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FIRM-LEVEL DETERMINANTS OF ACCESS TO EXTERNAL FINANCE AND IMPACT OF EXTERNAL FINANCE ON FIRM PERFORMANCE

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Abstract. This cross-sectional study employs resource-based view and resource dependence theories to examine the determinants of access to external finance at firm-level and the effect of access to external finance on performance of 328 agri-food firms. Applying binary logistic regression, results indicate that firm age, ownership, sources of financing, and firm location were significant predictors of access to external finance. The effect of access to external finance on firm performance analyzed using linear regression was positive and significant. Therefore, firm-specific characteristics are crucial in the decision to access external finance. Access is easier for older firms in small cities that rely on informal sources of financing. Family firms are more vulnerable to external finance than non-family firms. Furthermore, access to external financing is associated with better firm performance. The findings of this study are useful for managers making financing decisions and for stakeholders involved in micro and small enterprises financing.

Keywords: firm level, access to external finance, firm performance, agri-food, resource-based view, resource dependency.

JEL Classification: C83, G30, H80, L66.

Introduction

The majority of firms, especially firms from developing countries, face high levels of vulnerability and have low levels of performance (Sari & Sari, 2022). Most of Micro and Small Enterprises (MSEs) suffer from liquidity constraints (Dörr et al., 2022; Kalemli-Ozcan et al., 2020) and their contribution to the economy remains low (Seluhinga & Philip, 2021). Around 70% of micro, small and medium enterprises, particularly in emerging economies, are credit constrained (Mushtaq et al., 2022). The index of financial inclusion in sub-Saharan Africa is still low (Ofori-Abebrese et al., 2020) and it is estimated that only 10% of MSEs use external financing to finance business operations (Leke & Signé, 2020).

MSEs engage with external financers in order to acquire or access financial resources by considering the costs and benefits of the financing sources (Hafiz et al., 2022). Furthermore, access to external financing is an important determinant of firm performance and its effect on firm performance significantly varies across regions and countries (Abdisa & Hawitibo, 2021). There is still limited research in Africa, Asia-Pacific and the Middle East, as most research on access to finance comes from Europe and the Americas (Rao et al., 2021). Also the studies on the effect of ownership structure on access to finance are still limited in number (Khan et al., 2022) as family-owned firms differ from non-family-owned firms in terms of characteristics, goals, and priorities (Ramalho et al., 2018). Moreover, there is still a need for studies from poor countries to examine how dependence on external finance affects firm performance (Lee, 2020), especially in the agri-food subsector. Thus, the study fills these gaps by complementing the few studies from emerging economies that examine the determinants of access to external finance, considering firm ownership, and the impact of access to external finance on firm performance.

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Based on the concept of resource-based view (RBV), this study examines how firm-level factors such as firm age, legal status, firm ownership, firm size, sources of finance, firm location and financial management training received by the manager/owner-manager (hereafter referred to as the manager) affect access to external financing. The study also employs resource dependency theory (RDT) to examine the impact of external factors, namely access to finance, on firm performance.

1. Literature review

Age of a firm is a significant explanatory variable for access to external finance (Bongini et al., 2021; Martinez et al., 2022). The age of the firm has a positive impact on the firm's access to external financing as older firms have more access to external financing of all types compared to young firms (Bougheas et al., 2006).

The legal form of a firm could be considered an indicator of the quality of information disclosure. Limited liability firms are more likely to have access to external financing because they benefit from greater reliability and formality of the firms' operations than unlimited liability firms (Martinez et al., 2022).

Ownership of firms is also a significant variable in explaining access to external finance (Martinez et al., 2022). Family firms have close ties to financing institutions, therefore they are assumed to be financially unconstrained compared to non-family firms (Ergün & Doruk, 2020).

A firm's access to finance is influenced by its size (Bongini et al., 2021). Smallness presents a firm with greater challenges in raising external finance (Abdisa & Hawitibo, 2021). Many authors find a positive relationship between firm size and access to external finance (Ferrando & Ruggieri, 2018).

MSEs face credit rationing in formal markets hence they are likely to seek capital from informal sources (credit from suppliers, advances from customers or friends and relatives) to finance their business operations (Archer, 2021; Brixiová et al., 2020). Due to less developed financial systems in less developed countries, informal credit remains the important source of financing for firms in these areas (Rao et al., 2021)

Firms in disadvantaged areas are likely to have less access to external finance compared to firms located in advantaged areas because of greater information asymmetry and sparse networks of lenders, particularly formal lenders (Bakhadirov et al., 2022). Firms in larger cities have a better information environment, making it easier for them to obtain capital from lenders than for firms in small cities (Loughran, 2008).

