

Investigating the Mediating Role of Islamic Banking Intermediation in Promoting Economic Growth in Aceh Province, Indonesia

Insan Fikri ¹, Chenny Seftarita ¹ and Muhammad Abrar ^{1,*}

¹ Department of Economics, Faculty of Economics and Business, Universitas Syiah Kuala, Syiah Kuala, 23111 Kota Banda Aceh, Aceh Province, Indonesia; insanfikri91@gmail.com (I.F.), chenny@usk.ac.id (C.S.)

* Correspondence: muhammadabrar@usk.ac.id (M.A)

Citations: Fikri, I., Seftarita, C., & Abrar, M., (2024). Investigating the Mediating Role of Islamic Banking Intermediation in Promoting Economic Growth in Aceh Province, Indonesia. *International Journal of Finance, Economics and Business*, 3(3), 196-205.

Received: 22 May 2024 Revised: 6 August 2024 Accepted: 9 September 2024 Published: 30 September 2024

Abstract: Economic growth in Aceh is shaped by multiple sectors, including agriculture, fisheries, mining, and services. Among these, the Micro, Small, and Medium Enterprises (MSMEs) sector holds significant potential and warrants increased attention. This study examines the impact of Islamic banking financing and the presence of Islamic banking service offices on economic growth in Aceh, with micro and small medium enterprises (MSMEs) serving as a mediating variable. Employing the Ordinary Least Squares (OLS) method and multiple linear regression analysis, the research utilizes time-series data spanning from 2009 to 2023. The findings reveal that both Islamic banking financing and the expansion of service offices have a positive and significant effect on the development of MSMEs and, consequently, on economic growth. The study further highlights the reciprocal mediating relationship between these variables, demonstrating how Islamic banking can drive economic growth through the development of MSMEs. Based on these results, it is recommended that efforts be intensified to increase financing allocations for MSMEs, extend the reach of Islamic banking services to underserved areas, and promote technological innovation within Islamic financial products and services. The implementation of these measures is expected to strengthen the MSMEs sector and foster inclusive and sustainable economic growth in Aceh province, Indonesia.

Keywords: Islamic Banking Financing; Micro, Small, and Medium Enterprises (MSMEs); Economic Growth; Islamic Financial Products; Service Office Expansion



Copyright: © 2024 by the authors. Submitted for possible open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

1. Introduction

The Province of Aceh has experienced a long and complex history that continues to shape its current economic and social landscape. Following the resolution of a protracted conflict through the signing of the Helsinki Memorandum of Understanding in 2005, and the catastrophic impact of the 2004 tsunami, Aceh embarked on a challenging journey of recovery and reconstruction. Over the past decade, numerous development initiatives have been introduced to accelerate economic growth and promote sustainable development within the region.

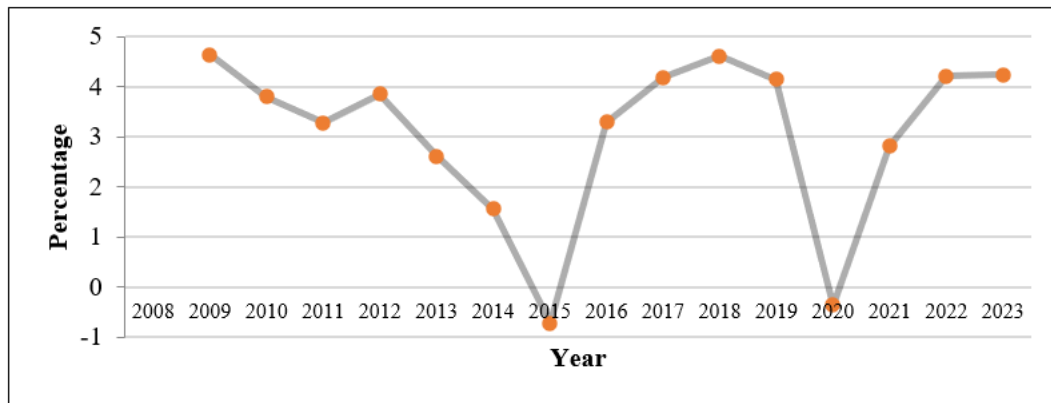


Figure 1. Economic Growth Rate of Aceh Province, 2008–2023

Figure 1 illustrates the fluctuating trend of economic growth in Aceh Province, measured by changes in the Gross Regional Domestic Product (GRDP). From 2015 to 2018, the province experienced a steady increase in economic growth. However, in 2020, there was a significant decline due to the implementation of Large-Scale Social Restrictions (PSBB) during the COVID-19 pandemic. Despite this setback, economic growth in Aceh rebounded in the subsequent years, continuing on an upward trajectory. Economic growth in Aceh is driven by several key sectors, including agriculture, fisheries, mining, and services. Among these, the Micro, Small, and Medium Enterprises (MSMEs) sector stands out for its considerable potential and focused attention from policymakers. MSMEs play a pivotal role in employment generation and income distribution for the local population, and they make a substantial contribution to Aceh's GRDP. Due to their operational flexibility and scale, MSMEs are particularly adept at responding to shifts in economic conditions and market demands. Data from the Central Bureau of Statistics (BPS) of Aceh confirm the significant contribution of MSMEs to the province's economic output. The emergence of Islamic banking can be traced back to the establishment of Mit Ghamr Local Savings Bank in 1963, which was later nationalized and transformed into the Nasser Social Bank by the Egyptian government in 1972. The growth of Islamic banking subsequently spread across the Middle East and extended into Europe—particularly Switzerland and Denmark—as well as into Southeast Asian nations with predominantly Muslim populations. In Indonesia, the development of Islamic banking began with the founding of Bank Muamalat in 1991, recognized as the first Islamic financial institution in the country (Nurhayati & Wasilah, 2015).

