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The Business Sector, Firm Age, and Performance: The Mediating Role of Foreign Ownership and Financial Leverage

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Abstract: The paper explores the business sector and firm age effects on firm performance mediated by foreign ownership levels in domestic firms and financial leverage by examining 146 Medium Enterprises (MEs). The results show that except for ownership, the business sector, firm age, foreign ownership level, and financial leverage significantly influence performance. Foreign ownership substantially mediates the correlation between firm age and performance but not leverage. Both foreign ownership and leverage have no substantial mediating effect on the relationship between the business sector and financial performance. Moreover, the findings reveal business sectors whose performance is statistically different from zero based on the referent group.

Keywords: business sector; firm age; leverage; foreign ownership; ownership; medium enterprises; firm performance

JEL Classification: C30; L26; O30

1. Introduction

Sufficient literature exists examining different aspects of small to medium enterprises and their contribution to the national well-being. These studies show points of divergence, particularly on the correlation between firm age and its performance. Nonetheless, most researchers concur that there is a desirable or positive relationship between these two factors. For example, the Coad et al. (2013) analysis of Spanish manufacturing firms for 18 years shows that performance improved with age due to steady growth of productivity rates, larger size, higher profits, lower debt, and superior equity ratios. Surprisingly, the same study also finds deterioration in performance to be significantly related to firm age for some firms. However, other researchers hold a contrary opinion concerning such a relationship. For instance, Legesse's (2018) analysis of a developing economy, specifically Ethiopia, fails to establish a substantial effect of age on financial performance. Moreover, firm age for family-owned enterprises negatively influences performance, whereas such ownership has a statistically significant effect (Lwango et al. 2017). Age is also a critical determinant of firm survival based on the industry (sector) life cycle (Esteve-Pérez et al. 2018). How then does age influence the performance of Kenyan firms?

Furthermore, economic sectors perform differently, especially where financial performance is one of the key performance indicators (KPI). Whether in the same sector or different industries, firms do

not have the same financial performance levels. A business may opt to be in the service sector, manufacturing, or both; the selected sector will affect financial performance (Ettlie and Rosenthal 2011). However, the government is responsible for formulating policies geared at attracting foreign investment, whether individual, institutional, public, or private. The Duggan et al. (2013) study on Indonesian firms' foreign direct investment restrictions during the 1997–2009 period offers important lessons to other emerging economies. Their study found that relaxed foreign direct investment policies resulted in improved service sector performance. Such a change led to an 8% improvement in manufacturers' total factor productivity in the water, electricity, and gas sectors. How friendly are the country's investment policies towards foreign investors in the Kenyan situation?

Still, businesses follow at least one of the capital structure theories when making financing decisions. While most firms' capital structure is a mixture of equity and debt, finding the optimal mix remains a hurdle; although models exist to guide enterprise, there is no silver bullet. Financial constraints negatively influence firms' operations and performance (Li et al. 2018). One of the challenges businesses, more so the small and medium, experience in the developing economies is formal credit access. Using data for 10,888 enterprises from 30 African economies, Fowowe (2017) concludes that access to finance hurdles exerts a significant adverse effect on firm growth; firms that are not credit-constrained register higher growth. Besides, the degree of financial constraint differs between purely private businesses and government-affiliated firms. Jin et al. (2019) analyzed the Chinese manufacturing sector from 1998 to 2007 and found that 90% of firms experienced external financial constraints; however, non-state firms were more constrained than state firms.

Also, formal credit providers like banks have requirements that limit access to finance for some firms and would-be entrepreneurs. By use of Euro area data, Casey and OToole (2014) found that bank-constrained firms are likely to use trade credit, which depends on age and size; these firms are also likely to go for informal loans and those from other companies but avoid market finance. However, as Mallinguh et al. (2020) show, firm owner-manager perception about formal credit availability affects firm performance. Researchers disagree on the impact of leverage on financial performance based on the current literature. Is debt the much sought-after prescription or a poisoned chalice for domestic firms? Whereas literature warns against high leverage levels, what about specific industries that require high liquidity for their operations? Should these firms curtail their operations due to the insufficiency of internally generated funds while avoiding external financing?

Individual investors, institutional or both, will always target high-growth enterprises or those with profitable investment opportunities. Such potential investors may be within or without the country. Often, unlisted MEs must decide on additional investors when the need arises. Whereas there may be many factors under consideration beyond this study's scope, one has to do with nationality. Where external investors seek-out these firms, what effect would inclusion have on performance? Research further points out the merits associated with foreign investors in domestic businesses. Literature suggests that foreign ownership results in domestic firms' superior performance (Akolaa 2018), does this hold for the Kenyan scenario? Moreover, existing investors or shareholders of an enterprise have the ultimate decision on the sector, capital structure decisions like the use of debt, and other operational decisions with a substantial effect on performance. Nevertheless, of what significance is the effect of ownership level or shareholders number on firm performance?

Based on the Kenya National Bureau of Statistics (2016) status report, small to medium-sized enterprises account for over 90% of all locally owned businesses providing millions of employment opportunities to the youth. However, this study seeks to focus on medium-sized enterprises exclusively—these are businesses that have outgrown the "small" tag and seek to join the "large" category of firms. Besides, these are enterprises at a crucial stage, having gathered considerable experience, resources, and built networks to sustain their operations over time; but such firms may stagnate or even regress if not well managed. Also, the same report showed that small and medium enterprises, on average, had a survival rate of 3.9 years, so what is the cause of their failure in under four years? Interestingly, Coad's (2018) findings resonate with the Kenyan scenario as the study

showed that approximately 50% of the new businesses in Europe ceased operations after the third year. The same study concludes that exceptional firm age-related effects occur from the fifth to seventh, emphasizing "younger" firms in the data set—as observed in the present study.

