Critical Success Factors and Barriers for Saudi Small and Medium Enterprises

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Abstract

This study aimed to produce and empirically tested a comprehensive framework of critical success factors and barriers to SME success with the goal of identifying such factors at individual, organisational, and environmental levels. A sample of 391 SME owners and managers produced the data for the study. A structural equation modelling analysis identified the influence of the following factors: leadership, motivations to succeed, and business experience at individual level; financial resources, motivated workforce, and business networking at organisational levels, and favourable economic and technology environment at business environment level. Bureaucracy and lack of financing options were the identified critical barriers to success. The results of study were consistent after the introduction of control variables at individual (age, gender), and organisational (size, age of business) levels. Practical implications of the study are discussed and future research directions are proposed.

Keywords: SME, critical success factors, critical barriers, Saudi Arabia

Introduction

Small and medium enterprises (SMEs) are widely regarded as the backbone of a successful economy. Researchers identified the role of SMEs in socio-economic development, creation of national wealth, poverty alleviation, boosting employment, and equitable distribution of income among other things (Abdullahi et al., 2015; Autio, 2015; Del Guidice et al., 2019; Kowo et al., 2019). SMEs are being increasingly recognized as one of the major drivers for economic development in Saudi Arabia as well. Vision 2030, the primary development strategy for the country, considers SMEs as the key contributor to economic diversification, development of economic opportunities, and boosting employment. In recognition of these goals, the SME Authority was established in October 2015 to centralize the government initiatives directed at SME aid and development.

And yet, SMEs in Saudi Arabia still contribute relatively little to the national economy. In contrast to the countries of the Eurozone, the

United States, or the neighbouring UAE where SMEs produce over 50% of the GDP, in Saudi Arabia, this share is about 28.7% (Alhawal et al., 2020). Researchers have predominantly looked into external factors influencing Saudi SMEs, such as access to capital, regulatory framework, and state bureaucracy (e.g., Ahmad, 2012; Altokhais, 2017; Elhassan, 2019; Rafiki, 2019). Fewer studies considered the internal factors such as technology adoption and use, management, and resource capacities (e.g., Alharbi et al., 2018; Alzahrani, 2019). However, there have been only few attempts to organise all kinds of relevant factors into a comprehensive framework that could be applied in practice. Recently, Al-Tit et al. (2020) developed and tested such framework. However, their sample was limited to SMEs sponsored by three government funds and it did not consider potential barriers to success.

It is clear that despite the recognized need of the Saudi authorities to promote SMEs development for the national economy, there is still a lack of knowledge of how to do this in present realities. In this regard, an insight from the private entrepreneurs and owners of SMEs could become very valuable. In the absence of a comprehensive framework of success and barrier factors to private SME development in Saudi Arabia, this study seeks to produce such model and test it empirically.

Literature Review

According to the Saudi Statistics Authority, an SME is an organisation that employs fewer than 250 individuals and has annual revenues not exceeding 200 million riyals (approximately \$53.4 million). This is roughly in line with the definition used in the European Union and most of the OECD countries (note that there is no clear definition in the USA).

Classical studies conceptualized critical success factors (CSF) as several activity areas which are necessary to reach specific goals (Bullen &Rockart, 1981). Boynton and Zmud (1984) defined them as the thing that "must go well to ensure the success of an organisation" (p. 132). Rockart (1979) viewed them as characteristics and areas of an organisation that "ensure successful competitive

performance for the organisation" (p. 85). In the context of this paper, CSFs are considered as the areas or characteristics of business necessary for the SME's survival and proliferation. Likewise, critical barriers are conceptualized as the factors that restrict SME's proliferation and may, in fact, cause its ultimate failure.

Literature is ripe with the studies considering CSFs and barriers to SME success. Generally, CSFs can be viewed across three major groups: individual, which are related to business owners/leaders; organisational, which encompass structural and operational business-related factors; and external, which include favourable conditions for SME business development (e.g., Gibb, 2000; Lampadarios et al., 2017; Simpson et al., 2012). In the same manner, barriers to success can be classified. Whereas certain individual, business, and environmental factors can be considered conducive to business, others may be considered as unfavourable influencers (Lampadarios et al., 2017). A review of each set of factors and their relationship to SME success is presented below.

Individual CSFs

Individual characteristics of entrepreneurs are important for SME success because entrepreneurs essentially run these businesses, determine their strategy direction, identify points of competitiveness, and oversee operations. Individual CSFs should be distinguished from individual characteristics of entrepreneurs. Whereas the latter encompass uncontrollable features such as age or gender, CSFs account for the factors that individuals develop and apply to their work. Researchers identified a number of such characteristics. Some commonly mentioned factors are educational level, managerial skills, and experience (Chawla et al., 2010; Lampadarios et al., 2017; Nikolic et al., 2015). Some researchers identified as CSFs the characteristics that are often associated with entrepreneurship. Among such factors are the owner's leadership skills, locus of control, motivation to succeed, and propensity for risk taking (Lo et al., 2016; Pletnev&Barkhatov, 2016; Wong, 2005).

At the same time, the role of uncontrollable personal characteristics has to be taken into account. Researchers

previously observed that in some instances, the impact of age and gender on SME success could be significant, depending on the socio-cultural environment in which the latter operates (Lampadarios et al., 2017; Nikolic et al., 2015). For example, entrepreneurship features are more often observed in men, and men are more often launching businesses (e.g., Amoros et al., 2013; Kennedy & Drennan, 2002). Likewise, age is sometimes associated with experience, suggesting that younger SME entrepreneurs may have higher chances to fail (Disney et al., 2003; Kautonen et al., 2008). These factors, therefore, are considered as control variables in the study. The following hypothesis is formulated:

H1: Individual CSFs are positively related to SME success.