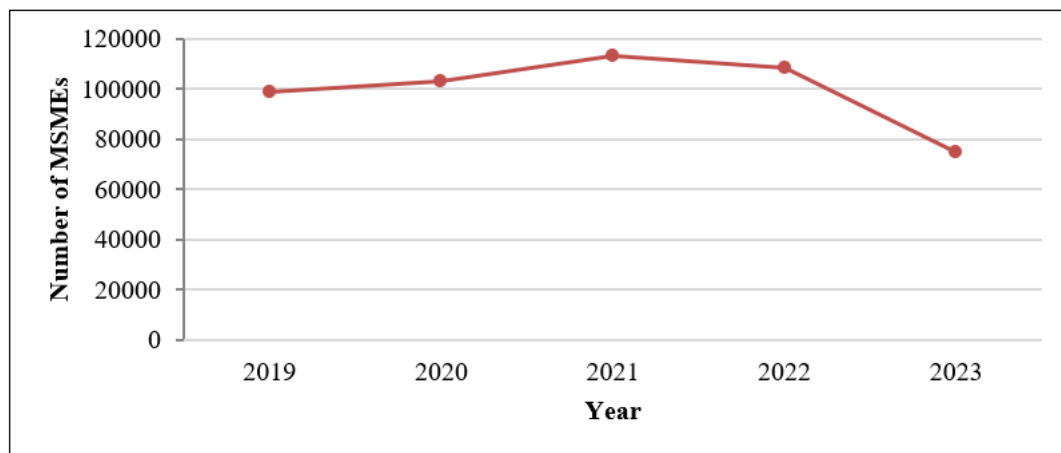


Figure 2. Number of MSMEs in Aceh Province, 2019-2023

Figure 2 illustrates the fluctuation in the number of Micro, Small, and Medium Enterprises (MSMEs) in Aceh Province. From 2019 to 2021, the number of MSMEs increased, followed by a decline in 2022 and 2023. Notably, the year 2020, which marked a major downturn for many economic sectors due to the COVID-19 pandemic, saw a surprising increase in the number of MSMEs. This growth can be attributed to the widespread job losses and layoffs, which compelled many individuals to seek alternative sources of income. For many, starting small businesses emerged as a viable solution to address financial hardship

during this period. Empirical evidence supports the significant role of financing in fostering MSME development. A study by Jun and Ran (2024) indicates that banking credit facilities have the potential to alleviate financial constraints faced by SMEs in China. This finding aligns with economic growth theory, which posits that improved access to financing enables SMEs to invest in technology, human resources, and infrastructure—factors that ultimately boost productivity and support economic growth. However, contrasting findings by Cowling et al. (2023) reveal that MSME demand for financing declined during the pandemic in China, rendering total financing ineffective in significantly influencing the number of MSMEs.

In Aceh, the growth in the number of Islamic banking service offices appears to correspond with the expansion of MSMEs. This growth has enhanced accessibility to financial services, particularly for MSME actors. Islamic financial institutions in the region commonly offer financing models aligned with Shariah principles, such as *mudharabah* (profit-sharing) and *musyarakah* (joint venture) contracts. The availability of such financing mechanisms has contributed to the sector's expansion by meeting the working capital and investment needs of entrepreneurs. Supporting this linkage, Lu et al. (2020) found that banking concentration and financial inclusion positively influenced the number of registered MSMEs in China, consistent with access-to-finance theory. According to this theory, greater availability and accessibility of banking services improve the ability of MSMEs to secure financing, thereby facilitating business expansion. Conversely, Mandak et al. (2023) discovered that in North Sulawesi, the mere increase in bank branches did not significantly impact MSME growth. This finding underscores the importance of not only increasing the quantity of service points but also improving the quality of financial services to ensure meaningful outcomes.

The performance of banks operating in Aceh also plays a critical role in the effective distribution of financial resources across the province. Efficient fund distribution leads to a multiplier effect, particularly as more MSMEs are established and expanded. As MSMEs grow, they contribute more significantly to the Gross Regional Domestic Product (GRDP), thereby promoting regional economic development. Given these dynamics and the research gap concerning the role of Islamic banking in Aceh, this study aims to examine the extent to which Islamic banking intermediation—specifically, total financing and the number of service offices—influences economic growth, with the number of registered MSMEs serving as a mediating variable.

