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The impact of organisational capabilities on the performance of small- and medium-sized enterprises (SMEs)

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Abstract

Purpose – The purpose of this study was to examine the extent to which organisational capabilities do impact the performance of small- and medium-sized enterprises (SMEs) in Ghana.

Design/methodology/approach – A cross-sectional survey design was used for the study. Data was collected from 306 SMEs from different sectors of the economy. The partial least square structural equation modelling was used to analyse the relationships between organisational capabilities and SMEs' performance measured by their financial viability.

Findings – The findings reveal as predicted that four out of the five organisational capabilities tested were indeed important predictors of SMEs' financial viability. Specifically, managerial capability, supply chain capability, operations capability and marketing capability were found to positively and significantly impact SMEs' financial viability. The findings further reveal that firm size does not moderate the relationship between these capabilities and financial viability.

Research limitations/implications – This study was undertaken in a developing economy with peculiar business operating conditions and, thus, may limit the generalisability of the findings.

Practical implications – The findings suggest that key organisational capability development is critical for enhancing the financial viability of firms, confirming four of such critical capabilities that are needed by SMEs. The findings further suggest the need for firms irrespective of size to develop organisational capabilities.

Originality/value – This study has empirically established that developing managerial capability, supply chain capability, operations capability and marketing capability are important success factors if SMEs, irrespective of size, intend to enhance their financial viability.

Keywords Organisational capabilities, Marketing capability, Financial viability, Firm size, Operations capability Technological capability, Managerial capability, Supply chain capability

Paper type Research paper

1. Introduction

This paper seeks to determine the extent to which organisational capabilities contribute to the financial viability of small- and medium-sized enterprises (SMEs), with particular emphasis on SMEs operating within a developing economy context. The study further improves understanding of the significance of organisational capabilities in the operations of SMEs, taking into account the moderating effect of firm size. Firm-unique ways of

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managing problems and activities are built on organisational capabilities that have been progressively shaped and accumulated over time (Rangriz and Soltanieh, 2015). Organisational capabilities therefore support organisations to effectively deal with fundamental organisational and environmental glitches that hinder the growth and performance of firms (Inan and Bititci, 2015). Firms develop capabilities over time (Teece *et al.*, 2017; Rangriz and Soltanieh, 2015; Cepeda and Vera, 2007). Capabilities are also expensive to develop; hence, knowing the set of capabilities that contribute to better performance will enable SMEs to focus their capability development effort. This will enable them to build the relevant competences to deliver superior performance and in turn remain financially viable and sustainable (Teece *et al.*, 2017).

The organisational capabilities literature appears to be unbalanced with rather overly focus on the dynamic capabilities, which are advocated to be a firm performance enabler. While much of the literature attention focus on examining the impact of dynamic capabilities on organisational performance (Rashidirad and Salimian, 2020; Eikelenboom and Jong, 2018), less effort has been paid to understanding the core organisational capabilities needed to improve performance, particularly in the context of SMEs operations. Hassan (2016) comments on the concept of organisational capabilities that despite its benefits in improving the operations performance and sustainability of firms, it has not gained sufficient attention among SMEs. The author reiterates that several research on SMEs in Sub-Saharan Africa, including Ghana, have largely examined barriers to SMEs' growth and the effect of government interventions on improving the performance of SMEs. While SMEs' failure have been typically attributed to the unavailability of capital and excessive competition, some scholars (Rose *et al.*, 2006) argue otherwise suggesting that poor management know-how and organisational capabilities are fundamentally responsible (Asamoah, 2014). The poor performance of SMEs amid the different interventions undertaken by governments and other governmental agencies as well as NGOs raises a call for investigations into what organisational capabilities SMEs might need to develop to enhance their sustainability and financial viability.

Agyapong (2010) noted that the poor performance by Ghanaian SMEs is fundamentally caused by poor organisational capabilities. The author explained that due to poor organisational capabilities, SMEs in Ghana lack the capacity to compete both internationally and locally. Sidik (2012) further revealed that despite the socio-economic importance of SMEs in Africa, the majority of them collapse in their early years of operations which remains a cause for concern. The study attributed the poor performance of more than 70% of SMEs to the prevalence of poor organisational capabilities and managerial skills. Similarly, Miles (2011) found that the majority of small businesses that possess huge potential to fuel economic growth within the continent are saddled with poor organisational and managerial capabilities that affect their growth and usually lead to their early demise. Narteh (2013) emphasised similar concerns stating that SMEs in Ghana are operating on the edge of collapse as poor performance resulting from poor managerial and organisational capabilities continue to threaten their survival.

It is against this backdrop that this research seeks to enhance knowledge and understanding regarding the influence of organisational capabilities on the performance of SMEs in Ghana to determine their relevance and value. Muhura (2012) proposes the need to examine the importance of organisational capability dimensions within SMEs' operations. Accordingly, this research attempts to address the following research questions:

RQ1. What are the relationships between organisational capabilities and SMEs' financial viability?

RQ2. How important are organisational capabilities relative to their contributions to the financial viability of SMEs?

RQ3. To what extent does firm size moderate the impact of organisational capabilities on SMEs' financial viability?

The paper is structured into five sections as follows: Section 2 provides the theoretical background to the study. Section 3 gives an overview of the methodology used, while Section 4 details the data analysis with Section 5 presenting the discussion of results. Finally, Sections 6 and 7 draw the conclusions and future research directions, respectively.

2. Theoretical background

2.1 Organisational capabilities

A fundamental notion about organisational capabilities is that organisations devise various ways of managing their business-related problems and handling activities that demonstrate their quest for superior performance (Rangriz and Soltanieh, 2015). Gryger *et al.* (2010) advocate that organisational capabilities create differentiation, innovation, knowledgeable workforce, flexibility, competitive advantage and responsiveness to changes in the dynamic business environment. The concept of "capabilities" highlights the overall duty of strategic management in integrating, adapting, deploying resources and functional abilities to overcome difficulties in the business setting. Businesses are heterogeneous; as such, they design and implement unique organisational practices even if they operate in a similar trade and produce outputs that are similar. Firm-unique ways of managing problems and activities are built on organisational capabilities that have been progressively developed, shaped and accumulated over time (Camison, 2005).

