






Article

Entrepreneurial Competencies and SMEs' Performance in a Developing Economy

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Abstract: This paper aims to empirically test the impact of entrepreneurial competencies on the performances of SMEs in Bangladesh. The data are obtained from 115 entrepreneurs by a structured questionnaire. The partial least square structural equation modeling (PLS-SEM) method is applied to find the causal relationship between exogenous and endogenous variables. The results reveal that the organizing and leading, learning, relationship, and commitment competencies of entrepreneurs have a meaningful impact on SME performance. On the contrary, strategic and opportunity competencies have no effect on the performance of SMEs. The contribution of this study is to find out the relevant entrepreneurial competencies and to empirically test their impacts on the performance of SMEs in a developing country setting. This study gives insights into the policymakers regarding the entrepreneurship training and development program. Finally, the competency measurement of this study provides a unique scope for designing such training and development programs for entrepreneurs.

Keywords: entrepreneurs; entrepreneurial competencies; performance of SMEs; Bangladesh; SmartPLS; partial least square structural equation modeling (PLS-SEM)



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1. Introduction

Small and medium-sized enterprises (SMEs) are often seen as crucial in the economy, particularly in developing nations, for industrialization advancement, poverty reduction, and job creation [1–4]. The findings of previous research on entrepreneurship and SME firms suggest that entrepreneurial orientations, including their behavioral characteristics as well as their psychological and demographic features, are frequently referred to as the most powerful and dominant factors influencing the performance of SMEs [5–11]. However, various industrial and business-specific factors and business strategies impact the success of SME firms [12,13]. Entrepreneurial skills, on the other hand, have an inevitable impact on the performance of SMEs [14–16]. Through cross-cultural research, Ahmad [17] identified certain entrepreneurial competency areas and experimentally showed their contributions to the success of SMEs in Malaysia and Australia. According to [18], entrepreneurial competencies are associated with SMEs' performances in the context of the Hong Kong service industry. Man et al. [19] provided empirical support for this link using the concept of competitiveness as a framework of analysis.

Bangladesh is a highly populated and developing country in South Asia, where SMEs provide significant job possibilities while requiring little capital investment, therefore contributing to a robust national economy [20–22]. In Bangladesh, SMEs contribute significantly to the creation of direct employment for 7.8 million people and affordable livelihoods

for 31.2 million people [23]. However, empirical information on the entrepreneurial capabilities and performances of SMEs in developing countries has yet to be ascertained. As far as the knowledge of the researchers is concerned, there are very few studies undertaken to ascertain the relationship between entrepreneurial competencies and the performances of SMEs in Bangladesh. Considering this reality, we approach our study with two significant research questions in mind: (a) what are the entrepreneurial competencies that might influence the success of SMEs and (b) is there any relationship between entrepreneurial competencies and the performances of SMEs? To tap into these questions, our paper aims to explore the entrepreneurial competencies and to empirically test the impact of entrepreneurial competencies on the performances of SMEs in one of the developing countries, Bangladesh.

Thus, the paper makes threefold contributions. First, we determine the SMEs' relevant entrepreneurial competencies for a contextual understanding of the performances of SMEs and the theoretical explanation of the relationship between entrepreneurial competencies and performances of SMEs. Second, we empirically test the theoretical relationship of entrepreneurial competencies on the performances of SMEs in a developing country's setting, an area that has not been adequately investigated in existing research papers. Third, we explore any competency areas needed to advance training and developing opportunities for further improvement of the entrepreneurial competencies from the standpoint of a developing country. For this purpose, the latest analytical procedure available in SmartPLS is applied to measure the relationship between entrepreneurial competencies and SMEs' performances [24]. The paper is arranged as follows: Section 2 uncovers the literature review and consequent development of the hypotheses; the methodology of this study is covered in Section 3; Section 4 presents the analysis and findings of this paper; lastly, the discussion and conclusion are discussed in Section 5.

2. The Literature Review and Hypotheses Development

2.1. The Concept of Entrepreneurial Competencies

Entrepreneurial skills are considered the most vital aspect of the survival, continual growth, and success of the business organization [25–27]. The literature is well-enriched in determining the competencies of an entrepreneur [6,11,15,28,29].

Entrepreneurial competencies can be described as intrinsic qualities, such as specialized knowledge, motivations, self-images, qualities, motivations, social positions, and abilities that contribute to the establishment, survival, and growth of businesses [30,31]. Muzychenko et al. (2004) [32] distinguish clearly between innate and learned components of competency. The intrinsic elements of competency include the entrepreneur's attitudes, characteristics, self-image, and social role [33]. Simultaneously, learned features include factors gained on the job through various theoretical and practical training, such as skills, experience, and knowledge, which are sometimes referred to as internalized components [19,34]. Internalized competency factors were found by [35], whereas externalized competence components were included by the researchers [32]. Innate or natural elements of competency are not easy to change, but appropriate training and education programs can alter the externalized shape of a competency [34,36].

2.2. The Domain of Entrepreneurial Competencies

Ahmad et al., (2010) [37] opined that there is much scope for identifying several entrepreneurial competency domains and for testing the impacts on the success of SMEs. Having examined the earlier literature on entrepreneurial competencies [6,18,19,29,38–40], we have grouped six competency domains (see Table 1), demonstrating six distinct entrepreneurial competencies. The following section presents a comprehensive review of the literature on these specific entrepreneurial competency domains and their impact on the success of SMEs.

