



Regional Investment, Fiscal Transfers, and Local Revenues: An Analysis of Working Capital Lending by Regional Development Banks in Indonesia

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ABSTRACT

This study explores the influence of fiscal and macroeconomic factors on working capital loan allocation by Regional Development Banks (RDBs) in Indonesia, with particular attention to how regional investment, government transfers, and economic growth contribute to credit distribution at the provincial level. The research employs multiple regression analysis on 180 panel data observations from 16 RDBs, using secondary data collected from regional financial statistics and annual RDB reports spanning the period 2013-2021. Eight explanatory variables are examined: domestic investment, foreign direct investment (FDI), general allocation funds (DAU), special allocation funds (DAK), local retributions, local taxes, proceeds from the management of separated regional assets, and provincial economic growth. The findings reveal that DAU has a statistically significant negative effect on credit disbursement, suggesting that high fiscal dependency may weaken financial autonomy and reduce the perceived creditworthiness of borrowing regions. Conversely, revenue from separated regional assets exhibits a strong positive impact, highlighting the role of productive asset management in enhancing access to credit. While both domestic and foreign investment show positive coefficients, their effects are statistically insignificant, possibly due to concentration in capital-intensive sectors with limited direct impact on micro, small, and medium enterprises (MSMEs). Local taxes exert a significant negative influence, whereas local retribution and provincial economic growth do not significantly affect lending behavior. The results underline the importance of fiscal structure, financial independence, and institutional governance in shaping regional credit markets. Policy efforts aimed at improving local asset productivity and reducing dependency on central transfers are essential to strengthen regional financial ecosystems and promote inclusive economic development. These findings contribute to broader policy discussions on fiscal decentralization and subnational financing within emerging economies.

Keywords: Working Capital Loan, Regional Investment, Fiscal Transfers, Local Government Revenues, Local Economic Growth

JEL Classifications: G21, O16, H72

1. INRODUCTION

Banks play a vital role in facilitating economic growth by acting as financial intermediaries that channel surplus funds from savers to sectors in need of capital. Through deposit instruments such as current accounts, savings, and fixed-term deposits, they mobilise public funds and redistribute them via various lending products to support productive activity and consumption. Given their systemic importance and influence on regional development, banks—

particularly regional development banks (RDBs) in Indonesia—have increasingly attracted scholarly attention. These institutions operate under mandates that restrict their operations to specific geographic jurisdictions, typically within certain provinces or districts. This spatial limitation has a profound effect on their lending behaviour, risk exposure, and responsiveness to local economic conditions (Jusni et al., 2019; 2022). Accordingly, a deeper understanding of their credit allocation practices is essential for informing policies aimed at enhancing regional financial inclusion and resilience.

In line with the broader banking industry, RDBs in Indonesia offer three core categories of credit: consumer loans, working capital loans, and investment loans. This study center specifically on the decision-making processes related to working capital loan provision. Although such loans are vital for sustaining the short-term liquidity needs of businesses, they are relatively underutilized by many regional banks. This cautious approach stems largely from the fact that working capital loans are commonly extended to micro, small, and medium enterprises (MSMEs)—a segment that is often characterized by significant information asymmetry. Many MSMEs lack adequate credit histories, reliable financial documentation, and sufficient collateral, thereby complicating banks' risk assessment procedures. Consequently, in the absence of targeted financial instruments and supportive institutional frameworks, RDBs often take a conservative stance in extending working capital loans.

Despite the extensive literature on bank lending, most existing studies take an aggregated view, examining loan distribution across categories without isolating the unique characteristics and developmental potential of working capital loans. This generalized perspective overlooks the strategic role of working capital lending in promoting regional economic resilience, particularly through support for MSMEs. As working capital loans directly address operational financing gaps in small-scale enterprises, they hold critical significance in stimulating local productivity, job creation, and income generation. Therefore, this study positions working capital loans as a focal point to better understand their underlying determinants and implications in the regional banking landscape.