From the above analysis, specific issues about the Kenyan economy call for further studies. Research is not conclusive on how significantly firm age affects performance. Besides, there is a consensus that older firms have superior performance than younger firms, but does this apply to all industries? How about young innovative enterprises with immense growth opportunities and above-average performance like gazelle firms? Whereas we seek to examine the effect of age on financial performance, the study explores such performance based on different business sectors—the assumption is that particular sectors have better results than others. Part of the existing literature establishes no strong association between the firm sector and financial performance (Hande 2017). Besides analyzing the direct effect of age and the business sector on performance, we investigate how these two factors relate to the outcome variable when foreign ownership and financial leverage intervene. These interveners or mediators have an angle of similarity, financing. Foreign ownership primarily channels foreign direct investment into domestic firms, while leveraging allows businesses to seize profitable investment opportunities.

While the direct effect of age and the business sector on firm performance is straight forward, the introduction of foreign ownership and financial leverage helps explain their indirect effect on the outcome variable. That notwithstanding, the mediators are in a parallel format; that is, they do not influence each other—an enterprise may have foreign ownership without being necessarily leveraged and vice versa. Also, such an arrangement allows for a proper comparison of the final models. Figure 1 illustrates the relationships between the variables and shows how some of the specific queries highlighted above are addressed. Besides adding to the body of knowledge, our findings may inform MEs' decisions about foreign ownership and financial leverage based on the business age and sector. Finally, the next section of the paper examines relevant literature, whose gaps support the current study. Still, the part details the statistical framework as the basis for hypotheses testing and then methodology. Section 3 presents the results, while four is on discussions. The final part summarizes the study, offers recommendations, and highlights limitations.

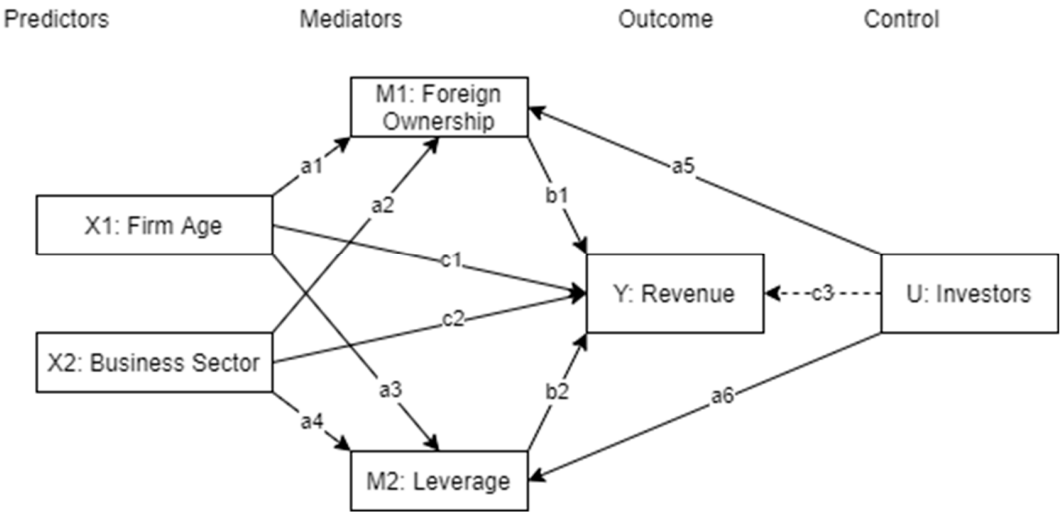

Figure 1. Direct and Indirect Effects Statistical Framework. Source: Authors conceptualization.

2. Materials and Methods

2.1. Materials

Empirical literature attempts to link the firm sector and varying firm performance aspects. The service and manufacturing sectors are different in many ways. Researchers seem to disagree

on whether management theories developed for manufacturing are entirely applicable to service firms. Simultaneously, empirical evidence suggests that economic rents occur at the business level for manufacturing firms but arise at the corporate level for service companies. These effects are non-linear and differ depending on whether products are standardized intangible services, customized goods/services, or tangible standardized goods (Reed and Storrud-Barnes 2009). Specific researchers have established statistically significant differences in performance based on the firm sector. For instance, Lahiri and Purkayastha (2017) evaluated several business group-affiliated firms in India for over five years (2004–2008). Their study finds the effects of corporate diversification on firm performance pronounced for service than manufacturing affiliated firms. The influence on firm performance varied significantly based on whether the focal business was in the manufacturing or service sector. Besides, businesses are engaging their customers in developing products inducing desirable operational and financial results. Zaborek and Mazur's (2019) study focused on the Polish market. The study concludes that allowing co-creation has more substantial positive impacts on service than manufacturing firms in terms of operational outcomes and financial benefits measured by return on investment (ROI).

However, performance differences may stem from financial and or operational decisions. For example, researchers have explored the correlation between innovation performance and firm performance. Such performances may include process and product innovation, while financial performance is market share, sales growth, and profitability. Prajogo (2006) analyzed 194 Australian firms (52% manufacturing firms and 47% service). The study found a stronger correlation between innovation and business performance for manufacturing than service firms, especially with process innovation. Likewise, Seo et al. (2016) analyzed Korean companies and established distinctive innovation patterns between service and manufacturing firms. Still, evidence shows that development in either service or manufacturing sectors influences the other. In India, reforms in the service sector, mainly telecommunication, banking, transport, and insurance, cumulatively had a positive, significant effect on the manufacturing firms' productivity. Also, services reforms benefited foreign and locally owned manufacturing firms, although the effect was more substantial for foreign firms. For instance, a one-standard-deviation increase in the services liberalization aggregate index resulted in a productivity increase of 13.2% for the foreign firms and 11.7% for domestic firms enterprises (Arnold et al. 2016). However, its innovative activities' level depends on its internal and external factors.

