Financial Inclusion Impact on Firms' Borrowing

Ahmed Hayatu[a], Bany-Ariffin A.N[b], Bolaji Tunde Matemilola[c], Soh Wei Ni[d]

[a,b,c,d]School of Business and Economics, Universiti Putra Malaysia, Malaysia, [a]Adamawa State College of Education, Nigeria
Email: ahmedhayatu82@gmail.com, bany@upm.edu.my, matemilolabt@gmail.com, sohweini@upm.edu.my

Abstract
This paper investigates the impact of financial inclusion on firms' borrowing. The paper applies the two-step system generalized method of moment (GMM) because it minimizes endogeneity concerns. The results reveal that automatic teller machines as financial inclusion proxy has a positive impact on firms' borrowing in ten African nations. Likewise, bank branches as a financial inclusion proxy has a positive impact on firms' borrowing in ten African nations. The results are robust to alternative model specifications. The results suggest that the firms' managers may profit from additional borrowing as banks' financial inclusion strategy attract more deposits to lend to firms.
Keywords: Firms' Borrowing, Financial Inclusion, African Nations, Dynamic Panel Estimations

Introduction
Financial inclusion (accessibility of money) and the presence of accessible financial products play a crucial role in fostering the growth of developing and emerging economies (Abubakar et al., 2020). Financial inclusion makes accessing formal financial services easy and could raise the deposit base of banks and enabling firms to access more debt capital and reduce their exposure to borrowing risk (Demirguc-Kunt et al., 2018).

Although, great progress has been made toward financial inclusion because the number of adults without access to an account has progressively reduced. Unfortunately, based on the latest Findex data, approximately 1.4 billion people around the world are without formal bank accounts and therefore excluded from financial services and majority of them are in developing nations, especially African nations. Moreover, fewer than a quarter of adults possess accounts with depository financial institutions and informal methods of savings are preferred (The World Bank, 2022). African nations are lagging other nations in Asia and Latin America (Ayyagari & Beck, 2015), an indication that financial inclusion is necessary in African nations.

Moreover, most firms in some African nations lack sufficient access to loan money to finance viable investment possibilities (Fowowe, 2017; Wasiuzzaman & Nurdin, 2019). Furthermore, the loan-asset ratio of firms in most African nations appears to be lower than in developed countries, partly due to banks' inability to raise sufficient funds to lend to firms. But if financial inclusion made it easier for people to get loans, firms' borrowing levels would go up. This study is important because it examines how financial inclusion affects firm borrowing in selected African countries is important because it shows how financial services accessibility promotes business expansion, and decreased poverty. It provides information on how to help African businesses, enhance financial systems, and promote equitable and sustainable economic growth to governments, financial institutions, and international development organisations.

This study is also important as it contributes to developing a more prosperous and just economic environment across the African continent by removing obstacles to financial access and comprehending the practical effects of financial inclusion on businesses. The study has practical significance. Firstly, the managers of firms may benefit from raising additional capital because the financial inclusion strategies of banks attract more deposits to lend to firms. Secondly, investors could encourage firm managers to raise the needed debt to finance lucrative investments from banks, using financial inclusion strategies to lure in more deposits. Third, policymakers should ensure the quality of the financial markets by encouraging banks to promote more financial inclusion strategies to attract more deposits to lend to firms, and firms can use the loans to fund good investments that raise the performance level of firms.

Examining financial inclusion proxy by account ownership and usage reveals that many people faced financial exclusion due to the requirement of maintaining a relatively high account balance, limited proximity to financial institutions, inadequate legal safeguards, and a lack of eco-friendly practices (Allen et al., 2016). In many African nation, financial inclusion is a government goal for advancement, and financial inclusion aims are frequently realized through a combination of activities, programs, and laws designed to reach unbanked residents (Ozili, 2021). When done appropriately, financial inclusion can increase access to finance; but when handled improperly problem of access to finance may remain.