The relevance of RDBs in this context is particularly pronounced. These institutions, mandated to serve geographically constrained areas, are often tasked with advancing inclusive economic growth in underserved regions. Despite limitations in accessing large-scale funding sources, RDBs possess operational advantages in reaching grassroots-level borrowers due to their extensive branch networks across districts. However, their limited liquidity—stemming from narrower depositor bases and restricted wholesale funding access—necessitates a differentiated approach to credit allocation, often focused on niche borrower segments and short-term financing consumers (Santos and Winton, 2019) (Mkhaiber and Werner, 2021). While much of the literature examines the lending behaviour of national banks, there remains a critical gap in understanding how RDBs make lending decisions under these structural and operational constraints.

Furthermore, this study contributes to the underexplored intersection between investment dynamics and bank credit allocation. Previous research frequently treats investment as a single macroeconomic indicator, neglecting the heterogeneity between domestic investment (DI) and foreign direct investment (FDI) (Fazaaloh, 2024). At the provincial level, the interaction between DI and FDI can significantly influence credit demand, perceived risk, and regional financing strategies. Certain forms of investment may generate crowding-in effects—where productive activities in one sector trigger broader demand for credit across complementary industries—thus creating a multiplier effect on the local economy (Gökçeli et al., 2022) (Nguyen et al., 2021).

Understanding this dynamic is essential for aligning credit disbursement with region-specific development trajectories.

In response to these gaps, this study examines the impact of regional investments (both DI and FDI), regional fiscal revenues, and provincial-level economic growth on the allocation of working capital loans by RDBs in Indonesia. Regional fiscal capacity is assessed through two main components: intergovernmental balancing funds and locally generated income. Balancing funds consist of General Allocation Funds (*Dana Alokasi Umum*, or DAU), which aim to reduce interregional disparities by enhancing basic fiscal capacity, and Special Allocation Funds (*Dana Alokasi Khusus*, or DAK), which are earmarked for targeted sectors such as infrastructure, education, and health. Meanwhile, locally generated income—comprising regional taxes and service retributions—reflects the extent of local government autonomy and administrative capability in mobilizing financial resources. By integrating these economic and institutional variables, the study provides a nuanced perspective on the determinants of working capital loan decisions at the subnational level, contributing both theoretically and empirically to the discourse on regional finance and development.

2. LITERATURE REVIEW

This study explores the lending practices of Regional Development Banks (RDBs) in Indonesia, with a particular focus on the allocation of working capital loans. The investigation centers on how these lending decisions are influenced by three interrelated regional-level determinants: investment flows, provincial government revenue streams, and subnational economic performance. Understanding the interplay among these variables is particularly pertinent given that RDBs operate within territorially constrained mandates and are uniquely positioned to support local economic development across Indonesia's diverse provinces.

Within the broader financial sector, the function of intermediation remains foundational. Banks serve as conduits, channeling liquidity from surplus economic agents—such as households and institutional depositors—toward units with capital deficiencies. While this intermediary function stabilizes financial systems, it also generates the primary revenue stream for most banks, with lending contributing a dominant share of total income relative to non-credit services (Birhanu et al., 2021).

From a structural perspective, lending products offered by banks are broadly categorized into consumer credit, designed to finance individual consumption, and productive credit, which supports income-generating activities. Productive credit is further classified into working capital loans, which facilitate short-term operational liquidity, and investment loans, intended for long-term asset acquisition. This study focuses on working capital loans due to their pivotal role in sustaining business continuity—particularly among micro, small, and medium-sized enterprises (MSMEs), which represent a vital segment of Indonesia's local economies.

The strategic importance of working capital loans has been reinforced by national policies that encourage increased MSME

financing, with targets set to raise MSME credit to 30% of total banking portfolios. This objective underscores the perceived developmental impact of such loans in fostering inclusive growth, enterprise scalability, and job creation.

Despite these policy drivers, RDBs—similar to commercial banks—often exhibit risk-averse tendencies when considering working capital financing. This cautious posture is largely attributable to the inherent risks associated with MSME borrowers (Bakhtiari et al., 2020). A primary concern is the issue of information asymmetry, where banks often lack access to reliable financial data such as audited statements or formal credit histories (Mkhaiber and Werner, 2021). In such circumstances, lending decisions must rely heavily on qualitative assessments, including borrower interviews and informal business evaluations, thereby heightening exposure to adverse selection and moral hazard.