Table 1. Entrepreneurial competency domain.

| Competency Domain | Behaviors of Entrepreneurs |
|-----------------------------------|---|
| Strategic competency | Entrepreneurs' capacity to create, assess, and implement the strategy of the firms. |
| Organizing and leading competency | The competency is connected to the organization of various firms' resources, such as human, financial, physical, and technical resources, and includes activities such as team formation, employee leadership, controlling, and training. |
| Opportunity competency | Entrepreneurs' capacity to recognize, seek, and seize business opportunities. |
| Commitment competency | Competencies that motivate entrepreneurs to keep going in business and to restart after a setback. |
| Learning competency | The capacity to stay updated in relevant disciplines and to put what one has studied into practice. |
| Relationship competency | The competency of building trustworthy relationships with suppliers, consumers, workers, rivals, government officials, and other stakeholders. |

Source: adapted and modified from [6,17,18].

2.3. The Concept of SMEs' Performances

The performance of an organization is a topic that is frequently explored and discussed in the literature on strategic management [41,42]. Organizations are evaluated based on their performance [43–45]. Formally, performance is decided by the proper choice of an organization, which ultimately enhances the organization's competitive advantage [46]. Kaplan and Norton (1996) [47] invented one of the most well-known techniques for assessing organizational performance: the multidimensional evaluation of a firm's present financial and non-financial situation. Apart from the financial terms, Kaplan and Norton (1996) proposed a balanced scorecard technique to evaluate a firm's performance from the viewpoints of customers, learning and growth, and inner business processes [47]. In addition, Li et al. (2006) [48] analyzed a variety of financial and market metrics to determine organizational performance using a pool of prior research, including profit margin on sales, return on investment (ROI), ROI growth, market share, market share growth, sales growth, and overall competitive position. Antony and Bhattacharyya (2010) [49] quantified organizational performance using six aggregated factors: innovativeness, efficiency, effectiveness, productivity, creativity, and competitiveness.

2.4. Entrepreneurial Competencies and SMEs' Performances

Entrepreneurial capabilities are viewed as the most critical factor in determining a business's development and success [26,42,50,51]. The previous literature suggests that entrepreneurship, and more precisely entrepreneurial abilities, are associated with the establishment, survival, and expansion of a firm [10,11,17,51–57]. For example, Chandler et al. (1992) [53] proved the link of venture performance with entrepreneurial, managerial, and technical-functional roles in the context of the State of Utah records of the venture. Similarly, Man (2001) [18] examined a domain of entrepreneurial abilities and found a robust relationship between the performances of SMEs in the context of the Hong Kong SMEs' service industry. Man (2002) [54] proposed a model incorporating six domains of entrepreneurial competencies along with firm success, capabilities, and competitive scope. Ahmad (2007) [17] extended [18] competency domain and connected it to the performance of SMEs in Malaysia and Australia from a dual-cultural viewpoint. Li (2009) [58] confirmed the positive association between entrepreneurial orientation and business success while considering knowledge creation as a mediating role in this association. However, Marmaya (2018) [57] reported a negative relationship between entrepreneurial orientation with firm performance in the context of Malaysia, yet [55] discovered a positive association between

the two in the same context. Similarly, Chittthaworn et al., (2014) [56] found no significant relationship between management know-how and business success in the context of SMEs in Thailand. Apart from these discussions, the subsequent section provides an extensive overview of each entrepreneurial competency and performance of SMEs.

2.5. Relationship Competency

Relationship competency can be defined as an entrepreneur's capacity to manage an organization's numerous internal and external resources, including physical, human, financial, and technical resources, as well as team-building, leading and directing workers, and training and controlling personnel [59,60]. According to [18], there is a link between relationship competency and the success of SMEs. On the other hand, entrepreneurs are seen by [61] as the builders of trustworthy relationships with suppliers, consumers, workers, rivals, government officials, and other stakeholders [62]. There is substantial evidence that small businesses rely heavily on a trusted network of stakeholders, such as government agencies, attorneys, accountants, and consultants [60,63]. Further, Hansen and Ostermeier (2001) [64] explained that entrepreneurs use this relationship competency to obtain resources to boost their business. Entrepreneurs must have excellent interpersonal communication and relationship-building abilities [59,62,63]. Therefore, it has been predicted that:

Hypothesis 1 (H1): *relationship competency of entrepreneurs will have a positive impact on the performance of SMEs.*

2.6. Organizing and Leading Competency

The organizing and leading competency of entrepreneurs can be realized as the designing of plans, allocating resources to implement the plans, organizing and delegating tasks, motivating, directing and leading employees, coordinating and collaborating activities, and finally maintaining the smoothness and running nature of the organization [59,65]. Man (2001) [18] grouped organizing competency under the competence domains of human and operational competency and found a significant association between organizing competency and the performance of SMEs in his study. The current research examines the organizing and leading competency as a distinct category since entrepreneurs must perform a variety of associated organizing and leading tasks in maintaining their SME firm [65,66]. Therefore, it has been hypothesized that:

Hypothesis 2 (H2): *the organizing and leading competency of entrepreneurs will have a positive impact on the performance of SMEs.*

2.7. Learning Competency

Learning competency can be defined as proactively learning hands-on behaviors, learning from diverse resources and approaches, staying up-to-date, and eventually putting extracted information into practice [30,67,68]. According to Park et al., (2019) [69], learning competency is required for entrepreneurs to help them become adept in the environment. According to Mancinelli and Mazzanti (2009) [70], learning competency is the key competence of the entrepreneurial process since it produces entrepreneurs' knowledge, which lowers potential risks and uncertainties and positively impacts firm performance. The researchers concluded that entrepreneurs learn via failure and business closure. As a result, the following hypothesis has been formed:

