can be caused by not optimizing in increasing local revenue. The government can increase local revenue from various potentials owned, because the Regency / city has a variety of economic potentials, ranging from tourism, agriculture and animal husbandry, to fisheries and marine, however, the contribution of these sectors to local revenue has not been maximized. This is due to lack of fiscal capacity, lack of supporting infrastructure, and suboptimal management of potential.

The average degree of decentralization over eight years is 12.36%, when compared to the degree of decentralization of Lhokseumawe City at 6.03% (Wahyuddin & Sugianal, 2017) and Puncak Jaya Regency at 1.30% (Enumbi, 2021) . This means that the degree of decentralization of the Regency / City in NTB is better than the two regions. The degree of fiscal decentralization of districts / cities in NTB, which is better than the two regions, does not make districts / cities in NTB capable of implementing this decentralization because the value of 12.36% is in the insufficient category.

The results of the analysis of the financial dependency ratio of districts / cities in NTB in 2016-2023: in table 6, has an average of 79.78%, if connected with the ratio of financial dependency of the Jember Regency of 79.53%, it can be seen that the level of financial dependency of districts / cities in NTB is almost the same as the financial dependency of the Jember Regency, entering the criteria very high. This certainly causes the two regions to have difficulty in carrying out other important developments, such

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as improving educational facilities and infrastructure, because these regions are very dependent on assistance from the central government.

The high financial dependency ratio of districts/municipalities in NTB is due to the DAU component included in the Balancing Fund for District/City Governments. Researchers assume that this occurs because the government cannot budget for personnel expenditures from PAD, so the central government helps fund these personnel expenditures, so the DAU is very large. This is one of the reasons why the dependency ratio of districts/cities in NTB is very high and the management of regional productive sectors, such as agriculture, fisheries, livestock, tourism, and MSMEs, which actually have great potential to increase PAD.

B. Panel Data Regression Analysis

The Effect of Gross Regional Domestic Product (GRDP) on Regency/City Financial Independence in NTB 2016-2023: Gross Regional Domestic Product (GRDP) at current prices has a positive and significant effect on Regency/City Regional Financial Independence in West Nusa Tenggara. These results are in accordance with the theory put forward by (Sukirno, 2005) that Gross Regional Domestic Product (GRDP) as the total value of goods and services produced by a region in a certain period, which adds up the results of the people of the region as well as the results of the people of other regions who work in the area that people who have income, will have the ability to pay various levies set by the local government and will increase their Regional Original Revenue.

The results of this study are in line with research conducted by, (Arib, 2024) that GRDP has a positive and significant effect on regional financial independence. GRDP plays an important role in increasing regional revenue. The higher the income of the Regency/city community in NTB, the greater the ability of the region to increase local revenue, especially from taxes and levies, because people's purchasing power increases. Therefore, an increase in GRDP will have an impact on better regional financial independence.

The Effect of Balance Fund (BF) on Regency/City Financial Independence in NTB 2016-2023: Based on the results of the study, it shows that the Balance Fund has a negative and significant effect on the financial independence of the Regency/City in NTB. This means that the greater the Balance Fund received by the Regency/city in NTB, the smaller the level of regional financial independence. Vice versa, the smaller the balance fund obtained, the greater the level of regional financial independence. Several previous studies have also proven that the balance fund has a negative and significant effect on the ratio of regional financial independence (Wasil et al., 2020; Ardiansyah, 2023; and Machfud et al., 2021). The influence of balancing funds on regional financial independence is one of the external assistance received by districts / cities in NTB to meet the needs of government programs if they experience a deficit.

Effect of Population Density (PD) on Financial Independence of Regency/City in NTB 2016-2023: Population density has a positive but insignificant coefficient on the financial independence of the Regency/City in West Nusa Tenggara Province. This means that, although there is a tendency that an increase in population density in the Regency/City in West Nusa Tenggara Province can encourage an increase in the level of financial independence, the relationship is not strong or consistent enough to be concluded as a statistically significant influence. The results of this study are not in line with research conducted by (Yaqien et al., 2023) with the results of population density having a significant effect on regional independence on the island of Java.