A further constraint is the limited financial capacity of MSMEs to service debt obligations consistently. These enterprises often operate with volatile or insufficient cash flows (Beck and Demirguc-Kunt, 2006) and may lack the financial literacy required to distinguish between operational and capital expenditure needs—especially when seeking bundled loans for both purposes (Fatoki and Asah, 2011). These limitations complicate risk assessments and increase the likelihood of repayment shortfalls.

Additionally, behavioural risks exacerbate credit concerns. In some cases, MSME borrowers—particularly in informal sectors—perceive bank loans as *de facto* government assistance, weakening their incentive to repay. This misconception is reinforced in regions with low financial literacy or histories of debt relief, resulting in moral hazard. Collateral issues also persist: MSMEs frequently provide guarantees that are either undervalued or illiquid, such as outdated machinery or land with uncertain legal status, which impairs the bank's recovery prospects in the event of default (Beck and Demirguc-Kunt, 2006; de la Torre et al., 2010).

Given these operational complexities, the analysis of working capital lending is best situated within established theoretical frameworks. Two particularly relevant approaches are financial intermediation theory and loan portfolio theory.

The former conceptualizes banks as specialized entities that reduce information asymmetries, facilitate efficient capital allocation, and manage borrower risk. By leveraging both hard (e.g., documents, financials) and soft (e.g., behavioral insights) information, banks improve loan screening, reduce transactional frictions, and limit credit misallocation. Their capacity to customize loan terms—including interest rates, tenors, and collateral structures—further supports prudent credit expansion. Advances in fintech, including AI-based credit scoring and mobile lending, have enhanced this risk-calibration process, expanding financial access without compromising institutional safeguards.

In parallel, loan portfolio theory provides a strategic lens for managing credit exposure. It posits that diversification across borrower types, sectors, and geographic regions mitigates systemic risk and enhances portfolio performance (Thomas and Bywaters, 2021). Implementation of this principle involves

developing risk-mapping tools to classify loan exposures by industry volatility, location-specific risks, and borrower tenors (BIS Bank for International Settlements, 2006). Banks then set sectoral or regional exposure limits, adjusting allocations based on portfolio performance indicators such as non-performing loan (NPL) ratios, return on assets (ROA), and loan-to-deposit ratios (LDR). These tools support a responsive, data-informed approach to credit management.

One of the most salient contextual factors affecting RDB lending behavior is the fiscal capacity of provincial governments. In Indonesia's decentralized framework, provincial revenues are composed of two primary sources: central government transfers—namely, the General Allocation Fund (DAU) and Special Allocation Fund (DAK)—and regionally generated income, or *Pendapatan Asli Daerah* (PAD). The DAU seeks to equalize interregional fiscal capacity by redistributing central resources to finance basic public services, while the DAK is earmarked for development projects aligned with national priorities, such as infrastructure and public facilities (Apriliani and Khoirunurrofik, 2020). These transfers are critical not only for enabling local expenditure but also for signaling regional creditworthiness to financial institutions.

PAD, on the other hand, reflects a province's fiscal independence and administrative efficiency. Comprising revenues from local taxes, service charges, asset returns, and other regionally authorized sources, PAD serves as a key indicator of regional financial health. A higher PAD-to-total revenue ratio is generally associated with better governance and lower reliance on central support. For RDBs, provinces with strong PAD may represent more favorable lending environments due to greater budget stability and a stronger local economic base (Rahmawati and Fajar, 2017).

Another influential determinant is the investment climate at the provincial level, particularly in terms of domestic and foreign capital flows. Domestic investment (PMDN) often exhibits a closer alignment with regional economic priorities and greater integration with local supply chains. Domestic investors tend to be more attuned to regional market conditions, cultural norms, and administrative processes, enabling them to adapt more effectively and sustainably within provincial economies (Nguyen et al., 2021). This embeddedness facilitates labor absorption, strengthens MSME participation, and increases demand for financial services from regional banks (Ashraf et al., 2022; Martínez and Rodríguez, 2021).

In contrast, foreign direct investment (FDI) tends to be capital-intensive, sector-specific, and concentrated in urban or industrial hubs such as Jakarta, Batam, and Surabaya. FDI often operates through global supply chains and in sectors with limited regional economic linkages, such as mining or property (Syarifuddin and Setiawan, 2022). Moreover, FDI is more susceptible to external shocks and political uncertainty, which limits its impact on regional credit markets (Koçak and Barış-Tüzemen, 2022; Mkhaiber and Werner, 2021). During the COVID-19 pandemic, for instance, FDI projects experienced sharp declines, delays, and cancellations, whereas domestic investment proved more resilient due to its proximity to essential sectors and community needs (Desdiani

et al., 2022).

