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## Article

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Administrative Sciences

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*Suggested Citation:* Al-Tit, Ahmad; Omri, Anis; Euch, Jalel (2019) : Critical success factors of small and medium-sized enterprises in Saudi Arabia: Insights from sustainability perspective, Administrative Sciences, ISSN 2076-3387, MDPI, Basel, Vol. 9, Iss. 2, pp. 1-12, <https://doi.org/10.3390/admsci9020032>

This Version is available at:

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## Article

# Critical Success Factors of Small and Medium-Sized Enterprises in Saudi Arabia: Insights from Sustainability Perspective

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Received: 7 March 2019; Accepted: 26 March 2019; Published: 2 April 2019



**Abstract:** The aim of this study is to explore the critical success factors (CSFs) of small and medium-sized enterprises (SMEs) in Saudi Arabia. A questionnaire was developed using 28 factors/indicators identified from the previous researches. From 500 respondents, a total of 347 questionnaires were returned. By conducting exploratory factors analysis, these indicators were categorized into six factors, namely: Individual factors, business characteristics, management factors, business support, capital availability and business environment. Using IBM SPSS and AMOS, the results indicated that business support was the most critical factor that significantly affects the success of SMEs in Saudi Arabia, followed by individual factors, capital availability, and management factors. They also indicated that business characteristics and business environment factors had no significant impacts on the success of these enterprises.

**Keywords:** critical success factors; business support; corporate social responsibility; SMEs; Saudi Arabia

## 1. Introduction

Small and medium-sized enterprises (SMEs) play an important role in the modern economy. What determines their success of SMEs is a topic of much academic debate. Scholars from various disciplines agreed on the importance of SMEs success in employment, wealth, and social and economic development (e.g., [Autio 2005](#); [Omri and Ayadi-Frikha 2014](#); [Omri et al. 2015](#)). According to [Pletnev and Barkhatov \(2016\)](#), SMEs contribute approximately 56% of the gross domestic product (GDP) of many European countries ([Muller et al. 2017](#)). Similarly, [Abdullahi et al. \(2015\)](#) cited additional factors that explain the importance of SMEs, such as communities' empowerment, poverty alleviation and employment opportunities provision.

In fact, the factors that determine their success have increasingly drawn the attention of scholars, practitioners, and policy makers. A review of the peer reviewed literature on critical success factors (CSFs) showed that these factors have been and continue to be the focus of many researchers in several areas, such as CSFs for business start-ups in several countries, such as China and Malaysia ([Watson et al. 1998](#); [Huang et al. 2011](#); [Chong 2012](#); [Chawla et al. 2010](#); [Omri et al. 2015](#); [Pletnev and Barkhatov 2016](#); [Lampadarios et al. 2017](#)), total quality management ([Yusof and Aspinwall 1999, 2000](#)), business intelligence implementation ([Olszak and Ziemia 2012](#)), business models for sustainability of food and beverage companies in Netherlands ([Long et al. 2018](#)), women-owned small and medium-sized enterprises in UAE ([Gupta and Mirchandani 2018](#)), environmental manufacturing ([Jabbour et al. 2018](#)), adoption of e-commerce by SMEs in Nigeria ([Agwu and Murray 2015](#)), implementation of lean six

sigma (Laureani and Antony 2018), implementation of business intelligence in SMEs in Poland (Olszak and Ziemia 2012). In a parallel bundle of the literature, scholars examined CSFs for micro, small and medium sized enterprises in the Kingdom of Saudi Arabia (KSA) either in general (Zamberi 2012) or in different areas like knowledge management (Migdadi 2009), e-commerce (Al-Ghamdi et al. 2011; Sin et al. 2016), technology transfer (Merdah and Sadi 2011), CSFs of enterprise resource planning (Aldayel et al. 2011), business marketing (Sadi and Iftikhar 2011), computer technology acceptance (Al-Gahtani 2004).

The importance of theoretical research to provide a conceptual framework for the success factors of SMEs to help investors, entrepreneurs and small business finance organizations and government institutions to adopt a strategy that contributes to enhancing the success of small projects and protecting them from managerial problems and financial failure, as well as directing the local community institutions to support these projects. The research is also important in presenting a model that explains the impact of critical success factors of SMEs in Saudi Arabia, thus providing a model adapted to the Saudi environment, which may serve as a starting point for conducting further researches. The main objective of this study is to identify the success factors of SMEs that contribute to sustainable development in Saudi Arabia by exploring the CSFs of 347 SMEs by using structural equation modeling. To the best of our knowledge, none previous researches have used 28 indicators, which are categorized into six factors, namely: Individual factors, business characteristics, management factors, business support, capital availability and business environment, on the success of SMEs in Saudi Arabia.