Majority of past researchers conducting empirical studies in the literature focus on financial development impacts of firms' borrowing but little attention on financial inclusion. Recently, limited studies have investigated how financial inclusion impacts firms' borrowing but they mainly focus on financial inclusion impacts on firms' performance (see for example, Nizam et al., 2021; Chauvet and Jacolin, 2017). These two studies find that financial inclusion positively impact firms' sales growth Unlike past studies, this paper makes incremental contribution to the literature. Firstly, the paper focus on how financial inclusion impacts the firms' borrowing using sample of listed manufacturing firms from 10 African nations to increases the robustness of the conclusion. Secondly, the paper integrates the financial inclusion and tradeoff theory to explain the link between financial inclusion and firms' borrowing and empirical evidence confirm significant link between financial inclusion and firms' borrowing.

Our findings reveal that financial inclusion is significantly and positively related to on firms' borrowing in African nations. Precisely, automatic teller machine as proxy for financial

inclusion is significantly and positively related to firms' borrowings. Likewise, the bank branches proxy for financial inclusion is significantly and positively related to firms' borrowing. Moreover, both automatic teller machines and bank branches proxies for financial inclusion are included simultaneously in the panel regression model, and the results remain the same as when the two financial inclusion proxies are separated in the panel regression model. The results are robust to alternative measurement of financial inclusion and outlier observations.

Literature Review and Hypothesis Development

Firms' Borrowing and Financial Inclusion

Firm borrowing describes businesses or corporations getting credit or loans from outside sources to fund their business activities and investments. Firms that borrow agrees to pay back the borrowed money plus interest over a predetermined period in exchange for receiving finances from a financier or financial institution. Bank loans and other types of debt financing are all examples of borrowing. It is a crucial instrument for businesses to access outside funding to support their expansion and development (Fazzari et al., 2008). The debate on factors affecting firms' borrowing started with the research work of Modigliani and Miller (1958 and 1963) and even after 60 years of research the main issue of what factors affect firms' borrowing is unending (DeAngelo 2022). Firms' borrowing is affected by firm-level and macroeconomic-level factors. This paper introduces financial as a potential factor that impacts firms' borrowing.

Financial inclusion has become widely acknowledged as a key tool for decreasing income disparities and promoting faster economic growth (Neaime & Gaysset, 2018). Improving access to banking services has been demonstrated to enhance low-income and underprivileged populations by enhancing their capacity to maximize utility and withstand financial distress, as well as by enhancing their long-term financial stability (Neaime & Gaysset, 2018). To meet all demands, access to finance is crucial (Maity & Sahu, 2020). This is true for both preserving and enhancing social and economic status. A sizable portion of the population is not eligible for financial services. Although, there is no coherent financial inclusion theory; but prior literature studies have laid the groundwork for an understanding of financial inclusion. Most previous approaches focused on the importance of finance to economic expansion (Rafiq & Adewale, 2019).

Schumpeter (1934) has long noted that the banks perform important intermediating function by channeling money or funds from the surplus to the deficit units in an economy and financial inclusion (i.e., access to financial services) helps improve the efficiency of banks' financial intermediating function. King and Levine (1993) support the Schumpeter's theory and confirm that robust long-term growth and profitability are the results of banking activities as a key financial facilitator. Moreover, according to the trade-off firms aim at an optimal debt borrowing level (Myers, 1984). The trade-off theory supports the moderate use of debt borrowing by firms that pay taxes. As interest on borrowing is deductible, firms opt for paying higher interest rates when access to funding is available which lead to increase in borrowing. Financial inclusion measured as automated teller machines and bank branch locations work together to expand banking services in developing nations. Instead of spending hours in a bank branch to withdraw cash, individuals would rather use an automatic teller machine. By

offering necessary services related to banking, additionally perform a significant role in the absence of a completely traditional location (Maity & Sahu, 2022).

Financial inclusion makes accessing formal financial services easy, lower costs, and banks can raise their deposit base (Demirguc-Kunt et al., 2018). All else constant, banks' financial inclusion strategy make access to formal financial services easy, reduces costs, and can increase bank deposit and make firms have more access to bank credits. Although this is a logical conjecture, but there is no empirical evidence to support it. Therefore, this paper hypothesized that:

$H_{alternative}$: Financial inclusion positively impact firms' borrowing.