Micro, small and medium firms are generally characterized by low financial and management skills, which affects their access to external finance (Anwar et al., 2020). Managers' financial capabilities play a dynamic role in integrating other resources and capabilities within the organization to strengthen the competitiveness of business activities (Anwar et al., 2020). Financial literacy skills are crucial as the knowledge behind helps to minimize the obstacles that firms could face in the credit market as well as being a key tool for managing firm finances (García-Cabrera et al., 2021).

Studies focusing on firm-level data have found that access to finance is strongly associated with firm performance (Ayyagari et al., 2008; Brixiová et al., 2020). Adomako et al. (2016) argued that access to finance has a positive effect on firm growth. Improving access to finance has a positive impact on firm survival and growth as firms with financial access are likely to have more efficient allocation of their asset portfolio and higher performance (Storey, 2016).

Therefore this study examines the effect of internal determinants on access to external finance and assesses how firm's dependence on external finance affects its performance. Specifically, the study addresses the following two main research questions:

1. What firm-level factors influence firm's access to external financing?
2. How does access to external finance affect performance of a firm?

2. Sample and study variables

The sample for this cross-sectional study was obtained using convenience and snowballing sampling techniques because of the difficulty in obtaining a reliable and up-to-date database for firms in developing countries, including Tanzania (Mashenene & Kumburu, 2020; Zulu-Chisanga et al., 2021). Potential participants were identified through the Small Industries Development Organization (SIDO) registry as a starting point. Five regions (Morogoro, Dar es salaam, Dodoma, Manyara, and Singida) were selected based on the concentration of agri-food firms and their importance to the sub-sector activities in the country (Seluhinga & Philip, 2021). A structured questionnaire completed by a single informant from each firm was used to collect data from knowledgeable managers. The convenience sampling approach provided the opportunity to recruit managers who were accessible and available at the time of recruitment, whereas the snowballing approach allowed recruitment of participants with greater diversity based on referrals from initial participants. 442 questionnaires were collected based on the number of referrals and contacts made. 328 questionnaires were then considered useful for further analysis after excluding the 94 firms that never applied for or used external financing and the 20 firms that were fully constrained (Cowling et al., 2018). Data were collected between November 2020 and June 2021. Table 1 presents the study variables.

The collected data was analyzed using descriptive statistics, binary logistics and linear regression models. Binary logistics regression was used to predict the odds determinants of access to external finance while simple linear regression analysis was employed to study the effect of access to external finance on firm performance.

Table 1. Study variables (source: created by authors)

Variable	Definition	Measurement scale	Reference
Firm age	Age of firm in years	Continuous variable	Bongini et al. (2021)
Legal status	Legal status of firm	Dummy variable (0 = Sole proprietorship; 1= Limited company)	Martinez et al. (2022)
Firm ownership	Family involvement in ownership of the firm	Dummy variable (0 = Non-family; 1 = Family)	Ergün & Doruk (2020).
Firm size	Size of the firm based on the number of employees	Dummy variable (0 = Micro enterprise; 1-4 employees; 1 = Small enterprise; 5-49 employees)	Bongini et al. (2021) and United Republic of Tanzania [URT] (2003)
Sources of finance	Sources of external finances used	Dummy variable (0 = informal; 1 = formal)	Nguyen & Canh (2021)
Firm location	Location of the firm	Dummy variable (0 = Otherwise; 1 = largest commercial city)	Ramalho et al. (2018)
Financial management training	Access to formal or informal financial management training	Dummy variable (0 = otherwise; 1 = if the manager has been trained in financial management)	Tundui & Tundui (2020)
Access	Status of access to external finances applied/ used	Dummy variable (0 = Constrained; 1 = Non-constrained)	Cowling et al. (2018)
Firm performance	Total overall firm performance	Continuous (aggregate) (4 Much deteriorated to 15 Much Improved)	Galbreath & Galvin (2008); Kamasak (2017); Spanos & Lioukas (2001)

3. Results and discussions

3.1. Descriptive results

Descriptive data were generated for all variables and presented in Table 2. Majority of the sampled firms were young non-family sole proprietorships. Mkuna et al. (2021) reported that the majority of Tanzanian agri-food firms were young.

64.3% of sampled firms reported to be constrained indicating that access to external finance is still a challenge among studied firms. Brixiová et al. (2020) highlighted that 20–40 percent of firms in developing countries are either fully or partially constrained to external financing, especially formal financing.

