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THE EFFECT OF BANKING PERFORMANCE ON INDONESIA'S ECONOMIC GROWTH: THE CAMEL APPROACH

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ABSTRACT

Economic growth, as measured by Gross Domestic Product (GDP), is an indicator of a country's welfare and progress. Bank Indonesia as the party responsible for monetary policy strives to build synergy between financial markets and economic growth. The banking sector plays a prominent role in the country's economic growth. This study analyzed the effect of banking performance on economic growth using the CAMEL approach. Collecting data from 39 banks listed on the Indonesia Stock Exchange from 2015 to 2020, this study employed the dynamic panel data regression with the GMM approach for data analysis. The results of the study show that banking performance as represented by the CAMEL approach affects economic growth. The CAMEL approach in this study consists of the Capital Adequacy Ratio (CAR), Non-Performing Loan (NPL), Net Interest Margin (NIM), Return on Asset (ROA), and Loan to Deposit Ratio (LDR), each of which has a distinct effect. CAR, NIM, and ROA show a significant positive effect on economic growth. On the other hand, the NPL and LDR show a significant negative effect on economic growth.

KEY WORDS

Financial performance, economic growth, CAMEL, endogenous growth theory.

Economic growth is defined as an increase in the production of goods and services to increase prosperity (Ivic, 2015). A country's economic growth indicates the success of its economic sector. Jannah (2020) adds that economic growth is a measure of the welfare and progress of a country. Further, Sengupta (2019) mentions that one of the indicators in measuring economic growth is Gross Domestic Product (GDP). An increase in a country's GDP indicates economic growth (Dikson, 2021). As recorded by the Central Bureau of Statistics in Indonesia (BPS Statistic), in 2015, the economic growth was 4.88%, which increased to 5.03% in 2016 and 5.07% in 2017. The highest growth rate of 5.17% was in 2018. However, there was a decline in 2019 with a growth rate of 5.02% and a further drop to 2.07% in 2020 due to the Covid-19 pandemic on the global economy, including Indonesia (Nasution et al., 2021). Economic growth is inextricably linked to government policies, one of which focuses on financial market deepening (Sena et al., 2021). Bank Indonesia, as the responsible authority for monetary policy, aims to foster a harmonious relationship between the financial market and economic growth to optimally facilitate the promotion of economic financing (Astuti & Eddyono, 2021). Credit disbursed by banks dominates financing in Indonesia (Rasbin et al., 2013). Therefore, the banking sector undoubtedly plays an important role in a country's economic growth (Alam et al., 2021).

The Financial Intermediation Theory posits that banks serve as intermediaries between providers and users of financial capital (Greenbaum & Thakor, 2007). Banks are considered a vital component for the growth and development of a country and have a crucial role in its economic growth (Anh, 2020). The profitability of banks has a direct effect on the economic growth of a country as well (Rabaa & Younes, 2016). Banks with good profitability encourage the country's economic growth (Bourke, 1989). Higher profitability of banks leads to a greater contribution to economic growth (Duqi et al., 2021). Endogenous Growth Theory, as propounded by Bencivenga and Smith (1991) incorporates financial intermediation to drive investment and stimulate capital accumulation. According to this theory, economic growth is driven by investment in physical and human capital (Romer, 1994). This growth model corrects the shortcomings of the Solow-Swan model by defining endogenous growth



conditions in an economy where investment in physical and human capital is a determinant of endogenous growth (Thach, 2020). In the endogenous growth model, the health of the financial sector is critical to investment financing and capital accumulation (Villanueva, 2022). The performance of the banking sector is crucial for economic growth as it affects investment (Tabash & Dhankar, 2014). A healthy banking sector is a significant determinant of economic growth (Zeqiraj et al., 2020). Referring to a study conducted by Pan and Ngo (2016), increased investment flows and investment positively influence economic growth.

The financial performance of a bank can be evaluated by analyzing several key financial ratios, including Return on Assets (ROA), Net Profit Margin (NPM), and Return on Equity (ROE) (Winarno, 2019). ROA and ROE are commonly used to assess profitability in the banking sector (Lardic & Terraza, 2019). Additionally, performance can be measured through the Non Performing Loans Ratio (NPL) and Capital Adequacy Ratio (CAR) (Ariesta et al., 2019). Financial ratios can help determine whether a bank's performance is considered good or bad (Amalia & Nugraha, 2021).

