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The Implementation of the Islamic Financial Institution Qanun and Economic Growth in Aceh Province

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ABSTRACT

This study aims to analyze economic growth during the implementation of Aceh Qanun No. 11 of 2018 concerning Islamic Financial Institutions by examining the roles of investment and poverty. The study employs a quantitative approach using panel data from 56 regencies and municipalities in Aceh and North Sumatra during the 2022–2024 period. Panel data regression is applied, with model selection based on the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM), followed by the Hausman and Lagrange Multiplier (LM) tests. The results indicate that the Fixed Effect Model (FEM) is the most appropriate model. Estimation using cluster-robust standard errors shows that investment has a positive but statistically insignificant effect on economic growth, while poverty has a negative and statistically significant effect. These findings suggest that investment has not yet contributed significantly to regional economic growth during the study period, whereas poverty reduction remains an important factor in promoting economic growth. The study highlights the importance of improving investment quality and strengthening poverty alleviation policies to support sustainable regional economic development.

Keywords: *Islamic financial institution qanun; economic growth; investmen; poverty; panel data regression*

INTRODUCTION

Economic growth is widely recognized as one of the most important indicators of regional economic performance because it reflects an economy's ability to expand productive capacity, generate employment opportunities, increase income, and improve the overall welfare of society. Sustainable economic growth not only signifies an increase in output but also represents the capacity of an economy to utilize available resources efficiently in order to support long-term development and improve living standards (Todaro & Smith, 2021; Apridar, Nasir, & Jamal, 2019). In recent decades, the concept of economic growth has evolved beyond the traditional emphasis on capital accumulation toward a broader perspective that highlights productivity improvement, technological innovation, knowledge creation, and institutional quality as key drivers of sustainable development. These factors enhance production efficiency, strengthen regional competitiveness, and enable economies to adapt to structural changes in an increasingly dynamic economic environment (Aghion & Jaravel, 2015; Aghion, Akcigit, & Howitt, 2015). Consequently, promoting sustainable economic growth has become one of the primary objectives of development policy, particularly in developing countries where economic expansion is expected to support poverty reduction, improve social welfare, and create more inclusive regional development.

Despite Indonesia's relatively stable macroeconomic performance in recent years, regional economic development remains uneven across provinces. Differences in investment realization, economic structure, infrastructure availability, and socioeconomic conditions have resulted in varying levels of economic growth among regions, indicating that development outcomes are strongly influenced by local characteristics and policy implementation (World

Bank, 2024; Asian Development Bank, 2024). These disparities are also evident across provinces on Sumatra Island, where differences in productive capacity and poverty levels continue to shape regional economic performance. Aceh Province represents a distinctive case because, in addition to facing development challenges similar to those of other provinces, it also operates under a special autonomy framework that provides greater authority in regulating various aspects of regional governance, including the implementation of Islamic economic policies. This distinctive institutional setting makes Aceh an important case for examining regional economic growth within the context of implementing the Islamic Financial Institution (LKS) Qanun.Despite the steady improvement in Indonesia's macroeconomic performance over the past decade, significant disparities in economic growth remain across regions. Differences in investment capacity, industrial structure, institutional quality, and regional policies have contributed to unequal economic performance among provinces. Nguyen and Su (2018) argue that regional economic growth is largely determined by the interaction between investment, institutional effectiveness, and local economic capacity. Similarly, Benos and Zotou (2014) found that regional development policies are more effective when supported by productive investment and strong institutional governance, enabling regions to achieve more sustainable economic growth.

Indonesia has experienced relatively stable economic growth over the past few years. However, the pace of regional development remains uneven due to differences in investment, economic structure, natural resource endowments, and socioeconomic conditions across provinces. Such disparities indicate that regional economic performance is influenced not only by macroeconomic conditions but also by local institutional and policy environments (World Bank, 2024; Asian Development Bank, 2024). This issue is particularly relevant in Aceh and North Sumatra, two neighboring provinces on Sumatra Island that share geographical proximity but differ in their institutional frameworks. While North Sumatra follows the national financial system, Aceh has implemented Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions, creating a distinctive policy environment that may shape regional economic performance during the post-implementation period.