Organisational capabilities therefore support organisations to effectively deal with fundamental organisational and environmental glitches that hinder the growth and performance of firms (Inan and Bititci, 2015). Muhura (2012) states that the dimensions of organisational capabilities that are fundamental to the continual existence of SMEs comprise technological, managerial, marketing, network and knowledge management capabilities. Tucker (2011) adds that firms that develop operations and supply chain capabilities in addition to other capabilities can create value by neutralising business-related threats while optimising performance. Organisational capability is therefore a multi-dimensional concept as several dimensions exist in literature (Degravel, 2011). The dimensions of organisational capability focused on in this study are managerial capability, supply chain capability, operations capability, marketing capability and technological capability.

2.1.1 Managerial capability. Basile and Faraci (2015) suggest that a core requirement for effective management of a firm is managerial capability. Also, Dangol and Kos (2014) observe that managerial capability in a firm is essential for effective resource allocation, strategy implementation and good relationship management with key stakeholders of the firm. The authors define managerial capability as a set of unique competences and abilities possessed by organisational members, especially top-level management. Such capability enable management to make good decisions, allocate organisational resources appropriately and regulate the overall performance of the entity (Hunt and Madhavaram, 2012; Parnell *et al.*, 2015). Basile and Faraci (2015) express the view that managers must possess a unique capability and knowledge specific to the firm, to be able to execute their managerial tasks effectively. Such managerial capability is developed through formal education, learning and training and characterised by personal attributes, technical know-how, personality profile, intellectual and tacit competences directed towards innovation, creativity and problem-

solving (Kunic and Morecroft, 2010; Kearney *et al.*, 2014). Simon *et al.* (2015) argue that managerial capability is considered as the accumulated knowledgeable proficiencies which enable the firm to make better decisions and undertake activities promoting the continuity of the business. Managerial capability is a critical determinant of firm growth and performance (Ates *et al.*, 2013). Pasanen (2007) emphasizes that the sustainability and rate of SMEs performance and growth are keenly dependent on their owner or manager's managerial capability. Thus, it is hypothesised that:

H1. Managerial capability positively influences SMEs' financial viability.

2.1.2 Supply chain capability. Capability in supply chain management is particularly significant as the recent complex business environment compels organisations to operate in more collaborative ways to ensure a smooth flow of resources and information among supply chain partners (Caridi *et al.*, 2014). Danese and Romano (2011) maintain that businesses are now highly compelled to strengthen, integrate and manage their value chains to be extra responsive in an effort to overcome the problems of modern business requirement. Fabbe-Costes and Jahre (2008) suggest that good knowledge of supply chain capability, its implications and dimensions is of managerial significance and can aid in operations, logistics and management. Supporting this view, Shanmugan and Kabiraj (2012) argue that supply chain capability explains how agile, robust and resilient a company's supply chain is to changes in business. Developing supply chain capability ensures efficient and smooth information, decisions, funds, services and products flow in an effort to deliver superior value and quality to customers at high speed and low cost. Supply chain capability is considered as a first-order capability that directly improves the efficiency and performance of organisations. Thus, it is hypothesised that:

H2. Supply chain capability positively influences SMEs' financial viability.

2.1.3 Operations capability. Operations capability is commonly accepted as essential for delivering superior performance and attaining competitive success (Tan *et al.*, 2007). Flynn and Flynn (2004) note that emphasis on the benefits of operations capability in influencing the performance and growth of firms has received interest within the operations and strategic management literature. Operations capability is explained as the execution of multifaceted series of activities undertaken by an organisation to improve its products by using efficient materials, processes and production competencies (Alsmadi *et al.*, 2011). According to Boyer and Lewis (2002), the core competencies that allow organisations to accomplish production-specific objectives including such issues as regular quality products, cost control, volume, product dependability and delivery flexibility is operations capability. Operations capability is therefore considered as the competency that create the basis for better firm performance (Hallgren, 2007). Capability in operations forms the basis for superior firm performance and competitive edge (Terjesen *et al.*, 2011). This may imply that operations capability is a requisite to anticipating and transforming inputs quickly into goods and services of good value, leading to superior firm performance. Value and superior performance have the potential to translate into a better financial position relative to competition because consumers might perceive the value as more favourable and support that particular SME as opposed to another (Sansone *et al.*, 2017; Krol and Boström, 2018). Thus, it is hypothesised that:

H3. Operations capability positively influences SMEs' financial viability.

2.1.4 Technological capability. The emergence of technologies has changed the manner in which firms conduct business. It cannot be denied that technology does influence operations, communication and management of modern businesses (Azubuike, 2013). Technological capability characterises firms' capacity to effectively use technological knowledge to deliver superior performance and outperform competitors (Munyoki, 2010). Firms that possess advanced technological capability seem to outperform competitors and also appear to be creative and innovative. Such firms may enjoy enviable efficiency and competence by creating innovative processes, maintain good communication with stakeholders and project unique branding strategies that differentiate their products (Terjesen *et al.*, 2011). Terjesen *et al.* (2011) explain technological capability as the capacity to use prevailing technology in executing significant technical activities including the skill to design novel processes, products and innovatively operate facilities.

According to Chahal and Kaur (2014), the key technological capability that contribute to better performance include business intelligence technologies, knowledge application technologies as well as collaboration and distribution technologies. Morse *et al.* (2007) posit that SMEs enjoy diverse benefits from possessing technological capability including improvement in the efficiency of SMEs, minimisation of costs and increase in both local and global market shares of SMEs. Thus, it is hypothesised that:

H4. Technological capability positively influences SMEs' financial viability.