Organisational CSFs

Organisational CSFs are important for SME success because they define what an organisation is and does. To be successful, any organisation has to develop a set of specific capabilities which distinguish it among the competitors and offer competitive advantage (Appiah-Adu et al., 2018). Researchers identified over a dozen of factors at the organisational level that could be influential to SME's success. Financial capital have been mentioned as an important factor because they allow to grow business, sustain losses and unfavourable market conditions, and acquire better resources for business development (Carter & Van Auken, 2005; Harrison et al., 2004; Locke, 2004). Likewise, productive and motivated human resources are usually mentioned for making SMEs more effective and efficient (Bonet et al., 2011; Crook et al., 2008; Unger et al., 2011). This applies to the management team as well, which has to be both committed and knowledgeable (Barringer & Jones, 2004; Dobbs & Hamilton, 2007; Garrett &Neubaum, 2013). Further, a clearly defined strategy has been considered by some researchers as a CSF for reducing uncertainty among the organisational members, offering a vision, and producing better understanding of the company's purpose and goals (French et al., 2004; Okpara & Wynn, 2007). Customer focus has been identified as a CSF because it allows to deliver superior value and distinguish the company from the competitors (Lo et al., 2016; Raju et al., 2011; Ziggers&Hanseler, 2015).

Although defined in different terms, technology integration allows organisation to utilize the power of technological tools and applications for various tasks: from administrative to operations and customer support (Khin & Ho, 2018) finally, business networks have been considered as a CSF for SMEs by means of establishing cooperative relationships and benefiting from partnership institutions and business linkages (Frank et al., 2007;Karaev et al., 2007). SMEs that establish strong business networks were found to improve their market positioning, reduce operational risks, develop new skills and competencies, and deal with technological changes (Bhatti & Kumar, 2012; Islam et al., 2011; Lampadarios et al., 2017). In relation to Saudi Arabia, a recent study also uncovered that strong networking connections (wasta) are influential in SME success (Sefiani et al., 2018).

While the aforementioned factors are the ones that organisations develop in the course of their lifecycle, researchers also found influence of organisational characteristics on SME success. However, the effect of these characteristics remains inconclusive. For example, in terms of company size, researchers noted that while larger companies enjoy a number of advantages such as economies of scale, more resources, brand recognition, and bargaining power, they also face additional hurdles in form of bureaucracy, loss of focus, and increasing cash flow requirements (Flynn et al., 2015; Dobbs & Hamilton, 2007; Raju et al., 2011). It should be remembered that as firms expand, they may overgrow the definition of an SME, which will make the performance comparisons less meaningful. Similarly, the effect of firm's age is unclear. While younger SMEs generally demonstrate higher growth rates, their relative degree of failure is also higher (Cowling et al., 2018; Gray et al., 2012; Heinonen et al., 2004). Age and size of the firm are, therefore, considered as control variables in this study.

H2: organisational CSFs are positively related to SME success.

Environmental CSFs

Environmental CSFs can be conceptualized as the factors in the business environment that influence SMEs but cannot be controlled by them. A good basis for identification of such factors is the PESTLE framework which is commonly used in macro-analyses (Azimzadeh et al., 2013; Dobbs & Hamilton, 2007; Lampadarios et al., 2017). Political factors that the researchers found necessary for SME success include stable political environment and presence of supporting programs and services (Amoros et al., 2013; Levie et al., 2014; McLarty et al., 2012; Wetherly & Otter, 2014). In terms of economic environment, literature suggests access to capital as the primary factor determining SME success (Amoros et al., 2013; Calcagnini & Favaretto, 2012; Rupasingha& Wang, 2017). Market accessibility, economy growth, and higher disposable income of the target market population have also been considered (Lampadarios et al., 2017). The effect of socio-cultural norms has been less explored in literature; however, there is sufficient literature on their positive effect on enhancing entrepreneurial activity, which, as shown earlier, has a positive impact on SME performance. Generally, researchers distinguished the presence of widely accepted societal norms and beliefs encouraging entrepreneurial and business activity as favourable for SME performance (Amoros et al., 2013; Levie et al., 2014; Khan et al., 2021; Onodugo&Onodugo, 2015).

Favorable technology environment is widely regarded as conducive to business development overall (Wetherly& Otter, 2014; Worthington & Britton, 2009). When it comes to SMEs, researchers noted that they can primarily benefit from the R&D transfer and access to innovative technologies to boost their competitiveness and responsiveness to the market needs (Amoros et al., 2013; Bilgin et al., 2012). This, in turn, is possible if the government establishes the mechanisms for equitable technology access. Further, presence of a favourable regulatory framework is considered a necessary macro element for SME success. Favourable regulation is widely seen as a catalyst for SME development, building trust with government institutions, and shielding smaller businesses from imbalanced competitive conditions against larger firms (Atherton et al., 2008; Welter & Smallbone, 2006; Wilson et al., 2012). Finally, environmental framework encompasses all aspects of the environment that concern environmental regulations and policies. While it is widely

acknowledged that such regulations are beneficial for sustainable development (Worthington & Britton, 2009), for SMEs additional regulations can be seen as a factor constraining resources and development. This is logical given that SMEs have much more limited capacities for compliance than larger organisations. Accordingly, researchers found that SMEs have lower environmental awareness (Lynch-Wood & Williamson, 2014; Nulkar, 2014). Therefore, unless environmental regulations are applied differently to SMEs than to larger organisations, the effect of such regulations are likely to be negative on SME success.

H3. External CSF are related to SME success.

H3a: Political environment CSFs are positively related to SME success;

H3b: Economic environment CSFs are positively related to SME success;

H3c: Socio-cultural environment CSFs are positively related to SME success;

H3d: Technology environment CSFs are positively related to SME success;

H3e: Legal environment CSFs are positively related to SME success;

H3f: Environmental regulations are negatively related to SME success.

Critical Barriers

Barriers to SME success can be conceptualized as those factors which constrain SME development and progress and which may eventually lead to SME failures. Overall, it can be argued that absence of a CSFs mentioned earlier can be regarded as a barrier. For example, the lack of SME owner's experience, the lack of firm's resources, and the lack of supporting programs from the government can all be viewed as the factors impeding SME success. On the other hand, additional negative factors may be in play. Research suggests that such barriers may arise from unique conditions specific to business environments in which SMEs operate. Accordingly, SME success may be contingent upon specific socio-cultural and business environment (Ahmad et al., 2010; Sajilan&Tehseen, 2015).

Research pertaining to Saudi Arabia indicates that SMEs have historically faced a number of unique obstacles such as excessive bureaucracy, unfriendly business environment, the lack of government support, Saudisation, and the lack of financing options (Alharbi, 2014; Elhassan, 2019; Zamberi, 2012). These factors, therefore, have to be considered in relation to SME success.