Hypothesis 3 (H3): *the learning competency of entrepreneurs will have a positive impact on the performance of SMEs.*

2.8. Opportunity Competency

The opportunity competency of entrepreneurs refers to an entrepreneur's ability to identify a wide range of market opportunities using various tools, approaches, and methods [71–73]. The capacity to discover goods and services that consumers desire, to discern the unmet need of consumers, to grasp genuine opportunities, and to offer the ultimate value to consumers may all be defined as opportunity competency [30]. Omsa et al., (2017) [74] stated that entrepreneurs' capacity to perceive opportunities amid challenges distinguishes them from others. According to Tehseen and Ramayah (2015) [75], opportunity competence refers to an entrepreneur's capacity for identifying, developing, and evaluating genuine market opportunities. Refs. [17,18] showed a good correlation between entrepreneurs' opportunity competency and the success of SMEs. Therefore, it has been hypothesized that:

Hypothesis 4 (H4): *the opportunity competency of entrepreneurs will have a positive impact on the performance of SMEs.*

2.9. Strategic Competency

The ability to create, compare, and eventually implement strategies for an organization is referred to as the strategic competency of entrepreneurs [76,77]. Man (2001) [18] defines strategic competency in terms of the following characteristics listed: (a) ability to project future directions and how change may affect the organization, (b) ability to prioritize activities in connection with business goals, (c) ability to restructure the company to better accomplish its goals, (d) ability to align current activities with business goals, and (e) ability to design the firm to meet the firm's objectives.

The researchers believe that an entrepreneur's ability to handle change is a strategic talent related to a company's competitive success, especially in highly competitive and dynamic environments [30,77,78]. Ahmad (2007) [17], on the other hand, emphasizes the importance of entrepreneurs' strategic behaviors in effectively managing SMEs in Malaysia and Australia. Furthermore, Man (2002) [54] give a theoretical justification for the favorable effects of an entrepreneur's strategic insight on the success of SMEs. Furthermore, Subagyo (2020) [50] conducted a study on the performance of micro, small, and medium enterprises (MSMEs) in Indonesia's East Java Province, demonstrating that an entrepreneur's strategic competency has an essential impact on MSMEs' successes. Numerous studies have discovered a strong link between entrepreneur strategic competency and SMEs' performances [62,79]. As a result, the following hypothesis has been developed:

Hypothesis 5 (H5): *entrepreneurial strategic competency will have a positive influence on the performance of SMEs.*

2.10. Commitment Competency

Entrepreneurial commitment competency reflects the ability of the entrepreneurs to effectively manage the organization while enabling the entrepreneurs to be devoted to or to be driven far beyond the vision of accomplishing the objectives and goals of the organization [40,80]. Refs. [17,18] found a link between the performance of SMEs and the commitment competency of entrepreneurs. Man (2001) [18] assessed entrepreneurs' commitment competency by looking at the capacity of: (a) having a strong internal desire to succeed, (b) refusing to let the firm fail, (c) having a robust dedication to making the firm run smoothly and successfully, and (d) having long-term business objectives while proving a positive relationship with firms' performances. Therefore, it can be stipulated that:

Hypothesis 6 (H6): *the commitment competency of entrepreneurs will have a positive impact on the performance of SMEs.*

From the above hypotheses, the research model of this paper has been derived as shown in the following figure (Figure 1).