The rest of the paper is organized as follows. Section 2 discusses the related literature of CSFs for small-sized enterprises. Section 3 discusses the research method. Section 4 describes our sample and variables. Section 5 presents and discusses the empirical results. Section 6 concludes and formulates some managerial recommendations.

## 2. Success Factors of SMEs: A Review of Literature

There has been a series of previous studies aimed at detecting the critical success factors of SMEs. For instance, Chawla et al. (2010) considered CSFs of small business in China and the USA, and found that small business in China are subject to several success factors related to marketing, competitive forces, industry trends, location, capital availability, and owner experience. Their study exhibited similarities between small business in China and the USA, except for the business-financing factor. In case of SMEs in Malaysia, Chong (2012) investigated the CSFs and he identified that managerial skills, government support, training, access to capital, marketing, customer service, competitive prices, human resource management, social skills, location, family and friends support are the key success factors. For a developing country, Ng and Kee (2012) identify the CSFs for SMEs, such as leadership and management, intellectual capital, organizational innovation, entrepreneurial characteristics and competence, human resource, motivation and market orientation. In addition, Nikolić et al. (2015) classified all factors that attribute to SMEs success into two groups: Individual factors and non-individual factors. Individual factors cover entrepreneur characteristics, such as owner and manager skills, personal characteristics, gender and motivation, while non-individual factors refer to internal (marketing, ability to compete, technology, innovation) and external factors (limited finance, market conditions, intensive competition).

In their mixed-method research paper, Omri et al. (2015) investigated factors that affect small business success using data from Tunisian micro-enterprises and concluded that innovation activities of micro-enterprises significantly mediated the effect of human, social, and financial capital on small business success. Moreover, Lampadarios et al. (2017) categorized the CSFs for SMEs into three factors: Entrepreneurial factors (owner age, gender, education level, experience and managerial skills), enterprise factors (business age and size, business networks, financial resources, customer relationship management; human capital, marketing and strategic planning) and business environment factors (political, economic, socio-cultural, technological, legal, and ecological environments).

Other veins in the literature examined CSFs for adopting and implementing several constructs. For instance, [Yusof and Aspinwall \(1999\)](#) studied CSFs of total quality management (TQM) for SMEs and proposed ten factors cover management leadership, continuous improvement system, employee education and training, supplier quality management, measurement and feedback, systems and processes, human resource management, resources, work environment and culture, along with tools and techniques. [Olszak and Ziemba \(2012\)](#) have also studied the CSFs for business intelligence implementation in SMEs and identified seven CSFs: Management commitment and support, a clear strategic vision, business-centric championship and a balanced team composition, business-driven and iterative development approach, change management, sustainable data quality and integrity, and business-driven, scalable, and flexible technical framework. In a study conducted by [Wong \(2005\)](#) on CSFs of knowledge management (KM) implementation, eleven CSFs were proposed: Management leadership and support, organizational culture, information technology, well-planned strategy, knowledge management measurement, organizational infrastructure, processes and activities of knowledge management, training, motivation, human and financial resources, as well as human resource management. Using data collected for respondents selected from SMEs in Nigeria, [Abdullahi et al. \(2015\)](#) found that financial needs, infrastructure and employee training were positively related to SMEs performance. In case of India, [Vyas et al. \(2015\)](#) determined CSFs of SMEs in banking in India: Supportive organizational factors, rapid delivery and response to customers, marketing, banking model and policy, and improved customer service. In Russia, [Pletnev and Barkhatov \(2016\)](#) indicated that SMEs are affected by CSFs like employee professional and personal qualities, relations with customers and suppliers, entrepreneurial skills of the top executives, wages, as well as manager's social responsibility.

In Saudi Arabia, [Migdadi \(2009\)](#) explored CSFs for knowledge management in SMEs and highlighted the following factors: Management leadership and support, culture, information technology, strategy, measurement, organizational infrastructure, processes, motivational aids, resources, human resource management, customer satisfaction and external relations. [Alshagawi \(2015\)](#) conducted analytical research of strategies for the women entrepreneurship success. The results determine the success factors: Family support, hard work, managerial skills and good customer service, and business knowledge. Small and medium-sized enterprises still need to be analyzed. [Alshumaimri and Almohaimeed \(2014\)](#) note that financial and administrative support for small and medium-sized enterprises must be provided, especially in the high failure rate. On the other hand, [Mahdi \(2014\)](#) identified a study aimed at identifying the requirements of entrepreneurship in Saudi Arabia by deepening the belief in business values and ethics to improve the social culture. The main objective of this study is to identify the success factors of SMEs that contribute to sustainable development in Saudi Arabia.

