

Factors that affect a better fiscally autonomous government: Evidence from an Indonesian newly autonomous region

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Abstract: This study aims to investigate the influence of fiscal decentralization and socio-economic determinants on fiscal autonomy, taking into account anti-corruption efforts as a moderating variable. This study uses a dataset that spans 5 years and focuses specifically on 74 recently established autonomous regions in Indonesia after the year 2004. This study shows that the factors that indicate fiscal decentralization, such as locally created sources of funds and means of profit sharing, have a favorable and significant influence on fiscal autonomy. In contrast, total allocated funds have a detrimental and significant impact, but the special fund has a negligible impact on fiscal autonomy. This study shows a strong and statistically significant correlation between local investment and fiscal autonomy when socio-economic aspects are taken into account. However, the analysis showed that inward investment has an unfavorable impact that is not statistically significant. Furthermore, this study shows that anti-corruption, when treated as a separate factor, has a favorable and notable influence. Furthermore, when used as a moderating variable, it can serve as a quasi-moderator for the relationship between each of the independent variables and fiscal autonomy, which acts as the dependent variable. His study contributes to the existing body of knowledge on fiscal decentralization by providing a more comprehensive understanding of its influence on fiscal autonomy.

Keywords: *Anti-corruption, Fiscal autonomy, Fiscal decentralization, Socio-economic.*

1. Introduction

Towards the end of the 20th century, governments around the world changed the way they governed their countries, from centralization to decentralization [1]. This phenomenon is known as decentralization, where authorities from the central government are devolved to the lower level of government [2]. From a broader perspective, decentralization is divided into three types: delegation, devolution, and de-concentration [3]. Devolution, defined as limiting the size of government territory and forming a new government under the existing government, is the focus of this study [1]. Furthermore, devolution can be divided into two categories: amalgamation and proliferation. Amalgamation refers to combining or uniting multiple elements, units, or components into a single, unified whole, while proliferation is the opposite [4]. Both amalgamation and proliferation policies establish a new autonomous region (NAR) with a specific territory and a set of powers to function as a new government.

Chalil [5] divides decentralization into four main dimensions: political, fiscal, administrative, and spatial. Fiscal decentralization is the transfer of tasks, power, and related resources (money, labor, etc.) from the federal government to the subnational levels of government [6]. One of the benefits of fiscal decentralization is that it promotes local autonomy and empowers regional governments to manage their finances independently. This encourages more responsive policies that are responsive to local needs and favor innovation in public service delivery [7, 8]. One of the classifications is the policy of

allocating revenue sources to different levels of government [9], whereby each unit of government has its own revenue sources, as well as the policy of intergovernmental transfer [10] to close the gap in fiscal imbalances [11].

In Indonesia, the fall of the Soeharto era marked the beginning of decentralization, and more than 207 new autonomous regions were formed at the provincial or local government level. The central government's policy of creating new autonomous regions is a wise step it has taken to advance the goals of the 1945 Constitution, especially the welfare of the population [12]. The adoption of Law 22 of 1999 on the regional government and Law 25 of 1999, which establishes the financial balance between the federal and regional governments, marked the beginning of the decentralization of government and regional autonomy. The passing of the two laws shows how the central government, following the concept of regional autonomy, ceded certain responsibilities to autonomous regions after further decentralization [13]. Decentralization is the result of the regions' demands for the power to develop their regions. Decentralization, which was upgraded with Act No. 32 of 2004 on Regional Government and Act No. 33 on Financial Equalization between Central Government and Regional Governments, and then with the recent Constitutional Act No. 23 of 2014 on Regional Government and Act No. 1 of 2022 on Financial Equalization between Central Government and Regional Governments.

According to the traditional view of fiscal federalism, residents benefit from the decentralization of tax authorities because it allows for a more individualized provision of public goods and services, ensuring better alignment of spending with local needs and preferences [8]. Involving more local actors increases responsiveness and promotes democracy, accountability, and transparency [14, 15]. A new autonomous region that is “closer” to the community can certainly improve public services and community well-being [16]. Various findings include that the regional government in North Macedonia increased the quality index of public services after regional enlargement [17]; or Agyemang-Duah, et al. [18] and Fridy, et al. [19] found that fiscal decentralization and regional enlargement have been shown to reduce poverty in Ghana.