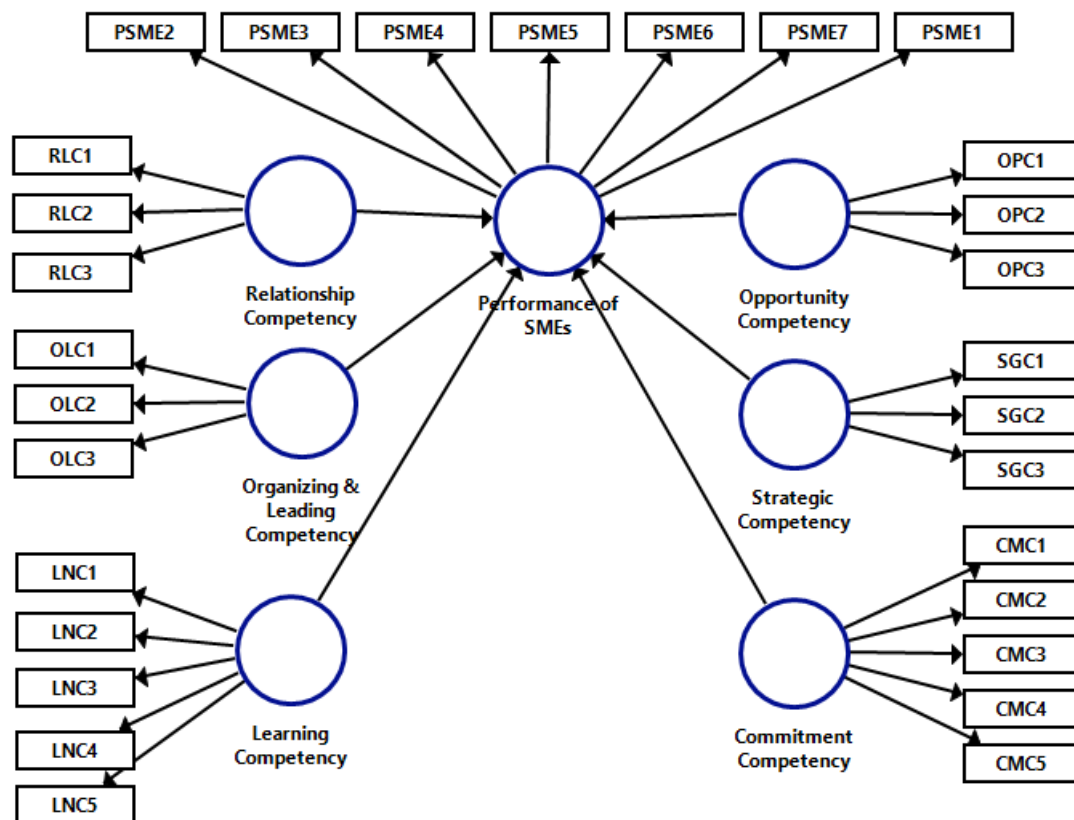


Figure 1. Research model. (Note: RLC—relationship competency; OLC—organizing and leading competency; LNC—learning competency; OPC—opportunity competency; SGC—strategic competency; CMC—commitment competency; PSME—performance of SMEs.)

3. Methodology

3.1. Measures and Constructs

We evaluated our proposed research model (see Figure 1) with the help of a single respondent cross-sectional survey design. For the purpose of maintaining consistency with the earlier studies, our questionnaire has been devised based on previous studies. The questionnaire has been grouped into three sections: Section 1 (demographic information), Section 2 (information about entrepreneurial competencies), and Section 3 (performance of SMEs). To measure entrepreneurial competencies, 3 items for each relationship, organizing and leading, opportunity, and strategic competency, and 5 items for each learning and commitment competency have been adopted from [18]. To determine the performance of SMEs, 7 items have been adopted from [18]. A five-point Likert scale has been used for the constructs of entrepreneurial competencies and performances of SMEs, where the expected responses vary between strongly disagree = 1 and strongly agree = 5 [81,82]. We used subjective measurement in our study as it is a well-accepted and common form of measurement in entrepreneurial research [81,83,84]. In order to ensure face validity, we pre-tested our questionnaire with the help of eight industry experts and two academicians, while asking them about the structure, readability, completeness, and ambiguity of our questionnaire [85,86]. We have incorporated the feedback in our final questionnaire. A detailed outline of all items for each measurement has been given in Appendix A.

3.2. Sampling and Data Collection

Between January and April 2021, data were gathered with the help of the Small and Medium Enterprise Foundation from a pool of entrepreneurs of small and medium-sized companies (SMEs) in Bangladesh using a structured Google Form questionnaire translated into Bengali (the native tongue) for this study. The sample size calculation was achieved using G* power 3.1 [87–89] software with the following settings: f^2 (effect size) = 0.10 (small), $\alpha = 0.05$, the number of predictors = 6, and the power was set at 95% [90]. Therefore, the required sample size was 110 to test the model. We sent our cross-sectional survey questionnaire to approximately 882 SME companies located across Bangladesh. We collected the database with the help of the SME foundation. We used a modified version of the total design test method to improve our response rate [91]. The single key informants of 882 SME companies were targeted for data collection. As a requirement of our study, the informants were entrepreneurs of SMEs. Hence, we note that our data collection approach is unique, considering the distinct socio-economic parlance of Bangladesh [81]. We were able to collect a total of 115 complete and usable responses, having an effective response rate of 13.04%. A complete demographic profile of the sample is given in Table 2. Approximately two-thirds (77%) of the respondents were male. The leading cluster of entrepreneurs falls from under 21 to 27 and the smallest cluster from under 43 to 49, representing 64% and 1%, respectively. The majority of the respondents had an honors degree, about 56%. The ownership of the structure of the firms was sole proprietor for 68% of respondents. A large pool of respondents did not have formal management or technical training before or after starting the business, representing 69% and 72%, respectively (See Table 2).

Table 2. Demographic profile of the respondents.

| Characteristics | Category | Frequency | Percent |
|---|-------------------------|-----------|---------|
| Sex | Male | 77 | 77% |
| | Female | 23 | 23% |
| The current age of entrepreneurs | 20 and Under 20 | 10 | 10% |
| | 21–27 | 64 | 64% |
| | 28–35 | 15 | 15% |
| | 36–42 | 10 | 10% |
| | 43–49 | 1 | 1% |
| Education level | Secondary | 20 | 20% |
| | Honors | 56 | 56% |
| | Master's | 24 | 24% |
| Any formal management/technical training before starting up/owning this business. | No | 69 | 69% |
| | Yes | 31 | 31% |
| Any formal management /technical training after starting up/owning this business. | No | 72 | 72% |
| | Yes | 28 | 28% |
| The ownership structure of the firm | Sole proprietorship | 68 | 68% |
| | Partnership | 27 | 27% |
| | Private limited company | 5 | 5% |

We compared the two waves of data collection using the guideline of Armstrong and Overton (1977) [92] for evaluating the possibility of non-response bias. We analyzed the two waves of data collection using the t -test for the first wave (those who did not require any reminder) and the last wave (those who required a reminder to participate in the survey). No significant variation between these two waves has been found for each item of the questionnaire ($p > 0.05$). Therefore, based on this finding, we can conclude that there is no non-response bias issue in our study.