2. Materials and Methods

This study adopts the classical economic growth model, which is grounded in the principles of trust in and the effectiveness of free market mechanisms. This theoretical framework was originally developed by classical economists such as Adam Smith and David Ricardo. In addition to classical theory, the study also draws on modern economic growth theories, particularly the Harrod-Domar model. The Harrod-Domar growth theory underscores the critical role of investment in driving economic growth. According to this model, increased investment enhances not only aggregate demand but also aggregate supply by expanding production capacity. Over the long term, investment contributes to economic growth by increasing the capital stock (Ma'aruf & Wihastuti, 2008). To evaluate economic growth, it is essential to first measure real national income, which involves calculating Gross National Product (GNP) or Gross Domestic Product (GDP) using constant prices from a selected base year. This calculation yields GNP or GDP at fixed prices, allowing for a more accurate assessment of growth by eliminating the effects of inflation. The economic growth rate is determined by the year-over-year increase in real GNP or GDP. To analyze the development of economic growth over time, the following formula is commonly used (Arliman, 2018):

$$r(t-1) = \frac{GRDP_t - GRDP(t-1)}{GRDP_{t-1}} \times 100\%, \quad (1)$$

Where: $r(t-1)$ = Economic growth rate, $GRDP_t$ = Gross regional domestic product of the year being calculated and $GRDP(t-1)$ = Gross regional domestic product of the previous year.

Also, this study adopts a quantitative approach based on economic growth theories derived from both classical and Islamic perspectives. Classical economists such as Adam Smith and David Ricardo emphasize that economic growth is fundamentally driven by production activities, capital accumulation, and free-market mechanisms. However, contemporary Islamic economic thought extends this notion by emphasizing that growth must also align with distributive justice and the balanced development of both material and spiritual aspects of human life. From the Islamic viewpoint, economic growth is more than a quantitative expansion of output—it is a holistic endeavor aimed at fostering social justice, equity, and prosperity for all. According to Abdurrahman Yusro, these principles are reflected in the Qur'an, particularly in *Surah Nuh*

(10–12), which illustrates that divine forgiveness leads to material abundance, increased wealth, progeny, and environmental fertility. Similarly, *Surah Al-A'raaf* (96) underlines that faith and piety result in blessings from the heavens and the earth, reinforcing the idea that spiritual values are essential components of sustainable growth.

This study also draws on several empirical works to develop a robust theoretical foundation and to inform its analytical framework. For instance, Anwar et al. (2018) examined the contribution of Islamic banks to Indonesia's economic growth using monthly data from January 2010 to December 2016. They employed econometric models such as the Autoregressive Distributed Lag (ARDL) and the Vector Error Correction Model (VECM). Their results demonstrated a significant bidirectional relationship between Islamic bank deposits, service office expansion, and economic growth, both in the short and long run. Additional studies provide diverse findings on the role of Islamic financial indicators in driving national growth. Hidayat and Irwansyah (2020) found that third-party funds in Islamic banking significantly influenced GDP, while Islamic financing showed no significant effect. Similarly, Setiawan (2020) compared conventional and Islamic banks and concluded that both conventional credit and Islamic financing positively impacted economic growth in Indonesia.

Research by Amri et al. (2023) focused on the impact of Islamic bank financing on MSME development and found a strong correlation between MSME financing and Islamic banking performance. Meanwhile, Bonivia et al. (2019) highlighted the importance of financial inclusion in economic development, showing that factors such as the number of bank branches, ATMs, and deposit accounts had a significant positive impact on the Indonesian economy. These previous studies provide theoretical and empirical justification for the variables selected in this study and contribute to the formulation of research hypotheses. The current research focuses on the interaction between Islamic banking and the MSME sector, both of which are seen as mutually reinforcing elements in creating a more inclusive and sustainable economy.

Islamic banking, operating on Sharia principles that prohibit interest (*riba*) and unjust transactions, offers various financing instruments tailored to the needs of MSMEs. Products such as *murabahah* (cost-plus financing), *mudharabah* (profit-sharing), and *ijarah* (leasing) provide ethical and adaptable financial solutions that are consistent with the values of many MSME actors, particularly in Aceh Province, where this study is situated. According to data from the Indonesian Financial Services Authority (OJK), by 2023, the total assets of Islamic banks exceeded IDR 1,000 trillion, with a growing market share. This indicates a significant potential for Islamic banking to support the expansion and sustainability of MSMEs through Sharia-compliant financial services (Himmati & Arwendi, 2023). Moreover, Supriyadi (2016) notes that Islamic banks are instrumental in promoting financial inclusion, particularly for MSMEs that face barriers when dealing with conventional banks.

Nonetheless, challenges remain, particularly in tailoring Islamic financial products to meet the specific and evolving needs of MSMEs. Ongoing innovation and strategic adjustments are necessary to ensure that Islamic banking services deliver meaningful value beyond financial access and contribute to broader development goals. In line with the goal of enhancing economic growth in Indonesia—especially through MSME development—this study proposes a multidimensional strategy. It examines the contributions of two primary indicators: (1) the volume of financing disbursed by Islamic banks to MSMEs, and (2) the number of Islamic banking service offices across Aceh Province. These variables serve as proxies to assess the intermediation function of Islamic banking and its impact on economic growth through the development of the MSME sector.