Table 2. Sample characteristics (source: created by authors)

Variable	Description	Frequency	Percent
Firm age	10 years and below	259	79.0
	Above 10 years	69	21.0
	Mean firm age (years)	7.87	
Legal status	Sole proprietorship	287	87.5
	Company	41	12.5
Ownership	Non family	219	66.8
	Family	109	33.2
Firm size	Micro firms	148	45.1
	Small firms	180	54.9
Sources of finance	Informal sources	137	41.8
	Formal sources	191	58.2
Firm location	Largest commercial city (Dar es Salaam)	124	37.8
	Otherwise (Dodoma, Manyara, Singida, Morogoro)	204	62.2
Financial management training	No	218	66.5
	Yes	110	33.5
Access	Constrained	211	64.3
	Unconstrained	117	35.7

3.2. Factor analysis and reliability results

The factor loadings for the three indicators of firm performance were considered adequate, as they were all above 0.50. The reliability of results were also satisfactory (Cronbach's alpha = 0.910) (Table 3).

Table 3. Factor analysis and reliability results (source: created by authors)

Item	Comm	KMO	Alpha	Initial items	Final items
Sales Turnover	0.907	0.738	0.910	3	3
Market Share	0.855				
Profit before tax	0.835				

Note: Comm – Communalities; KMO – Kaiser-Meyer-Olkin; Alpha – Cronbach's alpha.

3.3. Correlation results

The relationship between study variables was examined using the Pearson correlation coefficient. The three dependent variable indicators were highly correlated among each other ($r > 0.70$). These indicators were

Table 4. Correlation analysis (source: created by authors)

No.	Variables	1	2	3	4	5	6	7	8	9
1	Firm age	1								
2	Firm legal status	0.032	1							
3	Firm ownership	0.091	0.046	1						
4	Firm size	–0.060	–0.046	0.041	1					
5	Sources of finance	0.320**	0.002	0.086	–0.023	1				
6	Firm location	–0.049	0.048	0.024	–0.102	0.265**	1			
7	Financial management training	0.414**	0.083	0.006	0.021	0.274**	–0.114*	1		
8	Access	0.291**	0.103	0.272**	–0.054	0.385**	0.338**	0.105	1	
9	Firm performance	0.542**	0.074	0.051	0.038	0.390**	0.016	0.579**	0.228**	1
		10	11	12						
10	Sales turnover	1								
11	Market share	0.841**	1							
12	Profit before tax	0.814**	0.740**	1						

Notes: *$p < 0.05$; **$p < 0.01$.

subsequently added to create a new composite variable, firm performance. The added indicators are assumed to have equal weight and importance; hence no original information is lost by the summation (Wood, 2006). The results of the correlation matrix for the study variables show that no correlation coefficient exceeds the value of 0.70, indicating that the independent variables are not so highly correlated as to create a multicollinearity problem (Zizi et al., 2020). The highest correlation coefficient is between financial management training and firm performance (r = 0.579) (Table 4).

At a 95% confidence interval, binary logistic regression was performed to assess the impact of firm-level factors on access to external finance whereas simple linear regression was also used to assess the effect of access to external finance on firm performance. The model for firm-level determinants of access to external finance included seven independent variables (firm age, firm legal status, firm ownership, size, sources of financing, firm location, and financial management training). Preliminary analysis was conducted to ensure that the assumptions of normality, linearity, multicollinearity, and homoscedasticity were not violated. All analyses were carried out using SPSS 26.0. A p-value less than 0.05 was considered significant.

3.4. Regression analysis results

Table 5 presents the results of the binary logistics regression analysis on the firm level determinants of access to external finance. The full model, which included all predictors (age of the firm, legal form, ownership, size of the firm, sources of finance, firm location and financial management training) was statistically significant, indicating that the model was able to distinguish between constrained and unconstrained firms. We further report the effect of ownership (family and non-family) on access to external financing.

The effect of firm ownership on access to external finance was negative and significant across the whole sample. Family firms are more likely to have difficulties in accessing external financing compared to non-family firms ($\beta = -1.343$, $Exp(\beta) = 0.261$, $p < 0.001$).

The effect of firm age on access to external finance was positive and significant across the whole sample and across firm ownership. Older firms are more likely to have easy access to external funds than younger firms ($\beta = 0.121$, $Exp(\beta) = 1.129$, $p < 0.001$). The effect continues to be significant and positive across firm ownership (non-family $\beta = 0.114$, $Exp(\beta) = 1.121$, $p < 0.01$; and family firms ($\beta = 0.129$, $Exp(\beta) = 1.138$, $p < 0.05$).

Legal status of a firm has negative non-significant effect on access to external finance on the whole sample and across firm ownership. Limited liability firms are more likely to have difficulties in accessing external funds compared to sole proprietorships firms ($\beta = -0.71$, $Exp(\beta) = 0.492$, $p > 0.05$). Non-family limited liability firms are less likely to acquire external funds than non-family sole proprietorships ($\beta = -0.313$, $Exp(\beta) = 0.731$, $p > 0.05$). Limited liability family firms also less likely to acquire external financing than family sole proprietorships ($\beta = -1.464$, $Exp(\beta) = 0.231$, $p > 0.05$).