Data and Research Method

Data

Our sample consists of 255 listed manufacturing firms from 10 African countries for the 2010-2019 period.[1] Manufacturing firms are selected because according to the World Bank Report in 2022, manufacturing firms contributed significantly to the growth of the African countries. The data were obtained from the Datastream database. We utilize two indicators of financial inclusion namely, Automated Teller Machine (ATMs) per 100,000 adults and Bank Branch (BB) per 100,000 adults. The data starts from 2010 to remove the impact of the 2008 and 2009 financial crisis. Our focus is on African nations because they have problems of inadequate financial inclusion. Financial Inclusion is our main independent variable, and it is obtained from the World Development Indicators (World Bank database). Other macroeconomic data such as interest rate and GDP growth rate is obtained from the World Bank Database. The other company-specific data are extracted from the Datastream databases.

Variables Justification

Firms Borrowing (FBR): refers to debt capital. Debt continues to play a significant role in a firms' financial structure. Debt can be either short-term debt, long-term debt, or total debt, and some variables are used to explain the debt financing (Dakua, 2019; Koksal & Orman, 2015). Short-term debt shows the money required to fund daily operations. These funds' repayment schedules were completed in less than a year. Typically, businesses acquire long-term debt when they purchase real estate, such as structures, equipment, or machinery. The payback schedule for these funds usually spans over an extended period. In accordance with past studies (e.g., Chaklader and Jaisinghani, 2017 and Zeitun and Haq, 2015), the total debt to total asset ratio is used as proxy for firms' borrowing.

Financial Inclusion (FI): variable is the main independent variable, and it is proxied by Automated Teller Machine per 100,000 adults and Bank Branches per 100,000 adults. Automatic teller machines and bank branches per 100,000 adults are significant proxies for measuring financial inclusion. Khandare (2019) and Ayyagari & Beck (2015) used the proxy to illustrate the level of equitable expansion in the regions and nations under investigation. Having an account at a legitimate financial institution is a key component of financial inclusion in its early stages. This highlights the significance of a bank branch, where the charge must be opened, and a debit card, which the account holder may use to conveniently withdraw money from ATMs has also been use as proxy of financial inclusion by world bank (Khandare, 2019;

Ayyagari & Beck, 2015). These metrics show how far financial inclusion has come, which is why this study focused on using automated teller machines and bank branches as proxies for financial inclusions.

Firm Size (LTA): large firms often have predictable cash flows and are more diverse. As a result, they are less vulnerable to bankruptcy than small businesses. Larger firms, however, employ more debt since they have more access to the capital market to raise longer term capital at lower costs than smaller firms. According to empirical research, the relationship between size and firms' borrowing has been positively correlated as revealed in the studies of Chakrabarti & Chakrabarti (2019) and Dakua (2019), and Aurangzeb and Anwar ul Haq (2012). In contrast, Hanousek and Shamshur (2011) and Chakraborty (2010) observed a negative association between firm size and debt. Firm size is expected to be positively related to firms' borrowing because bigger firms are more stable and less likely to face financial distress problem. Following previous studies, this paper measured the firm size as the natural logarithm of total assets.

Fixed Assets (FATA): the firm's borrowing strategy is influenced by fixed assets since they are less impacted by information asymmetric problem. There are costs associated with information asymmetry when equity is issued, according to Myers and Majluf (1984). Additionally, the issuance of debt secured by fixed assets will lower the asymmetric information cost compared to the distribution of shares. In the case of bankruptcy, fixed assets have fair valuations and can be used as collateral by banks to obtain long-term funding (Matemilola et al., 2019; Flannery and Hankins, 2013; Oztekin and Flannery, 2012). As a result, firms' borrowing should be positively related to fixed assets. As in previous studies, fixed assets are measured as fixed assets to total assets ratio.

