# Moderating Effect of Access to Capital on the Relationship between Financial Literacy and Firm Survival

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**Abstract:** ***Financial literacy and access to finance are classically modeled as independent antecedents of firm survival. Though, the margin conditions for such models are relatively un-examine in the context of emerging economies, where financial literacy has been contended to be very poor. Therefore, drawing perspectives from RBT, this study observed the moderating effects of access to capital on the relationship between financial literacy and firm survival of owners/managers firms operating in Nigerian business environment. Adopting quantitative research approach, the study sampled 302 owners/managers firms. The data collected were analyzed through the aid of OLS. The findings revealed that financial literacy improves firm survival and specifically so when owners/managers have adequate financial access. Similarly the result shows strong positive relationship between financial literacy and firm survival. Therefore, its recommends that owners/managers should take more complex assessment to understand how financial access and financial literacy influenced firm survival.***

**Keywords:** Financial literacy, Access to Capital, Owners/Managers Firms, Survival

## 1. Introduction

Owners/managers are opposed with complicated financial decisions to turn around the fortunes of their businesses. For example, owners/managers make financial decisions on sourcing and application financial resources. Hence, financial literacy becomes fundamental in financing decisions of firms and their future survival. Indeed, findings suggest poor levels of financial literacy among developed and developing economies and few people are able to comprehend simple financial concepts (Lusardi and Mitchell, 2007b; Lusardi and Tufano, 2009; Cole, Sampson and Zia, 2009). Therefore, this presents a challenge for owners/managers to enhance survival chances of their business. Although, in recent past there is growing drive toward enhancing financial literacy by a wide range of major stakeholders like banks and government agencies. This has been due to greater concerned about owners/managers lack of working knowledge of basic financial concepts. Indeed, most owners/managers do not have the mechanism needed to make informed financial decisions that are most advantageous to the survival of their business. This can affect the firm's re-current operation and ability to utilize funds for long-term profitable investment. Undoubtedly, inefficient financial management can influence behaviors that make owners/managers exposed to financial crises. From a wider perspective, owners/managers activities are compromised when owners/managers do not possess the abilities required to mitigate their business finances risk effectively. Undeniably, there is convincing empirical evidence advocating a strong relationship between financial literacy and firm survival (Hogarth and O'Donnell, 1999; Lusardi and Mitchell, 2007; Stango and Zinman, 2006; Lusardi and Tufano, 2008). Notwithstanding this scholarly endeavor, there is a drought of findings on the influence of owners/managers financial literacy on firm survival. Therefore, this study attempts to fill this empirical gap. Therefore, to overcome address this problem the researchers' posit that the effect of financial literacy on firm survival is contingent on the internal influence of financial access of the firm. Hence, the study further examines the performance implications of financial access on the financial literacy-firm survival relationship of owners/managers firms operating in a developing economy. Similarly, this study is attempts to further observe the moderating role of financial access on financial literacy-firm survival relationship, add further evidence to the growing literature on firms' survival.

## 2. Literature Review

### 2.1 Underpinning Theory

To enhance understanding on relationships, between study variables, perspectives was drawn from Resource-Based Theory (RBT) to discuss the positive influence of financial access on the relationship between financial literacy and firm survival, maintaining that the relationship between financial literacy and firm survival is positively moderated by financial access. RBT, which serves as conceptual foundation for study hypotheses development. The RBT Barney, (1991) advocates that organizations are bundle of resources. Scholars of the RBT propose the idea of firm 'diversity' (Barney, 1991) and also the notion that organizations are 'combiners' of valuable, heterogeneous, imperfect and mobile resources (Barney, 1991; Barney and Clark, 2007). As such, the RBT ''aspires to explain the internal sources of a firm's sustained competitive advantage'' (Kraaijenbrink, Spencer and Groen, 2010). The main idea of the RBT is that a firm can achieve sustained competitive advantage and eventual superior growth and survival if it acquires and controls valuable, rare, inimitable and non-substitutable resources and capabilities, as long as it has the ability to absorb and apply them (Barney, 1991).