Following the implementation of the Islamic Financial Institution Qanun, Aceh continued to record positive economic growth, with growth reaching 4.21% in 2022, 4.23% in 2023, and 4.66% in 2024. Nevertheless, economic development in Aceh continues to face several structural challenges, particularly in attracting productive investment and reducing poverty across districts and municipalities. In contrast, North Sumatra possesses a more diversified economic structure and operates under the national financial system without implementing a comprehensive Islamic financial regulation similar to Aceh. These differences provide an important context for comparing regional economic performance between the two provinces during the post-implementation period of the Qanun (BPS, 2025).

The enactment of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions represents one of the most significant institutional reforms in Aceh's financial sector. The regulation requires financial institutions operating in Aceh to conduct their activities in accordance with Sharia principles as part of the province's special autonomy framework. Rather than serving as a direct determinant of economic growth, the Qanun establishes a distinctive institutional environment that differentiates Aceh from other provinces in Indonesia, including North Sumatra. Consequently, examining economic growth in Aceh alongside a neighboring province that does not implement a similar policy provides an opportunity to better understand regional economic performance under different institutional settings.

The relationship between Islamic finance and economic growth has attracted increasing attention in the development economics literature. Islamic financial institutions are expected to support economic development by promoting risk-sharing, facilitating productive investment, improving financial inclusion, and encouraging the allocation of funds to the real sector in accordance with Sharia principles (Abduh & Azmi Omar, 2012; Imam & Kpodar, 2016). Empirical evidence, however, remains inconclusive. Several studies report that the development of Islamic finance contributes positively to economic growth through financial intermediation and capital mobilization, while others find that its contribution depends on institutional quality, the scale of financial development, and the socioeconomic characteristics of each region. These mixed findings suggest that the economic implications of Islamic finance are highly context-dependent and require empirical investigation under different institutional settings.

Although numerous studies have investigated the relationship between Islamic finance and economic growth, empirical evidence at the regional level remains limited, particularly in the context of Aceh following the implementation of the Islamic Financial Institution Qanun. Existing studies have primarily focused on Islamic banking performance, financial inclusion, or customer behavior, while relatively few have examined regional economic growth by comparing Aceh with a neighboring province operating under a different institutional framework. Furthermore, limited research has simultaneously analyzed the roles of investment and poverty in explaining regional economic growth during the post-implementation period of the Qanun. This gap highlights the need for further empirical evidence to better understand regional economic dynamics under different institutional settings.

This study aims to analyze the effects of investment and poverty on economic growth in Aceh and North Sumatra during the period 2022–2024, following the implementation of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions. Using district- and municipality-level panel data and a Fixed Effects regression model, the study compares regional economic performance between the two provinces while accounting for unobserved regional heterogeneity. The findings are expected to contribute to the literature on regional economic development and provide empirical evidence regarding economic growth under different institutional and policy environments, thereby offering insights for policymakers in formulating strategies to promote sustainable and inclusive regional development.

RESEARCH METHODS

Research Design

This study employed a quantitative research approach using panel data regression to examine the determinants of economic growth in Aceh and North Sumatra during the period following the implementation of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions. Panel data analysis was selected because it combines cross-sectional and time-series observations, allowing researchers to capture both regional differences and changes over time while controlling for unobservable heterogeneity across districts and municipalities (Baltagi, 2021).

The study focused on Aceh and North Sumatra because the two neighboring provinces share comparable geographical characteristics but differ in their institutional settings. Aceh has implemented the Islamic Financial Institution Qanun as part of its special autonomy framework, whereas North Sumatra continues to operate under the national financial system. This difference provides an appropriate context for comparing regional economic performance during the post-implementation period.

Data Sources

This study utilized secondary data obtained from Statistics Indonesia (Badan Pusat Statistik/BPS). The dataset consists of annual observations from districts and municipalities in Aceh and North Sumatra covering the period from 2022 to 2024. Economic growth was measured using the annual growth rate of Gross Regional Domestic Product (GRDP), while investment was measured using the realization of domestic and foreign investment. Poverty was measured as the percentage of the population living below the official poverty line. All variables were compiled from official BPS publications and regional statistical reports to ensure data consistency and reliability.