2.1.5 Marketing capability. Day (2011) believes that how well a firm is fortified to sense and notice variations in the market and continuously take the appropriate actions to manage the requirement of the changing market is determined by its marketing capability. To be able to achieve superior performance, firms should persistently scan and capitalise on emerging trends in the market in a bid to meet the needs and requirement of customers appropriately (Nalcaci and Yagci, 2014). Dubihlela (2013) states that marketing capability relates to customer focus and market sensing competences, which are unique capabilities demonstrated in organisational strategies that allow customers voice to be heard throughout the organisation. Similarly, Ejrami *et al.* (2016) explain marketing capability as unique competences that allow the organisation to monitor moving trends and patterns ahead of competitors by implementing market insight approaches intended to understand customers and ultimately deliver superior performance. The importance of marketing capability in the attainment of financial and market success is massive. Thus, it is hypothesised that:

H5. Marketing capability positively influences SMEs' financial viability.

2.2 Firm performance

Firm performance is defined as how best an organisation accomplishes its market and financial-oriented objectives (Malina and Selto, 2004). Pandey and Dutta (2013) describe firm performance as the firm's ability to accomplish its objectives as well as the objectives of its stakeholders. Organisational performance is influenced by staff efficiency in making decisions, quality, problem-solving skills, improvement of processes, a good relationship with stakeholders, innovations, staff experience, new approaches and modern methods of developing products (Imran, Arif, Cheema and Azeem, 2014). Scholars advocate that there are no universally agreed measures of performance. However, Theodosiou *et al.* (2012) suggest that firm performance is a multidimensional construct and can be measured using financial indicators and non-financial indicators. In this study, financial viability is used to measure SMEs performance. The choice of this construct is based on the premise that SMEs

that are financially viable have a greater probability to remain competitive and will be in the position to expand their operations and influence their overall growth and development. Furthermore, organisational capabilities appear to have direct effect on a firm's financial viability as observed by Bharadwaj (2000), who argues that organisational capabilities enable the firm to adjust and cost effectively use or exploit emerging opportunities to generate adequate income for its operating expenses while improving service levels.

2.3 Firm size

The Ghana Statistical Service categorises businesses having not more than nine workers as micro and small-scale businesses, those having employees above 9 but less or equal to 29 as medium-scale businesses while those having 30 workers or more as large-scale enterprises. Size is a principal factor influencing the general performance of firms (Olawale and Garwe, 2010). Kouser *et al.* (2012) theorise that the positive link between the size of a firm and its performance is best illustrated by economies of scale. Firm size has been found to moderate the relationships between multiple independent variables and firm performance acting as a dependent variable. For instance, Corvino *et al.* (2019) established that firm size significantly moderates the relationship between relational capital and firm performance. Similarly, Lee (2017) discovered that firm size moderates the relationship between corporate strategy and actions and the consequent effects on firm performance. Other studies have also established firm size acting as a moderator between firms and their market environment (Scuotto *et al.*, 2017; Haleblian *et al.*, 2012). Given the evidence from the extant literature on the moderating effect of firm size, the argument could be made that firm size could potentially impact the type of capability developed and its consequent effect on the firm's financial viability. We therefore hypothesise that:

H6. Firm size moderates the relationship between organisational capabilities and SMEs' financial viability.

2.4 Characteristics of small- and medium-sized enterprises in Ghana

According to Gyimah-Boadi (2009) Ghana's economy is dominated by a large number of micro businesses, followed by medium-size businesses and a small number of large businesses. The key distinctive characteristics of SMEs is that their capital, management and technology requirement are not challenging as compared to large businesses. SMEs can thus be established easily. In view of the above unique features, micro business is the most predominant form of business, constituting about 92% of most Ghanaian businesses (Abor and Quartey, 2010). Kayunula and Quartey (2000) argue that SMEs' key distinguishing feature in Ghana is that they are sole proprietorship businesses with the owner/manager being the only decision maker. The majority of the owners or managers of SMEs are illiterates, lack skills, technical know-how and have limited capacity to use existing technologies (Hinson and Mahmoud, 2011). Food processing, manufacturing, dressmaking, pharmaceutical, transportation, agriculture, general services and petty trading among others constitute the dominant sectors in Ghana where small scale businesses are engaged in.

3. Methods

The research methods selected were guided by the purpose of the study, which was to determine the extent to which organisational capabilities contribute to the financial viability of SMEs within the context of developing economies. In line with the research purpose, the

researchers adopted the positivist research philosophy. Positivism concentrates exclusively on collecting facts via direct experiences or observations, measuring them empirically through quantitative methods (experiments and surveys) and applying statistical analysis on the data (Easterby-Smith *et al.*, 2008; Eriksson and Kovalainen, 2008). This research assumes the positivist stance influenced by the believe that the truth is stable and objectively observable without influence and that the researchers' values do not affect the study. Based on the positivist philosophical underpinnings, a quantitative approach, using a cross-sectional survey design, was adopted for the study. The decision to select the quantitative method was to enable a quantitative analysis to statistically determine the extent to which organisational capabilities do influence firm performance measured by financial viability.

The population for this study was SMEs registered and operating in Ghana as provided by the database of the National Board for Small Scale Industries (NBSSI) and Association of Ghana Industries (AGI). A total of 385 SMEs operating in Ghana were randomly selected from the two databases to constitute the sample size. The basic criterion for the selection of firms was the number of employees, which the researchers ensured, conformed to the Ghana Statistical Service's definition of SMEs being 29 employees or less. The SMEs participating in the study cut across multiple subsectors in manufacturing and service as organisational capabilities are important irrespective of the industry a firm finds itself.