This study examines the period from 2009 to 2023, with a specific focus on the Aceh Province. The data utilized are secondary time series data sourced from reputable institutions, including the Financial Services Authority (OJK), the Central Bureau of Statistics (BPS), the Aceh Province Open Data platform, and the annual financial reports of Islamic banking institutions. The analytical method employed in this study is the Ordinary Least Squares (OLS) regression model. To test the proposed hypotheses, multiple linear regression analysis is applied, complemented by path analysis to assess the mediating or intervening effects among variables. According to Ghazali (2013), path analysis serves as an extension of multiple linear regression and is used to estimate the strength and direction of causal relationships in models that involve direct and indirect effects. Path analysis is particularly useful for evaluating models with intervening variables. The path coefficient, a standardized form of the regression coefficient, quantifies the direct effect of an independent variable on a dependent variable within the structural model. To compute the path coefficients, two structural equations are developed—each representing a hypothesized causal relationship among the study variables. These equations allow the researcher to determine not only the direct effects but also the indirect effects that pass through intervening variables (Adityamurti & Ghazali, 2017). This

methodological framework is chosen to ensure a comprehensive and robust analysis of the role of Islamic banking in supporting MSME growth and overall economic development in Aceh Province.

Path analysis is an extension of multiple regression analysis that incorporates more than two variables and examines their complex interrelationships. The primary objective of path analysis is to determine the structural relationships between various independent variables and the dependent variable. It also aims to quantify the magnitude of the direct, indirect, and total effects within the model being studied (Trianto, 2015). The path model developed in this study is based on the variables identified for analysis. This model seeks to elucidate how each independent variable influences the dependent variable, both directly and through mediation or indirect pathways. Below is the path model developed based on the variables included in this study, accompanied by the corresponding substructure equations:

$$NB = \alpha + \beta_1 FNC_t + \beta_2 SOF_t + e_t, \quad (2)$$

$$EG = \alpha + \beta_3 FNC_t + \beta_4 SOF_t + \beta_5 + e_t, \quad (3)$$

In this study, NB represents the number of MSMEs, FNC denotes Financing, SOF stands for Service Offices, and EG indicates Economic Growth. The analysis utilizes time series data covering a 15-year period from 2009 to 2023. The model selection in this study employs the Ordinary Least Squares (OLS) regression method, complemented by a Normality Test to assess the distribution of the data. Additionally, the Sobel Test is used to evaluate the significance of the mediation effects in the path model.

3. Results

Descriptive statistics offer a comprehensive summary of the data utilized in this study, encompassing both dependent and independent variables. This summary includes key measures such as the mean, median, minimum and maximum values, standard deviation, and the number of observations for each variable. Table 3 presents the results of the descriptive statistics analysis for economic growth, MSMEs, Islamic banking financing, and service offices over the period from 2009 to 2023.

Table 1. Result of descriptive statistics analysis

Statistics	EG	NB	FNC	SOF
Mean	3,08	82.638	20.937	178
Median	3,85	95.502	129.195	154
Maximum	4,63	113.292	677.703	362
Minimum	-0,73	21.643	35.587	92
Std. Dev.	1,69	28.912	200.654	100
Observations	15	15	15	15

Table 1 presents the number of data observations for the variables used in this study, which is consistent across all variables. The dataset includes 15 observations. Regarding the average values of each variable, the economic growth variable has a mean of 3.08, indicating that Aceh's economic growth remains below the World Bank's target range of 4 to 6 percent, which is generally considered favorable for developing countries. The average number of MSMEs in Aceh is 82,638, suggesting that small and medium-sized enterprises dominate the business sector, outnumbering large-scale enterprises. The standard deviation for the Islamic banking financing variable is 200.654, which is smaller than the mean value of 209.371. Similarly, the number of Islamic banking service offices has a standard deviation of 100, which is less than the mean value of 178. The path analysis model in Substructure 1 examines the impact of the Total Financing (FNC) and Number of Service Offices (SOF) variables on the mediating variable, Number of MSMEs (NB), as outlined below:

Table 2. Result of Hypothesis Testing for Model 1

Variable(s)	Model 1		
	Coefficient	t-Statistic	Prob.
C	83458.83	0.777044	0.4522
NB	39264.16	1.475937	0.0657*
FNC	91918.93	1.940799	0.0761*

R-squared	0.326318	-	-
Adjusted	0.214038	-	-
R-squared		-	-
F-statistic	0.093482	-	-
Durbin-Watson Statistic	1.40818		

Table 2 presents the results of the data analysis for the equation in the model structure I. The constant value is 83,458.83, indicating that when financing and service offices are both zero, the number of MSMEs remains constant at 83,458.83. Furthermore, the FNC variable shows a positive coefficient of 39,264.16, suggesting that a 1% increase in FNC will result in an increase of 39,264.16 in the number of MSMEs. This result is statistically significant at the 10% level (p-value < 0.10), leading to the acceptance of Hypothesis 1 (H1), which concludes that financing has a positive and significant direct effect on MSMEs. Additionally, the SOF variable exhibits a positive coefficient of 91,918.93, indicating that a 1% increase in the number of service offices (SOF) will lead to an increase of 91,918.93 in the number of MSMEs. This value is also statistically significant at the 10% level (p-value < 0.10), which supports the acceptance of Hypothesis 2 (H2), confirming that the number of service offices has a positive and significant direct effect on MSMEs.