Variabels

The variabels employed in this study are presented in Table 1.

Table 1. Definition of Variabels

Variable	Symbol	Measurement	Source
Economic Growth	EG	Annual GRDP Growth (%)	BPS
Poverty	POV	Percentage of Poor Population	BPS
Investment	INV	FDI + DDI	BKPM

Economic growth serves as the dependent variable because it reflects regional economic performance. Investment and poverty are included as explanatory variables based on development economics literature, which identifies capital accumulation and poverty reduction as important determinants of regional economic growth.

Empirical Model

To examine the relationship between investment, poverty, and economic growth, this study estimated the following panel regression model:

$$\boldsymbol{EG_{it} = \beta_0 + \beta_1 INV_{it} + \beta_2 POV_{it} + \mu_i + \varepsilon_{it}}$$

Where EG_{it} represents the economic growth of district or municipality i in year t. INV_{it} denotes the total realized investment, measured as the combined value of domestic and foreign investment, while $\beta_2 POV_{it}$ refers to the percentage of the population living below the poverty line. The parameter β_0 is the intercept, whereas β_1 and β_2 represent the regression coefficients that measure the effects of investment and poverty on economic growth. The term $\mu_i$mu_iμi captures unobserved district- or municipality-specific characteristics that remain constant over time, while μ_i denotes the random error term.

Estimation Technique

Panel data regression was employed to estimate the relationship between investment, poverty, and economic growth. Three alternative panel data models, namely the Common Effect Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM), were initially considered. The Chow test was conducted to compare the Common Effect Model and the Fixed Effects Model, while the Hausman test was subsequently used to determine whether the Fixed Effects Model or the Random Effects Model was more appropriate (Wooldridge, 2020).

The estimation results indicated that the Fixed Effects Model (FEM) was the most suitable specification for the data. Accordingly, the regression analysis was estimated using the Fixed Effects approach with clustered robust standard errors to account for potential heteroscedasticity and serial correlation within districts and municipalities.

This estimation strategy improves the reliability and consistency of statistical inference in panel data analysis.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2. Descriptive Statistics

Variable		Mean	Std. dev.	Min	Max	Observations
pe	overall	4.293929	.8074274	.51	7.5	N = 168
	between		.6157633	2.92	5.456667	n = 56
	within		.5266074	1.883929	6.840595	T = 3
inv	overall	936255.3	1874059	2.7	9635330	N = 168
	between		1659166	392.4	6795977	n = 56
	within		890075.3	-3551504	5153650	T = 3
pov	overall	11.96631	4.526086	3.44	24.75	N = 168
	between		4.544004	3.5	23.41333	n = 56
	within		.2911427	11.14631	13.30298	T = 3

Source: *Processed by the author using Stata, 2026.*

Table 2 presents the descriptive statistics of the variables used in this study, covering 168 balanced panel observations from 56 districts and municipalities in Aceh and North Sumatra during the period 2022–2024. The descriptive analysis provides an overview of the characteristics and variation of the variables prior to the panel regression estimation.

The average economic growth rate reached 4.29 percent, with values ranging from 0.51 percent to 7.50 percent. The relatively low overall standard deviation (0.81) indicates that economic growth remained relatively stable across districts and municipalities during the observation period, although some regional disparities were still evident. The between variation shows differences in average economic growth across regions, while the within variation reflects relatively small year-to-year changes within each district or municipality.

Investment exhibits the largest variation among all variables included in the analysis. The average realized investment amounted to 936,255.3, with values ranging from 2.7 to 9,635,330. The large overall standard deviation (1,874,059) suggests substantial disparities in investment realization across districts and municipalities. These differences may reflect variations in regional economic potential, infrastructure availability, business opportunities, and local investment attractiveness.

Meanwhile, the average poverty rate was 11.97 percent, ranging from 3.44 percent to 24.75 percent, with an overall standard deviation of 4.53. This indicates that poverty levels varied considerably across the study areas. Such variation suggests heterogeneous socioeconomic conditions among districts and municipalities, providing sufficient cross-sectional and temporal variation for examining the relationship between investment, poverty, and regional economic growth using panel data analysis.