A widely accepted method for evaluating bank performance is the CAMEL approach (Keffala, 2021). The CAMEL approach is a rating system that is used as a performance measure for banks (Yildirim & Ildokuz, 2020). With a combination of indicators, the CAMEL indicator has a significant capacity to assess the soundness of a bank (Shaddady & Moore, 2019). CAMEL incorporates five parameters: Capital Adequacy (C), Asset Quality (A), Management Efficiency (M), Income (E), and Liquidity (L) (Heripson & Hade, 2016). The minimum Capital Adequacy Ratio and Capital Adequacy Ratio (CAR) is used to evaluate capital adequacy (Ariesta et al., 2019). While the Non Performing Loan (NPL) ratio is used to measure asset quality which shows the ability of bank management to manage loans disbursed by banks (Haryanto & Hanna, 2017). Management efficiency is assessed through the Net Interest Margin (NIM) to measure the ability of bank management to manage its productive assets to generate net interest income (Lestari et al., 2021). While earnings are evaluated through Return on Assets (ROA) to measure the ability of bank management to gain overall profits. The Loan to Deposit Ratio is used to assess liquidity (Iswari, 2022).

The financial ratios can be used to predict bank performance. The correlation between bank performance and economic growth is well-established, with improved bank performance having a positive effect on economic growth (Rabaa & Younes, 2016). Changes in bank performance, as indicated by financial ratios, can significantly affect changes in economic growth. As the performance of a bank improves, the economic growth of a country also increases (Tabash, 2019). Improved banking performance boosts economic growth, and the better a bank performs, the faster a country's economy grows (Ege & Topaloglu, 2020). However, some studies have shown that an increase in bank size may have a negative effect on economic growth (Kumar & Bird, 2020). Khoury et al. (2022) revealed that there is no relationship between the financial sector on growth where the financial sector does not contribute to a country's economic growth. The banking sector fails to effectively act as an intermediary for savings and investment (Hachicha & Amar, 2015). A study conducted by Hachicha and Amar (2015) found that the banking sector's performance does not support economic growth, and it has no effect on the decline or increase in economic growth. From the literature, the hypothesis formulated for this study is as follows:

- H₁: The Capital Adequacy Ratio (CAR) has a positive effect on the economy;
- H₂: The Non-Performing Loan (NPL) ratio has a negative effect on economic growth;
- H₃: The Net Interest Margin (NIM) ratio has a positive effect on economic growth;
- H₄: The ratio of Return on Assets (ROA) has a positive effect on economic growth;
- H₅: Loan to Deposit Ratio (LDR) has a negative effect on economic growth.

METHODS OF RESEARCH

This study involved the dependent and the independent variable. The dependent variable included in this study is economic growth. There are five independent variables, namely capital as measured by the CAR, assets are measured by the NPL, management as measured by NIM, earnings are measured by ROA, and liquidity as measured by LDR.



Table 1 – The Formula of the Study

Capital Adequacy Ratio (CAR)	$CAR = \frac{\text{Bank Capital}}{\text{Risk weighted assets}} \times 100\%$
Non Performing Loan (NPL)	$NPL = \frac{\text{Non performing loan}}{\text{Total loan}} \times 100\%$
Net Interest Margin (NIM)	$NIM = \frac{\text{Net interest}}{\text{Average interest earning asset}} \times 100\%$
Return on Assets (ROA)	$ROA = \frac{\text{Net profit}}{\text{Total asset}} \times 100\%$
Loan to Deposit Ratio (LDR)	$LDR = \frac{\text{Total loan}}{\text{Third party fund}} \times 100\%$
Economic Growth (EG)	$EG_t = \frac{(PDB_t - PDB_{t-1})}{PDB_t} \times 100\%$