Hypothesis 1 (H1). *The firm's sector or industry effect (unconditional and conditional) on financial performance is definitively different from zero.*

Literature reveals a correlation between firm age and financial performance. The nature of this relationship varies depending on the market, and the size of the firm examined. For example, in the Asian market, larger firms are more productive but less profitable, while older enterprises are less productive and more profitable (Majumdar 1997). The argument is that firms' performance improves with age. Aging businesses steadily increase their productivity, profitability, and equity ratios while lowering debt ratios. The Coad et al. (2013) evaluation of the Spanish manufacturing sector supports the assertion. Their findings show that older enterprises can better convert sales growth into subsequent growth in productivity and profitability. However, their findings also reveal that firm performance declines with age. Loderer and Waelchli (2010) concur; through their study, they show that profitability declines as the firm ages, fronting two hypotheses. One, aging reflects an institutionalization of organizational rigidities over time. Such a scenario could lead to slowing in sales growth, rises in costs, a decline in investment and R&D activities while assets become obsolete. Two, old age promotes the entrenchment of rent-seeking behavior in the business. Such behavior may be due to inefficient governance structures, higher CEO pay and larger boards.

Formal credit providers often shun firms with risky operations, even with high growth and profitable opportunities. However, such ventures may be a target for investors in search of investments with premium returns. These investors could be domestic or foreign, depending on the country's

regulatory framework. Research shows that foreign ownership may be an asset or a liability, depending on the ownership structure (Nachum 2009). In Europe, foreign investors prefer larger and less profitable businesses. These investors originate from wealthier, more prominent, and better-governed countries. Nachum argues that foreign ownership results in higher sales growth but a lower profit margin and return on assets. Moreover, such ownership is positively associated with operational efficiency (asset turnover and sales per employee) in the long term. Domestic firms whose foreign ownership is from better-governed countries register better performance than those whose investors are from countries with weaker governance (Lindemanis et al. 2019). Narrowing down to the Italian market, Bentivogli and Mirenda (2017) explored wholly domestic-owned firms and those with foreign ownership. The study finds a premium for the profitability, size, and financial soundness of the mixed-owned enterprises. However, the premium grows with time more in the service sector and depends on the investors' fiscal openness.

In emerging economies like Ghana, evidence demonstrates a superior post-acquisition financial performance of domestically acquired foreign subsidiaries than wholly locally owned companies (Akolaa 2018). However, the positive relationship between foreign ownership and financial performance is not always the case. Trung (2020), while controlling for leverage, among other variables, explored 621 listed Korean companies between 2007 and 2017. The study finds that foreign ownership negatively influences corporate investment efficiency based on financial resource availability. The negative correlation between investment efficiency and foreign ownership is substantial in financially unconstrained firms. The risk-averse nature of foreign investors makes firms lose some profitable investment opportunities and decreases their investment efficiency. Still, foreign ownership affects the capital structure of local firms. Thai (2019) illustrates the negative relationship between the proportion of foreign investment and financial leverage. However, when such ownership has no significant influence on the total productivity factor, and with technology, the difference between the investing and recipient countries has to be significant (Benfratello and Sembenelli 2006).

Whereas research suggests that the business's financial performance declines with age, it still shows that older firms outperform younger ones in specific sectors of the economy. Capasso et al. (2015) confirm this assertion through their study, which focuses on the Italian wine industry. They conclude that the older wineries have superior performance than the younger wineries, with the longevity factor significantly explaining the difference in performance. Moreover, financial performance is a significant determinant of the firm's Going-concern Assumption. Small and medium enterprises often fail due to poor performance. For instance, young and adolescent enterprises fail mainly due to internal shortcomings, whereas mature firms struggle more with economic slowdowns and increased competition (Kücher et al. 2018). Nevertheless, not all researchers establish the predominant relationship between age and firm performance. For instance, Legesse's (2018) study of the Ethiopian economy established no correlation between firm age and financial performance (sales).

Hypothesis 2 (H2). *The direct and indirect effect of a firm's age on financial performance is statistically significant.*

The firms' capital structure broadly comprises of equity and debt—with those unable to raise sufficient equity opting for debt. Like retail and airlines, specific sectors require high liquidity levels that impact their financial leverage levels. Whereas sustainable debt levels allow firms to seize existing profitable investment opportunities, high leverage levels may be detrimental. High leverage levels, especially for small and medium enterprises, limit formal credit access due to the debt overhang problem. Ibhagui and Olokoyo's (2018) analysis of the Nigerian market shows that debt only negatively affects small firms, but its effect diminishes as the business grows, eventually disappearing. Thus, highly leveraged companies could lose potential sales from profitable investment opportunities when unable to invest. On the flip side, highly leveraged firms can enhance their performance since banks and other creditors regularly monitor their operations, preventing inefficient

management (Tsuruta 2015). Besides, while high growth firms with limited access to financing could benefit from leverage, this may not be so in all cases. Anton's (2019) analysis of 1105 gazelles from Central, Eastern, and South-Eastern European (CESEE) countries for 2006–2014 shows that leverage negatively affects firm growth. Likewise, Joshua (2007) evaluation of the African market, particularly in Ghana and South Africa, suggests that debt negatively influences firm financial performance. However, Campello (2006) demonstrates that a moderate risk level leads to better performance than competitors, but high indebtedness leads to poor performance.

Businesses need financing, but the bank's market power has a significant effect on formal credit access. This power severely affects businesses that are informationally opaque while dependent on external financing. Besides, bank competition in any market improves credit flow (Wang et al. 2020). While banks remain the leading providers of credit to the private sector, there is a need to monitor their activities. Crises often expose the real commitment of banks to supporting business, like this Coronavirus pandemic period. Cubillas and Suárez's (2018) analysis of 735 commercial banks from 17 economies during the 2003–2012 period suggest that an indirect effect counteracts the direct negative effect of the global financial crisis (GFC) on banks' supply of loans through the increased level of bank market power in the years after the onset of the crisis.

Such a scenario is particularly relevant in markets with less stringent regulations on bank actions and less supervisory power. Bank decentralization allows smaller firms to access larger loans. Decentralization is where branch managers are enjoying more significant control over lending decisions. These banks are more likely to expand credit when faced with the competition but cherry-pick customers and restrict credit when they have market power (Canales and Nanda 2012). Governments often formulate policies meant to increase credit to the private sector. Such policies may substantially alter the banking environment. For example, Fungáčová et al. (2014) investigated 12 banks in the Eurozone from 2002 to 2010, focusing on loan supply. Their study shows that the bank's lending monetary policy effect depends on the bank's competition. The monetary policy transmission through the bank lending channel is lower for banks with extensive market power.