Overall, the descriptive statistics indicate that the variables exhibit adequate variation both across regions and over time, supporting the suitability of panel data estimation in the subsequent empirical analysis.

Comparison of Economic Growth between Aceh and North Sumatra

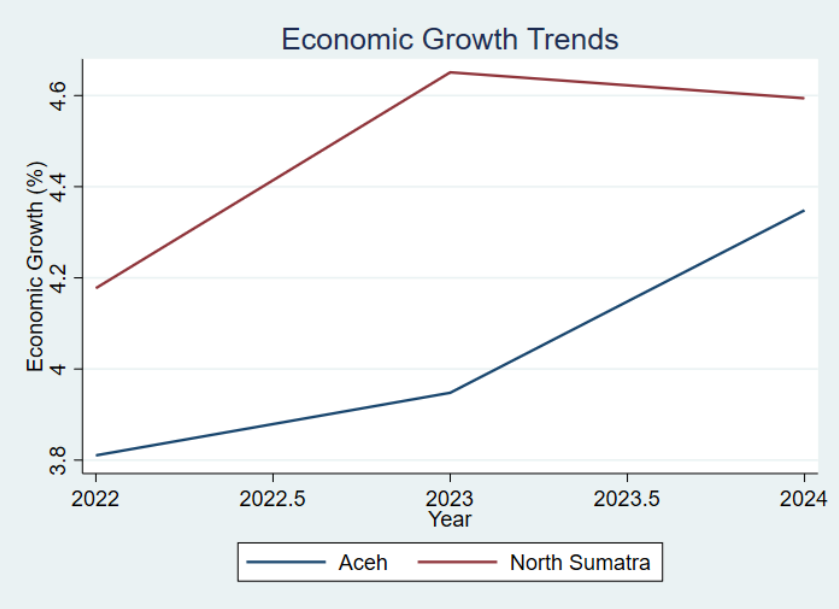

Image 1. Economic Growth Trends in Aceh and North Sumatra (2022-2024**)**

Image 1 illustrates the trend of economic growth in Aceh and North Sumatra during the period 2022–2024. The figure shows that both provinces experienced positive economic growth following the post-pandemic economic recovery, although the magnitude and pattern of growth differed across regions.

North Sumatra consistently recorded a higher economic growth rate compared to Aceh throughout the observation period. Economic growth in North Sumatra increased from approximately 4.18 percent in 2022 to 4.65 percent in 2023, before slightly declining to around 4.59 percent in 2024. This pattern indicates that North Sumatra experienced relatively strong economic recovery, supported by its larger economic structure, diversified sectors, and stronger investment capacity.

In contrast, Aceh exhibited a gradual upward trend in economic growth during the same period. Economic growth increased from approximately 3.80 percent in 2022 to 3.94 percent in 2023, and further improved to around 4.35 percent in 2024. Although Aceh recorded a lower growth level compared to North Sumatra, the increasing trend suggests continued economic recovery and improvement in regional economic performance after the pandemic period.

The differences in growth patterns between the two provinces provide an initial indication of regional heterogeneity in economic development. Aceh's economic performance during this period occurred within the institutional environment shaped by the implementation of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions, while North Sumatra continued under the national financial system. However, descriptive comparisons alone cannot determine the causal effect of the Qanun. Therefore, further panel regression analysis is conducted to examine how investment and poverty are associated with regional economic growth.

Panel Regression Results

This study estimated three alternative panel data models, namely the Common Effects Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM), to identify the most appropriate estimation approach. The estimated coefficients obtained from each model

are presented in Table 2. Subsequently, the Chow test, Hausman test, and Breusch–Pagan Lagrange Multiplier (LM) test were employed to determine the most suitable panel data specification.