Given these patterns, domestic investment appears to exert a more consistent and pronounced influence on local lending dynamics. Regions with vibrant domestic capital flows often exhibit higher credit demand and lower lending risk, providing RDBs with greater confidence to expand loan portfolios. Consequently, policy strategies should distinguish between the two investment types. Domestic investment promotion may benefit from fiscal incentives, regulatory simplification, and MSME infrastructure development, while FDI attraction should be targeted toward sectors with higher regional absorption potential—such as agribusiness, tourism, and labor-intensive manufacturing.

To contextualize the relationship between working capital loan disbursement and the aforementioned regional determinants, it is essential to frame these linkages within the conceptual literature. The allocation of working capital loans by regional development banks is not solely a function of borrower characteristics or bank-level risk management. Instead, macro-institutional variables—particularly regional income, regional investment, and regional economic growth—provide critical signals that inform banks' credit decisions and shape their portfolio distribution strategies.

First, regional income—particularly revenues generated through locally sourced taxes and levies (PAD)—plays a pivotal signaling role. Higher regional income levels reflect enhanced fiscal autonomy and institutional maturity, which, in turn, are perceived by banks as proxies for regional financial stability and governance capacity. According to fiscal decentralization theory, regions with robust PAD are more capable of undertaking infrastructure and service provision independently, reducing reliance on central transfers and enhancing credit absorption capacity. Empirically, this financial independence may lower the risk premium applied by RDBs to loan applicants from such regions, making MSME borrowers in high-PAD provinces more bankable due to the perceived systemic stability of their local economy.

Second, the intensity and quality of regional investment—especially domestic investment (PMDN)—are strongly correlated with local credit demand and the financial intermediation function of regional banks. Investment-led growth theory posits that increases in productive investment stimulate real sector activity, which in turn generates higher liquidity requirements for enterprises operating within local value chains. This relationship is particularly pronounced in regions where investment targets labor-intensive sectors such as trade, agribusiness, and light manufacturing, all of which typically rely on short-term working capital financing to manage inventory cycles, production inputs, and wage payments. Hence, a dynamic domestic investment environment acts as both a driver of credit demand and a mitigator of credit risk, fostering a conducive ecosystem for loan expansion by RDBs.

Third, the trajectory of regional economic growth provides another macroeconomic anchor for working capital lending decisions. The endogenous growth literature suggests that sustained subnational

economic expansion—reflected through rising gross regional domestic product (GRDP)—stimulates enterprise formation, consumption, and private sector investment, all of which increase the transactional base for local banks. In this context, regional economic growth not only heightens demand for operational financing but also enhances the repayment capacity of borrowers, thereby improving the risk-return calculus for banks. Moreover, positive growth trajectories often coincide with improvements in infrastructure, regulatory environments, and market access—all of which contribute to strengthening financial intermediation at the provincial level.

Together, these three dimensions—fiscal income, investment flows, and economic expansion—form the structural foundations upon which RDBs assess regional creditworthiness and determine lending strategies. Their interplay provides both the demand-side stimulus and the risk-calibrating information necessary for banks to expand working capital lending without compromising asset quality.

3. RESEARCH METHODS

The study conducts a quantitative research study with the use of Ordinary Least Square Regression (OLS) using panel data. Two group relationships are developed to affect working loans granted by regional development banks within Indonesia, which are investment and local revenue. The variables of investment funds are domestic investment (X_1) and foreign direct investment (X_2). Local revenue variables are general allocation funds (X_3), Special Allocation Funds (X_4), while regional incomes at provincial level are Local Retribution at the provincial level (X_5), and Local Taxes at the provincial level (X_6), Proceeds from Separated Regional Wealth Management at the provincial level (X_7), and Economic Growth at the provincial level (X_8).

The regression formula is:

$$\hat{Y}_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \epsilon \quad (1)$$

Where \hat{Y}_i denotes the dependent variable of investment loan granted by Regional Development Banks, ϵ is the random error component, β_0 is a constant parameter, and $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, \beta_7, \beta_8$ are the regression coefficient associated with $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8$ respectively.