Despite its positive aspects, fiscal decentralisation can also unintentionally lead to regional inequalities, as areas with more resources progress faster than underdeveloped regions, potentially deepening economic and social disparities [20]. Also, newly created autonomous regions often don't have stable ways to make money on their own, so they rely heavily on transfers from the central government [2, 4, 21]. Furthermore, widespread decentralisation could lead to corruption in local government [1, 5-7, 22, 23].

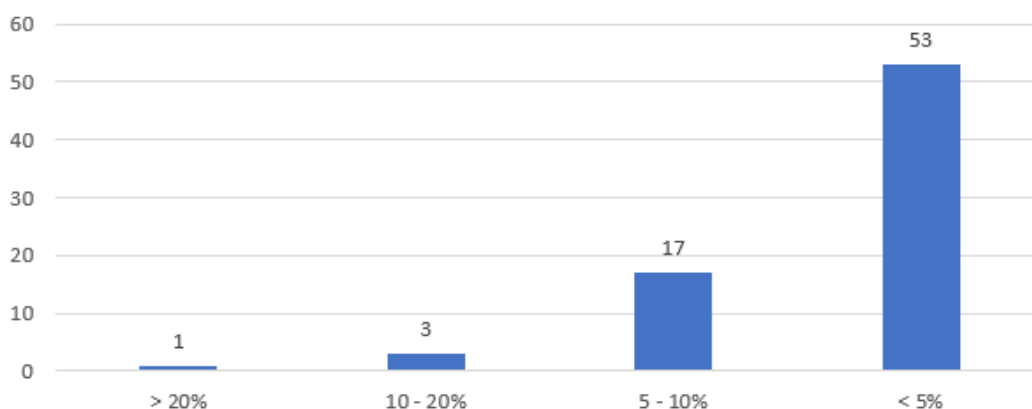


Figure 1.
Total of NAR with its average fiscal autonomy between 2018 – 2022.

Figure 1 presents the number of New Autonomous Regions (NARs) that have granted an average fiscal autonomy of over 20%. There is only one NAR, namely South Tangerang Municipality, while 3 NARs have a fiscal autonomy of 10 to 20%, 17 NARs with a fiscal autonomy of 5 to 10%, and a

whopping 53 NARs with a fiscal autonomy of less than 5%, with the Mamberamo Raya local government in Papua Province ranking the lowest with an average fiscal autonomy of 0.53%. This means that their local revenue sources only account for 0.53% of their total revenue. The data reveals that the New Autonomous Region (NAR), despite its noble establishment goals, has left many problems in its wake. It is evident that NAR is not yet financially independent and is an increasing burden on central government spending, especially in terms of fiscal autonomy. This also supports the argument [4, 16, 24] that the decentralization and expansion policies were mainly driven by the political enthusiasm of local and national elites who looked for opportunities in the NAR.

One of the fiscal decentralizations is the policy of intergovernmental transfer. To ensure that the lower levels of government have the financial resources they need to meet their requirements, the federal and national governments as well as the central government, make transfers to these levels. Depending on the reason for the provision, these transfers can take the form of unconditional or conditional grants [25]. The intergovernmental transfer will either increase local revenues, which means a more financially independent government (stimulus effect), or reduce local revenues (substitution effect) [26].

Intergovernmental transfers are an extremely important factor in promoting balanced regional development and providing assistance to local governments. They provide financial assistance for the provision of critical public services, the development of infrastructure, health, education, and social initiatives, and they have the potential to assist in the reduction of regional imbalances by shifting resources from the central government to regions that have lower financial resources. Xing and Zhang [27] and Musviyanti, et al. [13] are two examples of research that demonstrate that intergovernmental transfers have the potential to foster budgetary autonomy. On the other hand, an excessive reliance on transfers between governments might also result in excessive dependency [28]. There is a possibility that local governments may be less willing to manage their own earnings or look for alternate sources of support when they become unduly reliant on these particular payments. Due to this excessive dependency, local authorities may emphasize access to central money rather than striving to manage their own finances effectively or produce local income. This may result in a lack of fiscal discipline, which can lead to a lack of fiscal discipline.