In theory, (Halim, 2007) says that high population density can increase the potential for PAD because the large number of residents in a region can increase the local tax and levy base. Based on the theory put forward, it can be interpreted that PAD has a direct effect on financial independence, not direct population density, so the results of this study are still in line with the theory put forward. the still dominant role of central transfers to district / city governments creates dependence in the structure of regional revenue. This dependence causes an increase in population or density to indirectly reflect an increase in regional own-source revenue (PAD), so that its relationship to financial independence is statistically weak.

The effect of the Human Development Index (HDI) on Regency/City Financial Independence in NTB 2016-2023: the human development index (HDI) has no significant effect on regional financial independence in districts / cities in NTB with a positive coefficient. According to the theory put forward (Becker, 1993) that education, health, and education (HDI) are a form of investment that can increase the economic productivity of individuals and society as a whole, which means, if the higher the quality of human beings in a region, the greater the economic potential that can be generated, which in turn can increase local revenue.

In the context of Becker's theory, investment in *human capital* is important, but if it is not accompanied by productive employment opportunities, supporting infrastructure, and regional economic innovation, then the results of these investments will not be maximized. For example, many regencies/cities in NTB produce many university graduates, but many of them are looking for employment opportunities outside the region or even abroad or become Indonesian migrant workers (TKI), due to the

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lack of supporting infrastructure, so that the positive impact on the economy in the regencies/cities from their HDI is limited. These results support research conducted by (Hutasoit et al., 2025) where HDI is not significant to financial independence.

The Effect of Capital Expenditure (CE) on Regency/City Financial Independence in NTB 2016-2023. Capital expenditure based on the results of panel data regression has a positive and significant effect on the financial independence of districts/cities in NTB. The results of this study support research conducted by Ernawati & Riharjo (2017) and Rahmadani (2022) that expenditure budget in the Regency/city in NTB, the more facilities and infrastructure available to support economic activities and of course it will be better and more adequate. As a result, the level of productivity and output produced in the Regency/City in NTB will increase, and this can attract investors to invest their capital.

The results of this study are in line with the theory put forward by Mardiasmo (2002) that capital expenditure aimed at infrastructure development and public services encourages increased investment. In several districts/cities in NTB, increased capital expenditure has been shown to encourage growth in priority areas. For example, the development of tourism infrastructure in Central Lombok and the construction of trade facilities in several districts/cities have helped increase regional revenue.

Simultaneous Effect of GRDP, BF, PD, HDI, and CE on Regency/City Financial Independence in NTB 2016-2023: The results of simultaneous testing show that, the independent variables of Gross Regional Domestic Product (GRDP), Balance Fund (BF), Population Density (PD), Human Development Index (HDI) and Capital Expenditure (CE) have a positive and significant effect on the dependent variable of regional financial independence with a significance value of $0.000000 < 0.05$.

The results of testing the coefficient of determination with an R-Squared (R^2) value of 0.905962, which means that the independent variable can explain the dependent variable by 90.59% in the Regency/City in NTB in the 2016-2023 time period, while the remaining 9.41% is explained by other variables that are not included in the regression and panel estimation model in this study.

V. CONCLUSIONS

Based on the results and discussion, the following conclusions can be drawn

1. The ratio of financial independence of the Regency / City in NTB is still very low with an instructive pattern, the ratio of the degree of fiscal desentralization is included in the financial capability with less criteria and the dependency ratio is included in a very high level of dependence.
2. Partially, GRDP, Balance Fund, and Capital Expenditure affect regional financial independence in regencies / cities in West Nusa Tenggara province, while population density and Human Development Index (HDI) have no effect on regional financial independence in regencies / cities in West Nusa Tenggara province and simultaneously GRDP, Balance Fund, Population Density, Human Development

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