4. Analysis and Results

The research model was analyzed using the partial least square (PLS) approach with SmartPLS 3.0 [24]. Following the prescribed analytical techniques of Anderson and Gerbing (1988) [93], the measurement model (reliability and validity of the measurements) and the structural model (testing the hypotheses) were both examined [94]. Additionally, a bootstrapping approach (5000 resamples) was used to investigate the loadings of the model and the significance of the path coefficients [95].

4.1. Measurement Model Analysis

For the aim of evaluating the study's measurement model, the two types of validity—convergent and discriminant validity—were examined. The following figure (Figure 2) illustrates the measurement model.

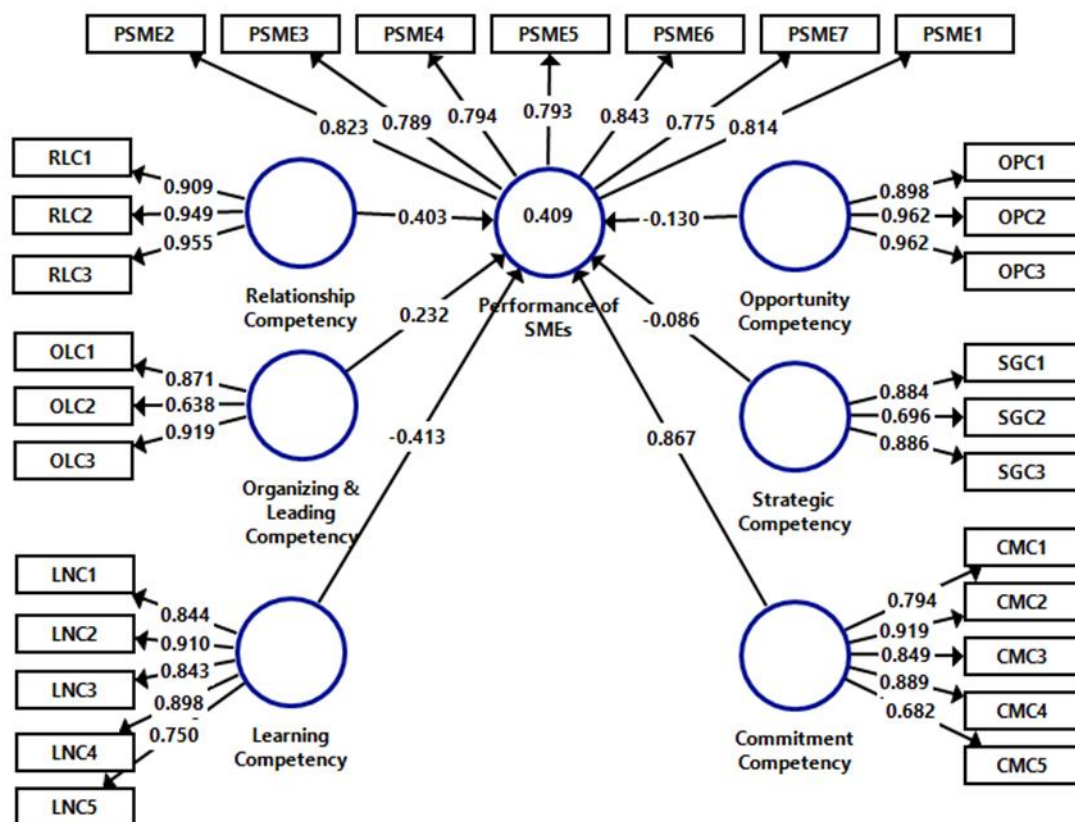


Figure 2. Results of measurement model.

4.2. Convergent Validity

According to ref. [96], the convergent validity is measured by using the loadings of the outer model, Cronbach's Alpha, rho_A, average variance extracted (AVE), and composite reliability (CR). It is suggested in the literature that the loadings need to be higher than 0.5, corresponding to the AVR to be 0.5 [96]. As suggested in the literature, all the scores of the loadings were higher than 0.638, and the AVR of all constructs was more than 0.640, as shown in Table 3. Additionally, all the values of Cronbach were more elevated than 0.786 and all the scores of composite reliabilities were more than 0.856 as proposed in the literature (See Figure 2 and Table 3).

Table 3. Convergent validity.

| Constructs | Items | Loadings | Cronbach | rho_A | CR | AVR |
|-----------------------------------|-------|----------|----------|-------|-------|--------|
| Relationship Competency | RLC1 | 0.909 | 0.935 | 1.017 | 0.956 | 0.880 |
| | RLC2 | 0.949 | | | | |
| | RLC3 | 0.955 | | | | |
| Organizing and Leading Competency | OLC1 | 0.871 | 0.786 | 1.02 | 0.856 | 0.670 |
| | OLC2 | 0.638 | | | | |
| | OLC3 | 0.919 | | | | |
| Learning Competency | LNC1 | 0.844 | 0.912 | 0.966 | 0.929 | 0.724 |
| | LNC2 | 0.91 | | | | |
| | LNC3 | 0.843 | | | | |
| | LNC4 | 0.898 | | | | |
| | LNC5 | 0.75 | | | | |
| Opportunity Competency | OPC1 | 0.898 | 0.946 | 1.01 | 0.959 | 0.886 |
| | OPC2 | 0.962 | | | | |
| | OPC3 | 0.962 | | | | |
| Strategic Competency | SGC1 | 0.884 | 0.796 | 0.858 | 0.865 | 0.684 |
| | SGC2 | 0.696 | | | | |
| | SGC3 | 0.886 | | | | |
| Commitment Competency | CMC1 | 0.794 | 0.906 | 0.976 | 0.917 | 0.690 |
| | CMC2 | 0.919 | | | | |
| | CMC3 | 0.849 | | | | |
| | CMC4 | 0.889 | | | | |
| | CMC5 | 0.682 | | | | |
| Performance of SMEs | PSME1 | 0.814 | 0.910 | 0.917 | 0.928 | 0.6480 |
| | PSME2 | 0.823 | | | | |
| | PSME3 | 0.789 | | | | |
| | PSME4 | 0.794 | | | | |
| | PSME5 | 0.793 | | | | |
| | PSME6 | 0.843 | | | | |
| | PSME7 | 0.775 | | | | |