Nonetheless, research suggests a U-shaped relationship between leverage and profitability. Financial leverage's positive effect on firm profitability may be due to the tax shield. The negative effect stems from financial distress, bankruptcy cost, severe information asymmetry, and agency problems (Ilhan 2018). Also, leverage may not lower growth for firms with profitable investment opportunities. However, it may relate negatively to growth for companies whose growth opportunities may not be sufficiently viable to overcome the debt overhang (Lang et al. 1996). Debt appears to affect firm performance differently depending on whether the leveraged firm is domestic or international. Vithessonthi and Tongurai (2015) investigated leveraged non-financial companies from 2007 to 2009 in Thailand. The study shows a positive relationship between leverage and performance for international firms but negative for domestic companies. Businesses with lower debt capacity constraints may benefit from using a higher debt if they shorten their debt maturity. Alternatively, these firms may gain by employing longer maturity debt if they lower their leverage to minimize underinvestment problems. Firms should take advantage of interest tax shields by financing more long-term debt while employing debt maturity and leverage as substitute strategies. However, debt capacity constrains concerns force firms to opt for a lower debt level that is mainly short-term (Kashefi Pour and Khansalar 2015).

Based on the explored empirical literature, some issues stand out. Countries always have plans guiding their economic trajectories, and whereas the two sectors, manufacturing and service, are a norm, the question depends on where the emphasis lies. Banks play a significant role in providing credit for private investment, but this also depends on the bank market power and concentration in a particular market. Moreover, the opinion on the effect of debt use on financial performance is divergent based on the market considered. Besides, while literature shows that older firms perform better than younger ones, the young firms are more agile and innovative, translating into better sales. Interestingly, research also suggests that financial performance declines as the firm ages for established firms but increases for start-ups. Foreign ownership enables a country to boost its investment capacity,

but the opinion differs on productivity and sales. The current study seeks to examine some of these grey areas in the next sections.

Figure 1 presents the statistical framework apportioning the two predictors' causal effect into indirect (through foreign ownership, M_1 and leverage, M_2) and direct (through path c). Preacher and Hayes (2008) state that mediation only occurs when a predictor indirectly influences the outcome variable via at least one intervening factor (mediator). Mediation hypotheses postulate by what means or how an explanatory (X) influences the explained variable (Y) through potential intervening factor(s) or mediators (M). The present study examines the effect of firm age (X_1) and the business sector (X_2) on firm financial performance (Y). Besides, it explores the intervening role played by foreign ownership and financial leverage in the said relationship. Extensive empirical literature details the impact of access to formal finance and performance (Tsuruta 2015, 2017; Cheong et al. 2020), but how do leverage levels influence the relationship between the predictors and the outcome variable.

Moreover, the gearing ratio or financial leverage depends on firm-specific factors such as age and the industry. Likewise, individual and institutional investors seek out MEs with high growth or profitable opportunities, but then does their action result in these firms' better performance? Also, does firm ownership, "the covariate," play a role in the whole model? The covariate has no relationship with the predictor (X) or minimal to no effect on the correlation between predictor(s) and outcome. The control factor has no primary theoretical interest besides accounting for additional variation in the endogenous variable (MacKinnon et al. 2012). Thus, ($X_2 \rightarrow Y$; $X_1 \rightarrow M_1/M_2 \rightarrow Y$) highlight Hypothesis 1 and ($X_1 \rightarrow Y$; $X_1 \rightarrow M_1/M_2 \rightarrow Y$), Hypothesis 2. The next section, methods, discusses the different relationships between the variables. While it may be impossible to expect full mediation, a partial intervention may explain the correlation between the predictors and financial performance—findings that may be useful to decision-makers within and without the enterprise.

2.2. Methods

The study uses primary data collected through targeted email questionnaires across different sectors of the economy. While the variables were selected arbitrarily, they nonetheless suit and capture the present study requirements. We simplified the tool to make it more understandable to the respondents, assured of anonymity. Age is the firm's duration since inception or date of merger or acquisition (M&A firms). We assume that businesses that underwent M&A turned a new chapter in their operations and deemed "new." Firms fell into one of these groups; agriculture, commercial and service, construction and allied, energy and petroleum, insurance, investment, manufacturing and allied, telecommunication, and information technology. The categorization followed the listing of companies at the Nairobi Stock Exchange. The study excludes firms in the banking sector since these are the providers of credit to businesses in other sectors of the economy. The variable being categorical was dummy coded "1–8". Foreign ownership is the proportion of shareholding by international investors in the domestic business—captured as a proportion, "0–1". Financial leverage is the proportion of debt in the firm's capital structure, also quantified as a proportion, "1–0". We control the ownership, the number of investors the firm has as we believe this substantially influences the decision-making process, ultimately affecting performance. The outcome variable, revenue, or sales, is a proxy for financial performance.

We emailed the questionnaire to about 500 medium-sized firms based on the Kenyan Business Directory from the African pages in the first half of 2019. KNBS defines an ME as a business employing 50–99 persons and generating United States dollar (USD) 5 K to USD 800 K. We approached the Kenya Top 100 small to medium enterprises (SMEs) secretariat for assistance in reaching some of the firms. The Top 100 SMEs is an annual competition targeting firms with high-growth prospects, leading innovation, and prudent financial management—organized by Klynveld Peat Marwick Goerdeler (KPMG) and the Nation media. To improve the response rate, we sent out reminder emails and made telephone calls in some instances. To pretest the research tool, it was shared among ten middle-level managers of local firms, and their recommendations improved the data collection tool.