Hence, resources that can generate sustained competitive advantage include assets, capabilities, organizational processes, information and knowledge. The collection of resources obtainable to a firm is vital for creating competitive advantage, and can be employed to commence several undertakings to attain survival. Evidence suggests that the internal capabilities of the firm should be examined to explain firm survival (Shelton, 2005). As indicated by Brush and Chaganti (1999), the formation of a firm's capabilities allows the firm to professionally track its survival. Thus, adopting the RBT this study examines the survival implications of financial access of firms on financial literacy survival relationship of owners/managers firms in Nigeria.

### 2.2 Financial literacy and Firm Survival

The relationship between financial literacy and financial decision-making has been study by several scholars in the past (Christelis et al., 2010; Banks et al., 2010; Smith et al., 2010; Lusardi and Mitchell, 2011a; Van Rooij et al., 2011a; Yoong, 2011). The conclusion of majority of these findings suggests a positive relationship between financial literacy and financial outcomes. Recent evidence suggests a positive relationship between financial literacy and performance (Cole, Sampson and Zia, 2018) and that a significant factor of equity market performance is financial literacy (Van Rooij, Bank and Lusardi, 2007). Literature posits that individuals with more financial knowledge are more likely to engage in a broad variety of optional financial decision (Hilgert, Hogarth and Beverley, 2003). On the other hand, Stango and Zinman (2007) opposed that individuals who are unable to properly calculate interest rates out of a stream of payments end up borrowing more and accruing lesser amounts of wealth. Thus, financial literacy is a important mechanism for handling business finance (Miller et al., 2009). For instance, financial literacy permits investors to appraise and relate financial services so as to make optimal investment decisions (Miller et al., 2009). Equally, financial literacy equips individuals with financial knowledge necessary to create household budgets and make strategic investment decisions (Greenspan, 2002). Hilgert et al., (2003) suggest that financial knowledge directly associate with self-beneficial financial activities. Therefore, it can further argued that stronger financial knowledge is important in overcoming problems in accessing and managing money markets. Financial literacy can simplify the decision-making processes such as payment of bills on time, proper debt management that can improve the credit worthiness of potential borrowers to support firm survival.

### 2.3 Financial Accesses and Firm Performance

Acquiring sufficient financial information may not automatically translate into firm survival, as financing is a vital part of operating any firm. Without adequate access to financing, the operating power of the firm and its likely hood for survival is at risk. The growth and performance of small firms also depends on the type of and amount of resources controlled by or made available to it (Wiklund and Shepherd, 2003). Access to finance is particularly important in realizing business goals such as survival. Lack of access to finance has been linked with owners/managers inability to achieve their aims (Malo and Norus, 2009; Robson and Obeng, 2008; Coad and Tamvada, 2012; BIS 2013) and confine owner-managers' opportunities to take action (Wiklund and Shepherd, 2003).

Financial capital access improves the search of resource-intensive survival strategies (Cooper et al., 1994) because slack resources can be tailored to better strategies and which in turn can permit the firm to pursue new survival prospects (Penrose, 1959).Therefore, financial access influences firm survival (Cooper et al., 1994). Therefore, access to sources of financing may play the both roles of proxying for internal financial capacity as well as delivering a indication about the quality of future survival prospects, in turn, decreasing the external financing restrictions for firms facing informational problems. Therefore, this study argue that financial access can underpin the effective implementation of entrepreneurial and financial management plans by permitting firms to access finance that may be more challenging in terms of collateral requirements but that also have better chance of survival. Consequently, it can be seen that financial access is likely to enhance the relationship between financial literacy and firm survival, such that the relationship is more strongly related to survival under great levels of financial literacy.

## 3. Methodology

### 3.1. Sample and Data Collection

The population of this study consists of 1,156 small sized enterprises in Yobe State Nigeria. The study employs (Krejcie and Morgan, 1970) technique for sample selection. Based on this, criterion 203small sized enterprises were selected to serve as a sample, out of 203 questionnaires administered, a total of 176 were completed and returned, representing 87 percent response rate. OLS was adopted for data analysis.