A 5five-point Likert scale was used in the questionnaire to measure the dimensions of organisational capabilities, firm size and financial viability. The study adopted a five-point Likert scale to achieve a considerable amount of statistical variance in the responses provided (see Appendix 1 for the measurement items for the respective constructs). The questionnaire was reviewed by three academics with backgrounds in the field together with ten practitioners to improve clarity, understandability and content validity. The questionnaires were administered to top management personnel deemed to be involved in organisational decision-making with regards to the phenomenon under study. The single key informant respondent approach was used where each participating firm was represented by a key informant respondent. The respondents included owners and operations managers of SMEs. For some firms, the questionnaires were administered electronically, whereas for others, the face-to-face method of questionnaire administration was used. Informed consent was sought from the participating firms prior to the administration of the questionnaire. Individual respondents were also assured of anonymity and confidentiality of the data collected and clearly notified ahead of the data collection that participation was purely voluntary. The data collection covered a period of three months. Out of the 385 questionnaires administered, 306 were retrieved giving a response rate of 79.5%, which is considered reasonable and acceptable when compared to studies of similar settings (Rashidirad and Salimian, 2020), which achieved a response rate of 23%.

The partial least square structural equation modelling (PLS-SEM) was used to analyse the relationships between organisational capabilities and SMEs' performance. Following a thorough review of the literature, seven constructs were derived; five for organisational capabilities measured by managerial capability (MC), supply chain capability (SCC), operations capability (OC), technological capability (TC), marketing capability (MAC); one for firm performance measured by financial viability (FV); and one for the moderating variable measured by firm size (FS). Thus, seven constructs were included in the model.

The demographic characteristics of responding firms included 208 (67.97%) small firms and 98 (32.03%) medium-sized firms giving an overall participation of 306 firms. Among these were 119 (38.9%) owners and 187 (61.1%) general/operations managers. In terms of

gender participation, 157 (51.3%) of the respondents were females while 149 (48.7%) were males.

4. Results and discussions

4.1 Reliability of individual indicators

The indicator reliability was assessed using the PLS algorithm with an adopted threshold of 0.7. Indicators that loaded 0.7 and above showed an acceptable level of reliability and thus were considered adequate for the study as suggested by Gefen and Straub (2005). However, indicators that loaded below the 0.7 threshold were deleted and the model was re-run. The outcome of the reliability analysis is presented in Table 1 and further supported by Figure 1 below.

4.2 Internal consistency test

The study further used composite reliability to assess the internal consistency level as well as the reliability of each individual latent construct. Latan and Ramli (2013) posit that composite reliability measures the internal consistency of scale items. The authors emphasised that high internal consistency levels are demonstrated if the composite reliability of the constructs exceeds 0.7 with 0.8 being considered good for confirmatory

Code	Financial viability	Firm size	Marketing capability	Managerial capability	Operations capability	Supply chain capability	Technological capability
FV1	0.790						
FV3	0.899						
FV4	0.878						
FV6	0.861						
FZ1		0.854					
FZ2		0.915					
FZ3		0.920					
FZ4		0.818					
MAC1			0.743				
MAC2			0.918				
MAC4			0.899				
MAC7			0.911				
MC1				0.848			
MC3				0.885			
MC4				0.882			
MC6				0.886			
OC3					0.880		
OC5					0.898		
OC6					0.886		
OC7					0.877		
SCC1						0.896	
SCC2						0.909	
SCC3						0.904	
SCC4						0.883	
TC1							0.887
TC2							0.919
TC3							0.870
TC6							0.898

Note: Outer loadings of indicators

Table 1.
Indicator reliabilities

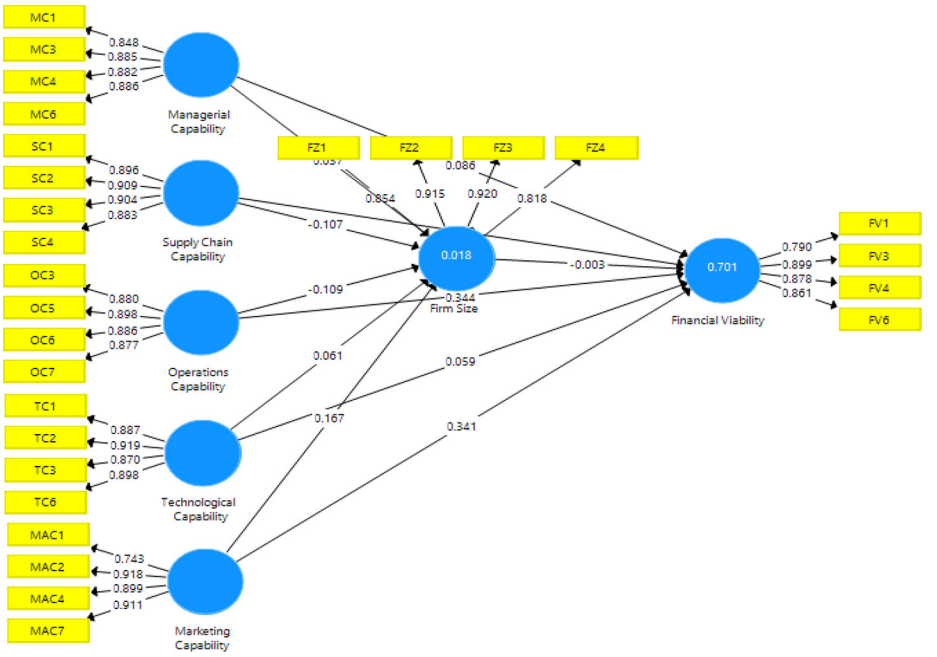

Figure 1.
Result of PLS algorithm for the indicator outer loadings

research. The reliability test results are submitted in Table 2. From the results presented in Table 2, the composite reliabilities of the reflective constructs all exceeded 0.7, hence confirming a strong and significant internal reliability.

4.3 Test for convergent validity

Convergent validity determines the level at which indicators or items measuring a particular construct congregate (Sarstedt *et al.*, 2017). Henseler *et al.* (2009) claim that a good assessment of convergent validity is the use of the average variance extracted (AVE). In line with Henseler *et al.* (2009) observation, the AVE was applied in evaluating the convergent validity of the variables. The acceptable threshold of the AVE was 0.50 denoting that 50% or more of the variability in items measuring a particular latent construct is explained by the latent construct, hence shows adequate convergent reliability (Hair *et al.*, 2019). All the AVE values for the latent constructs presented in Table 2 above exceed the 0.50 threshold indicating sufficient convergent reliability.