The variable of X_1 and X_2 are regional investments comprising of domestic and foreign direct investment at the provincial level which are calculated using the following formula:

$$\text{Domestic Investments} = \frac{\text{Domestic Investments}}{\sum \text{Investment}} \quad (2)$$

$$\text{Foreign Direct Investments} = \frac{\text{Foreign Direct Investment}}{\sum \text{Investments}} \quad (3)$$

The variable of X_3 and X_4 are funds allocation from central government to regional government. Those funds are general

allocation funds (DAU) and special allocation funds (DAK) at the provincial level. The formula for both allocation funds are:

$$\text{General Allocation Funds} = \frac{\text{General Allocation Funds}}{\sum \text{total revenues}} \quad (4)$$

$$\text{Special Allocation Funds} = \frac{\text{Special Allocation Funds}}{\sum \text{total revenues}} \quad (5)$$

For other three variables, they are X_5 , X_6 and X_7 that are revenue generated at the provincial level. For the purpose of the study, three revenues are examined which are Local Retribution, Local Taxes, and Proceeds from the Management of Separated Regional Assets (PMSRA) at the provincial level. The formula are:

$$\text{Local retributions} = \frac{\text{local retribution}}{\sum \text{total revenues}} \quad (7)$$

$$\text{Local taxes} = \frac{\text{local taxes}}{\sum \text{total revenues}} \quad (8)$$

$$\text{PMSRA} = \frac{\text{local taxes}}{\sum \text{total revenues}} \quad (9)$$

The rest is the variable of X_8 which is Economic Growth in the provincial level.

$$\text{Economic Growth} = \frac{PDRB_t - PDRB_{t-1}}{PDRB_{t-1}} \quad (10)$$

The study examines sixteen samples of regional development banks operating in Indonesia from the beginning of 2013-2021. Loan investment data was collected from audited financial reports from sixteen regional development banks in Indonesia beginning from 2013 to 2023. Those banks are SulSelbar, SulutGo, Sulteng, Sultra, Papua, Maluku, NTT, Kaltimara, Kalteng, Kalsel, Kalbar, Sumut, Bengkulu, Jambi, Lampung, Nagari. Investment data both domestic and foreign investments collected from Central Statistics Agency also from 2013 to 2023, while foreign investment is using data from 2013 until 2021. Local revenue data are taken from the Financial Statistics of Financial Governments. This study does not consider Java Island as it has its uniqueness of regional revenue, especially for data general allocation funds and special allocation funds (Setyowati et al., 2020).

To evaluate efficient coefficient of regression result, the study applied classical assumptions. The use of PP plot for normality

assumption using Kolmogorov-Smirnov, multicollinearity with Tolerance and Variance Inflation Factor (VIF), heteroscedasticity with scatter plot, and autocorrelation using Durbin-Watson.

4. DATA AND FINDINGS

Concerning descriptive statistics in Table 1, the study examines eight main variables which are domestic investment at the provincial level (X_1), Foreign Direct Investment at the provincial level (X_2), general allocation funds at the provincial level (X_3), special allocation funds at the provincial level (X_4), local retributions at the provincial level (X_5), local taxes at the provincial level (X_6), local taxes at the provincial level (X_6), Proceeds from the Management of Separated Regional Assets (PMSRA) (X_7) at the provincial level, and Economic Growth (X_8) at the provincial level. With regards to the mean, the variable of Domestic Investment (X_1) is the lowest score of others and the variable of Local Taxes (X_6) is the highest score. For Standard deviation, the lowest score is the variable of Proceeds from Management of Separated Regional Assets (X_7) with the score of 0.009362967 and the highest score is the variable of General Allocation Funds (X_3) with score of 0.134894052.