**Table 1:** Owners/Managers firm's profile

1= Strongly Disagree; 5= Strongly Minimum Maximum Mean S Test Value =4

| Agree | | | | D | t-values | sig |
|---|---|---|---|---|---|---|
| New product creation | 6 | 7 | 6.65 | .50 | 186.83 | p<01 |
| New production innovation | 5 | 7 | 6.54 | .49 | 194.09 | p<01 |
| Sustenance of survival | 5 | 7 | 6.67 | .47 | 206.85 | p<01 |
| Opening to markers | 5 | 7 | 6.68 | .48 | 195.58 | p<01 |
| Profit Generation | 6 | 7 | 5.43 | .95 | 756.38 | p<01 |

The table one above shows owners/managers firm's profile, the results shows that firm created new products mean score of 6.5, introduced new methods of production with mean score of 6.3 similarly, survival with mean score of 6.7 whereas, opened to a new markets with mean score of 6.7 while profit generated have mean score of 5.2. On the other hand, the results from the sample t-test establish that the mean values for all constructs of owners/managers profile were higher ($p<.01$) than the midpoint of 4. Therefore one can confidently argued that the variables included in the sample consist only owners/managers firms. On the other hand, Table 2 below presents the percentage of firms by industry. It is important to note that this study focused on the following specific industries: Agriculture (23%); mining and quarrying (12%); manufacturing (26%); building and construction (21%); transport and storage (11%) real estate an storage (11%) and others (7).

**Table 2:** Percentage of Firms by industry

| Industry | Percentage of Firms |
|---|---|
| Agriculture | 23% |
| Mining and Quarrying | 12% |
| Manufacturing | 26% |
| Building and Construction | 21% |
| Transport and Storage | 11% |
| Others (Professional/Scientific/technical activities/ health care | 7% |

## 4. Measure of Constructs

The present study relied on prior studies items to measure key variables. Thus, items were adapted from previous studies and modifications were made to fit the Nigerian context (Boso et al., 2013). Table 3 shows specific items adopted to measure the construct and their individual factor loadings and Cronbach's alpha values. The internal reliability values for all scales were above the 0.75thresholdsadvocated by (Nunnally and Bersntein, 1994).

### 4.1 Firm performance

The dependent variable tested in this study is firm survival, although there are different ways of measuring firm survival. These involve return on Assets (ROA) defined as the ratio of earnings before interest and tax to total assets (Tong and Green, 2007); Return on equity (ROE) defined as the ratio of net profit to average total equity (Ebaid, 2009) and Tobin's Q, defined as the ratio of the market value of a firm's assets to their replacement cost (Lang et al., 1991). Return on assets (ROA) is adopted as a measure of firm survival. The adoption of ROA helps in controlling size bias related with the outcomes (Adomako and Danso, 2014).

### 4.2 Financial literacy

Measures of financial literacy were adapted from Dahmen and Rodríguez (2014) to measure owners/managers' level of financial literacy. In total, four items were used to measure financial literacy construct. Owners/managers' were asked to respond to the following statements: (i) we prepare monthly company financial statement (income statement and balance sheet); (ii) we review monthly financial statements; (iii) we perform financial analysis on monthly financial statements; (iv) we have an understanding of the company's gross profit ratio and its contribution to the overall profit. A 5-point Likert scale was used to record owners/managers' financial literacy. The Cronbach's alpha of the scale was 0.78, indicating high reliability (Hair et al., 2006).

### 4.3 Financial Access

According to Wiklund and Shepherd (2005) the researchers' measured financial access. One subjective construct was adopted from Wiklund and Shepherd (2005). This item measured the owners/managers' level of satisfaction with his/her access to finance. This measure is original and is measured on a five-point scale (Wiklund and Sheperd, 2005). Four subjective items was adopted from Cooper et al., (1994). For instance, owners/managers' were asked to indicate how their business have easy access to financial to support its business operations; how business operations are better financed than our key competitors' operations. This was measured on a five-point-scale. The Cronbach's alpha of the scale was 0.77 for all constructs, indicating reliability (Nunnally and Bersntein, 1994).

### 4.4 Control variables

Control variables were also employed to account for features other than the theoretical constructs of interest that could describe variance in the firm survival. As business size, business age, industry, environmental munificence, age of the owners/managers' have been found been commonly investigated in preceding research and influence survival (Adomako and Danso, 2014), they were included as control variables. Thus, the control variables employed in present study include firm size, firm industry, firm age and owners/managers' age.

## 5. Validity Checks

The test for convergent validity of the study psychometric scales was design to assess the composite reliability. Previous empirical evidence indicates that estimates of composite reliability above .60 and statistically significant concept-to-domain coefficient ($t > 2.0$ $p < .05$) are considered relevant and supportive of convergent validity (Bagozzi & Yi, 1988).