4.3. Discriminant Validity

A recent critique of the Fornell–Larcker criterion to discover the lack of discriminant validity has been unearthed in the literature [97]. To eradicate the limitations of the Fornell–Larcker criterion, Henseler (2015) [97] suggested examining discriminant validity following the heterotrait and monotrait (HTMT) ratio of correlations. If the score of HTMT is greater than 0.85 [98] and 0.90 [90], then there is an indication of the question of discriminant validity. As shown in Table 4, all the scores are lower than the recommended limit of the HTMT ratio ($HTMT_{0.90}$ and $HTMT_{0.85}$). Thus, discriminant validity has been ensured for all constructs.

Table 4. Discriminant validity (HTMT ratio).

| Constructs | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--------------------------------------|-------|-------|-------|-------|-------|-------|---|
| 1. Commitment Competency | | | | | | | |
| 2. Learning Competency | 0.453 | | | | | | |
| 3. Opportunity Competency | 0.450 | 0.361 | | | | | |
| 4. Organizing and Leading Competency | 0.400 | 0.286 | 0.444 | | | | |
| 5. Performance of SMEs | 0.364 | 0.274 | 0.164 | 0.265 | | | |
| 6. Relationship Competency | 0.360 | 0.283 | 0.746 | 0.467 | 0.330 | | |
| 7. Strategic Competency | 0.194 | 0.185 | 0.206 | 0.176 | 0.103 | 0.232 | |

4.4. Common Method Bias and Causality

The common method bias (CMB) is often suggested to use in cross-sectional survey design for data collection [99–104]. Kock (2015) [102] (p. 2) viewed that “the instructions at the top of a questionnaire may influence the answers provided by the different respondents in the same general direction, causing the indicators to share a certain amount of common variation”. On the other hand, Podsakoff (2003) [103] argued that CMB might be the outcome of social desirability connecting with answering questions in a specific way, reasoning the indications to have a significant amount of common variation. There is a possibility that CMB exists in our study as we have used a cross-section survey questionnaire to collect data. Thus, to eradicate the possible impacts of CMB, we used dependent and independent variables while designing our questionnaire. Additionally, we examined the potential CMB in numerous ways. First, we ran a conservative version of Harman’s one-factor test to verify that the findings were not biased due to a single informant [103–105]. The outcome of this test indicated that the single factor predicted 43.02% of the total variance, consequently CMB is not a significant concern in our study. Second, we ran the correlation marker technique also to test CMB [106]. We observed a very negligible difference between adjusted and unadjusted correlations and no change was found in the significance of the correlations. Therefore, we are confident that CMB is not a major concern in our study. Before discussing hypothesis testing using structural model analysis, causality is a significant aspect that should be evaluated [81,107]. We evaluated the nonlinear bivariate causality direction ratio (NBCDR) following the guideline provided by [102]. The acceptable value of NBCDR is 0.7. In our study, we report it as 0.78. Therefore, causality would not pose any question for our study.

4.5. Structural Model Analysis

Bootstrapping results (5000 resamples) are depicted in the accompanying figure (Figure 3), which illustrates the magnitude of the path coefficients and the loadings of the inner model.