Additionally, it may result in financial fragility and restricted autonomy, as well as a reduction in expenditure autonomy [26]. Reliance on central government funds sometimes hinders local governments' capacity to make autonomous choices, efficiently manage their finances, and promptly respond to local needs. According to the Directorate General of Financial Balance, the average fiscal autonomy ratio of Indonesian regional governments in 2022 will be approximately 14%, with certain areas still having less than 5% independence. This information comes from the findings of the said directorate. Based on Oates [15] and Miyazaki [25] this exemplifies the moral hazard that exists within local governments as a result of their excessive dependence on transfer money. An additional significant issue that arises from fiscal decentralization is the growing occurrence of mishandling and improper distribution of money when fiscal authority is transferred to regional governing bodies [1, 5-7, 22, 23]. Occasionally, local authorities may use their recently acquired independence and susceptibility to particular interests, resulting in a reduced likelihood of losing their position [20, 23]. For instance, they may engage in corrupt activities such as misappropriation of funds, illicit payments, or biased contract allocation.

Several studies examine the influence of corruption on the fiscal independence of regional governments, which may indicate the effectiveness of fiscal decentralization. However, the findings are inconclusive. These studies indicate that fiscal decentralization strategies have the potential to greatly reduce corruption levels [29-31]. One of the ways in which fiscal decentralization might help reduce corruption is by enhancing local responsibility. According to Hadiz [32] decentralization fosters corruption in government, a view shared by Alfada [33]; Sarjana [22]; Shon and Cho [23]; Saputra and Setiawan [34] and Paranata [7]. The reduced supervisory function of the central government is a significant element that contributes to corruption in decentralized systems [7]. The decentralization of

governance has resulted in increased possibilities for inefficiency and corruption within local government.

According to data from the Indonesian Corrupt Watch (ICW), the incidence of corruption in Indonesia has risen steadily over the years. In 2018, there were 454 corruption cases involving 1087 suspects; however, in 2022, the number of corruption cases grew to 579, with 1396 suspects implicated. The Indonesian Corruption Perception Index (CPI) has shown a similar outcome, with a decline from a score of 38 in 2018 to 34 in 2022. This statistic indicates the decline in corrupt practices in Indonesia. The Indonesian Anti-Corruption Commission launched the Monitoring Centre for Prevention (MCP) initiative in 2018, also known as the Prevention Coordination and Monitoring initiative, to tackle these issues. The objective of this project is to evaluate the degree to which the regional administration is executing its anti-corruption initiative. The MCP program consists of eight specific areas of emphasis: The following are the eight areas of focus: 1) Planning and Budgeting; 2) Procurement of Goods and Services; 3) Integrated One-Stop Service; 4) Capacity; 5) Civil Service Management; 6) Optimization of Locally Generated Revenue (PAD); 7) Regional Asset Management; and 8) Village Fund Management (Dana Desa). The MCP score serves as a substitute for the anti-corruption factors, a measure also used by Wibisono and Khoirunurrofik [35].

This study also used investment as the socio-economic driver. Investment is crucial for fostering financial autonomy. Developing nations rely on foreign direct investment to improve enterprise functioning and provide a multiplier impact on regional revenue and autonomy [13]. The current body of research extensively examines the influence of fiscal decentralization, particularly intergovernmental transfers, on local fiscal independence and corruption. However, there remains a significant research gap in thoroughly examining the interaction among these components. There is a lack of comprehensive research that has examined the direct relationship between the amount of intergovernmental transfers and the financial independence of local governments, as well as the associated dangers of corrupt practices. In addition, while there is a wealth of literature on the pros and cons of fiscal decentralization, there has been less focus on actual approaches and processes that may successfully combat corruption within the framework of fiscal autonomy. Hence, this study seeks to address this deficiency by offering a more intricate comprehension of how fiscal decentralization impacts fiscal autonomy. Moreover, it proposes specific strategies for how the anti-corruption agenda may effectively mitigate corruption risks in decentralized fiscal systems.