Firm size effect on access to external finance was non-significant with a positive effect on the whole sample but with mixed results across firm ownership. Small firms are more likely to have less difficulties in accessing external funds compared to micro firms ($\beta = 0.063$, $Exp(\beta) = 1.065$, $p > 0.05$). Small non-family firms are less likely to acquire external financing than non-family micro firms ($\beta = -0.227$, $Exp(\beta) = 0.797$, $p > 0.05$). On the other hand, small family firms are more likely to acquire external funds than family micro firms ($\beta = 0.466$, $Exp(\beta) = 1.593$, $p > 0.05$).

The effect of sources of finance on access to external finance is negative and significant on the whole sample and

Table 5. Binary logistics regression analysis results (source: created by authors)

Variables	Whole sample		Non family		Family	
	β	Exp(β)	B	Exp(β)	β	Exp(β)
Firm ownership (family)	–1.343***	0.261				
Firm age	0.121***	1.129	0.114**	1.121	0.129*	1.138
Firm legal status (limited liability)	–0.710	0.492	–0.313	0.731	–1.464	0.231
Firm size (small)	0.063	1.065	–0.227	0.797	0.466	1.593
Sources of finance (formal)	–1.481***	0.227	–1.257**	0.285	–1.927**	0.146
Firm location (largest commercial city)	–1.550***	0.212	–1.552***	0.212	–1.723**	0.179
Financial management training (Yes)	0.153	1.165	0.335	1.398	–0.298	0.742
Constant	1.114	3.048	–0.535	0.586	2.082	8.019
Cox & Snell R Square	0.302		0.222		0.334	
Nagelkerke R Square	0.414		0.324		0.446	
Hosmer and Lemeshow Test	0.725		0.579		0.729	
Chi-square	117.805		55.061		44.242	
Classification	75.6		76.7		76.1	
Observations	328		219		109	

Note: β – Beta coefficient, Exp(β) – Odds ratio; *p < 0.05; **p < 0.01; ***p < 0.001. The dependent variable is access to external finance denoted as 0 if the firm is constrained and 1 if the firm is not constrained.

across firm ownership. Firms that rely on formal sources of finance are more likely to have difficulties in accessing external funds compared to firms that rely on informal funding sources (β = –1.481, Exp(β) = 0.227, p < 0.001). Non-family firms that rely on formal financing sources are less likely to acquire external financing than non-family firms that rely on informal financing sources (β = –1.257, Exp(β) = 0.285, p < 0.01). Family firms that rely on formal financing sources are also less likely to acquire external funds than family firms that rely on informal financing sources (β = –1.927, Exp(β) = 0.146, p < 0.01).

Firm location has a negative significant effect on access to external finance on the whole sample and across firm ownership. Firms located in largest commercial city are more likely to have difficulties in accessing external funds compared to firms located in smallest commercial cities (β = –1.550, Exp(β) = 0.212, p < 0.001). Non-family firms in largest commercial city are also less likely to acquire external funds than non-family firms in smallest commercial cities (β = –1.552, Exp(β) = 0.212, p < 0.001). Also, family firms operating from largest commercial city are less likely to acquire external funds than family firms operating from smallest commercial cities (β = –1.723, Exp(β) = 0.179, p < 0.01).

Financial management training has insignificant effect on access to external finance. The effect is positive on the whole sample, but with mixed results across firm ownership. Firms run by managers with financial management training are more likely to have easy access to external funds compared to firms managed by managers with managers with no financial training (β = 0.153, Exp(β) = 1.165, p > 0.05). The effect is also positive across non-family firms (β = 0.335, Exp(β) = 1.398, p > 0.05) whereas the effect is negative on family firms (β = –0.298, Exp(β) = 0.742, p > 0.05).

Four (4) of the predictors of access to external finance (firm age, firm ownership, sources of finance, and firm location) made a statistically significant contribution to the model. Firm legal status, firm size and financial management training were not significant predictors of access to external finance in the firms studied.

Table 6 presents the linear regression results on the effect of access to external finance on firm performance. The overall regression was statistically significant (R^2 = [0.049], F (1, 326) = 17.934, p < 0.001. The model showed that the effect of access to external finance on firm performance was positive and statistically significant (β = 0.228, p < 0.001). This suggests that firms with access to external finance are likely to perform better than constrained firms.

Table 6. Linear regression results (source: created by authors)

Variable	Std. Error	Beta	p-value
Access (unconstrained)	0.298	0.228	0.000
R-squared	0.052		
Adjusted R-squared	0.049		
t	4.235		
Observations	328		

3.5. Discussion

We limit our discussion on the effect of significant predictors of access to external finance and the effect of access to external finance on firm performance.