H4: critical barriers are negatively related to SME success.

SME Success

SME success, as the major dependent variable in this research, requires specific conceptualization. Researchers agree that there is no universally used term to describe organisational success (Halabi& Lussier, 2014; Rogoff et al., 2004; Simpson et al., 2012). Whereas financial performance and longevity have been most commonly used concepts to define business success, studies of SMEs suggest that non-financial factors could be in play such as owners' perceived autonomy, lifestyle, and self-fulfilment among other things (Greenbank, 2001; Simpson et al., 2012; Walker & Brown, 2004). Accordingly, success for SMEs has been defined by some researchers in terms of meeting specific needs and goals of their owners in relation to business (Lampadarios et al., 2017; Simpson et al., 2012). Therefore, this study proposes a composite view on SME success which includes financial performance, business longevity, and fulfilment of personal goals of the owners.

Conceptual Framework

Based on the reviewed literature, a conceptual framework of critical success factors and barriers for SME success in Saudi Arabia is developed (Figure 1). The framework considers three key dimensions of CSFs as well as unique barriers identified in literature focusing specifically on Saudi SMEs. The dependent variable in the framework is SME success which is considered as a composite score of financial performance, business longevity, and personal fulfilment factors for the owners. Finally, the control effect of individual and firm characteristics is recognized and measured as well.



-Risk taking propensity -Business experience Organisational CSFs -Financial resources SME Success -Motivated workforce -Financial performance -Clear strategy -Business longevity -Customer focus -Owners' self-fulfillment -Technology integration -Business networks Company size, age Environmental CSFs -Political stability -SME support programs -Access to capital -Access to market -Economy growth -Cultural norms encouraging entrepreneurship -R&D transfer -Favorable regulation -Environmental regulations (-) Critical Barriers (-) -Bureaucracy -Saudization -Hostile market environment -Lack of financing options -Lack of government support

Methodology

Research Instrument

The primary tool for data collection was an original questionnaire with the items developed from literature to represent the study constructs. Each construct was represented by two items measured on a 7-point Likert scale ranging from 1 = "strongly disagree" to 7 = "strongly agree." The questionnaire contained 57 items representing four groups of independent variables (individual CSFs, Organisational CSFs, Environment CSFs, and Critical Barriers), one group of dependent variable (SME Success), and two groups of control variables (owner-related and company-related). A back translating technique (Brislin, 1970) was used to translate the items into Arabic. The questionnaire was pilot tested on a small sample of target participants with all items demonstrating adequate levels of comprehensibility.

Data Collection

An online survey was used as the primary method for data collection. The participants were recruited from the Saudi Ministry of Commerce database on SMEs in Saudi Arabia. Invitations to participate in the study were sent to 1,500 randomly selected SMEs. For large target populations, literature offers various guidelines in terms of adequate sample sizes. Some authors suggest a minimum of 300 responses (e.g., Comrey& Lee, 2013; Tabachnik&Fidell, 2001). Others recommend to use a N:q ratio where N stands for sample size and q – for the number estimated parameters. The ratios vary from as high as 20:1 (Kline, 2015) to as low as 5:1 (Bentler & Chou, 1987), with some scholars suggesting a middle 10:1 ratio (Schreiber et al., 2006). Given the number of constructs in the study, this would result in a minimum sample size ranging between 125 and 500. Taking into account these recommendations, the study aimed for at least 300 responses with everything above 500 regarded as an excellent result.

Results

Response Rate and Sample Description

In total, 402 questionnaires were completed, which represents response rate of 26.8%. 11 questionnaires were eliminated for incomplete data making the final number of valid responses equal to 391. The collected data were checked for non-response bias using the late respondents as a proxy for those who did not participate in the study. T-test analyses for the differences between the responses of the first 30 and last 30 study participants were completed for the study constructs (Armstrong & Overton, 1977). No statistically significant differences were observed thereby suggesting that non-response was not a concern for this study.

Table 1 offers a summary of the study participants. Males and females represented 62.9% and 37.1% of the respondents respectively. In terms of age, the sample had a larger proportion of younger participants. The largest age group was 26-40 years old (150 respondents, 38.4%), followed by 25 and younger (113 respondents, 28.9%). The age groups 41-50 years and 50+ years represented 22.3% (87 individuals) and 10.5% (41 individuals) of respondents. In terms of position, 215 respondents (55.0%) were business owners and 176 respondents (45.0%) were business managers. In terms of company size, the majority of respondents represented microbusinesses with 10 or fewer workers (186 individuals, 46.6%), followed by companies with 11-49 workers (109 individuals, 27.9%) and companies with 50-250 workers (96 individuals, 24.6%). In the sample, there were no companies older than 10 years on the market. The majority of respondents represented businesses with 4-9 years of activity (250 individuals, 63.9%), followed by businesses with less than a year of activity (75 individuals, 19.2%), and those with 1-3 years of activity (66 individuals, 16.9%).

Characteristic	Category	Frequency	Percentage
Gender	Male	246	62.9%
	Female	145	37.1%
Age Group	<25 years	113	28.9%
	26-40 years	150	38.4%
	41-50 years	87	22.3%
	50+ years	41	10.5%
Position	Owner	215	55.0%
	Manager	176	45.0%

10 or fewer

11-49 workers

50-250 workers

workers

< 1 year

1-3 years

4-9 years

186

109

96

75

66

250

47.6%

27.9%

24.6%

19.2%

16.9%

63.9%

Preliminary Data Analysis

Company Size

Years in

Business

In order to test the fit of the study measurements, four models representing the independent variable dimensions were tested with confirmatory factor analysis (CFA). Maximum Likelihood estimation with robust standard errors (MLR) was used to control for possible nonnormality issues. Because chi-square is not a good measure of fit in large sample sizes, three fit indices were analyzed instead: the comparative fit index (CFI) and Tucker–Lewis Index (TLI) for recommended values of 0.9 and higher and root mean square error of approximation (RMSEA) for recommended values of 0.1 and lower (Kline, 2015; MacCallum et al., 1996). Whenever the required parameters were not achieved or negative variances (including error variances) occurred, the model in question would be improved by checking modification indicesand solving for Heywood cases (Byrne, 2012; Kline, 2015). Table 2 offers a summary of the final CFA analyses for each dimension involving independent variables. In all four cases, the models demonstrate acceptable fit based on CFI, TLI, and RMSEA parameters. The variables in each dimension were checked for multicollinearity issues with the variance inflation factors (VIFs) analysis. In all cases, VIFs were below 5.0 thereby indicating no serious multicollinearity issues with the data (Allison, 1999).