2. Methodology

We conducted the study analysis in 74 out of the 75 New Autonomous Regions (NAR) established after 2004. The year 2004 is chosen as the reference point due to the enactment of Law 32 of 2004 during that year. We contend that the legislation conferred legitimacy on decentralization and granted more authority to local administrations. In our research, we omitted one NAR, namely the province government of North Kalimantan. We made this decision to avoid any potential bias, given that the provincial governments' revenue structure differs from the local governments'. This research used data spanning from 2018 to 2022. However, we implemented a time lag of 1 year for both the independent and moderating variables. This decision was based on our claim that the independent and moderating variables can only have an impact on the dependent variable in the following year ($n+1$). A lot of model-fitting tests, like the Chow test, the Hausman test, and the Lagrange multiplier test, were used to find the best model from the common effects model (CEM), the fixed effects model (FEM), and the random effects model [36]. In order to satisfy the Ordinary Least Squares requirement, this study uses the Durbin-Watson test to examine the existence of correlations among the error terms of a regression model and conducts a multicollinearity test to ascertain the extent of correlation between the independent variables.

This research model displayed as equation:

$$Y_{it} = \beta + \beta_1 LGRS_{it-1} + \beta_2 GAF_{it-1} + \beta_3 SPF_{it-1} + \beta_4 PSF_{it-1} + \beta_5 FI_{it-1} + \beta_6 DI_{it-1} + \varepsilon_{it} \quad (1)$$

The indices in the model indicate the newly autonomous area i , the year, and the one-year lag $t-1$. The model includes the representative coefficient/constant $\beta_{(1-6)}$ and the error term ε . To find main variable in this study, fiscal autonomy [37] we look at how much locally produced income there is compared to the total amount of non-agricultural income. The dependent variable is made up of the fiscal decentralisation variable and the socio-economic variable. The degree of financial decentralisation in the NAR was measured using the sum of Local Generated Revenue Sources (LGRS), General Allocation Fund (GAF), Special Purpose Fund (SPF), and Profit-Sharing Fund (PSF) [13]. Socio-economic variables were represented by foreign investment (FI) and domestic investment (DI) [38]. Furthermore, we include the variable of anti-corruption (CORR) using MCP as a proxy to assess the correlation between fiscal decentralisation and fiscal autonomy, as well as to serve as a moderating element. Table 1 presents the variables and measurements used in this study.

Table 1.
Variables and measurement.

Variables	Symbol	Measurement	Source
Fiscal autonomy	FA	% Local generated revenue sources of total revenue	Ministry of finance
Anti-corruption program	CORR	Monitoring center for prevention (MCP)	Corruption eradication commission
Local generated revenue sources	LGRS	Total local generated revenue sources of total revenue	Ministry of finance
General allocated fund	GAF	Total general allocated fund	Ministry of finance
Special purpose fund	SPF	Total special purpose fund	Ministry of finance
Public sharing fund	PSF	Total public sharing fund	Ministry of finance
Domestic investment	DI	Total domestic investment	Central statistics agency
Foreign investment	FI	Total foreign investment	Central statistics agency

Likewise, this study implements the *Moderated Regression Analysis* (MRA) is a special application of multiple linear regression, where the regression equation contains an element of interaction Ghozali [36] Therefore, it can be written as:

$$Y_{it} = \beta + \beta_1 LGRS_{it-1} + \beta_2 GAF_{it-1} + \beta_3 SPF_{it-1} + \beta_4 PSF_{it-1} + \beta_5 FI_{it-1} + \beta_6 DI_{it-1} + \beta_7 CORR_{it-1} + \beta_8 LGRS_{it-1} * CORR_{it-1} + \beta_9 GAF_{it-1} * CORR_{it-1} + \beta_{10} SPF_{it-1} * CORR_{it-1} + \beta_{11} PSF_{it-1} * CORR_{it-1} + \beta_{12} DI_{it-1} * CORR_{it-1} + \beta_{13} FI_{it-1} * CORR_{it-1} + \varepsilon_{it} \quad (2)$$

