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Effect of owner-manager's financial literacy on the performance of SMEs in the Cape Coast Metropolis in Ghana

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Abstract

Financial literacy enables owner-managers of SMEs to understand and assess their own financial needs and make rational financial decisions. The paper explores the financial literacy of owner-managers of SMEs in the Cape Coast Metropolis and how such literacy influences the performance of their businesses. The study population were owner-managers of registered SMEs in the Cape Coast Metropolis from the National Board for Small and Medium Enterprise, out of which a sample of 132 was selected through the simple random sampling technique. The data was analyzed using Structural Equation Model. The results showed a positive relationship between financial literacy and the firm's financial performance ($t = 35.631$, $p < .00$). The paper recommends that policy makers should specifically design a program and platform targeted at further enhancing the financial literacy level of these owner-managers to help improve the performance of their firms.

Keywords: Financial literacy, SME performance, Structural equation modeling

Introduction

Small and medium enterprises (SMEs) continue to be the backbone of the economy in high-income countries. The Organization for Economic Co-operation and Development (OECD) reports that more than 95% of businesses in the OECD region are SMEs. Such businesses contribute significantly to gross domestic product, employment, innovation and income in low-income countries (OECD 2005). They are the main source of employment in countries like Ghana because they form about 90% of registered companies in Ghana (Adom et al. 2014; Laary 2015; Peprah, Mensah and Akorsah 2016). This means SMEs' performance is incidental to their contribution to the economies of Ghana. As Eniola and Entebang (2015) submit, performance is reflected in a firm's ability to create acceptable outcomes and actions. Among the SMEs' performance outcomes are sales growth, profit margin, cost efficiency, and market share (Watson 2007). Such outcomes are necessary if SMEs will play their role as catalyst to economic development.

However, the existence of SMEs has often been plagued with slow growth, low sales, lack of expansion with a number folding up within the first 2 years, thus raising questions about their performance. SMEs in Ghana have suffered slow growth (Asare 2014), have limited customer base, and are not competitive especially on global level (ITC 2016). Previous studies have attributed these challenges to access to finance, low capacity of research and development in technology, absence of business strategy and inadequate managerial competency (Asare 2014; Haselip, Desgain and Mackenzie 2015; Boateng and Poku, 2019; Al-Maskari et al. 2019; Bowen et al. 2009). These studies and others have focused largely on the access to credit and other managerial skills with less emphasis on financial literacy.

The success of an enterprise is largely dependent on how the firm sources, allocates, uses and manages funds. This means the manager of the venture should certainly have level of literacy in the finance and cash cycle (Mazzarol 2014) if the firm would be able to manage its capital efficiently. According to Remund (2010), financial literacy is the degree to which a person understands important financial concepts and possesses the capacity and confidence to handle personal funds decision-making. The lack of knowledge, skills, attitude and awareness to cope and direct the finances in a hardy, transparent and professional way is a significant obstacle to performance growth and the sustainability of such ventures. Grable and Joo (2000) stated that the lack of personal financial knowledge and lack of time to learn about personal financial management leads to inappropriate, inadequate and ineffective financial decisions by owner-managers.

Owner-managers of SMEs are confronted with multifaceted financial decisions in running their businesses. Financial literacy as a result becomes an important tool for owner-managers and performance of SMEs (Adomako and Danso 2014). Empirical studies done in this area showed low levels of financial literacy among owner-managers of SMEs in advanced and emerging economies, and only few are able to understand basic financial concepts (Lusardi and Mitchell 2007a; Lusardi and Tufano 2009; Cole, Sampson and Zia 2009). This issue is very important since lack of knowledge of financial decisions usually poses challenges which hinder performance of SMEs. This situation presents a challenge for owner-managers of SMEs in their quest to enhance the performance of their firms as banks and other organizations consider their financial literacy before dealing with them (Lusardi and Mitchell 2007a). Furthermore, previous studies (Asare 2014; Haselip, Desgain and Mackenzie 2015; Boateng and Poku 2019; Al-Maskari et al. 2019) have focused more on the availability of finance, managerial competency and general business climate as the major factors impacting on SMEs performance. These studies have not looked at how financial literacy impacts of financial performance, thus creating a research gap. The paper, therefore, sought to assess the effect of owner-manager's financial literacy on the performance of SMEs in the Cape Coast Metropolis in Ghana. The paper was motivated by the need to fill this gap and contributes to the body of knowledge on the existing debate on effect of owner-manager's financial literacy on the performance of SMEs. The findings of this study provide owner-managers of the SMEs and policymakers with insights to put the appropriate strategies and measures in place to boost the performance of SMEs through financial education.

The rest of the paper was divided into five sections. "Literature review" looks at the literature; "Research methods" was devoted to the research methods. "Result and discussions" looked at the results and discussions. Finally, "Conclusions" and "Recommendations" were devoted to the conclusions and recommendations respectively.