Table 2.
Constructs reliability tests results

Constructs	Cronbach's alpha	rho_A	Composite reliability	AVE
Financial viability (FV)	0.880	0.886	0.918	0.736
Firm size (FZ)	0.909	0.823	0.931	0.770
Managerial capability (MC)	0.899	0.904	0.929	0.766
Marketing capability (MAC)	0.892	0.906	0.926	0.758
Operations capability (OC)	0.908	0.908	0.935	0.784
Supply chain capability (SC)	0.920	0.920	0.943	0.806
Technological capability (TC)	0.916	0.916	0.941	0.798

4.4 Discriminant validity

Garver and Mentzer (1999) explained discriminant validity as how distinct a particular construct appears or differ empirically from the remaining constructs within the structural model. The hypothesised model is deemed to possess good or significant discriminant validity if the heterotrait–monotrait (HTMT) exogenous construct values do not exceed the threshold of 0.9 (Voorhees *et al.*, 2016). The discriminant validity results are submitted in Table 3.

As presented in the table above, all the values (HTMT) are less than the threshold of 0.9 denoting that sufficient discriminant validity exists.

4.5 Structural model evaluations

4.5.1 Assessment of multicollinearity. A multicollinearity test was first carried out to eliminate the problem of biased and imprecise coefficient estimation. Multicollinearity in PLS-SEM is examined by assessing each independent construct's variance inflation factor (VIF). In the perspective of Mela and Kopalle (2002), issues regarding multicollinearity can be avoided with a minimum VIF threshold of less than 5. The results of the multicollinearity test are shown in Table 4.

From the results presented in Table 4 above, the VIF for the variables are all below 5, suggesting that no issues of multicollinearity exist. Hence, a change in one particular latent variable under consideration has no effect on the other latent variables.

4.5.2 Testing for direct relationships. The first research question for the study is: What are the relationships between organisational capabilities and SMEs' financial viability? To address this research question, the study used a bootstrapping technique to test for significance between variables by way of two-tailed t-distribution. PLS algorithm with bootstrapping technique was first used without the mediating variable to find the direct relationships and effects between the modelled variables. Bootstrapping empirically provides p-values to determine a path coefficient significance. Path coefficients having p-values less or equal to 0.05 are deemed significant (Boos and Stefanski, 2011). To run the bootstrapping with a 95% bias-corrected interval level, 5,000 iterations were used. The outcomes are shown in the Table 5 and are further supported by Figure 2.

The results presented in Table 5 above shows that four out of the five hypotheses proposed in this study were supported at $p < 0.05$. The hypothesised relationship between technological capability and financial viability was however not supported given that the p-value obtained was 0.330.

Constructs	Financial viability	Firm size	Managerial capability	Marketing capability	Operations capability	Supply chain capability	Technological capability
Financial viability							
Firm size	0.037						
Managerial capability	0.437	0.059					
Marketing capability	0.861	0.074	0.374				
Operations capability	0.832	0.047	0.396	0.747			
Supply chain capability	0.787	0.031	0.324	0.833	0.731		
Technological capability	0.786	0.077	0.339	0.672	0.713	0.843	

Table 3.
Discriminant validity

4.5.3 Coefficient of determination. To address the second research question of the study (How important are organisational capabilities relative to their contributions to the financial viability of SMEs?), the structural model was further examined using R^2 (coefficients of determination) to ascertain its predictive power and accuracy. R^2 reveals the combined or overall effects as well as the impact of the various exogenous constructs on the latent endogenous construct (Mela and Kopalle, 2002).

As presented in the Table 6, the R^2 value is 0.701. This denotes that the five variables (managerial capability, supply chain capability, operations capability, technological capability and marketing capability) account for over 70% of the variability in financial viability. This R^2 value can be described as being of substantial effect. Since these selected capabilities alone account for about 70% of the financial viability, firms should make the effort to have such capabilities developed as this outcome highlights the overwhelming importance of capability development among SMEs.

4.5.4 Moderation effect of firm size. The last objective the study sought to achieve was to determine whether firm size moderates the relationship between organisational capabilities and financial viability. Hair *et al.* (2014) argue that moderation effect is present provided the relationship that exist between the dependent and independent variables is influenced strongly and reliant on a third variable often called the moderating variable. According to Boos and Stefanski (2011), the moderating variable has the ability to influence the strength and direction of the relationship that exist between the independent and dependent variables within the research model.

In the present study, firm size has been used as a moderating variable in the research model. The moderating effect of firm size on the relationship between organisational capabilities and financial viability was measured by adding an interaction effect to the model using the Smart-PLS function based on the two-stage approach. The two-stage approach uses the latent variable scores of the latent moderator and latent predictor variable from the main effects model (without the interaction term). The scores of the latent variable are used for estimating the product indicator for the second stage analysis that

Table 4.
Results of multicollinearity test

Constructs	Financial viability	Firm size
Financial viability		
Firm size	1.017	
Managerial capability	1.198	1.197
Marketing capability	3.213	3.172
Operations capability	2.553	2.543
Supply chain capability	2.757	2.750
Technological capability	3.326	3.326

Table 5.
Hypothesis testing (direct effect)

Hypotheses	Relationships	Std. beta	Std. error	Path coefficient	*p-values*	Decision
H1	Managerial capability –> Financial viability	0.085	0.035	0.086	0.016	Supported
H2	Supply chain capability –> Financial viability	0.150	0.052	0.152	0.004	Supported
H3	Operations capability –> Financial viability	0.347	0.062	0.344	0.000	Supported
H4	Technological capability –> Financial viability	0.060	0.060	0.059	0.330	Not Supported
H5	Marketing capability –> Financial viability	0.339	0.081	0.341	0.000	Supported