In Equation 2, the interaction terms between each of fiscal decentralization variable and anti-corruption variable (LGRS*CORR; GAF*CORR; SPF*CORR; PSF*CORR;) also between socio-economic variable anti-corruption variable (DI*CORR; FI*CORR) capture the moderating effects of corruption on the impact of fiscal decentralization on fiscal autonomy.

Table 2.
Summary statistics.

Variable	Mean	Median	Maximum	Minimum	Std. dev.
FA	4.218	3.228	5.277	0.000	6.132
CORR	5.139	5.500	9.700	1.000	2.445
LGRS	2.399	2.402	2.823	1.932	1.122
GAF	2.653	2.670	2.775	0.000	1.464
SPF	2.567	2.567	2.702	2.401	0.453
PSF	2.461	2.469	2.781	2.250	1.060
DI	1.554	2.251	2.907	0.000	1.202
FI	1.454	2.038	3.002	0.000	1.151

Table 2 presents the summary statistics of this research. FA as a dependent variable has a minimum of 0.000 and a maximum of 5.277, with a standard deviation of 6.132. This result is lower than that of Musviyanti, et al. [13] which show a range from 0.008 to 0.761 and a standard deviation of 0.163. This result indicated that, in general, NAR in Indonesia has lower fiscal autonomy than the majority of Indonesian cities. This result also aligns with its fiscal decentralization and socio-economic variables, which tend to have lower results than the majority of Indonesian cities. While CORR, which is proxied by the MCP, has a minimum of 1.000 to 9.700 results and a mean of 5.139, this result shows that NAR in Indonesia has 51.39%, which means anti-corruption programs in NAR are lower than the majority of Indonesian cities, which have an average MCP score of 71% [35].

3. Result and Discussion

Prior to hypothesis testing, this study converted the LGRS, GAF, SPF, PSF, DI, and FI data into their natural logarithm form (Ln). This function is used to reduce the variability between various levels of the independent variable and reduce the impact of extreme values or outliers.

Table 3.
Chow test result

Effect test	Probability value	Decision
Cross-section F	F=0.0000	FEM is selected
Cross-section Chi-square	F=0.0000	FEM is selected

Table 4.
Hausman test result

Test summary	Probability value	Decision
Cross-section random	F=0.0000	FEM is selected

The Chow test was used to determine the preferred estimating method between CEM and FEM. As presented in Table 3, the Chow test indicates that the cross-sectional F-squared and cross-sectional Chi-squared values are below 0.5, indicating the FEM was selected. Subsequently, this study uses Hausman test to choose the most appropriate model between SEM and FEM. Once again, the Hausman test indicates that the cross-section value is below 0.5, as shown in Table 4. This result indicates that FEM is selected as the most accurate estimate, and therefore, there is no need to do the LM test.

Once the FEM was selected as the model's estimator, a multicollinearity test was performed to confirm the existence of a correlation between independent variables in the model. As portrayed in Table 5, the multicollinearity statistic is below 0.8, indicating the absence of correlation within the model. This indicates an absence of correlation among the independent variables.

Table 5.
Correlation matrix.