This research was conducted among the banks listed on the Indonesia Stock Exchange between 2015 and 2020. The selection was based on their significant contribution to economic growth, as improved bank performance leads to increased economic growth (Ledhem & Mekidiche, 2020). The data used came from the annual reports and financial statements of the banks listed on the Indonesia Stock Exchange (<http://idx.co.id> dan www.bps.go.id). The study focused on 39 banks that were listed on the exchange between 2015 and 2020. Dynamic panel data regression was used in this study, which is based on panel data and aims to examine the relationship between the dependent variable and one or more independent variables. The panel data helps to better understand the dynamics of adjustment. The dynamic relationship of the model was defined by incorporating the lagged dependent variable as a regression. The dynamic panel data regression model took the following general form.

$$Y_{it} = \delta Y_{i,t-1} + \sum_{k=1}^K \beta_k X_{kit} + u_{it}; i = 1, 2, \dots, N; t = 1, 2, \dots, T;$$

The panel data model was estimated using the Generalized Method of Moments (GMM) approach. The Arellano-Bond and Sargan model specification tests were performed on the dynamic panel data regression model. The Arellano-Bond test was used to evaluate the relationship between one residual component and another residual component in GMM's first difference model. Following the overidentifying restriction conditions, the Sargan test was used to assess the validity of using instrument variables whose number exceeds the number of estimated parameters.

RESULTS AND DISCUSSION

Table 2 provides a descriptive summary of the variables in the study's model. The variable of economic growth is represented by GDP. From 2015 to 2020, the average GDP value is 3.88, with a standard deviation of 2.67. The smaller standard deviation compared to the average suggests a uniform distribution of data, indicating minimal variations or small differences between the minimum and maximum values. The minimum GDP value of -2.07% was recorded in 2020, while the maximum value of 5.17% was recorded in 2018.

Table 2 – Results of Descriptive Statistics

Variable	Obs	Mean	Std Dev	Min	Max
GDP	234	3.88	2.67	-2.07	5.17
CAR	234	22.13	10.33	3.21	98.28
NPL	234	3.57	2.64	0.00	22.27
NIM	234	4.72	1.94	0.22	12.00
ROA	234	0.75	2.28	-11.15	4.19
LDR	234	89.76	31.93	39.33	390.12



At this point, a dynamic panel data regression model was created using the RStudio application and the first difference GMM two-step estimator approach. In general, the following equation depicts the panel data regression model for dynamic economic growth in Indonesia from 2015 to 2020.

$$EG_{it} = \delta EG_{i,t-1} + \beta_1 CAR_{it} + \beta_2 NPL_{it} + \beta_3 NIM_{it} + \beta_4 ROA_{it} + \beta_5 LDR_{it} + u_{it},$$

Where: $EG_{i,t-1}$ is the level of economic growth in the previous period. The results of the estimation of the economic growth model can be seen in Table 3.

Table 3 – Estimation Results of the Economic Growth Model

Variable	Coefficient	<i>p</i> value
<i>EG</i>	0.1257	0.0254
<i>CAR</i>	0.0362	0.0000
<i>NPL</i>	-0.3965	0.0000
<i>NIM</i>	0.9209	0.0000
<i>ROA</i>	0.1246	0.0004
<i>LDR</i>	-0.2035	0.0000
Uji Wald		0.0000
m_1		0.0199
m_2		0.1526
Uji Sargan		0.3844

Table 3 shows the estimated economic growth from 2015 to 2020, which can be expressed using the coefficient values represented in the following equation:

$$EG_{it} = 0.1257EG_{i,t-1} + 0.0362CAR_{it} - 0.3965NPL_{it} + 0.9209NIM_{it} + 0.1246ROA_{it} - 0.2035LDR_{it} + u_{it};$$

The Arellano-Bond test was employed to examine the presence of autocorrelation between one residual component and another residual component in the first difference model. Meanwhile, the Sargan test is used to determine the validity of using instrument variables whose number exceeds the estimated variables (overidentifying restriction conditions). H_0 is rejected if p_{value} is less than 0.05. Table 3 shows the consistency of the m_1 test results of $p_{value} (m_1) = 0.0199 < \alpha = 0.05$, indicating that H_0 is rejected. In the test of m_2 , the $p_{value} (m_2) = 0.1526 > \alpha = 0.05$ showing no enough evidence to reject H_0 . This implies that the model is consistent and there is no autocorrelation.