Moreover, the coefficient of multiple determination (adjusted R²) is 0.21, meaning that 21% of the variation in the size of MSMEs in Aceh is explained by the two independent variables—financing and service offices. The remaining 79% is influenced by other factors not included in the research model. The path analysis model in Substructure 2 explores the impact of Total Financing (FNC), Number of Service Offices (SOF), and Number of MSMEs (NB) on the dependent variable, Economic Growth (EG), as detailed below:

Table 3. Result of Hypothesis Testing for Model 2

Variable(s)	Model 2		
	Coefficient	t-Statistic	Prob
C	2.489303	2.407153	0.0348
FNC	1.32E-05	3.244587	0.0078***
SOF	0.030532	3.554179	0.0045***
NB	3.96E-05	3.086262	0.0104**
R-squared	0.599839	-	-
Adjusted	0.490704	-	-
R-squared		-	-
F-statistic	0.014886	-	-
Durbin-Watson Statistic	2.044069		

Table 3 presents the results of the data analysis for Equation 3 in the model structure. The constant value is 2.489303, indicating that when financing, service offices, and MSMEs are all zero, economic growth will remain constant at 2.489303%. Additionally, the FNC variable has a positive coefficient of 0.0000132, implying that a 1% increase in Total Financing (FNC) will lead to a 0.0000132% increase in economic growth. This value is statistically significant at the 1% level (p-value < 0.01), leading to the acceptance of Hypothesis 3 (H3), which suggests that financing has a positive and significant direct effect on economic growth in Aceh. The SOF variable also shows a positive coefficient of 0.0305, indicating that a 1% increase in the number of service offices (SOF) will result in a 0.0305% increase in economic growth. This coefficient is significant at the 1% level (p-value < 0.01), supporting the acceptance of Hypothesis 4 (H4), which confirms that the number of service offices has a positive and significant direct effect on economic growth in Aceh.

Furthermore, the NB variable exhibits a positive coefficient of 0.0000396, meaning that a 1% increase in the number of MSMEs (NB) will lead to a 0.0000396% increase in economic growth. This result is significant at the 5% level (p-value < 0.015), leading to the acceptance of Hypothesis 5 (H5), which indicates that MSMEs have a positive and significant direct effect on economic growth in Aceh. On the basis of the results above, the empirical relationships between the independent variables, intervening variables, and economic growth in Sub-structures 1 and 2 can be summarized as follows:

$$\varepsilon_1 = \sqrt{(1 - R^2)}$$

$$\varepsilon_1 = \sqrt{(1 - 0.326318)}$$

$$\varepsilon_1 = \sqrt{0.673682} = 0.8208$$

The result of 0.8208 indicates that the total financing and the number of service offices, which are not directly examined in the model, contribute to 0.8208 of the unexplained variances in the number of MSMEs. This high error value suggests that the number of MSMEs is influenced by factors beyond just total financing and the number of service offices. Therefore, it can be concluded that other variables, not included in the model, also affect the number of MSMEs. To calculate the error value in the second equation (e2), the data derived from the R-squared value is used, as follows:

$$\varepsilon_1 = \sqrt{(1 - R^2)}$$

$$\varepsilon_1 = \sqrt{(1 - 0.599839)}$$

$$\varepsilon_1 = \sqrt{0.400161} = 0.63258$$

The result of 0.63258 indicates that financing, service offices, and MSMEs, which are not directly examined in the model, account for 0.63258 of the unexplained variances in economic growth. This high error value suggests that economic growth is influenced by factors beyond just financing, service offices, and MSMEs. Therefore, it can be concluded that other variables, not included in the model, also affect economic growth. Based on the results of the regression test, the Beta coefficients and Standard Error values for each of the variables—Total Financing (FNC), Number of Service Offices (SOF), and Number of MSMEs (NB)—were obtained. By entering the values of a, b and Sab above, the p-value is obtained by using the Sobel Test Calculator calculation as shown in the figure below:

Input:		Test statistic:	Std. Error:	p-value:
a	39264.16	Sobel test: 1.33211024	1.16721627	0.018282397
b	0.0000396	Aroian test: 1.2788027	1.21587227	0.020096654
s _a	26602.86	Goodman test: 1.39269307	1.11644178	0.016371263
s _b	0.0000128	Reset all	Calculate	

Figure 3. Result of Sobel Test for Model 1

Figure 3 presents the results of the Sobel test, which show a p-value of 0.01828, which is less than the significance level of 0.05, along with a Sobel Test Statistic value of 1.3321. These results allow us to conclude that the Financing variable (FNC) has a significant indirect effect on the Economic Growth variable (EG) through the MSME variable (NB). In other words, the MSME variable (NB) can mediate the relationship between the Financing variable (FNC) and Economic Growth (EG).