Variable	LGRS	GAF	SPF	PSF	DI	FI	CORR
LGRS	1	-	-	-	-	-	-
GAF	0.009	1	-	-	-	-	-
SPF	0.347	0.089	1	-	-	-	-
PSF	0.035	-0.178	0.238	1	-	-	-
DI	0.415	-0.060	0.121	0.179	1	-	-
FI	0.314	-0.038	0.123	0.090	0.453	1	-
CORR	0.401	-0.083	-0.036	0.103	0.454	0.370	1

The estimate in [Table 6](#) demonstrates the correlation between fiscal decentralization, socio-economic and fiscal autonomy, and anti-corruption as a moderating variable. The statistical analysis reveals that Local Government Revenue Sharing (LGRS) significantly impacts fiscal autonomy in the New Autonomous Regions (NAR) in Indonesia. A p-value of less than 0.5 and a coefficient of 0.934 demonstrate this, indicating a beneficial effect of LGRS on fiscal autonomy. As a result, a 1% increase in LGRS leads to a 93.4% increase in the regional fiscal autonomy of NAR, confirming the initial premise acceptance. The impact of local income sources on fiscal autonomy is crucial for the independence and effectiveness of local government governance. Local income sources empower local governments to make autonomous choices and customize their budgets and policies according to the unique requirements and goals of their communities by offering a direct and manageable source of money. Local governments can effectively meet their citizens' needs by having a variety of income streams that are collected via taxes and fees from the local population. This ensures that they can be responsive and responsible to their constituents. This conclusion is in line with the research by [Darmi \[12\]](#); [Wahyuni and Ardini \[39\]](#); [Oktavia and Handayani \[40\]](#); [Tahar and Zakhiya \[41\]](#); [Machfud, et al. \[42\]](#) and [Musviyanti, et al. \[13\]](#).

Table 6.
Estimation result.

Explanatory variables	Dependent variable: Fiscal autonomy			
	Coefficient	Std. error	t-statistic	Prob.
LGRS	0.934	0.373	2.531	0.012**
GAU	-0.303	0.153	-1.983	0.048**
SPF	0.209	0.582	0.359	0.720
PSF	0.618	0.248	2.488	0.013**
DI	0.071	0.031	2.269	0.024**
FI	-0.030	0.039	-0.781	0.436
CORR	0.079	0.018	4.279	0.000***
LGRS*CORR	0.017	0.000	0.000	0.000***
GAF*CORR	0.017	0.000	0.000	0.000***
SPF*CORR	0.017	0.000	0.000	0.000***
PSF*CORR	0.017	0.000	0.000	0.000***
DI*CORR	0.017	0.000	0.000	0.000***
FI*CORR	0.017	0.000	0.000	0.000***
F-test	0.000***			
R-squared	0.712			

Note: ***, ** and * indicate significance at 1%, 5% and 10%, respectively.

GAF has an impact on fiscal autonomy in the NAR, according to a statistically significant p-value of less than 0.5 and a coefficient of -0.303. The GAF thus has a detrimental impact on fiscal autonomy. A

1% rise in the General Authority for Urbanism (GAU) leads to a significant drop of -30.3% in fiscal autonomy. GAF detrimentally affects fiscal autonomy, primarily by fostering financial reliance among local governments. Reliance on the GAF requires local authorities to comply with the federal governments' regulations and limitations, thereby reducing their autonomy in financial decision-making. The excessive dependence on the GAF hinders the expansion of local governments' revenue streams and obstructs their ability to cultivate income sources that are more suited to their unique economic activity and resources. Furthermore, the monies given via the GAF often come with conditions and restrictions, which curtail the capacity of local governments to commence and execute projects in accordance with local objectives. This conclusion is consistent with the research by [Tahar and Zakhiya \[41\]](#); [Adriana \[43\]](#); [Machfud, et al. \[42\]](#) and [Sugiyanto and Musfirati \[44\]](#).

SPF, in contrast to the GAU, has a positive impact on fiscal autonomy, but this effect is not statistically significant, as a p-value greater than 0.1 demonstrates. The positive coefficient implies a positive correlation between the SPF and fiscal autonomy, suggesting that an increase in the SPF could lead to an increase in fiscal autonomy. Nevertheless, the insignificance of this coefficient indicates that the link lacks statistical robustness and is not sufficiently strong to make decisive conclusions. Multiple factors may contribute to this lack of relevance. While there is a positive correlation between SPF and fiscal autonomy, it is not a major determinant when compared to other parameters. Furthermore, certain designated objectives may tailor the SPF, thereby limiting its impact on total fiscal independence. This finding is consistent with the studies conducted by [Adriana \[43\]](#) and [Sugiyanto and Musfirati \[44\]](#).