The results of the Sargan test indicate that $p_{value} = 0,3844 > \alpha = 0,05$. Thus, there is not enough evidence to reject the H_0 , showing that the overidentifying restriction condition in the dynamic panel data regression model is valid. If the specification test of dynamic panel data regression results shows that the model meets the model specification, it will move on to the parameter significance test stage. The parameter significance test was performed in two stages, namely the simultaneous test and the partial test. The simultaneous test results in Table 3 show the $p_{value} = 0.000 < \alpha = 0.05$. Thus, the decision is to reject H_0 which means that there is at least one independent variable in the model that affects EG. Furthermore, the results of the partial test on the model show that the lag variables EG, CAR, NIM, and ROA of $p_{value} = 0.000 < \alpha = 0.05$ each having a positive coefficient. This indicated that the lag variables of EG, CAR, NIM, and ROA have a significant positive effect on EG. Meanwhile, the variables of NPL and LDR show a $p_{value} = 0.000 < \alpha = 0.05$ with a negative coefficient of the NPL and LDR. This shows that the variables of NPL and LDR have a significant negative effect on EG.

According to the results of this study, CAR has a significant positive effect on economic growth. This aligns with the statement of Martynova (2015) that bank capital influences the ups and downs of economic growth. A higher CAR not only increases financial stability but also helps banks to maintain loan levels, which contributes to overall economic growth. As described by Klein and Turk (2022), a well-capitalized banking system is not only safer but also less likely to impede economic activity. Financial Intermediation Theory states that



banks, as financial intermediary institutions, are vital in the intermediation process between providers and users of financial capital (Greenbaum & Thakor, 2007). They must have good capital to ensure they can support credit growth and prevent economic downturns (Boyarchenko et al., 2020). Banks are not just beneficial to individuals and society but also play an essential role in driving the economic growth and development of a country (Anh, 2020).

The rise of NPLs reduces bank profitability and erodes bank capital, thus limiting bank loans (Tolo & Viren, 2021). A high NPL rate, defined as a greater number of non-performing loans compared to loans made, has a negative effect on bank performance (Tani et al., 2019). Banks, as financial intermediaries, play a crucial role in the growth and development of a country by providing financial products and services. Banks serve as an intermediary between financial capital providers and users, according to financial intermediation theory. A bank's good performance helps it perform its intermediary function, whereas a high NPL ratio degrades the quality of credit extended, causing the bank to suffer (Irawati et al., 2018). The results of this study indicate that NPL has a significant negative effect on economic growth. NPLs force banks to bolster their capital structure, which in turn restricts the ability of banks to extend credit (Anita, 2018).

The ability of bank management to boost net interest income has an effect on the bank's revenue (Saksonova, 2014). An increase in NIM will result in a corresponding rise in ROA (Raharjo et al., 2014). The NIM ratio is a critical indicator of banking profitability and is widely regarded as the most appropriate metric for assessing the efficiency and stability of bank operations (Saksonova, 2014). When interest income decreases, ROA will also drop. Conversely, high interest earned by the bank presents an opportunity to enhance profits (Mulyani, 2019). The findings of the study indicate that a rise in NIM has a positive effect on economic growth (Sandhu & Singh, 2020). Banks can maintain their income and prevent revenue loss by increasing their net interest income (Raharjo et al., 2014). All in all, to perform their role as financial intermediary institutions and distribute funds to businesses in need of capital, banks need to sustain their income levels (Fahrial, 2018).

According to Endogenous Growth Theory, good capitalization causes an increase in share capital due to banking profitability, which leads to economic growth (Romer, 2011). The statement is corroborated by Tabash (2019) who found a significant positive correlation between the bank's return on assets (ROA) and economic growth. Banking performance is critical in stimulating economic growth, with high-performing banks more likely to contribute to a country's economic growth (Ege & Topaloglu, 2020). Banks with a high level of profitability have the potential to act as a catalyst for a country's economic growth (Rabaa & Younes, 2016). The Financial Intermediation Theory emphasizes that banks with strong financial performance, characterized by high profitability, play a key role in economic growth by fostering savings, financing, and investment activities (Herdhayinta & Supriyono, 2019). Bank profitability has a lasting positive effect on economic growth as it enables banks to build core capital and strengthens their ability to effectively assess loans and monitor borrowers (Klein & Weill, 2022).