Earnings Before Interest and Tax (EBITTA): the importance of a strong correlation between earnings and firms' borrowing was emphasized by Myers & Majluf (1984). They also stated that businesses should turn to retained earnings before debt and equity when they need financing. Similar findings were made by researchers including (e.g., Chakrabarti & Chakrabarti, 2019; Khemiri & Noubbigh, 2018) who discovered a negative relationship between profit and debt. On the other hand, Kaouther et al. (2019), Yusup and Susilawati (2023), and Aurangzeb and Anwar ul Haq (2012) findings reveal that earnings and firms' borrowing have a positive relationship. Earnings is expected to be positively related to firms' borrowing as profitable firms may rely on retain profits which lower their borrowing. Based on past studies, this paper uses earnings before interest and tax to total assets ratio. Non-debt tax shield (NDTSTA): is the ratio of depreciation to total assets. Non-debt tax shield is not directly related to firms' borrowing costs but it substitutes for debt interest tax shield and should be negatively related to firms' borrowing (DeAngelo and Masulis, 1980).

Macroeconomic factors also affect firms' borrowing. Interest Rate (INTR): The cost of taking out loans at long-term and short-term interest rates represents loans. Due to its impact on firms' borrowing, the rate of interest cannot be disregarded. When the cost is very high, firms prefer to borrow less money from banks to finance investments. Conversely, when the cost is very low, firms prefer to borrow more money from banks to finance investments. This encourages businesses to obtain affordable debt financing (Homapour et al., 2022; Semuel & Nurina, 2015; Noor & Nila, 2014). Economic Growth (GDPGR): economic growth is correlated

with firms' growth (Demirgu¨c¸-Kunt and Maksimovic, 1999) and improvement in economic growth rate of a country indicates firms can borrow more during this good period (Cheng and Shiu, 2007) to meet their financing needs. Thus, this study expects GDP growth to positively related to firms' borrowings.

Model Specification

The paper specifies a dynamic panel model because previous year debt can affect the current year debt (Matemilola *et al.*, 2019). The model can be expressed as follows:

$$FBR_{ij,t} = \lambda FBR_{ij,t-1} + \beta_0 + \beta_1 FI_{jt} + \beta_2 LTA_{ij,t} + \beta_3 FATA_{ijt} + \beta_4 EBITTA_{ijt}$$
$$+ \beta_5 NDTSTA_{ij,t} + \beta_6 INTR_{j,t} + \beta_7 GDPGR_{j,t} + \phi_i + \alpha_t + \mu_{ij,t} \quad (1)$$

where,

FBR is total debt to total assets; *FI* is a financial inclusion indicator (i.e., Automatic Teller Machine - ATM and Bank Branches, BB); *LTA* is log of total assets; *FATA* is a ratio of property, plant and equipment to book value of total assets; *EBITTA* is a ratio of profit before interest and tax to total assets; *PBR* is a ratio of market value of assets to book value of total assets, *NDTSTA* is a ratio of depreciation to total assets; *INTR* is interest rate; *GDPGR* is gross domestic product growth rate; and subscript i, j, and t represent firm, country, and time, respectively.

We employ the two-step system generalised method-of-moment (GMM) estimator proposed by Arellano and Bond (1991) and Blundell and Bond (1998). GMM improves efficiency by addressing biases introduced by the inclusion of lag dependent variables, endogeneity problem and firm-specific effects.[2] Additionally, the two-step estimator is more efficient than the one-step estimator because it uses heteroscedasticity-consistent standard errors (Blundell and Bond, 1998). The validity of GMM estimation is evaluated using AR (2) and Hansen over-identification tests.

Results

Descriptive Statistics Results

Table 4.1 below shows the descriptive statistics of all the variables in the model. The mean values of firms borrowing is 0.502 which falls within 0.163 (minimum value) and 0.785 (maximum value). This mean value for firms' borrowing indicates that on average, some firms borrow moderately in African countries. The bank branches have a mean value 11.144 which falls within 1 (minimum value) and 34 (maximum value) for the firms. This implied that on average, some African countries have more bank branches than others, which could increase firms' access to borrowing. Next, the automatic teller machine (ATM) mean value of 20.282 which falls within 3 (minimum value) and 69 (maximum value). Hence, on average, some firms in African countries have more access to finance than others. GDP growth rate (GDPGR) have the highest mean and the lowest standard deviation.