Dimension	Variables	CFI (>0.9)	TLI (>0.9)	RMSEA (<0.1)
Individual CSFs	-Education -Leadership skills -Locus of control -Motivation to succeed -Risk taking propensity -Business experience	.946	.939	.076
Organizational CSFs	-Financial resources -Motivated workforce -Clear strategy -Customer focus -Technology integration -Business networks	.954	.940	.074
Environmental CSFs	-Political -Economic -Social -Technological -Legal -Environmental	.973	.954	.081
Critical Barriers	-Bureaucracy -Saudization -Hostile market environment -Lack of financing options -Lack of government support	.965	.931	.075

Table 2 CFA for Independent Variables' Dimensions

After testing the fit for dimensional models separately, all constructs were combined into a single model. The CFA analysis showed an acceptable model fit (CFI = .937; TLI = 0.945; RMSEA = .091). All the items and their factor loadings on the corresponding variables are listed in the Appendix. The model demonstrated a weaker but still acceptable fit after adding control variables (CFI = .917; TLI = 0.914; RMSEA = .971). In order to test for common method bias, a single dimension model was run with all items loaded into a single variable (Podsakoff et al., 2012).

The model demonstrated a very poor fit (CFI = .637; TLI = 0.545; RMSEA = .197) which indicated that the risk of common method bias was low.

Model Analysis

In the next step, regression paths were added. Two full scale SEM tests were conducted: one without and one with control variables. The relationships between variables were tested at a 0.05 level of significance. The coefficient of determination for the model without control variables was

0.716, which means that it explained about 71.6% variability in SME success variable.

Figure 2 demonstrates the part of the model describing the relationship between individual critical success factors and SME success. The strongest relationship to SME success was demonstrated by leadership skills (β =.149, p<0.001), followed by motivation to succeed (β =.111, p=0.005) and business experience (β =.088, p=0.005). Education, locus of control, and risk taking propensity didnot demonstrate statistically significant influence. Therefore, Hypothesis 1 was partially supported: three out of six considered individual CSFs demonstrated influence on SME success.

Figure 2. Effect of Individual CSFs on SME Success



NOTE: *p<.05; **p<.01; ***p<.001

Figure 3 demonstrates the part of the model describing the relationship between organisational critical success factors and SME success. Financial resources (β =.367, p<0.001) and motivated workforce (β =.283, p<0.001) demonstrated relatively strong relationships to SME success. A somewhat weaker influence was demonstrated by business networking (β =.099, p=0.01). Clear strategy, customer focus, and technology integration did not demonstrate statistically significant relationships to SME success. Therefore, Hypothesis 2 was partially supported: three out of six considered organisational CSFs demonstrated influence on SME success.

Figure 3. Effect of Organizational CSFs on SME Success



NOTE: *p<.05; **p<.01; ***p<.001

Figure 4 demonstrates the part of the model describing the relationship of environmental CSFs to SME success. Out of six factors in the PESTLE framework, only two demonstrated statistically significant relationship to SME success: economic environment (β =.126, p=0.005) and technological environment (β =.250, p<.001). Political, socio-cultural, legal, and environmental environment did not demonstrate statistically significant relationship to SME. Therefore, Hypothesis 3 was partially supported.

Figure 4. Effect of Environmental CSFs on SME Success



NOTE: *p<.05; **p<.01; ***p<.001

Figure 5 demonstrates the final part of the model which describes the relationship between critical barriers to SME success. Two factors demonstrated statistically significant relationships: bureaucracy (β =-.180, p<.001) and lack of access to financing (β =-.089, p=0.028). In both cases the relationship was negative. Hostile market environment, Saudization, and lack of government support did not demonstrate statistically significant relationship. Therefore, Hypothesis 4 was partially supported.

Figure 5. Effect of Critical Barriers on SME Success



The second full scale model included control variables: respondent's gender and age and firm's size and years in business. While all considered control factors except for firm's size demonstrated statistically significant relationship to SME success, their influence on the confirmed study relationships was not substantial. Further, the coefficient of determination with controls was 0.732 thereby demonstrating just 0.016 variability addition in SME success in comparison to the original model. Table 3 shows changes to the significant relationships in the first model after the control variables were introduced. As it follows, the only significant effect was demonstrated for business networking variable, whose influence diminished when controlled for company size. Therefore, it was concluded that the effect of the considered controls was very weak.

NOTE: *p<.05; **p<.01; ***p<.001

Table 3:Effect of Controls

Relationship	Effect without Controls	Effect with Controls
Leadership Skill-> SME Success	β=.149, p<.001	β=.153, p<.001
Motivation to Succeed -> SME Success	β=.111, p<.001	β=.092, p=.002
Business Experience -> SME Success	β=.088, p<.001	β=.116, p=.002
Financial Resources -> SME Success	β=.367, p<.001	β=.352, p<.001
Motivated Workforce -> SME Success	β=.283, p<.001	β=.241, p<.001
Business Networking -> SME Success	β=.180, p=.01	β=048, p=.213
Economic Environment -> SME Success	β=.126, p<.001	β=.160, p<.001
Technology Environment -> SME Success	β=.250, p<.001	β=.204, p<.001
Bureaucracy -> SME Success	β=180, p<.001	β=129, p<.001
Lack of Financing -> SME Success	β=089, p=.028	β=101, p=.008

Discussion and Conclusion

This study sought to produce and empirically tested a comprehensive framework of critical success factors and barriers to private SME success in Saudi Arabia. Overall, the influence of CSFs in all considered dimensions was observed. At the same time, it is difficult to argue which dimension had a stronger influence because none of them demonstrated a significant effect of all considered factors.