Table 3. Panel Regression Results

Variables	CEM	FEM	REM
Investment	7.67E−08**	8.09E−08	7.61E−08**
	(3.07E−08)	(5.32E−08)	(3.38E−08)
Poverty	−0.0730***	−0.5302***	−0.0747***
	(0.0127)	(0.0898)	(0.0153)
Constant	5.0958***	10.5627***	5.1171***
	(0.1725)	(1.0647)	(0.2056)
Observations	168	168	168
R-squared	0.2455	0.1043	0.2455

Source: *Processed by the author using Stata, 2026.*
Notes: *Standard errors are reported in parentheses. Robust cluster standard errors are applied in the Fixed Effects Model. *** p < 0.01; ** p < 0.05.*

Table 3 presents the estimation results of the Common Effects Model (CEM), Fixed Effects Model (FEM), and Random Effects Model (REM). Across the three estimation methods, the estimated coefficients exhibit consistent signs, indicating that investment is positively associated with economic growth, whereas poverty is negatively associated with economic growth. The consistency of coefficient signs across different specifications suggests that the estimated relationships are relatively stable despite differences in panel estimation techniques.

The investment variable has a positive coefficient in all three models. Under the CEM and REM specifications, the coefficient is statistically significant at the 5 percent level, suggesting that higher investment is associated with higher regional economic growth. However, under the FEM specification, although the coefficient remains positive, it is not statistically significant. This difference implies that after controlling for unobserved time-invariant regional characteristics, the direct contribution of investment becomes weaker.

In contrast, poverty consistently exhibits a negative and statistically significant coefficient across all estimation models. The results indicate that higher poverty levels are associated with lower economic growth. The magnitude of the coefficient is largest under the Fixed Effects Model, suggesting that after controlling for unobserved regional heterogeneity, poverty exerts a stronger adverse effect on regional economic performance.

Although the estimated coefficients are generally consistent in terms of direction, the magnitude and statistical significance differ across estimation methods. Therefore, panel model specification tests are required to determine the most appropriate estimation model before drawing substantive conclusions. The results of the panel model selection tests are presented in the following section.

Panel Model Selection

Table 4. Panel Model Selection Test

Test	p-value	Preferred Model
Hausman Test	0.0051	Fixed Effects Model
Breusch–Pagan LM Test	0.0073	Random Effects Model (compared with CEM)

Source: *Processed by the author using Stata, 2026*

Table 4 presents the results of the panel model specification tests used to identify the most appropriate estimation approach. Panel data analysis requires selecting the model that best captures the characteristics of the data while accounting for potential unobserved heterogeneity across districts and municipalities.

The Hausman test produced a p-value of 0.0051, which is below the 5 percent significance level. Therefore, the null hypothesis that the Random Effects Model is appropriate is rejected, indicating that the unobserved individual effects are correlated with the explanatory variables. Consequently, the Fixed Effects Model (FEM) is considered more appropriate than the Random Effects Model for estimating the relationship between investment, poverty, and economic growth.

The Breusch–Pagan Lagrange Multiplier (LM) test generated a p-value of 0.0073, indicating that the Random Effects Model performs better than the Common Effects Model by accounting for panel-specific effects. However, because the Hausman test serves as the final criterion for selecting between the Fixed Effects Model and the Random Effects Model, the Fixed Effects Model is ultimately selected as the preferred specification.

Based on these specification tests, the subsequent interpretation focuses on the Fixed Effects Model estimated with cluster-robust standard errors. This approach provides more reliable statistical inference by accounting for potential heteroskedasticity and within-panel correlation, thereby improving the robustness of the estimated coefficients.

Regional Heterogeneity Analysis

Following the selection of the Fixed Effects Model as the preferred specification, an additional analysis was conducted to examine whether the relationships between investment, poverty, and economic growth differ across provinces. This regional heterogeneity analysis estimates the Fixed Effects Model separately for Aceh and North Sumatra, providing further insights into regional differences in the determinants of economic growth.