The results of the study indicate that LDR has a significant negative effect on economic growth. A high LDR means that a bank has limited liquidity (Ilahi et al., 2021). This puts banks at risk of defaulting on their obligations, hindering the banking sector's overall performance. A strong banking sector is critical to a country's economic growth (Alam et al., 2021). Hence, banks need to ensure that they maintain adequate liquidity to handle changes in financial and economic conditions.

CONCLUSION

Bank financial performance as measured using the CAR ratio on the CAMEL approach has a significant positive effect on economic growth. This demonstrates that banks with higher capitalization can improve financial stability and help keep bank loans in place, which has a positive effect on economic growth. Bank financial performance, as measured by the NPL ratio, has a significant negative effect on economic growth. This demonstrates that



rising NPLs will force banks to strengthen their capital structures, reducing banks' ability to extend credit, and thereby slowing economic growth. The NIM ratio, which measures bank financial performance, has a significant positive effect on economic growth. This demonstrates that an increase in bank management to generate net interest affects the bank revenue. Banks must maintain their revenue to fulfill their role as intermediary institutions. The ROA has a significant positive effect on economic growth. Banks with strong financial performance will significantly contribute to economic growth by facilitating savings, financing, and investment. The LDR ratio, which measures bank financial performance, has a significant negative effect on economic growth. Banks will struggle to meet their obligations, and an increase in LDR will decline banking performance. To conclude, a strong banking sector is critical to a country's economic growth.

Based on the research that has been conducted, the following recommendations are addressed to related parties:

- Banks must strive to improve their financial performance, as this will have a tangible effect on the economy, particularly in Indonesia;
- Future researchers should broaden the scope of their studies by extending the research period and incorporating additional variables beyond financial ratios to account for other factors that influence financial performance.

REFERENCES

1. Alam, M. S., Rabbani, M. R., Tausif, M. R., & Abey, J. (2021). Banks' performance and economic growth in India: A panel cointegration analysis. *Economies*, 9(1), 1–13. <https://doi.org/10.3390/economies9010038>.
2. Amalia, S., & Nugraha, N. M. (2021). The Impact of Financial Ratio Indicators on Banking Profitability in Indonesia. *Turkish Journal of Computer and Mathematics Education*, 12(8), 580–588.
3. Anh, N. T. H. (2020). The role of commercial banks on economic growth in vietnam. *Accounting*, 6(6), 1001–1006. <https://doi.org/10.5267/j.ac.2020.7.019>.
4. Ariesta, V. E., Marlina, M., & Hidayati, S. (2019). Financial Ratio Analysis of Bank Performance. *Journal of Economics, Business, and Government Challenges*, 2(2), 119–127. <https://doi.org/10.33005/ebgc.v2i2.80>.
5. Astuti, T. S., & Eddyono, L. W. (2021). Peran Bank Indonesia Dan Pembangunan Hukum Di Bidang Moneter Dalam Rangka Pemulihan Ekonomi Indonesia. *Jurnal Rechts Vinding*, 10(3), 393–411.
6. Bencivenga, V. R., & Smith, B. D. (1991). Financial intermediation and endogenous growth. *Review of Economic Studies*, 58(2), 195–209. <https://doi.org/10.2307/2297964>.
7. Bourke, P. (1989). Concentration and other determinants of bank profitability in Europe, North America and Australia. *Journal of Banking and Finance*, 13(1), 65–79. [https://doi.org/10.1016/0378-4266\(89\)90020-4](https://doi.org/10.1016/0378-4266(89)90020-4).
8. Boyarchenko, N., Giannone, D., & Kovner, A. (2020). Bank Capital and Real GDP Growth. *SSRN Electronic Journal*, 950. <https://doi.org/10.2139/ssrn.3742961>.
9. Dikson, S. (2021). Pengaruh Inflasi Terhadap Produk Domestik Bruto (Pdb) Indonesia Pada Periode Tahun 2010-2020. *Ibn.E-Journal.Id*, 24(1). <https://ibn.e-journal.id/index.php/ESENSI/article/view/231>.
10. Duqi, A., McGowan, D., Onali, E., & Torluccio, G. (2021). Natural disasters and economic growth: The role of banking market structure. *Journal of Corporate Finance*, 71(September), 102101. <https://doi.org/10.1016/j.jcorpfin.2021.102101>.
11. Ege, I., & Topaloglu, T. . (2020). The Relationship between Financial Performance of Banking Sector and Economic Growth: A Research on EU Countries. *Journal of Social Sciences Institute*, 11(2), 508–518.
12. El Khoury, R., Harb, E., & Nasrallah, N. (2022). Triple vectorial analysis of financial development impact on economic growth: evidence from the Middle East and Central Asia. *International Journal of Emerging Markets*. <https://doi.org/10.1108/IJOEM-07-2021-1060>.