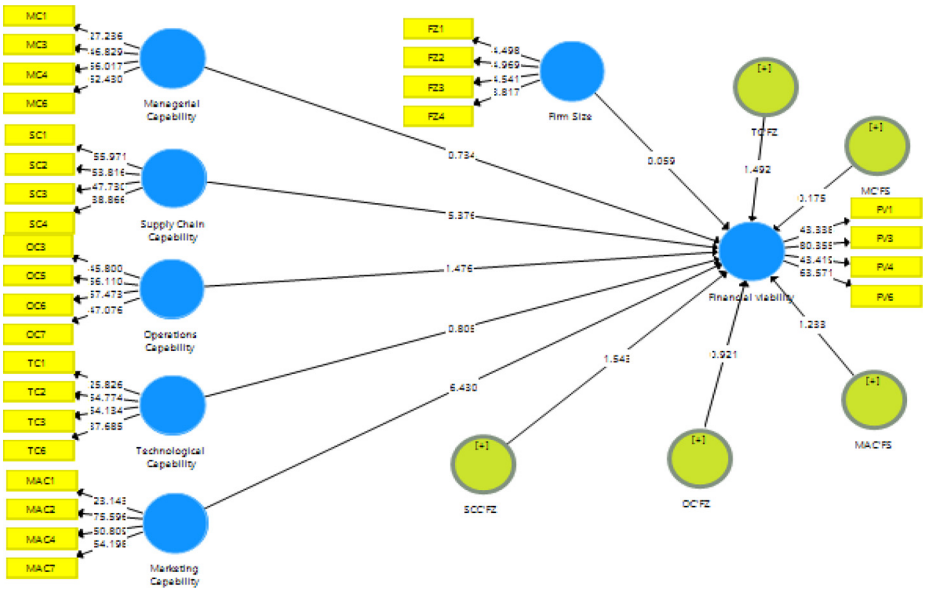

Figure 2.
Output of bootstrapping for moderating effect of firm size

involves the interaction term in addition to the predictor and moderator variable. In such an analysis, every predictor must be standardised as a way of making interpretations easier (Boos and Stefanski, 2011). The moderating effect was determined using the PLS bootstrapping algorithm and path coefficients for the interaction term based on the standard error, *p*-value and *t*-values. If the relationship appears significant ($p < 0.05$), the conclusion that moderation effect is present can be reached (Hair *et al.*, 2014).

The bootstrapping method for the moderation analysis presented in Table 7, and Figure 2 indicates that the moderating effect of firm size on the relationship between organisational capabilities and financial viability was not statistically significant ($p > 0.05$). This implies that firm size does not moderate the relationship between organisational capabilities and financial viability. This results agrees with Ali *et al.* (2016), who similarly discovered that firm size does not moderate the relationship between firm performance and

Table 6.
Results for R^2 and R^2 adjusted

Endogenous construct	R-square	R-square adjusted
Financial viability	0.701	0.697

Table 7.
Moderating effect of firm size

Moderating relationships	Std. beta	Std. error	T-values	*p-values*
FZ*MAC –> FV	−0.055	0.105	1.233	0.218
FZ*MC –> FV	−0.006	0.049	0.175	0.861
FZ*OC –> FV	−0.059	0.061	0.921	0.358
FZ*SCC –> FV	0.091	0.076	1.543	0.123
FZ*TC –> FV	0.042	0.076	1.492	0.136

functional integration. The results suggests that regardless of the size of the firm, organisational capabilities are critical to SMEs' financial viability. Thus, a conclusion can be drawn that the organisational capabilities of a firm do have effect on a firm's financial viability irrespective of the size of the firm, be it small or medium. This evidence highlights the understanding that capability development is a fundamental and critical determinant of superior performance for all categories of firms.

4.5.5 Predictive relevance of model. The predictive relevance, which is also referred to as the Stone-Geisser's Q^2 value assessment, was carried out using the blindfolding procedure to determine the predictive accuracy of the model (Hair *et al.*, 2013). The authors observe that a model is deemed to have significant predictive accuracy if the Q square values for the endogenous latent constructs are above zero. A blindfolding procedure was run using PLS algorithm as recommended by Hair *et al.* (2014). The predictive relevance test results are submitted in Table 8.

From the results submitted in Table 8, all the Q square values of the endogenous constructs exceeded 0, hence confirming a significant predictive relevance of the model.

4.5.6 Fitness of model. The standardised root mean square residuals (SRMR) was used to assess the fitness of the model. SRMR is a good measure of an estimated model fitness since SRMR measures the mean differences between the hypothesised and observed covariance matrices (Hair *et al.*, 2014). The authors recommend that when SRMR is less than 0.08, the model is said to possess a good fit with lower SRMR value being a better fit. The goodness of fit test results are submitted in Table 9.

From the results submitted in Table 9, the SRMR value for the model is 0.047, which denotes that the model is well fitted.

5. Discussion of the findings

5.1 Managerial capability and small- and medium-sized enterprises' financial viability

This analysis established that a positive statistically significant relationship exists between managerial capability and the financial viability of SMEs. Managerial capability related with financial viability at $\beta = 0.085$ and proved significant at $p < 0.05$ ($p = 0.016$). This finding confirms the results by Lee and Klassen (2008) who discovered that a positive and significant relationship exists between managerial capability and firm growth. This outcome further confirms Dangol and Kos's (2014) claim that persons with good managerial capability are better at starting, operating their businesses and enjoying higher profitability. With good managerial capability, management can make good decisions, allocate organisational resources appropriately

Table 8. Results of blindfolding procedure Q2 values

Endogenous constructs	Q square
Financial viability	0.510
Firm size	0.231

Table 9. Summary of model fit

SRMR indicators	Estimated model
SRMR	0.047
d_ULS	0.912
d_G	0.529
Chi-square	1159.772

and regulate the overall performance of the entity. Thus, the hypothesis that managerial capability positively influences SMEs' financial viability is firmly supported.