**Table 3:** Summary Predictor Measures

| Domain and Predictor | Number of items | Scale format | Cronbach's Alpha | Ave. Factor Loading | CR |
|---|---|---|---|---|---|
| Financial Literacy | **4** | 1 to 5 Likert-scale | .79 | .78 | .70 |
| Financial Literacy | **5** | 1 to 5 Likert-scale | .78 | .83 | .78 |

Compose reliability (CR) is calculated as the sum of the square roots of the item-squared multiple correlations squared and divided by the same quantity plus the sum of the error variance (Werts, Lim and Joreskog,1974). All the values obtained are above the stipulated value (.60) and all constructs showed to be statistically significant. The check for discriminant validity of the constructs was done adopting a three-prolonged approached that has been adopted in previous studies (Adomako and Danso, 2014). This has been computed as 95% confidence interval for each off- diagonal item of the phi-matrix and this showed that there were no issue does the interval involve the value of 1.00. Equally, a comparison of the study model with series of more restricted models with the relationship among each pair of unit constructs was carried out. The significant differences in chi-square, between the null model and more restricted ones, point to a rejection of the hypothesis that that any two constructs is not mutually distinct. Similarly, the study also makes sure that the average variance extracted by each latent variable's measure was larger than its shared variance with any other latent variable. This showed to be significant because it revealed the nonappearance of significant issues due to random error measurement (Fornell and Larcker, 1981).

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## 6. Measurement Model Analysis

We followed existing research studies (Adomako and Danso, 2014; Boso et.al 2013) in the creation of our interaction variables. Due to the inclusion of interaction variables in the regression estimate, multicollinearity becomes an issue. As argued in previous studies, failure to orthogonise the endogenous and exogenous variables can lead to structural coefficient bias. Therefore, all the variables adopted in the creation of the interactive terms were residually cantered. A two step-approach was employed in the evaluation of the relationship between financial literacy, financial access and survival. The initial step involved the estimation of the non-hypothesized variables. In the second stage, the regression analysis was estimated with the interaction terms nested in the main effect model. Hence both the hypothesized and non-hypothesized control variables were put together in the second model. Outcomes from the collinearity test after the residual centering method are obtainable in Table 5. As can be seen, all variables involved in the regression estimate exhibit a low variance inflation factor (VIF), way below the stipulated cut off of 10.00 (Baum, 2006). Thus, all the variables can be used to interpret the regression outcomes.

**Table 5:** Regression
**Dependent Variables: Firm Survival**

| Control Variables | Model 1 | Model 1 |
|---|---|---|
| Firm size | .183(2.016) | 142(1.565) |
| Firm experience | .149(1.571) | .142(1.565) |
| Environmental Munificence | -.051(-.564) | -.026344) |
| Industrial type | .040(.643) | -.047(-.702) |
| Main effects | | |
| Financial Access | 556(5.934) | .491(5.088) |
| *HI*: Financial Literacy | .210(2.456) | .185(1.876) |
| *Interactive effects* | | |
| *H2:* Financial Literacy x Financial | | .239(2.595) |
| Access | | |
| Model fit | | |
| $R^2$ | .314 | 346 |
| Adj. $R^2$ | .287 | 325 |
| $\Delta R^2$ | - | .055 |
| F Change | 11.647 | 6.297 |
| Sig F Change | .000 | .002 |

A= Beta coefficients are reported (t-values are in parenthesis) Critical t-values are 1.282,1.645 and 2.325 for a= 0.10, a = 0.05 and a = 0.1 respectively (one tailed test as all hypotheses are one directional).

**Table 6:** A summary of Standardized parameter Estimates and Significant Level

| Relationship | Standardized Parameter | T-values | comments |
|---|---|---|---|
| Financial Literacy (FL) | .194** | 1.876 | Supported |
| FL x FA | .239*** | 2.675 | Supported |

NB: FL is Financial Literacy; FA is Financial Access; RF.
*** *p*<0.01,***p* <0.05,**p<0.10.*

## 7. Findings and Discussion

This study was design to enhance understanding of the moderating role of financial access on the relationship between financial literacy and firm survival. Drawing perspective from RBT logic, the study hypotheses were advanced predicting how financial literacy influence firm survival; financial access moderates the relationship between financial literacy and firm survival. The analyze centers on return on asset (ROE) as a measure of firm survival. Similarly, financial literacy was measured by asking respondents to assess the capability on the following: preparing monthly company financial statement; reviewing monthly financial statements; performing financial analysis on monthly financial statements and understanding of the company's gross profit ratio and its contribution to the overall profit. In addition, we measured financial access by asking owners/managers to indicate how their companies have easy access to financial capital to support its business operations; how business operations are better financed than our key competitors' operations.