This study employs a multiple regression approach using the Ordinary Least Squares (OLS) method. To ensure the robustness of the model, several classical linear regression assumptions were tested, including normality, multicollinearity, linearity, heteroscedasticity, and autocorrelation. To evaluate the normality assumption, this study utilizes the Kolmogorov-Smirnov test, applying a significance threshold of 0.05. The test result yields a significance value of 0.200, which exceeds the cutoff point, indicating that the data do not significantly depart from a normal distribution. Multicollinearity was assessed using the Variance Inflation Factor (VIF) and tolerance levels. The results indicate no evidence of multicollinearity, as all variables recorded VIF values below 10 and tolerance levels above 0.1. The highest tolerance value was observed in the special allocation fund (DAK) at 0.978, while the lowest was associated with the general allocation fund (DAU) which is 0.336. Conversely, DAU exhibited the highest VIF which is 2.977, and DAK the lowest which is 1.023. To test for heteroscedasticity, a residual scatterplot was examined. The pattern showed a random distribution without any discernible structure, suggesting homoscedasticity in the data. Lastly, the Durbin-Watson (DW) statistic was used to detect autocorrelation. The DW value of 2.130 falls within the acceptable range ($1.896 < DW < 2.1504$),

Table 1: Descriptive statistics of main variables

Variables	Min	Max	Mean	Standard Deviation
Working Capital Loan (\hat{Y})	0.0025276	0.363995	0.14009633	0.087702009
Domestic Investment (X_1)	0.0000231	0.0852979	0.017965382	0.0182017498
Foreign Direct Investment (X_2)	0.0003459	0.1688748	0.026087212	0.0312145587
General Allocation Funds (X_3)	0.0047745	0.583725	0.28057638	0.134894052
Special Allocation Funds (X_4)	0.00069	0.43964	0.1583596	0.12618844
Local Retribution (X_5)	0.000838	0.079522	0.00868919	0.012972816
Local Taxes (X_6)	0.031670	0.634155	0.32665561	0.134616415
Proceeds from Management of Separated Regional Assets (X_7)	0.000233	0.079261	0.013334319	0.009362967
Regional Economic Growth (X_8)	-0.177750	0.188300	0.02309000	0.032476977

Sources: Author's elaboration

Table 2: Statistical results of OLS regression

Variables	Regression model								
n=180	1	2	3	4	5	6	7	8	9
Constant	0.112***	0.370***	0.089***	0.153***	0.123***	0.099***	0.255***	0.373***	0.350***
Domestic Investment (X_1)	0.636***				0.586***				0.208
Regional Foreign Direct Investment (X_2)	0.185				0.223				0.150
General Allocation Funds (X_3)		-0.393***					-0.392***	-0.574***	-0.509***
Special Allocation Funds (X_4)		-0.030					-0.029	-0.047	-0.053
Local Retribution (X_5)			-0.976**			-0.793*		0.223	0.217
Local Taxes (X_6)			0.067			0.061		-0.316***	-0.342***
PMSRA (X_7)			2.812***			2.702***		2.469***	2.747***
Local Economic Growth (X_8)				-0.554***	-0.471**	-0.352*	-0.011	0.161	0.096
Summary Statistics									
F	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000
R ² Adjusted	0.157	0.362	0.134	0.035	0.183	0.146	0.356	0.488	0.498

Significant at $t < 0.10$, **Significant at $t < 0.05$, ***Significant at $t < 0.01$ **Table 3: Hypothetical testing**

Hypothesis	Decisions
H ₁ Local investment positively and significantly affects working capital loan granted by regional development banks operating in Indonesia	Rejected
H ₂ Foreign investment positively and significantly affects working capital loan granted by regional development banks operating in Indonesia	Rejected
H ₃ General allocation funds positively and significantly affect working capital loan granted by regional development banks operating in Indonesia	Rejected
H ₄ Special allocation funds positively and significantly affect working capital loan granted by regional development banks operating in Indonesia	Rejected
H ₅ Local retribution positively and significantly affects working capital loan granted by regional development banks operating in Indonesia	Rejected
H ₆ Local taxes positively and significantly affect working capital loan granted by regional development banks operating in Indonesia	Rejected
H ₇ Proceeds from the Management of Separated Regional Assets positively and significantly affect working capital loan granted by regional development banks operating in Indonesia	Accepted
H ₈ Local economic growth positively and significantly affects working capital loan granted by regional development banks operating in Indonesia	Rejected

indicating the absence of serial correlation among the residuals.