Literature review

This study is premised on resource-based theory (RBT). This strategic management theory has been extensively applied within the management and entrepreneurship literature. The RBT looks at how the resources that a firm possess could help create a sustainable competitive advantage for it. The firm's resources include financial (liquid and illiquid), human (knowledge, skills and competencies), technological, marketing and physical resources. These resources are what the RBT describes as a firm's characteristics that derive its profitability, growth and ultimately survival. The view in this theory is that such resources should be valuable, rare and imitable (Dierickx and Cool 1989; Barney et al, 2001). However, for the firm to achieve competitive advantage, Grant (1991) suggests managers analyze resources, appraise capabilities, analyze competitive advantage, select strategy and identify resource gaps.

There is implication of RBT for the issue of financial literacy and firm performance. Financial skills and knowledge have implication for how a firm select, uses, manages and disposes financial assets (Nunoo, Andoh, and Darfor 2015). Furthermore, a manager's financial literacy level is a demonstration of the level of financial knowledge he or she possesses or has acquired over time (Gustman, Steinmeier and Tabatabal 2012). Such knowledge (resource) has implications for effectiveness of financial decision and strategy the firm adapts. This is especially so in SMEs where the owner-manager often has the ultimate power, in making strategic decisions. Financial decision is one of the central decisions that owner-managers have had to make in the running of their businesses. The outcome of such decisions impacts significantly on the profitability, growth and survival of their ventures. As submitted by Eniola and Entebang (2016), SMEs use idiosyncratic, immobile tangible and intangible resources as the bases to sustain competitive capability that brings about superior performance. The tangible resources include financial capital (e.g., equity capital, debt capital, retained earnings) and physical capital (e.g., machinery and buildings). Intangible resources consist of entrepreneurial knowledge, skills, experiences, organizational procedures, and reputation.

The theory suggests that lack of financial, human, organizational resources and capabilities reduces the firm innovation activities (Hewitt-Dundas 2006). This could affect the firm's product and service delivery and ultimately its performance. The inaccessibility of financial resources is a major impediment to the development of SMEs, particularly because it prevents them from acquiring new technology that would make them more productive and more competitive. Ironically, previous studies (Amornkitvikai and Harvie 2018; Sibanda, Hove-Sibanda and Shava 2018; Hossain 2018) have focused more on the availability and non-availability of finance but not on the literacy of the owner-managers in terms of financial knowledge and know-how. This paper fills this gap by looking at how the literacy of owner-managers impacts on the performance of such firms.

Financial literacy and financial performance

Bruhn and Zia (2011) investigated the impact of business and financial literacy program on owner-managers of SMEs. They found that SMEs with better performance had owner-managers with higher levels of financial literacy. Nyabwanga (2011) concluded that over 57% of these business operators hardly attend any business training programs, despite over 60% of them having little or no knowledge in financial literacy, hence, were void of financial knowledge vital in the running of their enterprises. The study also established that the performance of SMEs was averagely low.

Simeyo et al. (2011) established that training in micro enterprise investment had a significant positive impact on the performance of the microenterprises. The study further established that majority of the respondents were very satisfied with the provision of capital investment and basic business skills training in micro enterprise investment. This suggests the business skill training accompanying the provision of micro loans, most likely improves the capacity of the SME owners to use funds and hence impacts on business performance. In terms of business risk management, the results showed that respondents were moderately satisfied with the achievement of business risk management skills. With the implication that the owners of SMEs were inadequately equipped with knowledge and skills of business risk management, hence are unable to adequately deal with business risks. Therefore, in the event that such risks occur, their micro enterprises are significantly affected. Sucuahi (2013) points out that the significant role of the micro enterprises can be well harnessed and sustained through a fine and precise financial management by the owner-managers of SMEs themselves.

A good financial foundation of the owner-managers of SMEs is a significant barometer of the success and growth in the performance of SMEs. In addition, financial literacy impacts on access and payment of loans. In South Africa, one of the causes of the high failure rate of new micro enterprises is the non-availability of formal sector financing. In a study to investigate the effect of business development services on the performance of SMEs, Osinde, Iravo, Munene, and Omayio (2013) found that the owner-managers who received business advice and resources recorded an improvement in the growth of sales and market shares. The study further established that those who attended the training services recorded an improvement in their businesses in terms of growth in sales and profits. Eighty-three percent (83.3%) of the respondents who always attended training reported good growth in profits as opposed to 41.2% of those who never attended training. Wise (2013) found that increase in financial literacy leads to more frequent production of financial statements. An owner manager of SME that produces financial statements more frequently has a higher probability of loan repayment and a lower probability to voluntarily close his/her business. The Association of Chartered Certified Accountants (2014) submits that one of the challenges financial institutions face is low level of financial awareness. Nunoo, Andoh, and Darfor (2015) concluded financial literacy is a very important factor in explaining utilization of financial services. Low level of financial literacy can prevent owner-managers of SMEs from understanding and assessing financial products from financial institutions. This limits their performance in terms of service delivery and growth.