---

[2]The addition of lag dependent variable is particularly relevant because debt stock may be persistent (see, Matemilola et al., 2019).

Table 1
Descriptive Statistics

Variables	Mean	Std. Dev.	Min	Maximum
FBR	0.502	0.223	0.163	0.785
ATM	20.282	6.550	3	69
BB	11.144	7.826	1	34
LTA	23.501	5.635	6.758	34.297
FATA	0.530	0.623	0.136	0.890
EBITTA	0.300	1.170	0.120	0.900
NDTSTA	0.530	0.303	0.134	0.909
INTR	9.432	8.715	0.263	46.01
GDPGR	24.967	1.166	22.416	27.076

Notes: *FBR* is total debt to total assets; *FI (* i.e., ATM per 100,000 adults and BB per 100,000 adults) is a financial inclusion indicator; L*TA* is total assets; *FATA* is a ratio of property, plant and equipment to book value of total assets; *EBITTA* is a ratio of profit before interest and tax to total assets; *PBR* is a ratio of market value of assets to book value of total assets; *NDTSTA* is a ratio of depreciation to total assets; *INF* is inflation rate; *INTR* is interest rate; *GDPGR* is gross domestic product growth rate; *FD* is a ratio market capitalization to gross domestic products. Numbers in parenthesis are t-statistics.

Correlation Results
Table 2 presents the correlation coefficient between firms' borrowings (FBR) and the financial inclusion variables such as branches (BB) and Automatic Teller Machine (ATM); and the correlation coefficients between firms' borrowing and other independent variables. The correlation coefficient between firms' borrowing and bank branches (BB) has a positive value (0.030**) and statistically significant at 5% level. Similarly, the correlation coefficient between firms' borrowings and Automatic Teller Machine (ATM) has a positive value (0.055**) and statistically significant at 5% level. Thus, these variables suggest that as financial inclusion (i.e., firms' access to finance) increases, firms' borrowing also increases. Besides, the correlation coefficient between other independent variables is generally lower which indicate that there is no multicollinearity problem between the independent variables.

Table 2
Correlation Result

	FBR	BB	ATM	LTA	FATA	EBITTA	NDTST A	INTR	GDPG
FBR	1.000								
BB	0.030**	1.000							
ATM	0.055**	0.365***	1.000						
LTA	-0.117***	0.124**	-0.123***	1.000					
FATA	0.762***	-0.010**	0.031**	-0.063**	1.000				
EBITTA	0.002	-0.005*	0.019**	0.001	-0.005*	1.000			
NDTST A	0.375***	-0.004	0.095***	-0.073***	0.001	0.001	1.000		
INTR	-0.016***	-0.571**	-0.223***	-0.328***	0.124***	0.008*	-0.010*	1.000	0.009*
GDPG	0.069***	0.083**	0.576***	-0.191***	0.017**	0.024**	0.048**	-0.356***	1.000

Notes: *FBR* is the ratio of total debt to total assets; *FI (* i.e., ATM per 100,000 adults and BB per 100,000 adults) is a financial inclusion indicator; L*TA* is log of total assets; *FATA* is a ratio of property, plant and equipment to book value of total assets; *EBITTA* is a ratio of profit before interest and tax to total assets; *NDTSTA* is a ratio of depreciation to total assets; *INTR* is interest rate; and *GDPGR* is gross domestic product growth rate. Asterisk *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Two-Step System GMM Results
In dealing with a large dataset, we must be cautious about the possible impacts of outliers as they can dramatically change the magnitude of estimated coefficients and even the direction of coefficient signs, leading to misleading results. To minimize the impacts of outliers on our estimation results, we winsorize all variables at the top and bottom 1%. The idea behind the winsorization technique is to make the sample mean, which is sensitive to extreme values, robust (Nguyen and Phan, 2020).