We received 200 responses at the end of the data collection period translating to 40% of emailed questionnaires. Of this number, only 146 were valid, or 73% of all received responses. On further analysis, 93 companies had domestic and foreign ownership. Using the G-power statistical software to test the sample size's sufficiency with a medium-sized (f^2) effect, we found it slightly higher than the software recommendation, 146 against 138. We used two statistical software, the R program (to perform pathway analysis and structural equation modeling—SEM) and Process Macro (to explore firms' financial performance in different sectors). The proportion of foreign ownership in domestic firms and leverage condition (mediate) the indirect effect of two predictors on the outcome variable.

The following SEM equations summarize the effect of firm age (X_1) and business sector (X_2) pathways on financial performance (Y)—including the effect of the control term, U. The study uses R's program latent variable analysis (Lavaan) package to develop the model equations. Lavaan allowed the testing of indirect effects between the two paths (M_1 and M_2), their contrast and total effect—since the mediators are in a parallel arrangement, with no influence on each other, it is possible to examine the specific and collective effect of the predictor(s) on the outcome variable.

$$M_1 = a_1X_1 + a_2X_2 + a_5U + e_{m1} \tag{1}$$

$$M_2 = a_3X_1 + a_4X_2 + a_6U + e_{m2} \tag{2}$$

$$Y = b_1M_1 + b_2M_2 + c_1X_1 + c_2X_2 + c_3U + e_y \tag{3}$$

We test for the presence and significance of the indirect effect (IE) or mediation through the "product of coefficients" approach based on resampling bootstrapping, precisely, percentile approach. The equations below indicate the indirect effects, based on model mediators computed by multiplying the regression weights relating to each stage in an indirect pathway.

$$\text{Indirect effect 1}: \; X \rightarrow M_1 \rightarrow Y = a_1b_1 \tag{4}$$

$$\text{Indirect effect 2}: \; X \rightarrow M_2 \rightarrow Y = a_3b_2 \tag{5}$$

$$\text{Indirect effect 3}: \; X \rightarrow M_1 \rightarrow Y = a_2b_1 \tag{6}$$

$$\text{Indirect effect 4}: \; X \rightarrow M_2 \rightarrow Y = a_4b_2 \tag{7}$$

where $[X, M_1\ M_2 U \& Y]$ are the variables of interest, $[a_{ij}, b_j]$ pathway coefficients and $\left[e_{ij}\right]$ the error terms. Based on the equations, M_1 and M_2 estimations are from the firm age, business sector, and ownership. Moreover, the total effect of the two predictors [X_1 and X_2] on the outcome variable [Y] is the sum of the direct and indirect components (with C_1 and C_2 being the direct pathways). The equations below quantify any differences between various indirect pathways (particularly where these indirect effects are definitively different from zero). Equation (8) quantifies the difference in firm age's indirect effect on financial performance through either foreign ownership or leverage ($\{X_1 \rightarrow M_1 \rightarrow Y\}$-$\{X_1 \rightarrow M_2 \rightarrow Y\}$). Equation (9) represents the same narrative as (8); but considers the second predictor, the business sector. Equation (10) explores the indirect effect of firm age on performance through $X_1 \rightarrow M_1 \rightarrow Y$ path while subtracting the second predictor's effect, (X_2) on M_2.

Furthermore, Equation (11) resembles (10) while considering the $X_1 \rightarrow M_2 \rightarrow Y$ path.

$$C_1 \rightarrow \text{Firm age} = \; a_1b_1 - a_3b_2 \tag{8}$$

$$C_2 \rightarrow \text{Business sector} = \; a_2b_1 - a_4b_2 \tag{9}$$

$$C_3 \rightarrow X_1; \; X_2 = (a_1 - a_3)b_1 \tag{10}$$

$$C_4 \rightarrow X_2; \; X_1 = (a_3 - a_4)b_2 \tag{11}$$

Equation (3) represents the predictors' total effect (direct and indirect) on the endogenous variable, and their final influence analyzed separately. Equations (12)–(14) represent the separate effect of firm age, the business sector, and ownership on the firm's financial performance directly (c path) and indirectly $(a_i b_j)$.

$$\text{Firm age} = C_1 + a_1 b_1 + a_3 b_2 \quad (12)$$

$$\text{Business sector} = C_2 + a_2 b_1 + a_4 b_2 \quad (13)$$

$$\text{Ownership} = C_3 + a_5 b_1 + a_6 b_2 \quad (14)$$

3. Results

Table 1 presents the study variables' itemization, their descriptive statistics, their correlation matrix, and variance inflation factor (VIF)—which underwent log transformation except for the "sector." Revenue proxies financial performance, the endogenous variable; the exogenous factors are the business sector and firm age. Leverage for financial leverage and foreign-owned as a proxy of the proportion of local MEs' external ownership are the two mediators. We control the effect of the number of investors/shareholders in an enterprise on financial performance, a proxy for ownership. As stated earlier, we argue that the decisions undertaken by these investors may substantially affect business operations and, ultimately, performance. For better visualization of the table, we omit the term "log 10." Besides, in the next sections, the term will be silent in the variables for convenience reasons.

Table 1. Standardized Variable itemization, descriptive statistics, and correlation matrix.

Variable	Min Stat	Mean Stat	Max Stat	STD Deviation	VIF	1	2	3	4	5	6
Revenue (1)	4.14	6.5535	8.16	0.8596		1					
Firm Age (2)	0.9	1.7293	2.18	0.29125	1.248	0.204	1				
Sector (3)	1	4.03	8	2.179	1.293	0.88	0.07	1			
Investors (4)	1	3.7587	5.75	0.7841	1.491	0.204	−0.15	0.32	1		
Leverage (5)	3.65	6.0453	8.14	6.0453	1.262	0.57	0.009	0.31	0.411	1	
Foreign Owned (6)	−3.52	−0.959	1.67	0.8440	1.477	0.207	0.444	0.2	−0.298	−0.021	1.00

Percentile bootstrap Confidence Interval (CI) based on 5000 bootstrap samples.