According to Eniola and Entebang (2015), performance is commonly employed as an index of a SME's health over a dedicated period. This puts performance as one of the key issues of SMEs. The capacity to institute change in management of perceived market opportunities, adapting to the environment, and possessing certain managerial factors, contribute to strategic improvement in firm performance. Also, product innovations, creativity, proactiveness, technological change and networking are all critical factors to bringing about strategic improvement in firm performance. Performance encompasses growth, survival, success, and competitiveness. According to Eniola and Entebang (2015), performance can be characterized as the firm's ability to create acceptable outcomes and actions.

Furthermore, financial literacy could enable owners/managers to be more creative in the use of credit and debt, the monitoring of budgets, the timely acquisition of raw material, production, fixed and variable costs and stock usage (Reich and Berman 2015; Adomako et al. 2016). A combination of internal and external literacy has been reported to have a high correlation with the business performance of young entrepreneurs (Bruhn and Zia 2011), and similar findings are supported by Agbemava et al. (2016) and Sucuahi (2013).

Writers such as Reich and Berman (2015) and Cowling et al. (2015) were of the view that financial literacy is critical in responding to the turbulent global challenges such as Brexit and the global financial crisis. Ali et al. (2018) concluded that if entrepreneurs are really given time and energy to know and possess the skills in financial matters, it will help them as the economy today is open and becoming more challenging and robust. Among the variables chosen, budget control seems to be the main factor that owner-managers were more concerned with since a well-prepared budget will determine the performance of the SMEs.

From the discussions, financial literacy is key in attaining financial performance of SMEs. As a result, financial literacy becomes crucial in financing decisions of SMEs (Adomako and Danso 2014). Recent evidence suggests low levels of financial literacy among owner managers of SMEs in advanced and emerging economies. Previous researchers report that few owner-managers are able to understand basic financial concepts (Lusardi and Mitchell 2007a; Lusardi and Tufano 2009; Cole, Sampson and Zia 2009). This issue is very important since lack of knowledge of financial decisions usually poses challenges which hinder the growth of SMEs. This situation presents a challenge for owner-managers of SMEs in their quest to enhance SME performance. This is due to the fact that banks, government agencies, and other organizations now consider the financial literacy level of the owner-manager before dealing with them (Lusardi and Mitchell 2007a). This paper, therefore, sought to assess how financial literacy of owner-managers affects the financial performance of SMEs in the Cape Coast Metropolis.

Research methods

This study was quantitative in nature and employed the survey research design. A quantitative method was used because it enables one to objectively analyze the relationship between variables and also make predictions. Moreover, a survey allows for the collection of a large amount of data from a sizeable population in a highly economical way. For the purpose of this study, SMEs registered with the National Board for Small Scale Industries (NBSSI) were used. The NBSSI database indicated there were 200 registered businesses in the metropolis. One hundred thirty-two (132) respondents (owner-managers) were selected for the study based on the Krejcie and Morgan (1970) sample size determination table. From the table (Table 4 in Appendix), the minimum sample size for a population of 200 was 132.

Data on the registered SMEs was obtained from the database of NBSSI. Through simple random sampling technique (lottery method), 132 respondents were used for the study. Due to the challenges of data collection in the SME sector, there was the need to over sample (using 160) above the minimum sample size of 132. In employing the lottery method, the respondents were numbered on separate slips of paper of same size. They were then folded and mixed up in a container. A blindfold selection was then made. The required numbers of slips was selected until sample size of 160 was obtained.

Data and data collection

Data used in the study was obtained mainly from primary source. The main instrument for data collection was the questionnaire. The questionnaire was made up of a 5-point Likert-like scale with 5 being strongly agree and 1 being slightly agree. The scale allowed for the use of a special rating scale that allowed questions to be asked on the extent to which respondents agreed with a series of statements about a given subject (Sekaran and Bougie 2003). Likert scale has severally been used in the study of behavior and its outcomes of which financial literacy falls into such category (Willits, Theodori and Luloff, 2016; Joshi et al., 2015). The questionnaires were administered with the help of field assistants. In order to attain the minimum sample size of 132, a total of 160 questionnaires were sent out. Finally, 132 responded to the request to participate in the study after several attempts at retrieving the questionnaires. The reason for the non-response was due to inability to make contact with the units selected for the study.

That resulted in reducing the sample size without introducing bias into the study (see Cornish, 2002). The rest of the 28 questionnaires were not retrieved after several attempts at recovering them. The questionnaires retrieved represented a response rate of 82.5%.

Measurement of variables

Performance of SMEs

This is the dependent variable. Performance of SMEs was defined as the ability to create acceptable outcomes and actions (Eniola and Entebang 2015). Performance of SMEs was adopted from Watson (2007) who used sales growth, profit margin, cost efficiency, and market share as indicators of financial performance.