The negative significant effect of ownership status on access to external finance is in line with the study by Mertzanis (2017) which concluded that ownership structure is a significant predictor of firms' access to finance. Murro and Peruzzi (2019) reported that family-owned Italian manufacturing firms are more likely to be credit-constrained than non-family-owned firms. Family ownership increases the likelihood of rationing in firms with higher opacity and ownership concentration (Murro & Peruzzi, 2019).

The positive significant effect of age shows that old firms are likely to have good chances of accessing external finance compared to young firms. These results are consistent with Bougheas et al. (2006) who reported a positive effect of firm age on access to external financing. Fowowe (2017) also found that older African firms have better access to finance compared to young firms. Older firms have more access to external financing of all types compared to younger firms (Bougheas et al., 2006). Older firms are likely to have lower information asymmetries, making it easier for them to access long term external financing at lower costs (Martinez et al., 2022). In addition, older firms have better access to funding because they have been in business longer and have earned a good reputation (Bakhadirov et al., 2022).

The negative significant effect of funding sources on access to external finance suggests that firms that use formal external finance are likely to face difficulties in accessing external finance compared to firms that rely on informal external finance. These results are similar to Nguyen and Canh (2021) who found that when external finances are needed firms prefer informal sources. This could be due to the fact that firms are looking for cheaper and more convenient external sources of finance to fund their operations (Khattak & Shah, 2021).

The effect of firm location on access to external finance being negative and significant for whole sample and across firm ownership indicates that firms located in largest commercial city are less likely to access external funding compared to firms located in smallest commercial cities. These findings contrast with the study by Bakhadirov et al. (2022) which used a large dataset of World Bank Enterprise Surveys from 44 countries and found that urban firms were less likely than others to consider access to finance as the biggest obstacle. Location-advantaged firms suffer less from information asymmetry and the density of the network of external lenders (Bakhadirov et al., 2022). Study results may be due to inadequate credit history, underdeveloped relationships between lenders and borrowers, and a lack of collateral among studied firms (Quartey et al., 2017).

The results on the positive significant effect of access to external finance on firm performance are consistent with Ayyagari et al. (2008) who found that access to finance is closely related to firm performance. Ayyagari et al. (2021) used employment growth to measure firm performance and reported a strong positive relationship between access to finance and firm performance, especially for firms that were more dependent on external finance. Bongomin et al. (2017) reported that firms access to finance significantly affects overall growth of Ugandan multi-sector firms. Fowowe (2017) pointed out that unconstrained firms experience faster growth than credit-constrained firms in Africa. Access to finance helps firms in developing countries increase their income, build viable businesses, and reduce their vulnerability to external shocks (Bongomin et al., 2017). A firm that has easy access to finance is likely to be more financially stable, overcome liquidity constraints, improve resource allocation, and unlock growth and investment opportunities for long-term survival and performance (Kijkasiwat et al., 2022). The limited access to credit hinders long-term firm performance (Brixiová et al., 2020).

Conclusions

This study used binary logistic regression to examine the determinants of access to external finance at the firm level and simple linear regression to examine the impact of access to external finance on the performance of 328 agri-food firms. Study results show that firm ownership, firm age, sources of financing, and firm location are significant predictors of MSEs' access to external finance. Firm aging is associated with better access to external finances. Family-owned firms are likely to be more constrained by external financing than non-family-owned firms. Firms that used formal sources of financing were more constrained compared to firms that used informal sources. Moreover, firms located in advantageous areas largest commercial cities are more likely to have difficulties in accessing external funding compared to firms located in smallest commercial cities. Further analysis by firm ownership shows that access to external finance varies according to firm ownership. Therefore, family and non-family segments need to be differentiated with regard to financing. The study also found that external financing is of greater importance for performance of micro and small firms as access to external finance is positively associated with firm performance. Firm legal status, firm size and financial management training received by the manager were not significant predictors of access to external finance. Thus, a firm's decision to seek external financing is more influenced by firm-specific characteristics than by management characteristics. The results of the study are useful for managers in making financing decisions and for policymakers in designing and improving MSEs financing programs, especially in the agri-food industry.

Managers should build stronger networking ties to access appropriate external resources through informal channels (Zabri et al., 2021). Family firms can overcome financing bottlenecks by establishing and maintaining long-term and closer lending relationships (Murro & Peruzzi, 2019).

Disadvantaged firms are encouraged to seek microloans from local savings groups that require members to set aside small amounts of savings for lending to group members. However, these microloans from savings groups are too small to fill the funding gap when the firm needs more funds for expansion/investment (Oostendorp et al., 2019). Older firms may turn to a variety of formal external sources such as venture capital, bank loans, or financial markets, while young firms that are less transparent with their financial information may continue to seek funding from informal sources or business angels as they continue to improve financial transparency (Martinez et al., 2022).