For the individual CSFs, the effect of leadership skills, motivation to succeed, and business experience showed relationship to SME success. Similar effects were previously observed in studies conducted both outside Saudi Arabia (e.g., Chawla et al., 2010; Lo et al., 2016) and in relation to Saudi SMEs (Al-Tit et al., 2020; Migdadi, 2009). These results seem logical. Leadership and motivation to succeed has long been well-recognized as important entrepreneurial characteristics (Herron & Robinson, 1993; Littunen, 2000) whereas business experience matters owners of new ventures with their high failure rates. At the same time, three factors did not demonstrate influences, which requires further discussion. While education has been previously linked to SME success, studies considered educational level of owners/managers rather than specific business-related education (Nikolic et al., 2015; Rose et al., 2006). Therefore, it could be that SME success is related to general skills acquired with education, such as imagination, decision making aptitude, and ability to adapt to various environments (Bonet et al., 2011). Further, the absence of influence from risk taking propensity and locus of control could be a result of cultural specifics. Uncertainty avoidance and strong belief in fate are common in Saudi population in general (Saxena, 2018). These assumptions can be further explored in the future studies.

In terms of organisational CSFs, financial resources, motivated workforce, and business networking have showed relationship to SME success. These factors have been previously mentioned as influential for business owners in starting, developing, and growing companies (Bonet et al., 2011; Carter & Van Auken, 2005; Harrison et al., 2004; Unger et al., 2011). Somewhat surprisingly, however, no influence was observed for clear strategy, customer focus, and technology integration. To some extent, this could be explained by the sample specifics. The dominant number of the respondents represented microenterprises which could be small family businesses. For these SME types, integrating new technologies or developing strategic competitive plans may not be necessary for successful operations. A little more puzzling is the absence of the customer focus effect. A possible reason could lie in attempts by SME-respondents to serve a wide range of customer groups without a particular target market. Again, these assumptions provide some directions for further research.

In terms of business environment effects, economic and technology environment demonstrated positive influences on SME success. Economic environment was defined in terms of access to capital and markets which have shown positive relationship to SME success in previous studies (Amoros et al., 2013; Calcagnini&Favaretto, 2012; Rupasingha& Wang, 2017). Technological environment, on the other hand, have been defined in terms of access to innovations through research and development transfer (Amoros et al., 2013; Bilgin et al., 2012). In other words, the respondents believed that in Saudi Arabia, SMEs have equitable access to innovations. The effect of other external factors, however, have not been established. This is an interesting observation because political and legal environment have been defined in terms of business supporting programs and favorable to SME regulations (McLarty et al., 2012; Welter & Smallbone, 2006; Wetherly & Otter, 2014; Wilson et al., 2012) while social environment was defined in terms of positive societal beliefs regarding entrepreneurship (Khan et al., 2021; Onodugo & Onodugo, 2015). It is possible that Saudi SME owners and managers believe that they should rely on themselves to succeed rather than expect help from the state or social approval of their actions. Finally, the absence of environmental regulations' effect on SME success may be explained by less developed environmental regulatory framework in Saudi Arabia.

Exploring a group of critical barriers as negative influencers on SME success was one of the main contributions of this study. Lack of access to capital and excessive bureaucracy had the main negative impact on SME success based on the study results. This is in line with the previous studies conducted in Saudi Arabia (Alharbi, 2014; Elhassan, 2019; Zamberi, 2012). At the same time, hostile business environment, absence of government programs, and Saudization did not demonstrate significant effects. For the first two factors, these findings collate well with the findings regarding business environment effects. They as well could be explained by reliance of business owners on themselves first. Finally, the absence of Saudization effect could be explained by the fact that the requirements of the program are less stringent for smaller business or by the fact that SMEs are more willing to hire domestic workers than larger organisations do.

The results of the study offer some suggestions for government-directed SME programs. It seems that the major progress has to be achieved in terms of giving access to capital in form of loans and credits. Likewise, policy changes have to be directed towards reducing bureaucracy and red tape. The influential individual factors for success can also be taught. The government programs for SME support may focus on providing tools for developing leadership skills, motivating to start and own a business, and providing some hands on training that can help gain valuable experience in owning and running a business.

Finally, this study suggested that the results of the study predominantly persist with the introduction of control factors related to both, individuals and organisations. However, the results suggest that at least age, gender, and years in business may have direct relationship to SME success. Further, other controls may be important. For example, this study did not consider the industry effect, which may be influential. These factors may have strong implications for government policy towards SMEs. For example, if male-owned businesses turn out more successful, more programs and financing should be considered for female-owned SMEs. Similarly, if such differences exist across industries, the government will have some guidance for industry-specific business supporting programs. Therefore, this line of research is very promising.

Whereas some directions for future research have been

suggested above, additional studies can also address this study limitations. For example, longitudinal studies may offer a better view regarding cause-effect relationships rather than cross-sectional design used in this research. Further, instrument refinement may be needed given that some items demonstrated acceptable yet mediocre reliability scores. Likewise, the model itself showed an acceptable fit but the scores could be improved with more refinement techniques. Researchers may also consider more focused studies of specific dimensional effects on SME success. Additional CSFs and barriers could be considered based on strong theoretical foundations. Finally, it could be useful to see whether the model proposed in this study holds for different environments. In this regard, studies in the MENA region are recommended as culturally close to Saudi Arabia. At the same time, comparative studies with other cultures/countries/regions may reveal important differences in factors influencing SME success.