Financial literacy

This is the independent variable. In this study owner-manager's financial literacy is the independent variable. According to Remund (2010), financial literacy is the degree to which a person understands important financial concepts and possesses the capacity and confidence to handle personal funds, decision-making, and solid long-term financial forethought. The measure of financial literacy was adopted from van Rooij, Lasardi and Alessie (2011) who used financial management, debt, savings, insurance, and investment in measuring financial literacy.

Data analysis

The data collected was processed using SmartPLS software and analyzed using the structural equation modeling (SEM). According to Hox and Bechger (1998), SEM combines complex path models with latent variables (factors) in the same study. It is a robust technique that is used in studies with unobserved constructs such those under consideration in this study (Sander and Teh 2014). That is, it provides the avenue to measure unobservable variables with identifiable indicators. The method utilizes the features of factor analysis and multiple regressions that helps examine the relationship between endogenous and exogenous variables (Bagozzi and Fornell 1982; Gefen et al. 2000; Hair et al. 2006; Hair et al. 2017). This helps reduce first-generation statistical tool challenges that include the examination of only one single relationship at a single point in time (Gefen et al. 2000; Hair et al. 2006). Structural equation modeling permits the extension of longitudinal data within a single framework to conform to a study's conceptual framework and hypotheses (Preacher et al. 2008; Gunzler et al. 2013). Furthermore, it enables the combination of categorical, discrete, and continuous variables. The rule is that the observed variables may be categorical or discrete, but the latent variables must be continuous (Civelek 2018 p.10).

Measurement model

The results from the structural equation modeling (SEM) were subjected to relevant reliability and validity checks including convergent and discriminant validity. Construct validity was assessed using the convergent and discriminant validity tests.

Reliability

In partial least square (PLS), the individual factor reliability can be assessed by examining the loadings of the respective factors on their respective latent constructs as suggested by (Wong 2013; Hair Jr. et al. 2017; Wong 2019). Higher loadings imply that there is more shared variance between the construct and its measures, than the error variance. In this present study, the criterion of .50 as recommended by Hulland (1999) was adapted for the retention of factors. In PLS, loadings of respective factors on their respective latent constructs are examined to assess the reliability of the factors.

In addition to Cronbach's alpha, reliability of each variable was assessed through Fornell and Larcker's measure of composite reliability as cited in (Wong 2013). This measure was preferred over Cronbach's alpha because it offers a better estimate of variance shared by the respective indicators and because it uses the item loadings obtained within the nomological network (Hair et al. 2011).

Convergent validity

According to Rouibah, Ramayah and May (2011) convergent validity is the degree to which items measuring the same concept are in agreement. Evidence of convergent validity was assessed by the inspection of variance extracted for each factor (Hair et al. 2010). According to Hair et al. (2011) convergent validity is established, if the variance-extracted value exceeds .50.

Discriminant validity

Discriminant validity is the degree to which any single construct is different from the other constructs in the model (Hasan et al. 2012). The method used for assessing discriminant validity was by examining the cross loadings of the indicators. Specifically, an indicator's outer loading on the associated construct should be greater than all of its loadings on other constructs (i.e., the cross loadings). The presence of cross loadings that exceed the indicators' outer loadings represents a discriminant validity problem. This criterion is generally considered in establishing discriminant validity (Hair, Ringle and Sarstedt 2011).

Result and discussions

The measurement model was assessed to evaluate the individual loadings of each item's composite reliability, average variance extracted (AVE) and discriminant validity. Furthermore, the structural model depicting the hypothesized relationship was tested for significance and predictive power.

Reliability

From Fig. 1 "F1" to "F7" represent constructs used as indicator variables in understanding owner managers' financial literacy. Furthermore, "FP1" to "FP5" were the constructs used as indicators of performance of SMEs. When the factor loadings were closely examined, they all reported standard factor loadings (> .5) as proposed by Hair et al. (2011). None of the factors was dropped from the further investigations. Also, from Table 1 the composite factor reliability coefficients of the construct's financial literacy and performance of SMEs ranged from .923 to .941, which meets the benchmark. Similarly, the composite reliability of approximately .7 is acceptable.