Multivariate regression output showed nine model results (Table 2) to examine a possibly efficient model of relationships. Eight independent variables are tested in the models to show how each group is related to each other and how they affect the working capital loan granted by RDBs. Model 1 explores the influence of provincial-level investment flows—both domestic and foreign—on the allocation of working capital loans by Regional Development Banks (RDBs). Models 2 and 3 investigate the effect of regional income on loan distribution decisions, distinguishing between transfers received through balancing funds (Model 2) and revenues generated from local sources (Model 3). Model 4 isolates the impact of provincial economic growth on loan

outcomes, independent of other explanatory variables. In Models 6 through 8, the interaction effects between economic growth and each group of independent variables—investment, fiscal transfers, and regional revenue—are examined. Lastly, Model 9 integrates all eight variables to assess their combined influence on RDBs' working capital lending behavior at each group's effect on the dependent variables.

Building on the results across all estimated models, the analysis reveals that certain variables exhibit different levels of statistical significance depending on their interaction context. For instance, domestic investment (X_1) in Model 1 and local retribution (X_5) in Model 3 show a positive and statistically significant relationship with working capital lending when assessed independently. However, their significance diminishes when these variables are examined in interaction with other groups, indicating potential moderation effects. Additionally, the variable representing money supply demonstrates a positive but insignificant effect within its own variable group. Interestingly, this effect becomes both positive and statistically significant when it interacts with variables from different categories, such as local taxes (X_6). Another notable finding concerns economic growth, which has a negative and significant impact on loan allocation when tested in isolation (Model 4), but becomes positive and statistically insignificant once interaction with other explanatory variables is introduced.

Among all models evaluated, Model 9 emerges as the most robust, as indicated by the highest coefficient of determination and a statistically significant model fit, with a P-value of 0.000 ($P < 0.05$). This comprehensive model captures the collective influence of all variables examined. The results suggest that provincial-level investments—both domestic (X_1) and foreign direct investment (X_2)—exert a positive influence on working capital loan decisions by Regional Development Banks, although the effects are statistically insignificant, with coefficients of 0.208 and 0.150, respectively. Regarding fiscal transfers from the central government, the General Allocation Fund (DAU) demonstrates a negative and significant relationship with credit allocation ($\beta = -0.509$), while the Special Allocation Fund (DAK) has a negative but insignificant effect ($\beta = -0.053$). Regional own-source revenues present mixed outcomes: local retribution (X_5) shows a positive yet insignificant impact ($\beta = 0.217$), whereas

local taxes (X_6) reveal a significant negative relationship at the 1% significance level ($\beta = -0.342$). In contrast, proceeds from the management of separated regional assets (X_7) contribute positively and significantly to working capital lending, with a strong coefficient of 2.747 ($P < 0.01$). Finally, provincial-level economic growth is positively associated with loan decisions, though the effect remains statistically insignificant ($\beta = 0.0906$).

When evaluating the relative contribution of each variable through standardized coefficient scores, the General Allocation Fund (DAU) exerts the most substantial influence, accounting for 78.3% of the model's explanatory power. This is followed by local taxes (52.5%) and proceeds from the management of separated regional assets (29.3%). Domestic investment contributes 11.3%, regional foreign investment 7.8%, and the Special Allocation Fund 7.7%. Lower levels of influence are observed for foreign direct investment (7.3%), provincial economic growth (3.6%), and local retribution (3.2%). Hypothesis testing based on three critical alpha levels (1%, 5%, and 10%) reveals that only the proceeds from separated regional assets (X_7) are statistically significant at the 1% level, while the remaining variables do not meet the required thresholds for significance (Table 3).

5. DISCUSSION

This study investigates the extent to which domestic investment, foreign direct investment (FDI), general allocation funds (DAU), special allocation funds (DAK), local retributions, local taxes, proceeds from the management of separated regional assets, and provincial economic growth influence working capital loan decisions by Regional Development Banks (RDBs) in Indonesia. The results indicate that domestic investment exerts a positive, albeit statistically insignificant, influence on the allocation of working capital loans. This finding is consistent with earlier studies suggesting that while domestic capital inflows often signify regional economic activity, their impact on short-term credit distribution tends to be limited by the nature of the projects, which are often geared toward long-term infrastructure development rather than immediate financing needs (Beck and Demirgüç-Kunt, 2006; Berger and Udell, 2006; de la Torre et al., 2010). In a similar vein, FDI also demonstrates a positive but insignificant association with credit distribution. This may be explained by the fact that FDI is commonly directed toward large-scale enterprises or special economic zones that typically rely on foreign or syndicated financing channels (Alfaro et al., 2004). Moreover, the indirect benefits of FDI to domestic micro, small, and medium-sized enterprises (MSMEs)—which represent the main recipients of working capital credit—may not be immediately observable in provincial lending behavior (Ghosh et al., 2022). The limited volume of both domestic and foreign investment in provinces outside Java, where MSME density is lower and economic activity is often concentrated in smaller urban centers, may further diminish these variables' direct impact on credit allocation.