Item	Factor	Loading
Ed1	Ed	.818
Ed2	Ed	.896
Lead1	LEad	.926
Lead2	LEad	.630
LocCont1	LocCon	.924
LocCont2	LocCon	.594
MotSucc1	MotSuc	.807
MotSucc2	MotSuc	.746
Risk1	Risk	.885
Risk2	Risk	.796
Exp1	Exp	.933
Exp2	Exp	.690
FinRes1	FinRes	.807
FinRes2	FinRes	.883
MotWfrce1	MtvWfrce	.835
MotWfce2	MtvWfrce	.795
ClrStr1	ClrStr	.784
ClrStr2	ClrStr	.808
CustFcs1	CustFcs	.846
CustFcs2	CustFcs	.885
TechInn1	TechInn	.748
TechInn2	TechInn	.785
BNet1	BNet	.894
BNet2	BNet	.897
PEnv1	PoliticalEnv	.796

SptProg1	PoliticalEnv	.875
AccCap1	EconEnv	.860
AccMkt1	EconEnv	.966
CultNorm1	SocEnv	.916
CultNorm2	SocEnv	.910
FavRegul1	LegalEnv	.843
FavRegul2	LegalEnv	.814
RDTran1	Technology Env	.967
RDTran2	Technology Env	.971
Bur1	Bureaucracy	.884
Bur2	Bureaucracy	.895
HotMkt1	HostMarkt	.928
HostMkt2	HostMarkt	.923
Saud1	Saudization	.862
Saud2	Saudization	.791
LckSpt1	LackSuppt	.871
LckSpt2	LackSuppt	.803
LackFn1	LackFinanc	.990
LackFn2	LackFinanc	.672

References

- Abdullahi, M.S., Puspa L.G., Zainudin A., Tahir, I.M., & Mat, N.A. (2015). The effect of finance, infrastructure and training on the performance of small and medium scale enterprises (SMEs) in Nigeria. *International Journal of Business and Technopreneurship5*, 421–452.
- Ahmad, S. Z. (2012). Micro, small and medium-sized enterprises development in the Kingdom of Saudi Arabia: Problems and constraints. *World Journal of Entrepreneurship, Management and Sustainable Development.*
- Ahmad, H., Ramayah, T., Wilson, C. &Kummerow, L. (2010). Is entrepreneurial competency and business success relationship contingent upon business environment? A study of Malaysian SMEs. *International Journal of Entrepreneurial Behavior& Research*, 16(3), 182-203.
- Alharbi, M.M. (2014). Barriers to franchising in Saudi Arabia. *Journal of Marketing Channels, 21*(3), 196-209.
- Alharbi, R. K., Yahya, S. B., & Ahmed, E. R. (2018). Characteristics of manager's and SMEs performance:

the role of access to finance as a moderator. *International Journal of Engineering & Technology*, 7(4), 5115-5119.

- Alhawal, H.M., Nurunnabi, M., & Al-Yousef, N. (2020). The impact of COVID-19 on SME in Saudi Arabia: A large scale survey. *Monshaat*. Retrieved from https://www.psu.edu.sa/psu/articles/2020/05/21/surve y-impact-of-covid-19-on-sme-in-saudi-arabia-whitepaper-02_1590089655.pdf
- Al-Tit, A., Omri, A., &Euchi, J. (2020). Critical success factors of small and medium-sized enterprises in Saudi Arabia: Insights from sustainability perspective. *Administrative Sciences*, *9*, 32-44.
- Allison, P.D. (1999). Multiple regression: A primer. Thousand Oaks, CA: Pine Forge Press.
- Altokhais, S. (2017). Factors related to the financial assistance of SME's through the KAFALA programs in Saudi Arabia. *Journal of Contemporary Scientific Research, 2.*
- Alzahrani, J. (2019). The impact of e-commerce adoption on business strategy in Saudi Arabian small and medium enterprises (SMEs).*Review of Economics and Political Science*, 4 (1),73-88.
- Amorós, J. E., Bosma, N. S., &Levie, J. (2013). Ten years of global entrepreneurship monitor: accomplishments and prospects. *International Journal of Entrepreneurial Venturing*, 5(2), 120 152.
- Appiah-Adu, K., Okpattah B., & Amoako, G.K. (2018). Building capability for organisational success: an emerging market perspective. *Journal of African Business*, 19(1), 86-104, DOI: 10.1080/ 15228916.2017.1346335
- Armstrong, J. C., & Overton, T. S. (1977). Estimating nonresponse bias in mail surveys. *Journal of Marketing Research*, *14*(3), 396–402.
- Atherton, A., Frith, K., Price, E., Gatt, M., & Rae, D. (2008). The 'problem' with regulation: systemic constraints to effective implementation of new legislation. Paper presented at the *31st ISBE Conference*, Belfast.

- Autio, E. (2005). Global Entrepreneurship Monitor. In *Report on High-Expectation Entrepreneurship*. London: GEM.
- Azimzadeh, S. M., Pitts, B., Ehsani, M., &Kordnaeij, A. (2013). The vital factors for small and medium sized sport enterprises start ups. *Asian Social Science*, 9(5), 243 253.
- Barringer, B. R., & Jones, F. F. (2004) Achieving rapid growth revisiting the managerial capacity problem. *Journal of Developmental Entrepreneurship*, 9(1), 73 87.
- Bentler, P. M., & Chou, C. P. (1987). Practical issues in structural modeling. *Sociological methods & research*, *16*(1), 78-117.
- Bhatti, A., & Kumar, M. D. (2012). Internationalization factors and entrepreneurial perception: Indication from Yemen SMEs. *Far East Journal of Psychology and Business*, 6(1), 1 21.
- Bilgin, M.H., Lau, C.K.M., & Demir, E. (2012). Technology transfer, finance channels, and sme performance: new evidence from developing countries. *The Singapore Economic Review*, *57*(3), 1250020.
- Bonet, F. P., Armengot, C. R., & Martín M. A. G. (2011). Entrepreneurial success and human resources. *International Journal of Manpower*, 32(1), 68 80.
- Boynton, A.C., &Zmud, R.W. (1984). An assessment of critical success factors. *Sloan Management Review*, *17*(27), 84-98.
- Brislin, R. W. (1970). Back-translation for crosscultural research. *Journal of cross-cultural psychology*, *1*(3), 185-216.
- Bullen, C.B., &Rockart, J.F. (1981). *A primer on critical success factors*. CISR Working Paper 69, Sloan School of Management, Massachusetts Institute of Technology, Cambridge, Massachusetts, 383-423.
- Byrne, B. M. (2012). *Structural equation modeling with Mplus*. New York, NY: Taylor & Francis Group.
- Calcagnini, G., &Favaretto, I. (2012). *Small businesses in the aftermath of the crisis: international analyses and policies*. New York, NY: Springer Verlag.