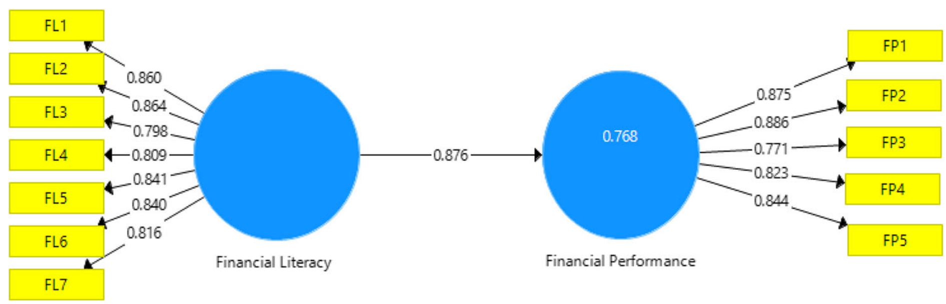

Fig. 1 Test of the research model (PLS, $n = 132$)

Convergent validity

According to Rouibah et al. (2011) convergent validity is the degree to which items measuring the same concept are in agreement. The results from Table 1 indicated that the variance extracted (AVE) ranged from .694 to .707. This meant that the convergent validity criteria of both financial literacy and performance of SMEs were met. The results show that the scale used possessed convergent validity.

Discriminant validity

Table 2 presented the cross loadings to test for discriminant validity. Discriminant validity is the degree to which indicators of the construct show weak correlation with all other constructs, except the one to which it is theoretically associated (Hasan et al. 2012; Henseler et al. 2014).

The method used for assessing discriminant validity was by examining the cross loadings of the indicators. The results as presented in Table 2 show adequate discriminant validity since indicator's outer loading on the associated construct was greater than all of its loadings on other constructs (i.e., owner-managers' financial literacy construct represented by "F1" to "F7" and performance of SME constructs represented by "FP1" to "FP5").

Structural model

The model produced an R^2 value of 76.8%, indicating that variations in the performance of SMEs can be explained by owner-manager's financial literacy as captured in Fig. 1. This shows that the causal relationship between owner-managers financial literacy on the performance of SMEs was significant.

Also, as demonstrated in Table 3 a bootstrapping procedure using 1000 sub samples was performed to evaluate the statistical significance of each path coefficient. The study sought to test the effect of owner-managers' financial literacy on the performance of SME using path analysis with ($t = 35.631$, $p < .00$). This indicates that owner-manager's

Table 1 Factor loadings, Cronbach's alpha, composite reliability, and AVE

Variables	Cronbach's alpha	Composite reliability	AVE
Financial literacy	.926	.941	.694
Financial performance	.896	.923	.707

Source: Field survey, (2018)

Table 2 Cross loading method

	Financial literacy	Financial performance
fl1	*.860*	.793
fl2	*.864*	.767
fl3	*.798*	.720
fl4	*.809*	.677
fl5	*.841*	.715
fl6	*.840*	.747
fl7	*.816*	.680
fp1	.706	.875
fp2	.827	.886
fp3	.646	.771
fp4	.795	.823
fp5	.683	.844

Source: Field survey, (2018)

financial literacy has direct positive significant influence on the performance of SMEs. Owner-manager's financial literacy changes in direct proportion to performance of SMEs with a coefficient of .876. This implies there is significant direct relationship between owner-manager's financial literacy and performance of SMEs. Therefore, improvement in the financial literacy of the owner-manager could spur strong financial performance of the firm. It is expected that the capacity of the owner-manager to use source, use, manage and dispose funds is improved through financial knowledge. This would invariably impact on their ability to manage their business risk and ultimately performance.

Financial knowledge of the owner-manager could create a competitive advantage for the business due to the quality of the financial decisions. The paper was premised on the resource-based theory. The theory emphasizes on how critical resources (including financial skills and competencies) are used by the firm to attain competitive advantage. Appropriate financial knowledge would help improve decisions in terms of market share, sales, and profit (Osinde et al., 2013). Such outcomes emerge because the owner/manager is able to use his/her financial competence to reduce waste and cost that results from poor financial product selection and management. The finding from this study supports the views in Reich and Berman (2015) and Adomako et al. (2016). These studies found that the financial skills of the owners/managers aid them in terms of the financing option, budgeting, costing, and making production decisions. The acquisition and the application of the appropriate financial knowledge have the ability to promote efficiency, and increase market share and sales profit. This would ultimately promote venture growth and survival which would create a competitive advantage for the business.

Table 3 Path coefficients along with their bootstrap values, 'T' values

	Original sample (O)	Sample mean (M)	Standard Dev	T statistic (|O/STERR|)	*p* values
Financial literacy - > financial performance	.876	.877	.025	35.631	.00

Source: Field survey, (2018)

Conclusions

The paper sought to look at the effect of financial literacy of owner-managers and the performance of their businesses. This is on the score that previous studies have not focused on such an important issue. Owner-managers of SMEs are confronted with complex financial decisions in running their businesses on the day-to-day basis. Thus, lack of knowledge, skills, attitude, and awareness to cope and direct the finances of their ventures in a hardy, transparent, and professional way is a significant obstacle to the performance of their businesses. The study found a significant positive relationship between financial literacy of owner-managers and performance of their businesses. This implies that improvements in financial literacy of owner-managers could spur increase in the performance of their ventures. As indicated earlier, the volume and value of knowledge available in the business helps create competitive advantage through proper decision making. This is likely to result in process and product innovations and ultimately firm performance. This is similar to findings by Osinde et al. (2013) which found out that the SMEs who received financial advice and resources had an improvement on the performance of SMEs with their sales and growth in market shares being increased. They established that those who attended training services recorded an improvement in their SMEs in terms of growth in sales and profits. This is because through training, the owner-managers are able to obtain the relevant business and financial knowledge.