Table 5. Regional Heterogeneity Analysis: Fixed Effects Estimation by Province

Variables	Aceh Coefficient	p-value	North Sumatra Coefficient	p-value
Investment	6.17E−07	0.038	2.51E−08	0.211
Poverty	-0.7662	0.128	-0.4703	0.000
Constant	15.1214	0.064	9.1409	0.001
Observations	69	–	99	–
Within R^2	0.1625	–	0.3548	–

Source: *Processed by the author using Stata, 2026*
Note: *p-values are based on the Fixed Effects Model estimated with cluster-robust standard errors.*

Table 5 presents the results of the regional heterogeneity analysis using the Fixed Effects Model estimated separately for Aceh and North Sumatra. The objective of this additional analysis is to identify whether the relationships between investment, poverty,

and economic growth differ across provinces after controlling for unobserved district-level characteristics.

The estimation results reveal that the determinants of economic growth vary between the two provinces. In Aceh, investment has a positive and statistically significant relationship with economic growth ($\beta = 6.17E{-}07$; $p = 0.038$). This finding indicates that increases in investment are associated with improvements in regional economic growth. In contrast, the poverty variable has a negative coefficient ($\beta = -0.7662$) but is not statistically significant ($p = 0.128$), suggesting that variations in poverty do not significantly explain differences in economic growth among districts and municipalities in Aceh during the study period.

A different pattern is observed in North Sumatra. The investment variable has a positive coefficient ($\beta = 2.51E{-}08$), but its effect is not statistically significant ($p = 0.211$). This result indicates that, after accounting for district-specific characteristics, investment does not have a statistically measurable contribution to regional economic growth during the observation period. Conversely, poverty exhibits a negative and highly significant relationship with economic growth ($\beta = -0.4703$; $p < 0.001$), implying that higher poverty levels are associated with lower economic performance across districts and municipalities in North Sumatra.

The comparison between the two provinces suggests that the factors driving regional economic growth are not uniform. In Aceh, economic growth appears to be more responsive to investment, whereas in North Sumatra, poverty plays a more prominent role in explaining regional economic performance. These differences may reflect variations in regional economic structures, development priorities, institutional settings, and socioeconomic characteristics between the two provinces.

It is important to note that this regional heterogeneity analysis is intended to complement the main panel regression rather than to establish the causal impact of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions. Although Aceh implemented the Qanun during the study period while North Sumatra did not, the separate provincial estimations merely demonstrate that the relationships between investment, poverty, and economic growth differ under distinct regional contexts. Consequently, these findings should be interpreted as evidence of regional heterogeneity rather than as direct proof of the policy's effectiveness.

DISCUSSION

The findings of this study provide several important insights into the determinants of regional economic growth in Aceh and North Sumatra during the period 2022–2024. Overall, investment exhibits a positive relationship with economic growth, whereas poverty consistently shows a negative relationship. However, the regional heterogeneity analysis demonstrates that these relationships differ across provinces. Investment significantly promotes economic growth in Aceh but becomes statistically insignificant in North Sumatra, while poverty significantly constrains economic growth only in North Sumatra. These findings suggest that regional economic growth is influenced not only by economic variables but also by differences in regional economic structures and institutional environments.

Investment and Economic Growth

Investment has long been recognized as one of the fundamental drivers of economic growth because it expands productive capacity, increases capital accumulation, and enhances technological progress. According to the Solow Growth Model, investment contributes to long-term economic growth through the accumulation of physical capital,

while endogenous growth theory emphasizes that the effectiveness of investment depends not only on the amount of capital invested but also on improvements in human capital, technological innovation, institutional quality, and the efficiency of resource allocation. Therefore, the contribution of investment to regional economic growth is influenced by both the quantity and quality of investment as well as the institutional environment in which investment takes place.

The results of this study indicate that investment has a positive but statistically insignificant effect on economic growth in the overall panel estimation during the 2022–2024 period. These findings suggest that although increases in investment tend to stimulate regional economic growth, the realized investment during the observation period had not yet generated a statistically measurable impact across districts and municipalities in Aceh and North Sumatra. One possible explanation is that the study period represents the post-pandemic economic recovery phase, during which many investment projects were still under construction or had not yet reached the production stage. In addition, investment may have been concentrated in sectors with relatively limited short-term multiplier effects on regional output and employment, causing the economic benefits of investment to materialize only over a longer period.