Reliance on informal finance is a product of personal cognitive resources and local institutional and market interactions that reflect the weaknesses of the formal financial system (Nguyen & Canh, 2021). Reducing information asymmetry in external financing will help managers be more prudent in identifying financing alternatives and taking advantage of the most cost-effective financing options (Zabri et al., 2021). Policymakers should focus on creating innovative financial infrastructures and tax regimes that can increase the need for formal credit for MSEs (Lin et al., 2020). The focus should be on developing customized financial services aimed at adapting existing products and developing new innovative products that meet the real financial needs of MSEs (Oostendorp et al., 2019). Policies to improve the infrastructure that supports financial transactions, including the legal system and the information environment, should also be strengthened (Ferrando & Ruggieri, 2018).

Despite its contribution, this study must be interpreted with the following limitations. First, the study used a binary variable to distinguish between family and non-family firms. Future studies may consider the composition of ownership, as family firms exhibit some heterogeneity (Ramalho et al., 2018). Second, the sample used in this cross-sectional study is based on a survey that may be subject to inherent response biases such as sample selection and sample-dependent biases (Nguyen & Canh, 2021). Future studies may therefore conduct longitudinal studies with a larger dataset using objective measures and statistical sampling procedures to re-examine the validity of the study findings. Finally, this context-specific study presents respondents' perspectives on subjective measures of achievement in the agri-food industry. Future studies may consider multiple industries or countries and use objective measures of performance.

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Conflicts of interest

The authors declare no conflict of interest.

References

Abdisa, L. T., & Hawitibo, A. L. (2021). Firm performance under financial constraints: Evidence from sub-Saharan African countries. *Journal of Innovation and Entrepreneurship*, *10*(1), 38. https://doi.org/10.1186/s13731-021-00177-1

Adomako, S., Danso, A., & Ofori Damoah, J. (2016). The moderating influence of financial literacy on the relationship between access to finance and firm growth in Ghana. *Venture Capital*, *18*(1), 43–61. https://doi.org/10.1080/13691066.2015.1079952

Anwar, M., Tajeddini, K., & Ullah, R. (2020). Entrepreneurial finance and new venture success – the moderating role of government support. *Business Strategy & Development*, *3*(4), 408–421. https://doi.org/10.1002/bsd2.105

Archer, L. T. (2021). Formality and financing patterns of small and medium-sized enterprises in Vietnam. *Emerging Markets Finance and Trade*, *57*(10), 2852–2869. https://doi.org/10.1080/1540496X.2019.1658576

Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2008). How important are financing constraints? The role of finance in the business environment. *The World Bank Economic Review*, *22*(3), 483–516. https://doi.org/10.1093/wber/lhn018

Ayyagari, M., Juarros, P., Peria, M., & Singh, S. (2021). Access to finance and job growth: Firm-level evidence across developing countries. *Review of Finance*, *25*(5), 1473–1497. https://doi.org/10.1093/rof/rfab003

Bakhadirov, M., Pashayev, Z., & Farooq, O. (2022). Effect of location on access to finance: International evidence on the moderating role of employee training. *Review of Behavioral Finance*, *14*(2), 260–276. https://doi.org/10.1108/RBF-07-2020-0166

Bongini, P., Ferrando, A., Rossi, E., & Rossolini, M. (2021). SME access to market-based finance across Eurozone countries. *Small Business Economics*, *56*(4), 1667–1697. https://doi.org/10.1007/s11187-019-00285-z

Bongomin, G. O. C., Ntayi, J. M., Munene, J. C., & Malinga, C. A. (2017). The relationship between access to finance and growth of SMEs in developing economies: Financial literacy as a moderator. *Review of International Business and Strategy*, *27*(4), 520–538. https://doi.org/10.1108/RIBS-04-2017-0037

Bougheas, S., Mizen, P., & Yalcin, C. (2006). Access to external finance: Theory and evidence on the impact of monetary policy and firm-specific characteristics. *Journal of Banking and Finance*, *30*(1), 199–227. https://doi.org/10.1016/j.jbankfin.2005.01.002

Brixiová, Z., Kangoye, T., & Yogo, T. U. (2020). Access to finance among small and medium-sized enterprises and job creation in Africa. *Structural Change and Economic Dynamics*, *55*, 177–189. https://doi.org/10.1016/j.strueco.2020.08.008

Cowling, M., Liu, W., & Zhang, N. (2018). Did firm age, experience, and access to finance count? SME performance after the global financial crisis. *Journal of Evolutionary Economics*, *28*(1), 77–100. https://doi.org/10.1007/s00191-017-0502-z