Table 3 reports the results for the full sample. Three models are estimated using ATM and BB as proxies for financial inclusion and one baseline model. The results of both *AR*(2) and Hansen tests show that the *p*-values exceed 0.05 for all models which suggest that they are adequately specified, and the instruments are valid. The result of baseline model 1 which includes only the traditional firm-specific determinants reveals three important determinants namely, size (LTA), profits (EBITTA) and non-debt tax-shield (NDTSTA). In model 2 using ATM, the coefficient on ATM is positive and significant at the 1% level which suggests that financial inclusion increases the firms' borrowings. We also reach the same conclusion using BB

indicator (i.e., Model 3). In model 4, both ATM and BB are included simultaneously, and we find significantly positive relationship between financial inclusion and firms' borrowings remains unchanged.

The findings suggest that financial inclusion increases firms' borrowing levels because of extra access to debt capital. The findings also suggest that improvement in access to financial services allow banks to attract more deposits which can be channelled to firms. This gives firms more flexibility in raising the needed debt-level to maximise the tax-shield benefits of debt emphasized in the Myers (1984) trade-off theory. The trade-off theory proved that firms should target optimal debt to maximize the tax-shield benefits of debt. Moreover, the positive coefficients of most of the financial inclusion proxies implied that financial inclusion increased the firms' borrowing due to the additional access to debt capital. Moreover, based on comparison between model 2 and model 3, we find that BB increase firms' borrowing than ATM. In conclusion, the finding on the positive impact of financial inclusion on firms' borrowings are robust. It is not influenced by the selection of financial inclusion proxies and outliers' observations. Moreover, the results are not driven by biases due to the inclusion of lag dependent variable, endogeneity problem, and firm-specific effects.

These findings support Nizam et al. (2021) findings for ASEAN 5 countries that financial inclusion impacts positively on firms' growth and reasoning that financial inclusion has a greater effect on economic growth because of the advantage obtained from the allocation of financial access to support firms' growth. Likewise, the findings support Chauvet and Jacolin (2017) who reported that financial inclusion positively impacts on firms' growth in developing and emerging countries.

Table 3
Tow Step System Generalized Method of Moments (GMM) results

Regressors	Model 1	Model 2	Model 3	Model 4
FBR$_{it-1}$	0.3432*** (13.30)	0.3363*** (13.29)	0.3420*** (13.12)	0.3345*** (13.14)
ATM	-	3.3750*** (7.94)	-	3.0350*** (6.07)
BB	-	-	5.0630*** (6.34)	2.3014*** (2.79)
LTA	-22.935** (-8.59)	-17.851*** (-7.46)	-16.951*** (-6.81)	-17.724*** (-7.76)
FATA	0.001 (0.93)	0.0009 (0.89)	0.0001 (0.56)	0.0001 (0.96)
EBITTA	-0.0001** (-2.29)	-0.005** (-2.57)	-0.0001** (-2.33)	-0.0001** (-2.58)
NDTSTA	1.1980*** (25.14)	1.3139*** (29.11)	1.2471*** (26.37)	1.3013*** (29.06)
INTR	-	-0.2468 (-0.38)	-0.8451 (-1.30)	-0.0555 (-0.09)
GDPGR	-	35.8865*** (5.01)	21.9110** (2.31)	25.605*** (3.91)
Constant	22.207*** (8.72)	41.933** (2.24)	49.4282*** (2.79)	15.522 (0.87)
Observations	2500	2500	2500	2500
Number of firms	250	250	250	250
Industry effects	Yes	Yes	Yes	Yes
Year fixed effect	-	Yes	Yes	Yes
AR(2) (p-value)	0.239	0.211	0.221	0.319
Hansen Test (p-value)	0.208	0.223	0.318	0.339
Instruments	52	53	53	54

Notes: *FBR* is total debt to total assets; *FI* (i.e., ATM and BB) is a financial inclusion indicator; L*TA* is total assets; *FATA* is a ratio of property, plant and equipment to book value of total assets; *EBITTA* is a ratio of profit before interest and tax to total assets; *PBR* is a ratio of market value of assets to book value of total assets; *NDTSTA* is a ratio of depreciation to total assets; *INTR* is interest rate; *GDPGR* is gross domestic product growth rate; *FD* is a ratio market capitalization to gross domestic products. Numbers in parenthesis are t-statistics. Asterisks indicate statistical significance at the 1% (***) and 5% (**).