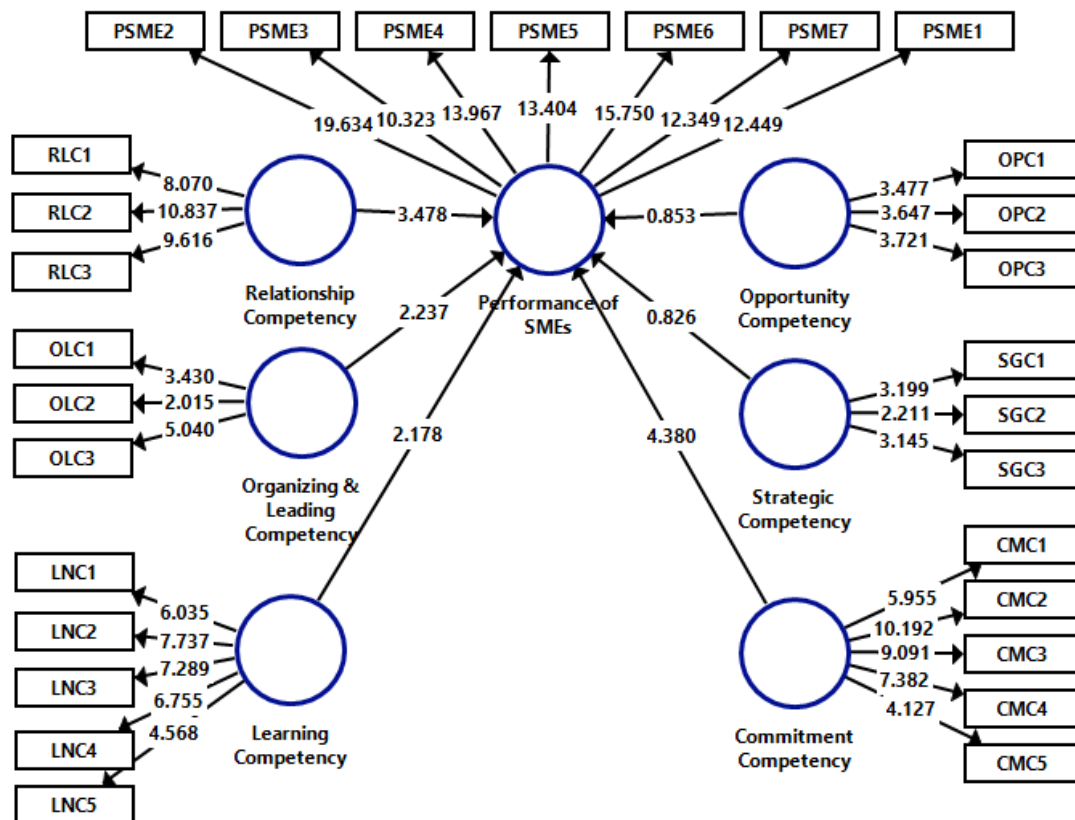


Figure 3. Results of bootstrapping.

4.6. Results of Hypotheses Testing

To assess a structural model, Hair et al., (2017) [108] recommended looking at the R^2 , the beta (b) value, the t -value, and the corresponding p -value through a bootstrapping procedure taking resamples of 5000. Furthermore, they also recommended reporting on predictive relevance (Q^2) and effect size (f^2) [95]. As it is recommended that the p -value confirms an effect existed, it will not inform the extent of the impact. For this, it is recommended to report the effect size (f^2) in addition to the p -value [109]. Further, Hair et al., (2017, p-279) [108] suggested reporting and interpreting both the statistical significance (p -value) and the substantive significance (f^2).

As suggested, it has been illustrated that the beta value (b), t -value, p -value, collinearity issue, R^2 , f^2 , and Q^2 in Table 5; the relationship competency ($b = 0.403$, $t = 3.478$, $p < 0.1$, $f^2 = 0.125$); the organizing and leading competency ($b = 0.232$, $t = 2.237$, $p < 0.5$, $f^2 = 0.07$); the learning competency ($b = -0.413$, $t = 2.178$, $p < 0.5$, $f^2 = 0.04$); the commitment competency ($b = 0.867$, $t = 4.38$, $p < 0.1$, $f^2 = 0.178$) positively influenced the performance of SMEs. Therefore, this supports H1, H2, H3, and H6.

Oppositely, opportunity competency ($b = -0.13$, $t = 0.853$, $p < 0.394$, $f^2 = 0.014$) and strategic competency ($b = -0.086$, $t = 0.826$, $p < 0.409$, $f^2 = 0.011$) were statistically insignificant to influence the performance of SMEs. Thus, the findings do not support H4 and H5.

Additionally, all the constructs of entrepreneurial competencies can predict and explain 40.9% of the performances of SMEs as the R^2 is 0.409, while the score of Q^2 is 0.247, which indicates that all the constructs of entrepreneurial competencies have some extent of predictive relevance as the value is higher than 0 [95]. Further, the values of VIF show that there is no collinearity issue as the values are in the range of 0.2 to 5 [95].

Table 5. Results of hypothesis test.

| Hypothesis | Relations * | Std. Beta | Std. Error | t-Value | p-Value | Decision | VIF | R ² | f ² | Q ² |
|------------|-------------|-----------|------------|---------|---------|---------------|-------|----------------|----------------|----------------|
| H1 | RLC → PSME | 0.403 | 0.116 | 3.478 | 0.001 | Supported | 2.191 | 0.409 | 0.125 | 0.247 |
| H2 | OLC → PSME | 0.232 | 0.103 | 2.237 | 0.025 | Supported | 1.288 | | 0.07 | |
| H3 | LNC → PSME | 0.413 | 0.19 | 2.178 | 0.029 | Supported | 4.287 | | 0.04 | |
| H4 | OPC → PSME | −0.13 | 0.152 | 0.853 | 0.394 | Not supported | 2.036 | | 0.014 | |
| H5 | SGC → PSME | −0.086 | 0.104 | 0.826 | 0.409 | Not supported | 1.102 | | 0.011 | |
| H6 | CMC → PSME | 0.867 | 0.198 | 4.38 | 0 | Supported | 4.12 | | 0.178 | |

* RLC—relationship competency; OLC—organizing and leading competency; LNC—learning competency; OPC—opportunity competency; SGC—strategic competency; CMC—commitment competency; PSME—performance of SMEs.