Dörr, J. O., Licht, G., & Murmann, S. (2022). Small firms and the COVID-19 insolvency gap. *Small Business Economics*, *58*(2), 887–917. https://doi.org/10.1007/s11187-021-00514-4

Ergün, B., & Doruk, Ö. T. (2020). Effect of financial constraints on the growth of family and nonfamily firms in Turkey. *Financial Innovation*, *6*(1), 28. https://doi.org/10.1186/s40854-020-00188-z

Ferrando, A., & Ruggieri, A. (2018). Financial constraints and productivity: Evidence from euro area companies. *International Journal of Finance and Economics*, *23*(3), 257–282. https://doi.org/10.1002/ijfe.1615

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

Galbreath, J., & Galvin, P. (2008). Firm factors, industry structure and performance variation: New empirical evidence to a classic debate. *Journal of Business Research*, *61*(2), 109–117. https://doi.org/10.1016/j.jbusres.2007.06.009

García-Cabrera, A. M., García-Soto, M. G., & Nieves, J. (2021). Knowledge, innovation and NTBF short- and long-term performance. *International Entrepreneurship and Management Journal*, *17*(3), 1067–1089. https://doi.org/10.1007/s11365-020-00656-z

Hafiz, N., Latiff, A. S. A., Islam, M. A., Saif, A. N. M., & Wahab, S. A. (2022). Towards the underlying theories of small firm growth: A literature review. *FIIB Business Review*, *11*(1), 36–51. https://doi.org/10.1177/23197145211049627

Kalemli-Ozcan, S., Gourinchas, P. O., Penciakova, V., & Sander, N. (2020). *COVID-19 and SME Failures* (IMF Working Paper). International Monetary Fund. https://doi.org/10.5089/9781513557748.001

Kamasak, R. (2017). The contribution of tangible and intangible resources, and capabilities to a firm's profitability and market performance. *European Journal of Management and Business Economics*, *26*(2), 252–275. https://doi.org/10.1108/EJMBE-07-2017-015

Khan, A., Goodell, J. W., Hassan, M. K., & Paltrinieri, A. (2022). A bibliometric review of finance bibliometric papers. *Finance Research Letters*, *47*, 102520. https://doi.org/10.1016/j.frl.2021.102520

Khattak, M. S., & Shah, S. Z. A. (2021). Entrepreneurial orientation and the efficiency of SMEs: The role of government financial incentives in an emerging industry. *Journal of Public Affairs*, *21*(3), e2242. https://doi.org/10.1002/pa.2242

Kijkasiwat, P., Shahid, A. U., Hassan, M. K., & Hunjra, A. I. (2022). Access to finance, social capital and the improvement of corporate performance: Evidence from Southeast Asia. *Managerial Finance*, *48*(7), 1047–1068. https://doi.org/10.1108/MF-10-2021-0519

Lee, M. (2020). Does a firm's access to external finance matter for its performance? *Applied Economics Letters*, *27*(9), 725–728. https://doi.org/10.1080/13504851.2019.1644434

Leke, A., & Signé, L. (2020). Spotlighting opportunities for business in Africa and strategies to succeed in the world's next big growth market. In *Africa's untapped business potential: Countries, sectors, and strategies* (pp. 77–95).

Lin, M. S., Song, H. J., Sharma, A., & Lee, S. (2020). Formal and informal SME financing in the restaurant industry: The impact of macroenvironment. *Journal of Hospitality and Tourism Management*, *45*, 276–284. https://doi.org/10.1016/j.jhtm.2020.08.017

Loughran, T. (2008). The impact of firm location on equity issuance. *Financial Management*, *37*(1), 1–21. https://doi.org/10.1111/j.1755-053X.2008.00004.x

Martinez, L. B., Guercio, M. B., & Bariviera, A. F. (2022). A meta-analysis of SMEs literature based on the survey on access to finance of enterprises of the European central bank. *International Journal of Finance and Economics*, *27*(2), 1870–1885. https://doi.org/10.1002/ijfe.2247

Mashenene, R. G., & Kumburu, N. P. (2020). Performance of small businesses in Tanzania: Human resources-based view. *Global Business Review*, 1–15. https://doi.org/10.1177/0972150920927358

Mertzanis, C. (2017). Ownership structure and access to finance in developing countries. *Applied Economics*, *49*(32), 3195–3213. https://doi.org/10.1080/00036846.2016.1257106

Mkuna, E., Nalaila, S., & Isaga, N. (2021). Extent and determinants of women participation in agro-processing Small and Medium Enterprises (SMEs) in Dar es Salaam-Tanzania. *REPOA*. https://www.africaportal.org/publications/extent-and-determinants-women-participation-agro-processing-small-and-medium-enterprises-smes-dar-es-salaam-tanzania/