5.2 Supply chain capability and small- and medium-sized enterprises' financial viability

Hypothesis two (*H2*) was statistically supported after running the bootstrapping algorithm. Supply chain capability was related with financial viability at $\beta = 0.150$ and proved significant at $p < 0.05$ ($p = 0.004$). The finding confirms the results by Wieland and Wallenburg (2012), who discovered that a positive and significant relationship exists between supply chain capability and manufacturing firms' responsiveness. The result further supports Morash's (2001) assertion that firms that build proficient supply chains are capable of finding a good match between the dynamic business environment and their competitive strategies and establish a good fit between them, ultimately leading to enhanced firm operations. Firms similar to those participating in the study who are able to build competency or capability in supply chain management may be able to forecast and act on changes in customer needs through the collaborative efforts of channel members, suppliers and customers.

5.3 Operations capability and small- and medium-sized enterprises' financial viability

The bootstrapping results showed that operations capability and the financial viability of SMEs are positively related. Operations capability was related with financial viability at $\beta = 0.347$ and proved significant at $p < 0.05$ ($p = 0.000$). The study revealed that firms that have the ability to provide products and processes at a desired high level of quality, performance and conformance to specifications can outperform their competitors. Also, firms that have the capacity to minimise their production and operations cost can achieve enhanced operations performance and profitability. This result concurs with Terjesen *et al.* (2011) findings that operations capability positively affects product and service quality, sales returns and return on assets. Thus, the hypothesis that operations capability positively influences SMEs' financial viability is supported. Operations capability in this respect includes the ability to develop and introduce new products, continuously improve product quality, minimise production and distribution cost and rapidly change product mix to satisfy customer demands.

5.4 Technological capability and small- and medium-sized enterprises' financial viability

The hypothesis that technological capability positively influences SMEs' financial viability was not statistically supported by the bootstrapping results. The relationship between technological capability and financial viability had a beta (β) value of 0.060 and proved insignificant at $p > 0.05$ ($p = 0.330$). This implies that SMEs' technological capability does not predict the financial viability of these firms within the Ghanaian context. This finding is completely unexpected and surprising as it contradicts existing findings in the literature. Scholars who have examined the influence of technological capability on firms' performance in different contexts discovered statistically significant positive relationship between technological capability and performance of firms (Azubuike, 2013; Obembe *et al.*, 2014). A possible explanation to this finding is the observation by Yusuf (2003). Yusuf (2003) observed that the majority of managers and owners of SMEs in Africa are not well educated and therefore are rarely informed about available technologies, which in turn affects their ability to access and use appropriate technologies in the frequently changing business environment. Furthermore, many small business operations lack the appropriate technologies perhaps due to cost or lack of awareness of the advantages and opportunities offered by technology, and how technology may be used to influence organisational competitiveness. In the course of the data collection for this study, it was observed that a good number of the SMEs visited do not even have internet facility, which is a basic technological

requirement in modern businesses. Consequently, the owner/managers of SMEs may lack the appreciation of the importance of technology in enhancing business performance.

5.5 Marketing capability and small- and medium-sized enterprises' financial viability

The findings, after running the bootstrapping algorithm, revealed that marketing capability has a positive and statistically significant relationship with firm performance measured by financial viability. Marketing capability was related with financial viability at $\beta = 0.339$ and proved significant at $p < 0.05$ ($p = 0.000$). This finding confirms the results by Karanja *et al.* (2014), who discovered that a positive and significant relationship exists between marketing capability and customer satisfaction. The marketing capability seems to enable firms in this study to undertake effective market research and frequently discuss their competitors' strategies and strengths to offer better alternatives, maintain good customer relationships and reap lasting benefits in the form of firm growth and profitability. Thus, the hypothesis that marketing capability positively influences SMEs' financial viability was supported.

5.6 Moderating effect of firm size

The moderating effect of firm size on all the relationships between the organisational capabilities and financial viability was established to be statistically non-significant as the *p*-values were greater than 0.05. Boos and Stefanski (2011) emphasised the moderating effect of firm size by stating that firm size has the ability to influence the strength and direction of the relationship that exists between the independent and dependent variables within the research. This claim is confirmed by Jiménez-Jiménez and Sanz-Valle (2011) who found that firm size plays a key moderating role between a firm's operations and its performance. The evidence from the present study is inconsistent with the finding of Jiménez-Jiménez and Sanz-Valle (2011). This finding implies that the relationship between organisational capabilities and financial viability is not moderated by firm size. Thus, the size of the firm does not matter regarding the impact of organisational capabilities on firm performance. Thus, the findings support Ali *et al.* (2016) who also reached the conclusion that firm size does not have any effect on firm performance.

This current finding may be attributed to the fact that the majority of SMEs are managed and operated in a more personalised and informal way with little regard for firm structure, size and basic formal principles of management particularly within the developing economy context.

6. Implications of the study

The understanding offered by this study has relevant policy, theoretical and managerial implications for the benefits of SMEs in Ghana and similar economies. For policy implications, given the outcomes of this study, institutions such as the NBSSI and AGI as well as other policy bodies that are responsible for regulating SMEs operations in Ghana can better appreciate the need for entrepreneurship education, workshops and trainings, especially on basic capabilities that are fundamentally required to support SMEs' operations performance. Developing economies appear to share similarities in the operating conditions of SMEs. Thus, other developing economies may be guided by the present research findings in their development and operationalisation of organisational support strategies to improve performance of the SMEs' sector.

The findings that managerial capability, supply chain capability, operations capability, technological capability and marketing capability predict SMEs financial performance is a key theoretical contribution made by this study. Evidence from the present study suggests that when SMEs develop these capabilities, they may be able to engender their financial performance. This knowledge deepens our understanding of the relationship between organisational capabilities and the financial viability of SMEs. Thus, the theoretical contribution is made that organisational capabilities underpin firm survival and financial performance particularly in the current business

environment characterised by uncertainty and customer sophistication and unpredictability. The study further adds to the SME literature by unpacking the value of organisational capabilities to these firms. The findings from the study may equally inform SMEs that no matter their size, developing organisational capabilities is a critical success factor.