The outcome of the study has implications for the theory, policy, and practice. The results support the view in the resource based theory, that the assets (financial literacy/knowledge) of the firm are the basis for its competitive advantage. On policy and practice, the findings highlight the critical issue of one's level of financial literacy before he or she is granted credit. The outcome of this study re-echoes the need for national dialogue on financial literacy and financial education. This would help develop the financial skills of existing and potential owner-managers. Moreover, the results have implications for owner-managers with respect to their own training needs and that of their staff.

The paper contributes to knowledge through the application of the resource-based theory to show financial knowledge and competencies are essential for the owner/manager if the venture would have a competitive advantage over others in the industry.

Recommendations

Based on the findings and conclusions, the paper suggests the design and implementation of financial literacy programs by the bodies responsible for managing SMEs in the metropolis including the National Board for Small Scale Industries (NBSSI). Furthermore, the owner-managers of such businesses must make a conscious effort to improve upon their financial knowledge by attending workshops, conferences and short courses on financial literacy. Such events could be organized through industry-academia collaborations. For instance, NBSSI could liaise with universities and the financial institutions in the metropolis to organize such training workshops, seminars and conferences for the SMEs. Where necessary, owner-managers should seek the advice of financial consultants in making critical financial decisions.

Appendix

Table 4 Krejcie and Morgan's table for determining sample size from a given population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10,000	370
150	108	750	254	15,000	375
160	113	800	260	20,000	377
170	118	850	265	30,000	379
180	123	900	269	40,000	380
190	127	950	274	50,000	381
200	132	1000	278	75,000	382
210	136	1100	285	1,000,000	384

N is population size
S is sample size

Authors' contributions
The paper was jointly conceptualized and designed by the authors. In terms of the shared responsibility, D.A reviewed theoretical literature, provided technical support. A. B. A. reviewed the empirical literature and undertook the field work and the analysis. The final manuscript was proof read by D.A, but jointly agreed by both authors before submission.

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Respondents were assured of anonymity and participation was voluntary.

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References

Adom, P. K., Amakye, K., Doh, E. & Anku, R. (2014). SMEs Record Keeping in Ghana: Has VAT Made It Better?' International Journal of Economics and Financial Issues, 4 (1), p. 152–169.

Adomako, S., & Danso, A. (2014). Financial literacy and firm performance: The and resource flexibility. *International Journal of Management and Organizational Studies, 3*(4), 1–15.

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 (2016). doi:https://doi.org/10.1080/13691066.2015.1079952.

Agbemava, E., Ahiase, G., Sedzro, E., Adade, T. C., Bediako, A. K., Nyarko, I. K., & Kudo, M. B. (2016). Assessing the effects of sound financial statement preparation on the growth of small and medium-scale enterprises. *The International Journal of Business & Management, 4*(3), 104.

Ali, H., Omar, E. N., Nasir, H. A., & Osman, M. R. (2018). Financial literacy of entrepreneurs in the small and medium enterprises. In *Proceedings of the 2nd Advances in Business Research International Conference* (pp. 31–38). Singapore: Springer.

Al-Maskari, A., Al-Maskari, M., Alqanoobi, M., & Kunjumuhammed, S. (2019). Internal and external obstacles facing medium and large enterprises in Rusayl Industrial Estates in the Sultanate of Oman. *Journal of Global Entrepreneurship Research, 9*(1), 1.

Amornkitvikai, Y., & Harvie, C. (2018). Sources of finance and export performance: Evidence from Thai manufacturing SMEs. *The Singapore Economic Review, 63*(01), 83–109.

Asare, A. (2014). Challenges affecting SME's growth in Ghana. *OIDA International Journal of Sustainable Development, 07*(06), 23–28.

Association of Chartered Certified Accountants (2014). Financial education for entrepreneurs: What Next? Available at: https://www.accaglobal.com/content/dam/acca/global/PDF-technical/small-business/pol-tp-fefe.pdf

Bagozzi, R. P., & Fornell, C. (1982). Theoretical concepts, measurements, and meaning. In *A second generation of multivariate analysis. Measurement and evaluation* (pp. 24–38). New York: Praeger.

Barney, J. B., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management, 27*(6), 625–641. https://doi.org/10.1177/014920630102700601.

Boateng, S., & Poku, K. O. (2019). Accessing finance among women-owned small businesses: Evidence from lower Manya Krobo municipality, Ghana. *Journal of Global Entrepreneurship Research, 9*(1), 5.