Input:		Test statistic:	Std. Error:	p-value:
a	91918.93	Sobel test: 1.6440712	2.21400972	0.01001615
b	0.0000396	Aroian test: 1.58570239	2.29550618	0.011280684
s _a	47361.38	Goodman test: 1.70939964	2.12939651	0.08737695
s _b	0.0000128	Reset all	Calculate	

Figure 4. Result of Sobel Test for Model 2

Figure 4 presents the results of the Sobel test, which indicate a p-value of 0.01001615, which is less than the significance level of 0.05, along with a Sobel Test Statistic value of 1.6440712. Based on these results, it can be concluded that the Service Office variable (SOF) has a significant indirect effect on the Economic Growth variable (EG) through the MSME variable (NB). In other words, the MSME variable (NB) can mediate the effect of the Service Office variable (NB) on Economic Growth (EG).

4. Discussion

The primary objective of this study is to examine the impact of Islamic banking intermediation on economic growth, focusing on the mediating role of Micro, Small, and Medium Enterprises (MSMEs) in Aceh Province. The research investigates seven hypotheses, each exploring different aspects of the relationship between Islamic banking, MSMEs, and regional economic development. The study finds that Islamic banking financing has a positive and significant effect on MSMEs in Aceh, suggesting that access to financial resources is crucial for the growth and sustainability of these enterprises. This finding aligns with the MSME finance and growth theory, which posits that access to financing allows firms to invest in assets, expand operations, and improve market reach (Beck & Demirguc-Kunt, 2006). Additionally, the number of Islamic banking service offices also shows a positive and significant influence on MSMEs, emphasizing the importance of proximity and accessibility to financial services (Beck, Demirguc-Kunt, & Maksimovic, 2005).

Regarding broader economic outcomes, the study reveals that Islamic banking financing significantly contributes to economic growth in Aceh. This result supports endogenous growth theory, which highlights the role of financial institutions in mobilizing capital, enhancing productivity, and stimulating long-term economic development (Barro, 1991; Levine, 1997). Similarly, the expansion of Islamic banking service offices is found to positively influence economic growth, consistent with regional growth theories that stress the importance of infrastructure in fostering local development (Romer, 1990). Furthermore, the study shows that MSMEs themselves have a direct and significant impact on economic growth, aligning with regional development theory, which advocates for leveraging local business sectors to support diversified and inclusive economic progress (Todaro & Smith, 2015).

The analysis also finds that Islamic banking financing indirectly contributes to economic growth through the growth of MSMEs. This supports Schumpeter's (1934) perspective that financial institutions drive innovation and entrepreneurship, which in turn fuel economic expansion. Likewise, the establishment of Islamic banking service offices indirectly enhances economic growth by supporting MSMEs, reinforcing the regional economic theory that emphasizes infrastructure and financial accessibility as pillars of regional prosperity (Krugman, 1991). In conclusion, this study provides empirical evidence that Islamic banking intermediation, both in terms of financing and service outreach, plays a vital role in promoting MSME development and driving sustainable economic growth in Aceh Province.

5. Conclusions

This study investigates the impact of Islamic banking intermediation on economic growth through the number of Micro, Small, and Medium Enterprises (MSMEs) in Aceh Province. Specifically, it analyzes how total financing, and the number of Islamic banking service offices influence economic growth by fostering the development of MSMEs in the region. The research utilizes time-series data from 2009 to 2023 and employs multiple linear regression with path analysis to achieve its objectives. The findings of this study reveal that Islamic banking financing significantly and positively influences the growth of MSMEs in Aceh. Furthermore, the presence of Islamic banking service offices also plays a crucial role in supporting MSME development. The impact of Islamic banking financing extends beyond MSMEs, contributing positively to overall economic growth in Aceh. In this context, Islamic banking service offices are instrumental in promoting and enhancing economic growth. As key drivers of the economy, MSMEs contribute to the growth of Aceh's economy, with Islamic banking financing serving as a catalyst for economic development through the mediation of MSMEs.

Similarly, the expansion of Islamic banking service offices further supports economic growth by improving access to financial services for MSMEs. The interaction between Islamic banking financing, MSMEs, and Islamic banking service offices creates a synergistic effect that fosters sustainable economic growth in Aceh. Based on the findings, several recommendations are proposed. Islamic banking institutions should increase the distribution of financing by offering financial products and services that cater to the specific needs of MSMEs in Aceh, particularly working capital and investment financing that promote growth and innovation. Expanding the network of Islamic banking service offices in underserved areas, especially in remote or rural regions, is also critical for improving MSME access to financial services.