13. Greenbaum, S. I., & Thakor, A. V. (2007). *Contemporary Financial Intermediation*. In Elsevier Inc. (2nd ed.).
14. Hachicha, N., & Amar, A. . (2015). Does Islamic Bank Financing Contribute to economic growth? The Malaysian case. *Internasional Journal of Islamic*, 8(3), 349–368. <https://doi.org/10.1108/mf.2008.00934jaa.001>.
15. Haryanto, M., & Hanna, H. (2017). Camel Dan Tingkat Kesehatan Perbankan. *Jurnal Akuntansi*, 18(3), 350–370. <https://doi.org/10.24912/ja.v18i3.270>.
16. Heripson, & Hade, R. (2016). Aplikasi Model Camel Dalam Mengukur Kesehatan. *Al-Masraf: Jurnal Lembaga Keuangan Dan Perbankan*, 1(2), 125–141. <http://journal.febi.uinib.ac.id/index.php/almasraf/article/view/52>.
17. Iswari, A. (2022). Analisis Meningkatkan Kinerja Keuangan Terhadap PT . Bank Sumut Berdasarkan Loan To Deposit Ratio (Ldr), Ra- sio Non Performing Loan (NPL), dan Return On Assets (ROA). 2, 57–68.
18. Jannah, M. F. (2020). Peningkatan Ekonomi Di Tengah Pandemi Dalam Menunjang Pergerakan Pertumbuhan Ekonomi Surabaya. *Jurnal Inovasi Penelitian*, 1(3), 1–4.
19. Keffala, M. R. (2021). “How using derivative instruments and purposes affects performance of Islamic banks? Evidence from CAMELS approach.” *Global Finance Journal*, 50, 100–520. <https://doi.org/10.1016/j.gfj.2020.100520>.
20. Klein, P. O., & Turk-Ariss, R. (2022). Bank capital and economic activity. *Journal of Financial Stability*, 62(August), 101068. <https://doi.org/10.1016/j.jfs.2022.101068>.
21. Kumar, V., & Bird, R. (2020). Do Profitable Banks Make a Positive Contribution to the Economy? *Journal of Risk and Financial Management*, 13(8), 159. <https://doi.org/10.3390/jrfm13080159>.
22. Lardic, S., & Terraza, V. (2019). Financial Ratios Analysis in Determination of Bank Performance in the German Banking Sector. *International Journal of Economics and Financial Issues*, 9(3), 22–47. <https://doi.org/10.32479/ijefi.7888>.
23. Ledhem, M. A., & Mekidiche, M. (2020). Economic growth and financial performance of Islamic banks: a CAMELS approach. *Islamic Economic Studies*, 28(1), 47–62. <https://doi.org/10.1108/ies-05-2020-0016>.
24. Lestari, H. S., Chintia, H., & Akbar, I. C. (2021). Determinants of Net Interest Margin on Conventional Banking: Evidence in Indonesia Stock Exchange. *Jurnal Keuangan Dan Perbankan*, 25(1), 104–116. <https://doi.org/10.26905/jkdp.v25i1.5102>.
25. M.Ivic, M. (2015). Economic growth and development. *Routledge Handbook of the Chinese Economy*, 3(1). <https://doi.org/10.9783/9781512803792-014>.
26. Martynova, N. (2015). Effect of Bank Capital Requirements on Economic Growth: A Survey. *SSRN Electronic Journal*, 467. <https://doi.org/10.2139/ssrn.2577701>.
27. Nasution, D. A. ., Erlina, & Muda, I. (2021). Dampak Pandemi Covid 19 Terhadap Perekonomian Indonesia. *Jurnal Ekonomi Perjuangan*, 2(2), 212–224.
28. Pan, W. H., & Ngo, X. T. (2016). Endogenous growth theory and regional performance: The moderating effects of special economic zones. *Communist and Post-Communist Studies*, 49(2), 113–122. <https://doi.org/10.1016/j.postcomstud.2016.04.005>.
29. Rabaa, B., & Younes, B. (2016). The Impact of the Islamic Banks Performances on Economic Growth: Using Panel Data. *International Journal of Economics and Finance Studies*, 8(1), 101–111.
30. Rasbin, Ginting, A. M., Mauleny, A. T., Sayekti, N. W., Lisnawati, & Satya, V. E. (2013). Peran Sektor Keuangan Terhadap Perekonomian Indonesia. In C. M. Firdausy (Ed.), *Pusat Pengkajian, Pengolahan Data dan Informasi (P3DI) Sekretariat Jenderal DPR RI* (1st ed., Vol. 53, Issue 9). Azza Grafika.
31. Romer, P. (1994). The origins of endogenous growth. *A Macroeconomics Reader*, 8(1), 3–22. <https://doi.org/10.4324/9780203443965.ch26>.
32. Sena, P. M., Asante, G. N., & Brafu-Insaidoo, W. G. (2021). Monetary policy and economic growth in Ghana: Does financial development matter? *Cogent Economics and Finance*, 9(1). <https://doi.org/10.1080/23322039.2021.1966918>.
33. Sengupta, A. (2019). Understanding characteristics of economic growth in the emerging economies during the post-financial liberalization period: Case study of India and Brazil.