Bowen, M., Morara, M., & Mureithi, M. (2009). Management of business challenges among small and micro enterprises in Nairobi-Kenya. *KCA journal of business management*, 2(1), 21-34 (2009). Doi: https://doi.org/10.4314/kjbm.v2i1.44408.

Bruhn, M., & Zia, B. (2011). *Stimulating managerial capital in emerging markets: the impact of business and financial literacy for young entrepreneurs*. Policy research working paper; no. WPS 5642. Washington, DC: World Bank. http://documents.worldbank.org/curated/en/737211468139183866/Stimulating-managerial-capital-in-emerging-markets-the-impact-of-business-and-financial-literacy-for-young-entrepreneurs

Civelek, M.E. (2018). Essentials of structural equation modeling, Zea E-Books. 64 https://digitalcommons.unl.edu/zeabook/64.

Cole, S. A., Sampson, T. A., & Zia, B. H. (2009). Financial literacy, financial decisions, and the demand for financial services: Evidence from India and Indonesia. Working paper (09–117). Harvard Business School.

Cornish, J. (2002). Response problems in surveys: Improving response & minimising the load. UNSD regional seminar on good practices in the organisation and management of statistical systems for ASEAN countries, Yangon Myanmar, 11–13 December.

Cowling, M., Liu, W., Ledger, A., & Zhang, N. (2015). What really happens to small and medium-sized enterprises in a global economic recession? UK evidence on sales and job dynamics. *International Small Business Journal, 33*(5), 488–513.

Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. Management science, 35(12), 1504–1511.

Eniola, A. A., & Entebang, H. (2015). SME firm performance-financial innovation and challenges. Procedia-Social and Behavioural Sciences, 195, 334–342 (2015). Doi: https://doi.org/10.1016/j.sbspro.2015.06.361.

Eniola, A. A., & Entebang, H. (2016). Financial literacy and SME firm performance. *International Journal of Research Studies in Management*, 5(1), 31-43 (2016). Doi: https://doi.org/10.5861/ijrsm.2015.1304.

Gefen, D., Straub, D. W., & Boudreau, M. C. (2000). Structural equation modeling and regression guidelines for research practice. *Communications of the Association for Information Systems, 4*(7), 2–77.

Grable, J. E., & Joo, S. H. (2000). A cross-disciplinary examination of financial risk tolerance. *Consumer Interests Annual, 46*, 151–157.

Grant, R. M. (1991). The resource-based theory of competitive advantage: implications for strategy formulation. California management review, 33(3), 114–135.

Gunzler, D., Chen, T., Wu, P., & Zhang, H. (2013). Introduction to mediation analysis with structural equation modeling. *Shanghai Archives of Psychiatry, 25*(6), 390–394.

Gustman, A. L., Steinmeier, T. L., & Tabatabai, N. (2012). Financial knowledge and financial literacy at the household level. *American Economic Review, 102*(3), 309–13.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6 ed.): Prentice hall.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Thousand Oaks: Sage Publications Inc..

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed, a silver bullet. *Journal of Marketing Theory and Practice, 19*(2), 139–151. https://doi.org/10.2753/MTP1069-6679190202.

Hasan, Y., Bègue, L., & Bushman, B. J. (2012). Viewing the world through "blood-red tinted glasses": The hostile expectation bias mediates the link between violent video game exposure and aggression. *Journal of Experimental Social Psychology, 48*(4), 953–956. https://doi.org/10.1016/j.jesp.2011.12.019.