The regional heterogeneity analysis, however, reveals a more nuanced relationship between investment and economic growth. While investment is statistically insignificant in the pooled estimation, it has a positive and significant effect on economic growth in Aceh but remains insignificant in North Sumatra. This finding indicates that the effectiveness of investment differs across provinces, reflecting variations in regional economic structures, investment absorption capacity, and institutional characteristics. In Aceh, investment appears to be more effectively transformed into productive economic activities capable of generating regional output, whereas economic growth in North Sumatra is likely influenced by a broader combination of structural factors beyond investment alone.

The findings for Aceh are consistent with previous empirical studies showing that investment is an important driver of regional economic development. Investment has been found to stimulate productive activities, increase production capacity, and encourage regional economic expansion (Inayati et al., 2024). Likewise, productive investment plays a crucial role in promoting long-term economic growth, particularly when supported by efficient financial systems and sound institutional quality (Pradhan et al., 2019). The consistency of these findings reinforces the argument that investment remains one of the key determinants of regional economic performance when accompanied by an enabling economic environment. Nevertheless, the insignificant effect observed in the pooled estimation suggests that the contribution of investment is not uniform across regions and depends on local economic conditions and the efficiency with which investment is allocated.

From the perspective of Islamic financial development, the findings of this study also provide important institutional implications for Aceh. The implementation of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions (LKS) transformed Aceh into the only province in Indonesia that fully implements a Sharia-compliant banking system. This institutional reform was expected to strengthen financial intermediation and expand access to Sharia-based financing for productive investment. Previous studies indicate that Islamic bank financing and investment contribute positively to economic growth, although their effects may differ between the short and long run, implying that the benefits of investment require time to be translated into productive economic activities (Nofrianto et al., 2021). Furthermore, Islamic banking intermediation has been shown to promote economic growth in Aceh by strengthening

the allocation of productive financing to the real sector and improving the linkage between the financial sector and regional economic activities (Fikri et al., 2024). These findings suggest that Islamic financial institutions can create a supportive environment for investment by facilitating the efficient allocation of capital to productive sectors.

Nevertheless, the results of the present study indicate that institutional reforms alone are insufficient to generate immediate economic growth. Although Aceh has implemented a comprehensive Islamic financial system and investment is found to significantly support regional economic growth within the province, the overall panel estimation remains statistically insignificant. This finding implies that the effectiveness of the LKS Qanun depends not only on the availability of Sharia-compliant financial institutions but also on complementary factors such as infrastructure development, human capital quality, investment efficiency, and the capacity of local businesses to utilize productive financing. Therefore, the implementation of the LKS Qanun should be viewed as an institutional foundation that supports investment and long-term economic development rather than as the sole determinant of regional economic growth.

Poverty and Economic Growth

Poverty is widely recognized as one of the major obstacles to sustainable economic growth because it reduces household purchasing power, weakens labor productivity, limits access to education and healthcare, and hinders human capital accumulation. According to endogenous growth theory, human capital is a fundamental determinant of long-term economic growth, implying that persistently high poverty levels reduce the productive capacity of the labor force and constrain regional economic development. Consequently, regions with high poverty rates generally experience lower economic productivity and slower economic expansion.

The results of this study indicate that poverty has a negative and statistically significant effect on regional economic growth during the 2022–2024 period. The findings imply that an increase in the poverty rate is associated with a decline in economic growth across districts and municipalities in Aceh and North Sumatra. This relationship confirms that poverty remains a structural challenge to regional development because households with limited income tend to have lower consumption capacity, reduced access to productive resources, and fewer opportunities to invest in education and health, thereby limiting overall economic performance.

The regional heterogeneity analysis further demonstrates that the impact of poverty differs between provinces. Poverty has a negative but statistically insignificant effect on economic growth in Aceh, whereas its effect is negative and statistically significant in North Sumatra. These findings suggest that the influence of poverty on regional economic performance depends on local socioeconomic conditions. In Aceh, economic growth may be supported by other factors, such as productive investment, government expenditure, and regional development programs, which partly offset the direct effect of poverty during the observation period. Conversely, poverty remains a more dominant constraint on economic growth in North Sumatra, indicating that improving household welfare is essential for sustaining regional economic expansion.