A p-value of less than 0.5 and a coefficient of 0.618 demonstrate that the PSF has a statistically significant and favorable impact on fiscal autonomy. Consequently, a mere 1% rise in the PSF results in a substantial 61.8% boost in fiscal autonomy. The presence of a positive coefficient and the substantial impact of the PSF on fiscal autonomy suggest a strong and noteworthy association between these factors. The positive coefficient indicates that there is a direct relationship between a rise in the PSF and an increase in fiscal autonomy for the unit being considered. The beneficial impact may stem from the inherent characteristics of the PSF, which seeks to distribute earnings or income among local entities. We anticipate that the PSF's fund will significantly boost the recipient's financial independence, enabling them to make independent decisions and effectively meet local needs. This conclusion is in line with the studies done by [Novalistia \[45\]](#) and [Musviyanti, et al. \[13\]](#).

The socio-economic factors influenced by local and international investment yield contrasting outcomes. The DI has a statistically significant p-value of less than 0.5 and a coefficient of 0.071. Consequently, the hypothesis was validated, indicating that domestic investment has a favorable and substantial influence on fiscal autonomy. In contrast, FI has the opposite effect. This study shows that FI has a negative coefficient of -0.030 and a p-value greater than 0.1, indicating that it has a negligible and adverse impact on fiscal autonomy. The test findings provide intriguing insights into the determinants that impact fiscal autonomy. Higher levels of domestic investment have a positive and substantial impact on the fiscal autonomy of the examined firm, indicating that increased domestic investment contributes favorably to the company's financial independence. This discovery implies a connection between increased domestic investment and enhanced fiscal autonomy, enabling the firm to make independent decisions and effectively meet local demands. Conversely, the absence of a substantial and adverse effect of FI on fiscal autonomy indicates that variations in FI do not have a statistically significant impact on fiscal autonomy. The differential effects of domestic and FI underscore the significance of differentiating between various forms of investment when evaluating their influence on fiscal independence. This offers valuable perspectives for policymakers and stakeholders engaged in economic and financial decision-making. The impact of DI aligns with the findings of [Afiah, et al. \[46\]](#) but the lack of substantial impact of FI aligns with the findings of [Musviyanti, et al. \[13\]](#) and [Reza and Sopiana \[47\]](#). The F-statistics demonstrate the collective impact of all the independent factors on the dependent variable, yielding an R-squared value of 0.712.

This study also examines the impact of CORR as a standalone variable and its effect on fiscal autonomy. The analysis reveals that the variable anti-corruption has a p-value below 0.1 and a coefficient of 0.079. This indicates that anti-corruption, as an independent variable, has a statistically significant beneficial impact on fiscal autonomy, aligning with the findings of [Wibisono and Khoirunurrofik \[35\]](#). Next, this study performed MRA to determine whether CORR variable moderates the effects of fiscal decentralization and socio-economic factors on fiscal autonomy. [Table 6](#) shows that all interaction factors in the result exhibit a p-value below 0.1 and a positive coefficient of 0.017, which shows all interaction factors have a significant effect on the dependent variable, while all independent variables were also having a significant effect except SPF variables. Thus, according to the moderating variables matrix in [Table 7](#) by [Ghozali \[36\]](#) CORR variable may be classified as a moderating variable.

Corruption has the potential to greatly weaken the efficiency of fiscal decentralization initiatives and diminish the financial independence of local governments. Corruption presents a significant concern under a decentralized fiscal system that gives local authorities more authority over financial resources. Corruption has the ability to manipulate and misdirect the distribution and utilization of finances at the local level. Corruption may lead to the misallocation of resources in financial decision-making, diverting them away from initiatives that really benefit the public. This can undermine the efficiency and efficacy of fiscal decentralization. Corruption not only squanders public funds but also erodes confidence in government institutions, obstructs socio-economic progress, and maintains regional disparities. Striking a balance between devolving power to local governments and enforcing stringent oversight, transparency, and anti-corruption measures is essential to combating corrupt behavior and guaranteeing the successful execution of fiscal decentralization.