Conclusion

Unlike past studies on the factors that affect firms' borrowings, this study investigates whether financial inclusion impact on firms' borrowing decisions in African nations. To the best of our knowledge, this issue has not received attention in the literature. The results of the system GMM estimation reveals a positive impact of financial inclusion on firms' borrowing in African nations. These results have policy implications. Firstly, the results indicate that financial managers could benefit from raising additional debt capital as banks' financial inclusion strategy attracted more deposits to lend to firms. Secondly, shareholders should encourage financial managers to raise the necessary debt capital to fund positive investment projects from banks that possess attractive financial strategies to lure in more

deposits. Third, the policymakers are encouraged to create the enabling environment that support banks financial inclusion strategies to attract more deposits to lend to firms. Our research focuses on firms in Africa with data availability; this limitation can be improved with larger sample size. Moreover, future research can investigate the impact of financial inclusion on other corporate finance outcome variables like cash holdings and green real investments.

References

Abubakar, A. M., Daneji, B. A., Muhammed, A. I., and Chekene, I.-A. B. (2020). Driving faster financial inclusion in developing nations. *Technology Audit and Production Reserves*, 24(52), 35–40.

Arellano, M., and Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence with an application for employment equations. *Review of Economic Studies*, 58, 277–297.

Allen, F., Demirguc-Kunt, A., Klapper, L., and Martinez Peria, M. S. (2016). The foundations of financial inclusion: understanding ownership and use of formal accounts. *Journal of Financial Intermediation*, 27, 1–30.

Anarfo, E. B., Abor, J. H., and Achampongosei, K. (2020). Financial regulation and financial inclusion in Sub-Saharan Africa: Does financial stability play a moderating role? *Research in International Business and Finance*, 51, 1-11. https://doi.org/10.1016/j. ribaf.2019.101070

Ayyagari, M., and Beck, T. (2015). Financial inclusion in Asia: an overview. *SSRN Electronic Journal*. DOI: 10.2139/ssrn.2707540

Blundell, R., and Bond, S. (1998). Initial condition and moment restriction in dynamic panel data Models. *Journal of Econometrics,* 87, 115-143.

Chakraborty, I. (2010). Capital structure in an emerging stock market: the case of India. *Research in International Business and Finance*, 24, 295-314.

Chaklader, B., and Jaisinghani, D. (2017). Testing dynamic trade-off theory of capital structure: an empirical study for the textiles industry in India and China. *Afro-Asian Journal ofFinance and Accounting*, 7(4), 378–401.

Chauvet, L., and Jacolin, L. (2017). Financial inclusion, bank concentration, and firm Performance. *World Development*, 97, 1-13.

Cheng, S., and Shiu, C. (2007). Investor protection and capital structure: International evidence. *Journal of Multinational Financial Management*, 17, 30–44.

DeAngelo, H., and Masulis, R. W. (1980) 'Optimal capital structure under corporate and personal Taxation', *Journal of Financial Economics*, 8(1), 3–29.

DeAngelo, H. (2022). The capital structure puzzle: What are we missing? *Journal of Financial and Quantitative Analysis*, 57(2), 413–54

Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S., and Hess, J. (2018). The global findex database 2017: measuring financial inclusion and the fintech revolution. *The World Bank. file:///C:/Users/User/Downloads/978146481259*

Demirguc-Kunt, A., and Maksimovic, V. (1999). Institutions, financial markets and firm debt Maturity. *Journal of Financial Economics*, 54, 295-336.

Flannery, M. J., and Hankins, K. W. (2013). Estimating dynamic panel models in corporate Finance. *Journal of Corporate Finance*, 19(1), 1–19.

Fowowe, B. (2017). Access to finance and firm performance: Evidence from African countries. *Review of Development Finance*, *7*(1), 6–17. https://doi.org/10.1016/j.rdf.2017.01.006

Hanousek, J., and Shamshur, A. (2011). A stubborn persistent: is the stability of leverage ratios determined by the stability of the economy. *Journal of Corporate Finance*, 5(17), 1360-1376.