Table 2 summarizes the direct and conditional effect of firm age and the business sector on financial performance. Path A shown by estimates a_{ij} presents the predictors' effect on the mediator variables, which act as endogenous variables (path a) and exogenous (path b). Based on the findings, the firm age is a significant determinant of foreign investment since the bootstrap confidence intervals are definitively different from zero ($a_1 = 0.109$, $p = 0.002$. ci = 0.0480 to 0.0740); however, it has a weak negative influence on financial leverage as the bootstrap confidence intervals contain a zero ($a_3 = -0.085$, $p = 0.096$, ci = −0.1820 to 0.0031). The second predictor, the business sector, weakly correlates with the two mediators as evidenced by the bootstrap confidence intervals that are not statistically different from zero, with foreign ownership ($a_2 = -0.393$, $p = 0.357$, ci = −1.3190 to 0.5000) and leverage ($a_4 = -1.113$, $p = 0.067$, ci = −0.1000 to 2.2480). Scholars differ on whether control variables' effect makes sense analyzed from the outcome variable or on other model variables and ultimately on the dependent variable. To accommodate the two arguments, we analyze this effect on both mediators and the outcome variable. The model results reveal that the number of investors or shareholders has a zero effect on foreign investors interested in a company, so is the case with financial leverage (estimates a_5 and a_6).

Table 2. Structural equation modeling (SEM) estimates with confidence intervals and standard errors highlighting firm age and business sector's effect on financial performance based on R output.

Antecedent	Estimates	Standard Error	*p*-Value	95% Bootstrap Confidence Interval
X_1M_1: Firm Age~Foreign Own	$a_1 \rightarrow 0.109$	0.036	0.002	0.0480→0.0740
X_2M_1: Sector~Foreign Own	$a_2 \rightarrow -0.393$	0.427	0.357	−1.3190→0.5000
X_1M_2: Firm Age~Leverage	$a_3 \rightarrow -0.085$	0.000	0.096	−0.1820→0.0031
X_2M_2: Sector~Leverage	$a_4 \rightarrow 1.113$	0.0607	0.067	−0.1000→2.2480
M_1U: Investors~Foreign Own	$a_5 \rightarrow 0.000$	0.000	0.062	0.0000→0.0000
M_2U: Investors~Leverage	$a_6 \rightarrow 0.000$	0.000	0.474	0.0000→0.0000
M_1; Y: Foreign Own~Revenue	$b_1 \rightarrow 0.434$	0.163	0.008	0.1230→0.7200
M_2; Y: Leverage~Revenue	$b_2 \rightarrow 0.241$	0.118	0.042	0.0100→0.7200
X_1; Y: Firm Age~Revenue	$c_1 \rightarrow 0.237$	0.068	0.000	0.0990→0.3660
X_2; Y: Sector~Revenue	$c_2 \rightarrow -1.830$	0.816	0.025	−3.464→−0.2580
U; Y: Investors~Revenue	$c_3 \rightarrow 0.000$	0.000	0.000	0.0000→0.0000
Indirect Effect 1	$a_1b_1 \rightarrow 0.047$	0.025	0.041	0.0100→0.1100
Indirect Effect 2	$a_3b_2 \rightarrow -0.02$	0.017	0.231	−0.0580→0.0070
Indirect Effect 3	$a_2b_1 \rightarrow -0.17$	0.213	0.424	−0.6130→0.2660
Indirect Effect 4	$a_4b_2 \rightarrow 0.268$	0.218	0.219	−0.0310→0.8050
Comp1: $a_1b_1 - a_3b_2$	$k_1 = 0.068$	0.030	0.022	0.0170→0.1340
Comp2: $a_2b_1 - a_4b_2$	$k_2 = -0.439$	0.319	0.169	−1.1220→0.1550
Comp3: $(a_1 - a_2)b_1$	$k_3 = 0.218$	0.211	0.303	−0.1910→0.6630
Comp4: $(a_3 - a_4)b_2$	$k_4 = -0.289$	0.224	0.198	−0.8230→0.0210
T. Effect 1: $c_1 + a_1b_1 + a_3b_2$	$e_1 = 0.263$	0.063	0.000	0.1460→0.3920
T. Effect 2: $c_2 + a_2b_1 + a_4b_2$	$e_2 = -1.732$	0.850	0.042	−3.4530→−0.1040
T. Effect 3: $c_3 + a_5b_1 + a_6b_2$	$e_3 = 0.000$	0.00	0.000	0.0000→0.000
R Square Estimates:	Revenue	0.350		
	Foreign Own	0.107		
	Leverage	0.041		

Path B presents the mediators' effect (while holding the influence of the two predictors and control variable at zero) on the dependent variable. In this case, the mediators act as exogenous variables in their influence of the outcome variable. The results show that the level of foreign ownership in domestic firms has a positive and significant influence on revenue generated since the bootstrap confidence interval is above zero ($b_1 = 0.434$, $p = 0.008$, ci = 0.1230 to 0.7200). Likewise, financial leverage correlates positively and significantly with revenue generation ($b_2 = 0.241$, $p = 0.042$ ci = 0.0100 to 0.7200). Path C illustrates the direct effect of the predictor and control factors on the dependent variable. Firm age has a positive and statistically significant effect on the outcome as illustrated by the *p*-value and confidence interval that is decisively different from zero ($c_1 = 0.237$, $p = 0.000$, ci = 0.0990 to 0.3660). Similarly, the business sector or the industry the firm operates in is a substantial determinant (direct) of its financial performance based on the *p*-value and a confidence interval distinctly different from zero ($c_2 = -1.83$, $p = 0.025$, ci = −3.460 to −0.2580). Conversely, the number of investors or shareholders has a neutral effect on firm performance ($c_3 = 0.000$, $p = 0.00$, ci = 0.000).