## 8. Summary of Findings

Adopting RBT, the researchers' examined the direct relationship between financial literacy and firm survival and moderating influence of financial access on the relationship between financial literacy and firm survival. The aim is to develop a firm survival strategy through these relationships. Accordingly, effects of financial literacy and financial access, on survival outcome-return on assets (ROE). The literature advocates that individuals with more financial information are more likely to involve in an extensive variety of optional financial activities (Hilgert, et al., 2003). Though, the study key argument is that the relationship between financial literacy and firm survival has not been examined explicitly in developing economies. Additional, the boundary settings for such models are under-examine, as is their operationally to developing economies.

Therefore, sets of hypotheses were advanced to test argument. The statistical outcomes show that financial literacy positively relates to firm survival. Similarly financial access positively moderates the relationship between financial literacy and firm survival. Hence, the study found that financial literacy enhanced firm survival and this is specifically when financial resources are adequate and when owners/managers are capable to access finance with ease. That is to say ease accesses to finance is contingency variable and that, owners/manager who are financial literate need to account for these contingency variables to enhance their firm survival. Therefore, the study highlights two mechanisms through which the relationship between financial literacy and firm survival might be improved. The outcomes simply imply that access to financial that is valuable for enhancing financial literacy-business survival correlation.

### 8.1 Theoretical Implications

This study adds to entrepreneurship literature in two ways. First, the direct effect of financial literacy on firm survival sheds new light on the significance ascribed to the concept of financial literacy in decision-making (Banks et al., 2010; Smith et al., 2010; van Rooij et al., 2011a; Yoong, 2011). The outcomes indicate that financial literacy enhances firm survival. Therefore, entrepreneurship theory is unlikely to unearth fresh perceptions into the function of financial literacy in firm survival in developing economies. The implication is that past studies are design to include the role of financial literacy when firms survive. Similarly, the study clarify why financial access matter when owners/managers report high levels of financial literacy by showing their moderating roles. it show that financial access enhance the relationship between financial literacy and firm survival. This new insight implies that by failing to reflect the moderating effect of financial access and neglect an important contribution to the entrepreneurship literature. Therefore, the study tests the contingency role of financial access.

### 8.2 Practical Implications

The postulation that financial literacy influenced firm survival has been poorly investigated. Therefore, this study examines this argument in developing economy. Further, the study examines the moderating role of financial access on the relationship between financial literacy and firm survival. Hence, the study shows the importance of financial literacy and financial access in influencing firm survival in the settings of developing economy. First, owners/managers of firms and policy makers may wish to pay greater attention to not only financial literacy but also concentrate on the ways in which firms can obtain finance. Second, owners/managers may develop their financial capability alongside learning to access to financial resources. This means that owners/managers who encourage financial literacy as an end in itself but neglect financial access may achieve survival. Though, the outcomes suggest that when owners/managers are highly inclined in financial management they need to consider access to finance and in order to spur long-term firm survival.

### 8.3 Limitations and Conclusion

This study has a number of limitations that should be considered in the interpretation of the outcomes. The study examined entrepreneurial firms in general. Since diverse entrepreneurial firms may operate in multiple industries the use of industrial dummies in the regression analysis to control for industrial effect may be inadequate to 'partial out' the industrial effects (Wan and Hoskisson, 2003). Therefore, future research could overcome this limitation by examine firms limited to specific industry to assist and deal with the industrial factors. Additional, the generalizability of the results is limited because the study employed data from a sample of entrepreneurial firms in Nigeria.

Therefore, in conclusion, the study outcomes support the fact that financial literacy is a significant factor that drive firm survival and should be advanced as an integral part of the entrepreneurial operations. Hence, owners/managers should acknowledge and administer the learning process of managing finance. This study also argued owners/managers to take a more complex assessment of how and why financial access influences firm survival.

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