The DAU variable shows a statistically significant negative relationship with working capital lending. This outcome suggests that regions heavily reliant on unconditional fiscal transfers from the central government may signal weaker fiscal autonomy and

suboptimal financial management capacity, thereby raising the perceived risk among lenders (Brodjonegoro and Martinez-Vazquez, 2004; Lewis, 2005). Since most DAU allocations are absorbed by operational expenditures rather than capital investment, their ability to stimulate local economic activity and enhance creditworthiness is limited (Smoke, 2015). In contrast, the DAK displays a negative but statistically insignificant effect. This is likely due to its nature as earmarked funding designated for specific sectors such as education and infrastructure, which may not directly align with the short-term financing requirements of the private sector (Dewi et al., 2018).

Regarding provincial own-source revenues, the results reveal varied impacts. Local retribution presents a positive but insignificant association with credit allocation, which may be attributed to its narrow revenue base and inefficient collection mechanisms. Eniola and Entebang (2015) emphasize that service-based fees often suffer from administrative shortcomings, thereby reducing their role as credible fiscal signals in bank credit assessments. Conversely, local taxes exhibit a negative and statistically significant relationship with lending outcomes. Elevated tax burdens may constrain private sector growth, depress disposable income, and increase the cost of doing business—conditions that erode borrower creditworthiness (Fatoki and Asah, 2011). On the other hand, proceeds from the management of separated regional assets demonstrate a strong and significant positive influence on credit allocation. This suggests that regions capable of generating revenue from commercially managed public assets are perceived by lenders as more financially autonomous and institutionally stable. As (Cadenas et al. (2021) note, effective asset management and transparent governance structures serve as positive indicators of fiscal credibility, thereby enhancing the bankability of such regions.

Lastly, the analysis finds that provincial economic growth, while positive in coefficient, has no statistically significant effect on working capital loan decisions. One plausible explanation is the uneven pace of post-pandemic recovery across Indonesia—particularly outside Java—where many provinces either experienced sluggish growth in 2020 or continued to contract into 2021 (Olivia et al., 2020). Furthermore, regional banks have shown a tendency to prioritize lower-risk consumer lending over working capital credit, which is typically sought by MSMEs and is perceived as riskier due to limited collateral and irregular cash flows (Petrovito and Pozzolo, 2021; Wangmo and Islam, 2021). It is also worth noting that regional GDP figures represent aggregate macroeconomic indicators, which may not adequately reflect borrower-specific factors such as liquidity, repayment capacity, or asset quality—factors that banks consider more relevant when evaluating loan applications decisions (Berger and Udell, 2006).

6. CONCLUSION

This study provides empirical evidence on the relationship between regional fiscal variables and credit allocation behavior among Regional Development Banks in Indonesia. The results confirm that institutional and fiscal characteristics—particularly dependence on central transfers (DAU) and the capacity to generate income from separated regional assets—significantly

influence working capital loan decisions. These findings suggest that regions with higher financial autonomy and effective asset management are more likely to attract productive financing, while heavy reliance on unconditional fiscal transfers may reduce perceived creditworthiness.

The absence of significant effects from macroeconomic indicators such as economic growth and investment inflows indicates that structural and governance-related variables are more salient in shaping subnational credit behavior. This has important policy implications for developing economies pursuing fiscal decentralization. Enhancing the productivity of local assets, diversifying revenue streams, and strengthening institutional frameworks are key to creating resilient and creditworthy regional economies. Future research could extend this analysis to examine the determinants of consumer credit disbursement or explore the relationship between regional credit allocation and sector-specific investment, particularly in infrastructure, energy, and public service delivery—areas that are critical to long-term economic sustainability.

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