The understandings and insights from this study have significant managerial implications. The study has uncovered some critical capabilities unpinning the success of SMEs. This knowledge could inform managers and owners of SMEs who are concerned about their financial performance to invest in the development of key organisational capabilities uncovered in this study as part of the feasible solution. Thus, managers who are keen to drive the financial viability agenda into their operations strategy may develop a long-term strategy of gradually building the organisational capabilities examined in this study.

7. Limitations of the study and suggestions for future research

This study mainly focused on SMEs, thereby limiting its scope. Thus, the findings may not be applicable to large firms since the dynamics of their operations may differ. Thus, an extension of the study to encompass large firms can be duly considered by future researchers as this can further aid a comparative analysis of the differences in capabilities between large firms and SMEs in both the developing and developed economy context.

Despite the broad scope of organisational capability dimensions, the current study concentrated on only five capabilities. Thus, it is suggested that future researchers could explore equally important capabilities to see how they impact firm performance. In the current study, firm size was used as a moderating variable, moderating the relationship between organisational capabilities and financial viability. Future studies could use firm size and age as control variables to see if organisational capabilities would still be established as influential firm performance variables. Finally, data for the study were collected from single key informant respondents from each of the firms that took part in the study. Future research may improve the validity and generalisability of the current research findings by using multiple respondents from the participating firms.

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Appendix 1

QUESTIONNAIRE

PART A: DEMOGRAPHIC FACTORS (Please tick the appropriate box)

1. Gender Male [ ] Female [ ]
2. Age of respondent

   19 – 29 years [ ] 30 – 39 years [ ] 40 – 49 years [ ] above 49 years [ ]
3. What is your highest level of education?

Primary [ ] secondary [ ] Certificate or Diploma [ ] Degree and above [ ]

4. Does the total number of employees in your firm fall between 1 – 9 [ ] 10 – 29 [ ] 30 and above [ ]

SECTION B: Managerial Capabilities

Using a Likert scale from 1-5, please rate the extent to which you agree or disagree with the following statements.

Key: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly disagree = 1

	Statement	5	4	3	2	1
Mc1	Management has the ability to allocate resources effectively (e.g. financial, employees) to achieve the firm's goals					
Mc2	Management has the ability to coordinate different areas of the business to achieve results					
Mc3	Management has the ability to attract and retain creative employees					
Mc4	Management has the ability to forecast and plan for the success of the business					
Mc5	Management has the ability to implement policies and strategies that achieve results					
Mc6	Management has the ability and expertise to design jobs to suit staff capabilities and interest					
Mc7	Management has the ability to form strong social network ties with both employees, customers and other stakeholders					

(*continued*)

SECTION C: Supply Chain Capabilities

Using a Likert scale from 1-5, please rate the extent to which you agree or disagree with the following statements

Key: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly disagree = 1

	Statement	5	4	3	2	1
Sc1	Our organization has an integrated system with supply chain partners					
Sc2	Compared to our competitors, our supply chain responds more quickly and effectively to changing customer needs					
Sc3	Our supply chain has adequate capacity to respond to demand and supply variations					
Sc4	Our organization has standard key indicators for evaluating performance of suppliers					
Sc5	We use negotiation to get better prices and other purchase terms from our suppliers					
Sc6	Our organization has the ability to keep long-term relationship with supply chain partners					
Sc7	Our suppliers and strategic partners are reliable					

SECTION D: Operations Capabilities

Using a Likert scale from 1-5, please rate the extent to which you agree or disagree with the following statements.

Key: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly disagree = 1

	Statement	5	4	3	2	1
Oc1	We have the ability to develop and introduce new products into the market					
Oc2	Our organization is able to minimize production and distribution cost					
Oc3	We have the ability to provide products and processes at a desired high level of quality, performance and conformance to specifications					
Oc4	Our organization is able to manage and control inventory levels					
Oc5	We are able to deliver products quickly or in short lead-times					
Oc6	We have the capability to make rapid product mix changes					

(*continued*)

Oc7	We are able to constantly improve our production/ service delivery					

SECTION D: Technological Capabilities

Using a Likert scale from 1-5, please rate the extent to which you agree or disagree with the following statements.

Key: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly disagree = 1

	Statement	5	4	3	2	1
Tc1	Our IT expertise is up-to-date with current technologies					
Tc2	Our business strategies are well aligned with current technologies					
Tc3	We have better IT infrastructure than most of our competitors					
Tc4	Our organization has the ability to connect with customers and use E-trading to increase sales and service delivery					
Tc5	Our organization is able to use technology to efficiently produce more products than our competitors and at the lowest cost.					
Tc6	We are able to use technology to achieve automation of our processes					
Tc7	We are able to make IT investment decisions with long-term perspective					

SECTION D: Marketing Capabilities

Using a Likert scale from 1-5, please rate the extent to which you agree or disagree with the following statements.

Key: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly disagree = 1

	Statement	5	4	3	2	1
Mac1	Our organization has the ability to develop marketing information about specific customer needs					
Mac2	Our organization is good at providing better after-sales service					
Mac3	Our organization is good at pricing the firm's products/ services and monitoring prices on the market					
Mac4	We have the ability to ascertain customers' current needs and product/service they will need in the future					
Mac5	Our organization is good at creating, maintaining and enhancing relationship with customers					

(*continued*)

Mac6	Our organization regularly discusses our competitors strengths/strategies and adopt new strategies to achieve competitive advantage					
Mac7	We are able to market our products/services and improve our firm's image					

SECTION D: Financial Viability

Using a Likert scale from 1-5, please rate the extent to which you agree or disagree with the following statements.

Key: Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly disagree = 1

	Statement	5	4	3	2	1
Fv1	We do not take short-term loan to meet our recurrent expenditure					
Fv2	Our revenues are higher than our expenses					
FV3	Our suppliers are paid without delay					
Fv4	We maintain reasonable cash reserves for use in difficult times					
Fv5	We regularly monitor our financial performance					
Fv6	Our net profits have been increasing consistently					

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