The findings are consistent with previous empirical studies that identify poverty as a major impediment to economic growth. (Ravallion, 2012) argues that poverty reduction enhances labor productivity, expands access to economic opportunities, and improves household welfare, thereby supporting long-term economic growth. Likewise, (Dollar & Kraay, 2002) demonstrate that lower poverty levels encourage greater participation in productive economic activities and contribute to more inclusive and sustainable economic development. In the Indonesian context, regional studies have

similarly reported that provinces with lower poverty rates generally experience stronger and more stable economic growth because higher household purchasing power stimulates domestic demand and productive investment.

From the perspective of Islamic financial development, the implementation of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions (LKS) also provides an important institutional context for regional economic development. The transformation of Aceh's financial system into a fully Sharia-compliant banking system is expected to strengthen financial inclusion by expanding access to Islamic financial services and productive financing, particularly for micro, small, and medium enterprises (MSMEs). Previous evidence indicates that the implementation of the Qanun LKS expanded access to Islamic financing, increased the number of bankable MSMEs, and encouraged business development through Sharia-compliant financing mechanisms (Jannah et al., 2024). These improvements in financial accessibility may strengthen the productive capacity of local businesses and create conditions that support broader regional economic development. Furthermore, previous studies have shown that the development of Islamic banking can support economic growth by improving financial intermediation and expanding access to productive financing. A more developed Islamic financial system encourages investment and strengthens productive economic activities, thereby contributing to long-term economic development. Although the magnitude of its impact may differ across regions depending on institutional and economic conditions, Islamic finance remains an important instrument for promoting sustainable economic growth (Caporale et al., 2018)

Nevertheless, the results of the present study indicate that reducing poverty cannot rely solely on reforms within the financial sector. Although the implementation of the LKS Qanun provides an institutional foundation for expanding Islamic financial inclusion, sustainable poverty reduction also requires complementary policies that improve education, employment opportunities, infrastructure, human capital development, and social protection. Therefore, the Islamic financial system should be viewed as one component of a broader regional development strategy aimed at achieving inclusive and sustainable economic growth.

CONCLUSIONS

This study examined the effects of investment and poverty on regional economic growth in Aceh and North Sumatra during the 2022–2024 period using panel data regression. The empirical findings indicate that investment has a positive but statistically insignificant effect on economic growth in the overall panel estimation, suggesting that increases in investment have not yet generated a measurable impact on regional economic performance during the post-pandemic recovery period. In contrast, poverty has a negative and statistically significant effect on economic growth, confirming that poverty remains a major structural challenge to sustainable regional development. Furthermore, the regional heterogeneity analysis reveals that investment significantly promotes economic growth in Aceh but not in North Sumatra, whereas poverty significantly constrains economic growth only in North Sumatra. These findings demonstrate that the determinants of regional economic growth vary across provinces due to differences in regional economic structures and socioeconomic conditions.

From an institutional perspective, although this study does not directly estimate the causal impact of Qanun Aceh Number 11 of 2018 concerning Islamic Financial Institutions (LKS), the findings suggest that the institutional environment created through the implementation of the Qanun may support productive investment by strengthening Islamic financial intermediation and expanding access to Sharia-compliant

financing. However, the results also indicate that institutional reforms alone are insufficient to accelerate economic growth without complementary policies that improve investment quality, infrastructure, human capital, and poverty reduction. Therefore, regional development strategies should integrate financial-sector reforms with broader economic and social policies to achieve more inclusive and sustainable economic growth.

This study contributes to the literature by providing recent empirical evidence on the determinants of regional economic growth during Indonesia's post-pandemic recovery while highlighting regional heterogeneity between Aceh and North Sumatra. Nevertheless, the study is limited by its relatively short observation period and the inclusion of only two explanatory variables. Future research is therefore encouraged to employ longer panel datasets and incorporate additional determinants, such as government expenditure, labor productivity, education, infrastructure, and Islamic banking indicators, in order to obtain a more comprehensive understanding of regional economic growth and the role of Islamic financial development in supporting sustainable economic performance.

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