- Carter, R., & Van Auken, H. (2005). Bootstrap financing and owners' perceptions of their business constraints and opportunities. *Entrepreneurship and Regional Development*, *17*(2), 129 144.
- Chawla, S. K., Khanna, D., & Chen, J. (2010). Are small business critical success factors same in different countries. *SIES Journal of Management*, *7*, 1–12.
- Comrey, A. L., & Lee, H. B. (2013). A first course in factor analysis. Psychology press.
- Cowling, M., Liu, W. & Zhang, N. (2018). Did firm age, experience, and access to finance count? SME performance after the global financial crisis. *Journal of Evolutionary Economics, 28*, 77–100. https://doi.org/ 10.1007/s00191-017-0502-z
- Creswell, J.W., & Creswell, J.D. (2017). *Research design: qualitative, quantitative, and mixed methods approaches*. New York, NY: SAGE.
- Crook, T., Ketchen, D., Combs, J., & Todd, S. (2008). Strategic resources and performance: a meta-analysis. *Strategic Management Journal*, *29*(11), 1141–1154.
- Del Giudice, M., Scuotto, V., Garcia-Perez, A., &Petruzzelli, A.M. (2019). Shifting wealth II in Chinese economy. The effect of the horizontal technology spillover for SMEs for international growth. Technological Forecasting and Social Change, 145, 307-316.
- Disney, R., Haskel, J., &Heden, Y. (2003). Entry, exit and establishment survival in UK manufacturing. *The Journal of Industrial Economics*, *51*(1), 91 112.
- Dobbs M., & Hamilton R. T. (2007). Small business growth: recent evidence and new directions, *International Journal of Entrepreneurial Behaviour* and Research, 13(5), 296-322.
- Elhassan, E. (2019). Obstacles and problems facing the financing of small and medium enterprises in KSA. *Journal of Finance and Accounting*, 7(5), 168-183.
- Fernandez, E., Iglesias-Antelo, S., Lopez-Lopez, V., Rodriguez-Rey, M., & Fernandes-Jardon, C.M. (2019).
 'Firm and industry effects on small, medium-sized and large firms performance. BRQ Business Research Quarterly, 22(1), 25-35.

- Flynn, A., McKevitt, D., & Davis, P. (2015). The impact of size on small and medium-sized enterprise public sector tendering. *International Small Business Journal: Researching Entrepreneurship*, 33(4), 443-461.
- Frank, H., Lueger, M., &Korunka, C. (2007). The significance of personality in business start-up intentions, start-up realization and business success. *Entrepreneurship & Regional Development, 19*(3), 227-251.
- French, S. J., Kelly, S. J., Harrison, J. L. (2004). The role of strategic planning in the performance ofsmall, professional service firms: A research note. *Journal of Management Development*, 23(8), 765 776.
- Garrett, R. P., &Neubaum, D. O. (2013). Top management support and Initial strategic assets: A dependency model for internal corporate venture performance. *Journal of Product Innovation Management*, 30(5), 896-915.
- Gibb, A. (2000) SME policy, academic research and the growth of ignorance, mythical concepts, myths, assumptions, rituals and confusions. *International Small Business Journal*, *18*(3), 13 36.
- Gorgievski, M. J., Ascalon, M. E., & Stephan, U. (2011). Small business owners' success criteria, a values approach to personal differences. *Journal of Small Business Management*, 49(2), 207–232.
- Gray, D., Saunders, M., &Goregaokar, H. (2012). Success in challenging times: Key lessons for UK SMEs, University of Surrey working paper. Retrieved f r o m https://www.researchgate.net/publication/237076800_ Success_in_challenging_times_Key_lessons_for_UK _SMEs_-_Summary_Report
- Greenbank, P. (2001). Objective setting in the micro business. *International Journal of Entrepreneurial Behaviour and Research*, 7(3), 108 127.
- Halabi, C. E., & Lussier, R. N. (2014). A model for predicting small firm performance. *Journal of Small Business and Enterprise Development*, 21(1), 4 25.

- Harrison, R. T., Mason, C. M., & Girling, P. (2004). Financial bootstrapping and venture development in the software industry. *Entrepreneurship and Regional Development*, 16(4), 307 33.
- Heinonen, J., Nummela, N., &Pukkinen, T. (2004). To grow or not to grow? An analysis of internationally growth orientated Finnish SMEs. Paper presented at the *EIBA Annual Conference*, Slovenia, 5 8 December.
- Herron, L., & Robinson, R.B. (1993). A structural model of the effects of entrepreneurial characteristics on venture performance. *Journal of Business Venturing*, 8(3), 281-294.
- Islam, A., Khan, M. A., Obaidullah A. Z. M., &Alam, M. S. (2011). Effect of entrepreneur and firm characteristics on the business success of small and medium enterprises (SMEs) in Bangladesh. *International Journal of Business and Management*, 6(3), 289 299.
- Karaev, A., Koh, L. S. C., &Szamosi, L. T. (2007). The cluster approach and SME competitiveness: a review. *Journal of Manufacturing Technology Management*, 18(7), 818 835.
- Kautonen, T., Down, S., & South, L. (2008). Enterprise support for older entrepreneurs: The case of PRIME in the UK. *International Journal of Entrepreneurial Behaviour and Research*, *14*(2), 85 101.
- Kennedy, J., & Drennan, J. (2002). Entrepreneurial intentions of women. *Small Enterprise Research*, *10*(1), 75 87.
- Khan, R.U., Salamzadeh, Y., & Shah, S.Z.A. (2021). Factors affecting women entrepreneurs' success: a study of small- and medium-sized enterprises in emerging market of Pakistan. *Journal of Innovation and E n t r e p r e n e u r s h i p , 1 0* (11). https://doi.org/10.1186/s13731-021-00145-9
- Khin, S., & Ho, T.C.F. (2018). Digital technology, digital capability and organisational performance: A mediating role of digital innovation. *International Journal of Innovation Science*, 11(2), 177-195. https://doi.org/10.1108/IJIS-08-2018-0083

- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York, NY: Guilford Press.
- Kowo, S., Adenuga, O., &Sabitu, O. (2019). The role of SMEs development on poverty alleviation in Nigeria. *Insights into Regional Development, Entrepreneurship and Sustainability Center, 1*(3), 214-226.
- Lampadarios, E., Kyriakidou, N., Smith, G. (2017). Towards a new framework for SMEs success: a literature review. *International Journal of Business and Globalization, 18*(2), 194-232.
- Levie, J., Hart, M., & Bonner K. (2014). Global entrepreneurship monitor: United Kingdom 2013 Monitoring Report, Retrieved from http://www. gemconsortium.org/docs/download/3371
- Littunen, H. (2000). Entrepreneurship and the characteristics of the entrepreneurial personality. *International Journal of Entrepreneurial Behavior*& *Research*, 6(6), 295-310.
- Lo, M.C., Wang, Y.C., Wah, C.R.J., &Ramayah, T. (2016). The critical success factors for organisational performance of SMEs in Malaysia: a partial least squares approach. *Review of Business Management*, *18*(61), 370-391.
- Locke, S. (2004). ICT adoption and SME growth in New Zealand. *Journal of American Academy of Business*, 4(1/2),93 102.
- Lynch Wood, G., & Williamson, D. (2014). Civil regulation, the environment and the compliance orientations of SMEs. *Journal of Business Ethics*, *125*, 467–480.
- MacCallum, R.C., Browne, M.W., & Sugawara, H.M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1, 130–149.
- McLarty, R., Pichanic, M., &Srpova, J. (2012). Factors influencing the performance of small to medium sized enterprises: an empirical study in the Czech Republic. *International Journal of Management, 29*(3), 36 47.

- Migdadi, M. (2009). Knowledge management enablers and outcomes in the small-and-medium sized enterprises. *Industrial Management & Data Systems*, 109, 840–858.
- Nikolic, N., Dhamo, Z., Schulte, P., Mihajlovic, I., &Kume, V. (2015). An analysis of factors affecting failure of SMEs. In *The Proceedings of 11th International May Conference on Strategic Management—IMKSM2015*, Bor, Serbia, May 29–31; pp. 160–80.
- Nulkar, G. (2014). SMEs and environmental performance A framework for green business strategies. *Procedia Social and Behavioral Sciences, 133*, 130 140.
- Okpara, J. O., & Wynn, P. (2007). Determinants of small business growth constraints in a Sub Saharan African economy. *SAM Advanced Management Journal*, *72*(2), 24 35.
- Onodugo, V., &Onodugo, C.I. (2015). Impact of sociocultural factors on entrepreneurial development in Nigeria. *African Educational Research Journal*, *3*(4), 246-254.
- Pletnev, D., &Barkhatov, V. (2016). Business success of small and medium sized enterprises in Russia and social responsibility of managers. *Procedia-Social and Behavioral Sciences*, 221, 185–93.
- Pokdsakoff, P.M., MacKenzie, S.B., &Podsakiff, N.P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, 63, 539-569.
- Rafiki, A. (2019). Determinants of SME growth: an empirical study in Saudi Arabia. International *Journal of Organizational Analysis*.
- Raju, P. S., Lonial, S. C., & Crum, M. D. (2011). Market orientation in the context of SMEs: A conceptual framework. *Journal of Business Research*, 64, 1320–1326.
- Rockart, J. (1979). Chief executives define their own data needs. *Harvard Business Review*, 52(2), 81-93.
- Rogoff, E. G., Lee, M. S., & Suh, D. C. (2004). "Who

done it?" Attributions by entrepreneurs and experts of the factors that cause and impede small business success. *Journal of Small Business Management, 42*(4), 364–376.

- Rose, R. C., Kumar, N., & Yen, L.L. (2006). Entrepreneurs success factors and escalation of small and medium-sized enterprises in Malaysia. *Journal of Social Sciences*, *2*, 74–80.
- Rupasingha, A., Wang, K. (2017). Access to capital and small business growth: evidence from CRA loans data. *The Annals of Regional Science*, 59, 15–41. https://doi.org/10.1007/s00168-017-0814-9
- Sajilan, S., &Tehseen, S. (2015). Cultural orientations, entrepreneurial competencies and SMEs business success: The contingent roles of environmental turbulence and network competence. *Review of Integrative Business and Economics Research*, 4(2), 20.
- Saxena, S. (2018). National open data frames across Japan, The Netherlands and Saudi Arabia: role of culture. *Foresight*, 20(1), 123-134.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of educational research*, *99*(6), 323-338.
- Sefiani, Y., Davies, B.J., Bown, R., & Kite, N. (2018). Performance of SMEs in Tangier: the interface of networking and wasta. *EuroMed Journal of Business*, *13*(1), 20-43. https://doi.org/10.1108/EMJB-06-2016-0016
- Simpson, M., Padmore, J., & Newman, N. (2012). Towards a new model of success and performance in SMEs. *International Journal of Entrepreneurial Behaviour & Research*, 18(3), 264–285.

- Tabachnick, B., &Fidell, L. (2001). Using multivariate statistics. Boston: Ally and Bacon.
- Unger, J. M., Rauch, A., Frese, M., &Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta analytical review. *Journal of Business Venturing*, 26, 341 358.
- Walker, E., & Brown, A. (2004). What success factors are important to small business owners? *International Small Business Journal*, 22(6), 577 594.
- Welter, F., &Smallbone, D. (2006). Exploring the role of trust in entrepreneurial activity. *Entrepreneurship Theory and Practice*, *30*(4), 465–476.
- Wetherly, P., & Otter, D. (2014). *The business environment: themes and issues in a globalizing world* (3rd Ed.). Oxford: Oxford University Press.
- Wilson, C.D.H., Williams, I.D., & Kemp, S. (2012). An evaluation of the impact and effectiveness of environmental legislation in small and medium-sized enterprises: experiences from the UK. *Business Strategy and the Environment, 21*(3), 141–156.
- Wong, K. Y. (2005). Critical success factors for implementing knowledge management in small and medium enterprises. *Industrial Management & Data Systems*, *105*, 261–79.
- Worthington, I., & Britton, C. (2009). *The business environment* (6th Ed.). Harlow, Essex: Financial Times Prentice Hall.
- Zamberi, A.S. (2012). Micro, small and medium sized enterprises development in the Kingdom of Saudi Arabia: Problems and constraints. *World Journal of Entrepreneurship, Management and Sustainable Development*, 8(4), 217-232.
- Ziggers, G. W., &Henseler, J. (2015). The reinforcing effect of a firm's customer orientation and supply-base orientation on performance. *Industrial Marketing Management*, *52*, 18-26.