Moreover, Islamic banking should promote innovation in financial products, such as microfinance and Islamic venture capital, to align with the cultural characteristics of Aceh. Expanding the number and reach of service offices across districts and cities in Aceh would enhance MSMEs' accessibility to financial services. The government should also prioritize business mentoring and training programs to enhance the managerial, technical, and marketing capabilities of MSMEs. These initiatives would boost the productivity

and competitiveness of MSMEs, thereby strengthening their role in driving local economic growth. By implementing these measures, it is anticipated that the collaboration between Islamic banking financing, MSMEs, and financial services will promote more sustainable economic growth in Aceh.

Author Contributions: Conceptualization, I.F., C.S. and M.A.; methodology, I.F.; software, I.F.; validation, C.S. and M.A.; formal analysis, I.F.; investigation, I.F. and M.A.; resources, I.F.; data curation, C.S. and M.A.; writing—original draft preparation, I.F. and M.A.; writing—review and editing, I.F., C.S. and M.A.; visualization, I.F.; supervision, C.S. and M.A.; project administration, M.A.; funding acquisition, M.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: Not applicable.

Acknowledgments: The authors would like to thank Universitas Syiah Kuala, Indonesia, for supporting this research and publication. We would also like to thank the reviewers for their constructive comments and suggestions.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Adhari, I. Z., Fikri, Y. T. A., Jamaludin, J., Sukarnoto, T., Naafisah, D. D., Cahyanti, I. S., ... & Maulana, Y. (2021). *Kumpulan Teori Penafsiran Al Qur'an-Al Hadis Dan Teori Ekonomi Islam Menurut Para Ahli*. Penerbit Widina.
- Adisasmita, R. (2013). *Teori-Teori Pembangunan Ekonomi, Pertumbuhan Ekonomi dan Pertumbuhan wilayah*. Yogyakarta: Graha Ilmu.
- Adisasmita, R. (2014). *Pertumbuhan Wilayah dan Wilayah Pertumbuhan*. Yogyakarta : Graha Ilmu.
- Aditya, R., & Rusdianto, R. Y. (2023). Penerapan digital marketing sebagai strategi pemasaran UMKM. *Jurnal Pelayanan Dan Pengabdian Masyarakat Indonesia*, 2(2), 1–11. <https://doi.org/10.31961/impact.v2i2.844>.
- Badan Pusat Statistik (BPS). (2022). *Laju Pertumbuhan di Indonesia*. Badan Pusat Statistik.
- Barro, R. J. (1991). Economic growth in a cross section of countries. *The Quarterly Journal of Economics*, 106(2), 407–443. <https://doi.org/10.2307/2937943>
- Batrancea, L. M. (2022). Determinants of Economic Growth across the European Union: A Panel Data Analysis on Small and Medium Enterprises|Determinantes del crecimiento económico en la Unión Europea:Un Panel de Análisis de Datos sobre Pequeñas y Medianas Empresas. *Sustainability*, 14(8), 4797.
- Beck, T., & Demircuc-Kunt, A. (2006). Small and medium-size enterprises: Access to finance as a growth constraint. *Journal of Banking & Finance*, 30(11), 2931–2943. <https://doi.org/10.1016/j.jbankfin.2006.05.009>
- Beck, T., Demircuc-Kunt, A., & Maksimovic, V. (2005). Financial and legal constraints to growth: Does firm size matter? *The Journal of Finance*, 60(1), 137–177. <https://doi.org/10.1111/j.1540-6261.2005.00727.x>
- Bonivia, T. Della, Aimon, H., & Satrianto, A. (2019). Pengaruh financial inclusion terhadap perekonomian Indonesia. *Jurnal Kajian Ekonomi Dan Pembangunan*, 1(3), 721–730.
- BPS. (2020). *Pertumbuhan Ekonomi Indonesia Triwulan IV-2019.2*. Jakarta : Badan Pusat Statistik.
- BPS. (2024). *Statistik Indonesia 2024*. Jakarta : Badan Pusat Statistika.
- Cowling, M., Liu, W., & Conway, E. (2023). Ethnicity and bank lending before and during COVID-19. *International Journal of Entrepreneurial Behavior & Research*, 29(3), 614–642. <https://doi.org/10.1108/IJEBr-02-2021-0157>
- Effendi, M. S. (2021). *Penyaluran Kredit Perbankan Di Indonesia*. Jawa Tengah, CV. Pena Persada.
- El Ayyubi, S., Anggraeni, L., & Mahiswari, A. D. (2018). Pengaruh bank syariah terhadap pertumbuhan ekonomi di Indonesia. *Al-Muzara'ah*, 5(2), 88–106. <https://doi.org/10.29244/jam.5.2.88-106>
- Ghozali, I. (2013). *Aplikasi Analisis Multivariat dengan Program SPSS*. Edisi ke 3. Semarang: Uversitas Diponegoro.
- Hidayat, S., & Irwansyah, R. (2020). Pengaruh dana pihak ketiga dan pembiayaan perbankan syariah terhadap pertumbuhan ekonomi Indonesia. *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah*, 5(1), 1–9.