The indirect effect of the predictors on the outcome variable are pathways a_ib_j, which are also the product of coefficients. The model has four conditioned influences of predictors X_1 and X_2 on the outcome variable. The first pathway is the effect of firm age (X_1) on financial performance conditioned on the level of foreign ownership (M_2). The product of coefficients for the path is positive and significant, implying that foreign ownership in local firms mediates the relationship between their age and financial performance ($a_1b_1 = 0.047$, $p = 0.041$, ci = 0.0100 to 0.1100). The second path is the indirect influence of firm age on firm performance through leverage (M_2). The coefficients' product suggests that leverage has a negative mediation effect on the correlation between firm age and performance; however, the mediation effect is insignificant as the confidence interval contains a zero ($a_3b_2 = -0.02$, $p = 0.231$, ci = −0.0580 to 0.0070). Likewise, the second predictor (X_2) affects the outcome variable through each of the two mediators. Based on the coefficients' product, foreign ownership negatively mediates sector and revenue generation's association, albeit insignificantly ($a_1b_1 = -0.17$, $p = 0.424$, ci = −0.6130 to 0.2660). On the other path, the product of coefficients indicates that financial leverage

positively mediates the relationship between X_2 and M_2, but this is not definitively different from zero ($a_4b_2 = 0.268$, $p = 0.219$, ci = −0.0310 to 0.8050).

The indirect pathways allow for comparing the predictors' conditional influence on the outcome variable either through M_1 or M_2 and its significance level. The first comparison analyzes the effect of firm age on performance through foreign ownership and leverage. The estimate reveals a statistically significant difference between coefficients of the two paths as the confidence interval has no zero ($k_1 = 0.068$, $p = 0.022$, ci = 0.0170 to 0.1340). The second comparison examines the indirect effect of the second predictor, the business sector, also through the two mediators. The estimate suggests evidence of a negative and statistically insignificant difference between the two pathways ($k_2 = -0.439$, $p = 0.169$, ci = −1.1220 to 0.1550)—confirmed by the results of the two separate paths. Likewise, it is possible to explore how firm age (X_1) affects performance (Y) through its net estimate (after deducting business sector estimate) transmitted through either of the mediators. Based on the findings, there is no statistically significant difference between pathways, that is, through foreign ownership ($k_3 = 0.218$, $p = 0.303$, ci = −0.1910 to 0.6630) and financial leverage ($k_4 = -0.289$, $p = 0.189$. ci = −0.8230 to 0.0210). Whereas we examined the difference in the performance of the four conditional pathways', such an analysis is critical only when the coefficients' product (indirect effect) is significant in more than one (conditional) pathway.

The table also presents the total effect (TE) results that analyze each specific predictor's direct and indirect influence on the explained variable while holding the other variables at zero. Firm age and the business sector acting directly and indirectly significantly influence firms' financial performance since the confidence interval is significantly different from zero. For the firm age, the total effect is positive ($e_1 = 0.068$, $p = 0.00$, ci = 0.0170 to 0.1340); while negative with the business sector ($e_2 = -1.732$, $p = 0.42$, ci = −3.4530 to −0.1040)—this is discussed next. Nonetheless, the number of shareholders or investors has nil (neutral) influence on firm performance.

Table 3 presents the estimated effects of the different sectors or industries on financial performance. Note the table has seven instead of eight categories as indicated in the data collection tool because information and communication technology (ICT) is the referent group. The selected reference group is this because the industry has experienced a phenomenal group in Kenya and globally, forcing the banking and the ICT players to decide whether to complement or compete against each other. MEs in the "construction and allied" and "manufacturing and allied" experience positive financial performance relative to the ICT. However, only MEs in the manufacturing and allied industries register a significantly higher performance than those in ICT, as evidenced by the p-value and bootstrap confidence interval levels being distinctly different from zero. Nonetheless, most of the sectors, five to be precise, have inferior performances than the referent group. Besides MEs in the agricultural and insurance sectors, those in commercial and services, energy & petroleum, and investment have statistically significantly lower performance than those in telecommunication and ICT. In short, most of these sectors have an inferior performance than the referent group, which confirms the R output on business sector effect in the model (indirect effects 3 and 4 as well as the specific total effect). The last part of the table shows that the firm age, business sector, and investors' cumulative direct and indirect effect accounts for 35% of the sales change. The three predictors also represent 10.7% and 4.1% of the change in foreign ownership and leverage (when they act as dependent variables), respectively.

Interchanging the terms in the model Equations (1)–(3) to find the best fitting structural equation model.

$$M_1 = 0.109X_1 - 0.393X_2$$

$$M_2 = -0.085X_1 + 1.113X_2$$

$$Y = 0.434M_1 + 0.241M_2 + 0.237X_1 - 1.830X_2$$

Table 3. Effect estimates of the relative direct effects of different business sectors on firm financial performance based on Process Macro output.

Sector	Effect (Standard Error)	*p*-Value	95% Bootstrap Confidence Interval
Agriculture	−0.5450 (0.2731)	0.0504	−1.0909→0.009
Commercial and Service	−0.6210 (0.3089)	0.0487	−1.2386→−0.0035
Construction and Allied	0.4367 (0.3899)	0.2670	−0.3427→1.2160
Energy and Petroleum	−1.2016 (0.3152)	0.0003	−1.8317→−0.5716
Insurance	−1.3351 (0.7523)	0.809	−2.8390→0.1687
Investment	−0.6576 (0.3165)	0.0419	−1.2902→−0.0249
Manufacturing and Allied	1.1765 (0.4155)	0.0062	0.3459→2.0071

Percentile bootstrap Confidence Interval (CI) based on 5000 bootstrap samples.

Note that the control factor estimate is missing in the three equations due to its nil or neutral effect in the entire model. Finally, as evidenced by indirect effects three and four, the first hypothesis that the firm's sector or industry effect (unconditional and conditional) on financial performance is definitively different from zero fails to hold. Nevertheless, the second hypothesis is that the direct and indirect effect of a firm's age on financial performance is statistically significant; thus confirmed.

4. Discussion

The findings of the study provide some insightful facts for current and potential investors in the country. The firm age is a significant determinant of financial performance, both directly and indirectly, through foreign ownership. The positive correlation suggests that foreign investors prefer businesses that have been in the market or operation for longer than start-ups or those in the infancy phase. One argument would be that younger firms may be riskier, less experienced, with limited tangible and intangible resources than older enterprises. The difference in performance gives credence to the KNBS MSMEs Status report (2016), which established firms in the country to have an average collapse rate of 3.8 years—the primary reason being low revenues. The results concur with empirical evidence in other jurisdictions like the Capasso et al. (2015) findings on Italian firms. The results suggest that the proportion of foreign ownership has a positive and substantial effect on domestic firms' performance.