Table 7.
Moderating variable matrix.

Test result	Type of moderator	Explanation
The β moderating variable is not significant and the β interaction between the independent variable and the dependent variable is significant	Pure moderator	The moderating variable only acts as a moderating variable and does not act as an independent variable
The β moderating variable and the interaction between the independent variable and the β dependent variable are both significant	Quasi moderator	The moderating variables can act as moderating variables as well as independent variables
The β moderating variable is significant and the β interaction between the independent variable and the dependent variable is not significant	Predictor moderator	The moderating variable only acts as an independent variable
The β moderating variable and the interaction between the independent variable and the β dependent variable are both not significant	Homologizer moderator	The variable does not interact with the independent variable and does not have a significant relationship with the dependent variable

A complicated and important part of governance studies is looking at how anti-corruption might act as a "quasi-moderator" variable in relation to other factors that affect fiscal autonomy. Anti-corruption programs that function as a quasi-moderator can potentially change the intensity or course of connections between fiscal independence and important factors such as locally generated revenue sources, the general allocation fund, the special fund, the profit-sharing fund, domestic investment, and foreign investment. Efficient implementation of anti-corruption measures may amplify the beneficial

effects of locally produced income, the general allocation fund, the special fund, the profit-sharing fund, and domestic investment on fiscal autonomy. They have the ability to reduce the corruption's negative effects and ensure that money is distributed and spent more effectively, thereby promoting fiscal autonomy. Conversely, the influence of anti-corruption policies on foreign investment may be less significant, given that the dynamics of international investment are influenced by a broader set of variables.

4. Conclusion

This study provides valuable insights into the factors influencing fiscal autonomy in the NARs established in Indonesia after 2004. The study demonstrates that income sources produced inside the local area, money designated for specific purposes, funds obtained via profit sharing, domestic investments, and anti-corruption initiatives all have a positive and statistically significant influence on fiscal autonomy. This highlights the significance of having a varied income source, strategic reserves, and efficient ways to combat corruption in enabling NARs to autonomously make financial choices. It is worth mentioning that the general allocation fund and foreign investment have distinct impacts, both of which are either negative or minor for fiscal autonomy. These findings indicate that while aiming for budgetary autonomy for NARs, it is crucial to thoroughly evaluate the implications of central transfers and foreign investment. The discovery that anti-corruption initiatives function as quasi-moderators adds an additional dimension to the findings. This implies a strong connection between the efficacy of anti-corruption initiatives and the impact of other factors on fiscal independence. This underscores the all-encompassing aspect of governance and the need for comprehensive policies that go beyond just financial concerns.

This study has yielded some significant suggestions for future academics and stakeholders seeking to enhance their comprehension and implementation of fiscal autonomy in NARs in Indonesia. The framework based on the NAR results must be continuously improved to accurately represent the changing dynamics of governance and financial management in these areas. Researchers could consider fine-tuning the measuring measures by investigating supplementary indicators that include qualitative dimensions of governance, transparency, and accountability. A comprehensive examination of the unforeseen adverse and negligible effect of the general allocation fund on fiscal autonomy is necessary to determine the particular elements that influence it. Stakeholders must enhance the framework for establishing NARs, since present NARs lack financial independence. Additionally, there are persistent issues with the creation of new NARs in Indonesia.

To summarize, this study not only sheds light on the factors that influence fiscal autonomy in NARs in Indonesia but also highlights the interconnectedness of these factors. The implications go beyond fiscal policy alone to encompass broader governance frameworks, emphasizing the need for a multidimensional approach to effectively strengthen fiscal autonomy. Policymakers can use these insights to formulate strategies that enable NARs to navigate the complex landscape of fiscal governance to promote sustainable development and self-determination.

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Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Competing Interests:

The authors declare that they have no competing interests.

Authors' Contributions:

All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

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