Homapour, E., Su, L., Caraffini, F., and Chiclana, F. (2022). Regression analysis of macroeconomic conditions and capital structures of publicly listed British firms. *Mathematics*, 10(7), 1–28.

Jarallah, S., Saleh, A. S. and Salim, R. (2019). Examining pecking order versus trade-off theories of capital structure: New evidence from Japanese firms. *International Journal of Finance and Economics*, 24, 204–211.

Kaouther, T., Viviani, J.-L. and Belkacem, L. (2019). From ethical principles to financial decision theoretical foundations and empirical comparison with conventional banks of Islamic banks capital structure', *SSRN Electronic Journal*, 1–28.

Khandare, D. V. (2019), 'Financial inclusion: empirical study of BRICS countries. *International Journal of Social Science and Economic Research*, 4(3), 3319–3334.

King, R. G., and Levine, R. (1993b). Finance and growth: schumpeter might be right. *Quarterly Journal of Economics*, 108(3), 717–737.

Köksal, B., and Orman, C. (2015). Determinants of firm capital structure: evidence from a major developing economy. *Small Business Economics*, 44(2), 255–282.

Matemilola, B. T., Bany-Ariffin A. N., Azman-Saini, W. N. W., and Annuar Md Nassir (2019).Impact of institutional quality on the capital structure of firms in developing countries. *Emerging Markets Review*, 39, 175-209.

Maity, S., and Sahu, T. N. (2022). Bank branch outreach and access to banking services toward financial inclusion: an experimental evidence. *Rajagiri Management Journal*, 17(2), 170–182.

Modigliani, F., and Miller, M. H. (1963). Corporate income taxes and the cost of capital : A correction. *The American Economic Review*, 53(3), 433-443.

Modigliani, F., and Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment, *The American Economic Review*, 48(3), 261–297.

Myers, S. C. (1984). The capital structure puzzle. *Journal of Finance,* 39(3), 575-592.

Neaime, S., and Gaysset, I. (2018). Financial inclusion and stability in MENA: evidence from poverty and inequality. *Finance Research Letters* 24, 199–220.

Nguyen, J. H., and Phan, H. V. (2020). Carbon risk and corporate capital structure. *Journal of Corporate Finance*, 64. https://doi.org/10.1016/j.jcorpfin.2020.101713

Nizam, R., Karim, Z. A., Sarmidi, T., and Rahman, A.A. (2021). Financial inclusion and firm growth in Asean-5 countries: new evidence using threshold regression. *Finance Research Letters* 41, https://doi.org/10.1016/j.frl.2020.101861 (forthcoming)

Ozili, P. K. (2021). Financial inclusion research around the world: A review. *Forum for Social Economics*, 50(4), 457–479.

Öztekin, Ö., and Flannery, M. J. (2012). Institutional determinants of capital structure adjustment speeds. *Journal of Financial Economics*, 103(1), 88–112.

Schumpeter, J. (1934). The theory of economic development. Cambridge, MA: Harvard University Press.

Semuel, H., and Nurina, S. (2015). Analysis of the effect of inflation, SBI interest rates, and exchange rates on the money supply in Indonesia. *Proceedings of the International Conference on Global Business, Economics, Finance and Social Sciences*, 4(1), 7-20.

The World Bank. (2022). Financial Inclusion. https://www.worldbank.org/en/topic/ financial inclusion /overview. Access date: 20th of December 2023.

Wasiuzzaman, S., & Nurdin, N. (2019). Debt financing decisions of SMEs in emerging markets: empirical evidence from Malaysia. *International Journal of Bank Marketing*, *37*(1), 1–21. https://doi.org/10.1108/IJBM-12-2017-0263

Yusup, A. K., and Susilawati, C. E. (2023). How do political connection and intellectual capital affect the debt usage of majority shareholders? Evidence in Indonesia. *International Journal of Business and Emerging Markets,* 15(1), 34-51.

Zeitun, R., and Haq, M. M. (2015) 'Debt maturity, financial crisis and corporate performance in GCC countries: a dynamic-GMM approach, *Afro-Asian Journal of Finance and Accounting*, 5(2), 231–247.