These study results reaffirm the findings of studies in other countries like Bentivogli and Mirenda's (2017) evaluation of the European context and Akolaa's (2018) analysis of the African situation. Domestic firms with high innovation or growth potential should make efforts to attract foreign investors or investment. Such an attempt has several associated positives for the firms. For example, firms unable to secure funding from traditional credit providers can do so through foreign investment. Besides, foreign ownership may catapult the firm's innovation activities through technology transfer (Mattoo et al. 2004; Srholec 2009). Also, suitable management structures (Love et al. 1996) and external networks (Chen and Chen 1998) are add-ons that domestic firms can leverage to boost their performance.

The preferred business sector has a substantial direct influence on performance. The negative correlation between the business sector and performance relative to the referent group (telecommunication and ICT) implies that investors must carefully select the industry to venture in. While from a general point of view, MEs in most sectors had a lower performance than the referent group, it does not mean they are unprofitable, or those in the manufacturing industry are the best. An influx of investors in sectors deemed profitable will wipe away any advantages enjoyed by existing firms. Such movements may eventually see sectors seen unprofitable register good performance. Potential domestic investors must change their "copy and paste" attitude in their investment decisions, where present sector performance clouds objective investment decision-making. The finding resonates with existing empirical literature like Prajogo's (2016) study of the Australian firms and that of Lahiri and Purkayastha (2017). Both studies conclude that the firm industry/sector significantly influences its financial performance. Still, the findings reveal that the business sector is not a crucial factor for potential investors but rather growth prospects and returns. Thus, local firms in

any sector of the economy planning to go international or act as a subsidiary of a foreign multinational entity can still achieve this objective—what matters is the strategy.

Moreover, most domestic firms cite that financial constraint is a major obstacle to the growth of businesses. However, study findings reveal that access to formal credit positively and significantly enhances performance. Local MEs with promising growth prospects should actively seek debt to finance their operation, albeit with caution. Whereas debt is desirable for firms with profitable investment opportunities, it may act as a poisoned chalice past the equilibrium level. Debt can either hurt or boost financial performance based on the degree of indebtedness (Campello 2006). Therefore, domestic firms must be aware of their debt threshold levels, otherwise surpassing the limit may negatively affect financial performance.

Besides, firm age correlates negatively with financial leverage, indicating that managers or entrepreneurs must critically analyze their funding requirement sources as their firm ages. Conversely, the business sector correlates positively with leverage, further affirming that debt is necessary for financing business operations more so for firms in specific sectors and growth prospects. Nevertheless, the study findings are consistent with those of other researchers who find a positive correlation between reasonable debt levels and financial performance. The findings are consistent with a study by Ilhan (2018). Besides, our results differ from those by Joshua (2007), whose analysis of the Ghanaian and South African markets established a negative relationship between debt and performance. Unfortunately, strict terms and conditioning on financing by providers of credit remains a substantial hurdle for most MEs in the country. The number of investors in the firm does not affect critical decisions like financial leverage or potential foreign investors' investment decisions. Still, their number may not have any exceptional influence on the business's financial performance.

5. Conclusions

The study examines firm age and the business sector's effect on financial performance mediated by the proportion of foreign ownership in domestic firms and the level of financial leverage by examining 146 medium enterprises. Moreover, the study analyzes the performance of different industries based on ICT as the referent group. The firm age has a significant direct influence on foreign investors' decisions regarding domestic firms from the findings. In contrast, the sector or industry has no substantial effect on external investors. Still, firm age has a strong indirect effect on financial performance, suggesting that foreign ownership levels mediate this relationship. Nonetheless, age has no noticeable influence on performance, through the second mediator, financial leverage levels.

Furthermore, neither foreign ownership nor financial leverage mediates the correlation between the business sector and financial performance. Since age has a substantial effect on firm performance, contrast analysis shows the indirect effect between the two mediator pathways. The contrast results reveal that the indirect effect of firm age on performance through foreign ownership statistically differs from that of leverage and vice versa. Besides, firm age has a strong influence on performance, both directly and indirectly, through M_1 and M_2. On the converse, the business sector has no discernable effect on the outcome variable. The business sector analysis shows that four categories had significantly different performances from the referent group. These are commercial and service, energy and petroleum, investment and manufacturing and allied; however, only the last category had a more superior performance than the referent group.

The finding on foreign ownership in domestic firms is significant to policymakers. Investor-friendly policies should be formulated, especially with external investors at the center of the discussion. Whereas there may be concerns about profit repatriation from the domestic market, among other challenges, formulated regulations should not curtail foreign domestic investment. That notwithstanding, managers or entrepreneurs intending to expand their operations must be careful about the firm lifecycle. Owner-managers of credit-constrained domestic firms with high growth prospects sought by external investors must "perfectly" time the moment. The firm should bring onboard foreign investors when faced with profitable investment opportunities but limited financial resources. Different sectors

have different return levels, something potential entrepreneurs or those contemplating industry switch ought to consider. The results may be of interest to researchers who wish to explore how firm age and industry influence performance, especially when foreign ownership and financial leverage explain the said relationship.

Finally, one limitation of our study is the online data collection approach. The sample may not be representative of the entire MEs population in the country. However, certain previous studies used the same approach. Lefever et al. (2007) note that whereas online surveys may access broad, geographically distributed populations, they nevertheless have limitations. One such shortcoming is accessing the population sample; however, this also applies to traditional data collection techniques. Besides, our study focuses on an emerging economy but are the findings different from a mature or maturing economy? Still, we omitted the financial sector from our analysis while countries may differ in sector or industry classification; how different will the findings be from the current study should it be included in the analysis? These are some areas future studies may address. Despite the limitations, we feel our findings are robust, as evidenced by the two software results, and contribute to the body of knowledge.

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