Murro, P., & Peruzzi, V. (2019). Family firms and access to credit. Is family ownership beneficial? *Journal of Banking and Finance*, *101*, 173–187. https://doi.org/10.1016/j.jbankfin.2019.02.006

Mushtaq, R., Gull, A. A., & Usman, M. (2022). ICT adoption, innovation, and SMEs' access to finance. *Telecommunications Policy*, *46*(3), 102275. https://doi.org/10.1016/j.telpol.2021.102275

Nguyen, B., & Canh, N. P. (2021). Formal and informal financing decisions of small businesses. *Small Business Economics*, *57*(3), 1545–1567. https://doi.org/10.1007/s11187-020-00361-9

Ofori-Abebrese, G., Baidoo, S. T., & Essiam, E. (2020). Estimating the effects of financial inclusion on welfare in sub-Saharan Africa. *Cogent Business and Management*, *7*(1), 1839164. https://doi.org/10.1080/23311975.2020.1839164

Oostendorp, R., van Asseldonk, M., Gathiaka, J., Mulwa, R., Radeny, M., Recha, J., Wattel, C., & van Wesenbeeck, L. (2019). Inclusive agribusiness under climate change: A brief review of the role of finance. *Current Opinion in Environmental Sustainability*, *41*, 18–22. https://doi.org/10.1016/j.cosust.2019.09.014

Quartey, P., Turkson, E., Abor, J. Y., & Iddrisu, A. M. (2017). Financing the growth of SMEs in Africa: What are the contraints to SME financing within ECOWAS? *Review of Development Finance*, *7*(1), 18–28. https://doi.org/10.1016/j.rdf.2017.03.001

Ramalho, J. J., Rita, R. M., & da Silva, J. V. (2018). The impact of family ownership on capital structure of firms: Exploring the role of zero-leverage, size, location and the global financial crisis. *International Small Business Journal: Researching Entrepreneurship*, *36*(5), 574–604. https://doi.org/10.1177/0266242617753050

Rao, P., Kumar, S., Chavan, M., & Lim, W. M. (2021). A systematic literature review on SME financing: Trends and future directions. *Journal of Small Business Management*, 1–31. https://doi.org/10.1080/00472778.2021.1955123

Sari, P. A., & Sari, W. P. (2022). The small firm performance and entrepreneurial competence revealed through competitiveness framework: A case study of MSMEs in Indonesia. In B. S. Sergi & D. Sulistiawan (Eds.), *Modeling economic growth in contemporary Indonesia* (pp. 1–24). Emerald Publishing Limited. https://doi.org/10.1108/978-1-80262-431-120221001

Seluhinga, N. S., & Philip, D. (2021). The influence of geographical concentration of firms on performance of small agro food processing enterprises in Tanzania. *Journal of Agriculture and Food Research*, *6*, 100220. https://doi.org/10.1016/j.jafr.2021.100220

Spanos, Y. E., & Lioukas, S. (2001). An examination into the causal logic of rent generation: Contrasting Porter's competitive strategy framework and the resource-based perspective. *Strategic Management Journal*, *22*(10), 907–934. https://doi.org/10.1002/smj.174

Storey, D. J. (2016). *Understanding the small business sector*. Routledge. https://doi.org/10.4324/9781315544335

Tundui, C. S., & Tundui, H. P. (2020). Performance drivers of women-owned microcredit funded enterprises in Tanzania. *International Journal of Gender and Entrepreneurship*, *12*(2), 211–230. https://doi.org/10.1108/IJGE-06-2019-0101

United Republic of Tanzania. (2003). *Small and medium enterprise development policy*. URT. Ministry of Industry and Trade, p. 11. https://www.mit.go.tz/uploads/files/Tanzania%20SME%20Policy.pdf

Wood, E. H. (2006). The internal predictors of business performance in small firms: A logistic regression analysis. *Journal of Small Business and Enterprise Development*, *13*(3), 441–453. https://doi.org/10.1108/14626000610680299

Zabri, S. M., Ahmad, K., & Adonia, S. A. (2021). The influence of managerial characteristics on external financing preferences in smaller enterprises. The case of Malaysian micro-sized enterprises. *Cogent Business and Management*, *8*(1), 1912524. https://doi.org/10.1080/23311975.2021.1912524

Zizi, Y., Oudgou, M., & El Moudden, A. (2020). Determinants and predictors of SMEs' financial failure: A logistic regression approach. *Risks*, *8*(4), 107. https://doi.org/10.3390/risks8040107

Zulu-Chisanga, S., Chabala, M., & Mandawa-Bray, B. (2021). The differential effects of government support, inter-firm collaboration and firm resources on SME performance in a developing economy. *Journal of Entrepreneurship in Emerging Economies*, *13*(2), 175–195. https://doi.org/10.1108/JEEE-07-2019-0105