- The Gains and Pains of Financial Integration and Trade Liberalization: Lessons from Emerging Economies, 49–61. <https://doi.org/10.1108/978-1-78973-999-220191010>.
34. Shaddady, A., & Moore, T. (2019). Investigation of the effects of financial regulation and supervision on bank stability: The application of CAMELS-DEA to quantile regressions. *Journal of International Financial Markets, Institutions and Money*, 58, 96–116. <https://doi.org/10.1016/j.intfin.2018.09.006>.
 35. Tabash, M., & Dhankar, R. (2014). Flow of Islamic Finance and Economic Growth-- An Empirical Evidence of United Arab Emirates (UAE) Abstract: *Journal of Emerging Issues in Economics, Finance and Banking (JEIEFB)*, 3(2), 1069–1085.
 36. Tabash, M. I. (2019). Banking Sector Performance and Economic Growth: An Empirical Evidence of UAE Islamic Banks. In *Advances in Science, Technology and Innovation*. Springer International Publishing. https://doi.org/10.1007/978-3-030-01662-3_6.
 37. Thach, N. N. (2020). Endogenous economic growth: The arrow-romer theory and a test on vietnamese economy. *WSEAS Transactions on Business and Economics*, 17(May), 374–386. <https://doi.org/10.37394/23207.2020.17.37>.
 38. Villanueva, D. S. (2022). Finance and Endogenous Growth. *Buletin Ekonomi Moneter Dan Perbankan*, 25(2), 55–72. <https://doi.org/10.21098/bemp.v25i1.1878>.
 39. Winarno, S. H. (2019). Analisis NPM, ROA, dan ROE dalam Mengukur Kinerja Keuangan. *Jurnal STEI Ekonomi*, 28(02), 254–266. <https://doi.org/10.36406/jemi.v28i02.254>.
 40. Yildirim, H. H., & Ildokuz, B. (2020). Determining the Relationship Between CAMLS Variables and Profitability: An Application on Banks in the BIST Bank Index. *Business, Economic and Finance*, 104, 85–103. <https://doi.org/10.1108/s1569-375920200000104017>.
 41. Zeqiraj, V., Hammoudeh, S., Iskenderoglu, O., & Tiwari, A. K. (2020). Banking sector performance and economic growth: evidence from Southeast European countries. *Post-Communist Economies*, 32(2), 267–284. <https://doi.org/10.1080/14631377.2019.1640988>.