5. Discussions and Conclusions

The contribution of this paper was threefold; therefore, each contribution has been addressed in further depth here. First, the findings of the study offer a solid theoretical explanation and contextual understanding regarding the relationship between entrepreneurial competencies and SMEs performances. The findings of this study specifically suggest that all the entrepreneurial competencies, except strategic and opportunity competency, lead to the performance of SMEs. The evidence further indicates that these competencies are crucial for managing entrepreneurial activities. Thus, the long-term discrepancies in the firm's performance can be explained by the entrepreneurial competencies [6,50,51,62,110,111]. Some researchers have used entrepreneurial orientation instead of entrepreneurial competencies and linked it with the performances of SMEs [5,58,112–115]. For example, Li et al., (2009) [58] proved a positive association between entrepreneurial orientation (competitive aggressiveness, autonomy, innovativeness, proactiveness, and risk-taking attitude) and firm performance while considering the knowledge creation process as a mediating role in this relationship. Oppositely, contradictory findings have also been found in the previous literature [56,57]. According to [57], there is no link between entrepreneurial orientation and SMEs firm performance in the context of Malaysia. However, others have explored a positive association of SMEs performances with entrepreneurial orientation in the same context of Malaysia [55]. Similarly, ref. [56] explored no significant relationship between the management know-how competency of entrepreneurs on the business success of SMEs in the context of Thailand. Despite this fact, a series of training and development programs would enhance the competencies of the entrepreneurs instead of simply giving them a positive environment and some resources for business [62]. Additionally, the specific aspects of each entrepreneurial competency can provide a more focused approach to initiating entrepreneurial training and development programs. As explained, the survey instrument or competency measurement of this study can provide such a unique scope of designing training and development programs for each competency.

Secondly, the findings of quantitative analysis further suggest that the lack of formal training and development can be an extent of hindrance and less satisfactory performance for the two competency domains, instance, strategic and opportunity competency. Oppositely, entrepreneurs are more comfortable and satisfied with their commitment, relationship, learning, and organizing and leading competencies. Thus, high-performed and low-performed competency domains are significantly correlated with the trait-based and skilled-based competency areas. As Lau et al., (2012) [116] opined, skilled-based competencies depend on training and development programs, while trait-based competencies rely on the entrepreneur's personal experiences and involvement in the business development process. Due to the congruence with the research findings of Lau et al., (2012) [116], this study suggests that training would need to be instilled to enhance the strategic and opportunity competencies of the entrepreneurs. Oppositely, an entrepreneur can acquire, from experiences through day-to-day business performance and maintenance, commitment,

relationship, and learning competencies. According to [30], entrepreneurial competencies are essential competencies that can be learned and trained.

Finally, the results of the quantitative analysis also show that entrepreneurs tend to learn through experiences and involvement in business activities. Thus, the training should be given based on real-life examples instead of solely relying on theoretical knowledge. The training based on real-life examples and cases would be more effective than theoretical knowledge only [14,111].

6. Limitations and Future Research Directions

We have noted several limitations of our study. As our dataset represents a wide variety of companies related to SMEs from a developing country's perspective, we advise our readers that they should assess our findings from the viewpoints of its limitations. Therefore, the readers should not generalize the findings of our study to all companies regardless of their size throughout the world. Hence, future studies can be conducted to scrutinize the findings from different settings such as developed countries or from different time frames to ensure significant environmental dynamism in the dataset. Further studies can be conducted to compare SME performances between a group of developing countries linked with entrepreneurial competencies along with developed countries to provide more generalized findings. In addition, there is room to increase the domain of entrepreneurial competencies in future studies. Further studies could also determine whether there are any moderating or mediating roles between SMEs performances and entrepreneurial competencies. Additionally, future studies might use longitudinal data to eradicate the potential bias from a single respondent's cross-sectional design.

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Appendix A

Items for Determining Entrepreneurial Competencies and Performance of the SMEs.

| Constructs | Items | Statement |
|-------------------------|-------|--|
| Relationship competency | RLC1 | Cultivate a trusting relationship with others in the long run |
| | RLC2 | Develop and maintain a personal network of professional contacts |
| | RLC3 | Negotiate with others |

| Constructs | Items | Statement |
|-----------------------------------|-------|---|
| Organizing and leading competency | OLC1 | Organize resources and tasks |
| | OLC2 | Motivate and lead subordinates |
| | OLC3 | Delegate the tasks effectively |
| Learning competency | LNC1 | Keep me up-to-date in my field |
| | LNC2 | Learn proactively |
| | LNC3 | Apply learned knowledge and skills to real-world situations |
| | LNC4 | Learn to have a clear objective in mind |
| | LNC5 | Able to learn from numerous sources |
| Opportunity competency | OPC1 | Be able to identify the goods and services that clients desire |
| | OPC2 | Perceive unmet demands of customers. |
| | OPC3 | Enthusiastically look for products and services that deliver genuine benefits to the clients |
| Strategic competency | SGC1 | Determine the challenges, difficulties, and opportunities that will affect the organization in the long run |
| | SGC2 | Understand the predicted trends of the industry and how changes may affect own organization |
| | SGC3 | Reorganize the department and organization to better accommodate long-term changes and goals |
| Commitment competency | CMC1 | Make a commitment to making the venture a success whenever possible |
| | CMC2 | Refrain from allowing the venture to fail when it is necessary |
| | CMC3 | Retain an extraordinary robust internal drive |
| | CMC4 | Make a commitment to long-term business objectives |
| | CMC5 | Individual sacrifice to make the enterprise a success |
| Performance of SMEs | PSME1 | Return on investment |
| | PSME2 | Net profit from operations |
| | PSME3 | Gross profit margin |
| | PSME4 | Sales growth |
| | PSME5 | Ability to fund business growth from profit |
| | PSME6 | Return on an investment relative to competitors |
| | PSME7 | Gross profit relative to competitors |

Source: adopted with slight modification from [18].

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