- Himmati, R., & Arwendi, D. F. (2023). Pengaruh perbankan syariah terhadap pertumbuhan ekonomi Indonesia. *El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam*, 5(3), 1734–1751. <https://doi.org/10.47467/elmal.v5i3.5839>.
- Huda, N. (2017). *Keuangan Publik Islami: Pendekatan Teoritis dan Sejarah*. Prenada Media.
- Indonesia, P. P. (2008). *Undang-undang (UU) Nomor 20 Tahun 2008 tentang Usaha Mikro, Kecil, dan Menengah*. Jakarta : Pemerintah Pusat.
- Jun, W., & Ran, X. Q. (2024). Dynamics in digital finance and its impact on SME financing. *Heliyon*, 10(9), e30586. <https://doi.org/10.1016/j.heliyon.2024.e30586>
- Karim, A. A. (2001). *Bank Islam: Analisis Fiqih dan Keuangan*. Jakarta : PT Raja Grafindo Persada.
- Kementerian Koperasi dan Usaha Kecil dan Menengah. (2015). Peraturan Menteri Negara Koperasi dan Usaha Kecil dan Menengah Republik Indonesia Nomor 12/Per/M.KUKM/IX/2015 tentang Pedoman Umum Akuntansi Koperasi Sektor Riil. Jakarta : Kementerian Koperasi dan Usaha Kecil dan Menengah.
- Khairina, T. (2022). Eektivitas penerapan islamic microfinance melalui pembiayaan mikro dalam pengembangan usaha dan peningkatan pendapatan nasabah UMKM (Studi Kasus Pada Bank Syariah di Kota Medan). *Komputer, Jurnal Ilmu Jikem, Manajemen*, 2(1), 1–29.
- Krugman, P. (1991). Increasing returns and economic geography. *Journal of Political Economy*, 99(3), 483–499. <https://doi.org/10.1086/261763>
- Lembaga Pengembangan Perbankan Indonesia. (2021). Profil Bisnis Usaha Mikro Kecil dan Menengah. Bank Indonesia. <https://www.bi.go.id/id/umkm/penelitian/nasional/kajian/Pages/Profil-Bisnis-UMKM.aspx>.
- Levine, R. (1997). Financial development and economic growth: Views and agenda. *Journal of Economic Literature*, 35(2), 688–726. <https://www.jstor.org/stable/2729790>
- Lu, Z., Wu, J., & Liu, J. (2020). Bank concentration and SME financing availability: the impact of promotion of financial inclusion in China. *International Journal of Bank Marketing*, 38(6), 1329–1349. <https://doi.org/10.1108/IJBM-01-2020-0007>
- Ma'aruf, A., & Wihastuti, L. (2008). Pertumbuhan Ekonomi Indonesia: Determinan dan Prospeknya. *Jurnal Ekonomi Dan Studi Pembangunan*, 9(1), 40–52.
- Mandak, Z. M., Kumaat, R. J., Mandei, D., Pembangunan, J. E., Ekonomi, F., & Bisnis, D. (2023). Analisis pengaruh jumlah kantor cabang bank, kredit macet dan inklusivitas keuangan terhadap penyaluran kredit UMKM di Provinsi Sulawesi Utara periode 2012Q1-2021Q4. *Jurnal Berkala Ilmiah Efisiensi*, 23(2), 1–12.
- Nadzifah, A., & Sriyana, J. (2020). Analisis pengaruh inflasi, kurs, birate, PDB dan kinerja internal bank terhadap profitabilitas pada perbankan syariah dan konvensional. *Jurnal Manajemen Dan Bisnis Indonesia*, 6(1), 79–87. <https://doi.org/10.32528/jmbi.v6i1.3537>
- Napitupulu, B., Sudarno, S., & Junaedi, A. T. (2021). Budget realization as a management control tool for company performance at PT. Pelabuhan Indonesia I (Persero) Pekanbaru Branch. *Journal of Applied Business and Technology*, 2(3), 243–250.
- Nurhayati, S., & Wasilah. (2015). *Akuntansi Syariah di Indonesia*. Jakarta : Salemba Empat.
- Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, 98(5, Part 2), S71–S102. <https://doi.org/10.1086/261725>
- Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle*. Harvard University Press.
- Sugiyono. (2018). *Metode Penelitian Bisnis (Pendekatan Kuantitatif, Kualitatif dan R&D)*. Alfabeta CV.
- Sulastri, D., Delawati, K., & Hidayaty, D. E. (2023). Strategi pada UMKM snack Bu Iyam. *Marketgram Journal*, 1(2), 114–121. <https://e-journal.naur.eendigiton.com/index.php/mj/article/view/548>
- Todaro, M. P., & Smith, S. C. (2015). *Economic development* (12th ed.). Pearson.
- Trianto, A. (2015). *Mendesaian Model Pembelajaran Inovatic, Progresif dan Kontekstual*. Surabaya : Prenadamedia Group.
- Trimulato, T., Syamsu, N., & Octaviany, M. (2021). Sustainable development goals (sdgs) melalui pembiayaan produktif umkm di bank syariah. *Islamic Review: Jurnal Riset Dan Kajian Keislaman*, 10(1), 19–38. <https://doi.org/10.35878/islamicreview.v10i1.269>