Haselip, J., Desgain, D., & Mackenzie, G. (2015). Non-financial constraints to scaling-up small and medium-sized energy enterprises: Findings from field research in Ghana, Senegal, Tanzania and Zambia. *Energy Research & Social Science, 5*, 78–89.
Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J., Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common beliefs and reality about partial least squares: Comments on Rönkkö & Evermann (2013). *Organizational Research Methods, 17*(2), 182–209.
Herrington M, Kew, J. & Kew, P. (2009). *Global entrepreneurship monitor*, South African Report. http://www.gbs.nct.ac.za/gbswebb/userfiles/ gemsouthafrica2000pdf.
Hewitt-Dundas, N. (2006). Resource and capability constraints to innovation in small and large plants. *Small Business Economics, 26*(3), 257–277. https://doi.org/10.1007/s11187-005-2140-3.
Hossain, M. (2018). *Local financial development, access to credit and SMEs' performance: Evidence from Bangladesh*.
Hox, J., & Bechger, T. (1998). An introduction to structural equation modelling. *Family Science Review, 11*, 354–373.
Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal, 20*(2), 195–204.
International Trade Centre. (2016). *SME Competitiveness in Ghana: Alliances for Action*. Geneva: ITC.
Joshi, A., Kale, S., Chandel, S., & Pal, D. K. (2015). Likert scale: Explored and explained. *British Journal of Applied Science & Technology, 7*(4), 396–403.
Kotze, L., & Smit, A. (2008). Personal financial literacy and personal debt management: The potential relationship with new venture creation. *South African Journal of Entrepreneurship and Small Business Management, 1*(1), 35–50. https://doi.org/10.4102/sajesbm.v1i1.11.
Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607–610.
Laary, D., (2015). Ghana: government, big corporations crowd out SMEs. The Africa Report. Available at http://www.theafricareport.com/West-Africa/ghana-government-big-corporations-crowd-out-smes.html.
Lusardi, A., & Mitchell, O. S. (2007a). Baby boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of Monetary Economics, 54*(1), 205–224.
Lusardi, A., & Tufano, P. (2009). Debt literacy, financial experiences, and over indebtedness. Working paper no. 14808. Frankfurt, Deutschland: National Bureau of economic research.
Mazzarol, T. (2014). Research review: A review of the latest research in the field of small business and entrepreneurship: Financial management in SMEs. Small Enterprise Research. The Journal of SEAANZ 21(1), 2–13. Doi: https://doi.org/10.1080/13215906.2014.11082073.
Nunoo, J., Andoh, K. F., & Darfor, K. (2015). Sustaining small and medium enterprises through financial service utilization: Does financial literacy matter. *Journal of Small Business and Enterprise Development, 5*(1), 74–94.
Nyabwanga, R. N. (2011). An assessment of the effect of working capital management practices on financial performance. *A study of small scale enterprises in Kisii south district, Kenya*. Unpublished MBA project, Egerton University, Kenya.
OECD, (2005). SME and entrepreneurship outlook. Paris, OECD.
Osinde, K., Iravo, M., Munene, C., & Omayio, D. (2013). Effect of business development services on the performance of small scale entrepreneurs in Kenya. A survey of small scale Enterprises in Kenya. *Interdisciplinary journal of contemporary research in business, 5*(1), 292–300.
Peprah, J. A., Mensah, A.O. & Akosah, N.B. (2016). Small and medium Sized enterprises accessibility to public procurement: SMEs Entity Perspective in Ghana', *European Journal of Business and Social Sciences, 4*(11), p. 25–40.
Preacher, K. J., Wichman, A. L., MacCallum, R. C., & Briggs, N. E. (2008). *Latent growth curve modeling*. Los Angeles, CA: Sage.
Reich, C. M., & Berman, J. S. (2015). Do financial literacy classes help? An experimental assessment in a low-income population. *Journal of Social Service Research*, *41*(2), 193-203 (2015). doi.org/https://doi.org/10.1080/01488376.2014.977986.
Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, *44*(2), 276-295 (2010). https://doi.org/10.1111/j.1745-6606.2010.01169.x.
Rouibah, K., Ramayah, T., & May, O. S. (2011). Modelling user acceptance of internet banking in Malaysia: A partial least square (PLS) approach. *E-adoption and socio-economic impacts: Emerging infrastructural effects, 23*, 1–23.
Sander, T. & Teh, P. L. (2014). SmartPLS for the human resources field to evaluate a model in "International Scientific Conference," New Challenges of Economic and Business Development, May, Riga, University of Latvia.
Sekaran, U., & Bougie, R. (2003). Research methods for business: A skill building approach. Chichester, UK: Wiley.
Sibanda, K., Hove-Sibanda, P., & Shava, H. (2018). The impact of SME access to finance and performance on exporting behaviour at firm level: A case of furniture manufacturing SMEs in Zimbabwe. *Acta Commercii, 18*(1), 1–13.
Simeyo, O., Martin, L., Nyamao, N. R., Patrick, O., & Odondo, A. J. (2011). Effect of provision of micro-finance on the performance of micro-enterprises: A study of youth micro-enterprises under Kenya rural enterprise program, Kisii town, Kenya. *African Journal of Business Management*, *5*(20), 82-90 (2011). Doi: https://doi.org/10.5897/AJBM11.1419.
Sucuahi, W. T. (2013). Determinants of financial literacy of micro entrepreneurs in Davao City. *International Journal of Accounting Research, 1*(1), 44–51.
Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics, 101*(2), 449–472.
Watson, J. (2007). Modelling the relationship between networking and firm performance. Journal of Business Venturing, 22(6), 852–874.
Willits, K. F., Theodori, L. G., & Luloff, A. E. (2016). Another look at Likert scales. *Journal of Rural Social Sciences, 31*(3), 126–139.
Wise, S. (2013). The impact of financial literacy on new venture survival. *International Journal of Business and Management*, *8*(23): 30-39 (2013). doi:https://doi.org/10.5539/ijbm.v8n23p30.
Wong, K. K. K. (2013). Partial least squares structural equation modelling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin, 24*(1), 1–32.
Wong, K. K. (2019). Mastering Partial Least Squares Structural Equation Modeling (Pls-sem) with Smartpls in 38 Hours. iUniverse. Bloomington, IN, USA.

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