### 3. Research Method and Hypotheses Development

#### 3.1. Instrument

Prior to gathering research data, a questionnaire was developed using CSFs found in the literature. A total of 52 CSFs for small and medium-sized business success were identified and included in a questionnaire in order to identify the importance of these factors. Adapting the method used by [Wong \(2005\)](#), the questionnaire was anchored using 5-point Likert from 1 (not successful), 2 (slightly successful), 3 (moderately successful), 4 (successful), to 5 (very successful). Responses with 1 and 2 were regarded as poor, responses with 3 were satisfactory, while responses with 4 and 5 were deemed good. Refining the questionnaire in light of academics and practitioners' modifications resulted in 42 CSFs with satisfactory and good scores.

### 3.2. Factor Analysis

The forty-two factors identified by the group of academics and practitioners were explored via principal component analysis. The results depicted in Figure 1, which is a scree plot of components number and eigenvalue values, showed that six components were extracted with Eigenvalues greater than 1 (Hayton et al. 2004), since factors with Eigenvalues less than 1 were excluded because those factors account for no more variance (Terwee et al. 1998).

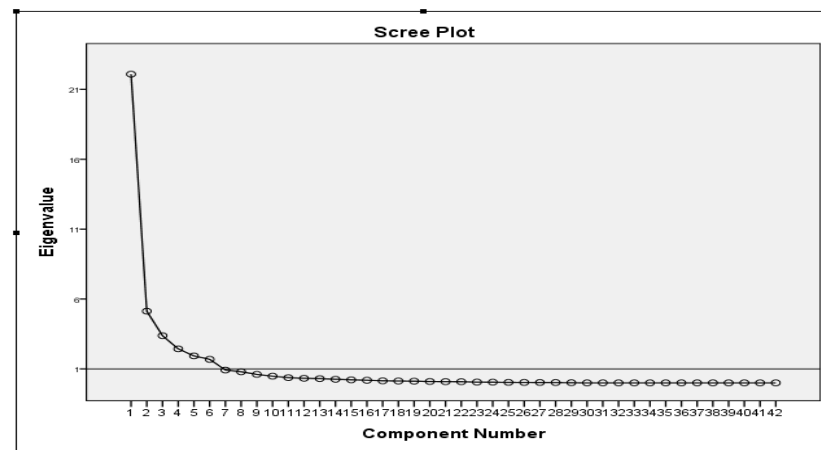


Figure 1. Scree plot of the components extracted.

Using principal component analysis as an extraction method, as well as varimax with Kaiser normalization as a rotation method, the six components that extracted explained, as shown in Table 1, about 87% of the total variance.

Table 1. Total variance explained by extracted components.

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	22.086	52.586	52.586
2	5.130	12.214	64.800
3	3.378	8.044	72.843
4	2.431	5.789	78.632
5	1.929	4.593	83.225
6	1.681	4.003	87.228

The results reported in Table 1 indicated that component 1 (individual factor) explained about 53% of the total variance, followed by component 2 (business characteristics), which explain about 12% of the total variance. Furthermore, component 3 (management factor) was accounted for 8% of the total variance, in comparison with component 4 (business support) that accounted for 6% of the total variance explained. Component 5 (capital availability) explained about 5% of the total variance and component 6 (business environment) explained about 4% of the total variance. Table 2 indicated that all factor loadings of the six components were ranged from 0.711 to 0.962. Factor loadings of individual factor items (ITEM1-ITEM5) ranged from 0.776 to 0.962, business characteristics items (ITEM6-ITEM9) ranged from 0.791–0.901, management factor items (ITEM10-ITEM17) ranged from 0.739 to 0.898, business support items (ITEM18-ITEM20) ranged from 0.722 to 0.776, capital availability items (ITEM21-ITEM23) ranged from 0.746 to 0.968, and finally, business environment items (ITEM24-ITEM28) ranged from 0.711 to 0.884. It was noted that all factor loadings were higher than 0.50 (Luarn and Lin 2005). Acceptable factor loadings were regarded as a key condition for obtaining a good model (Ullman and Bentler 2012).

**Table 2.** Components factor loadings, average variance extracted (AVE) and composite reliability (CR).

Factors	1	2	3	4	5	6	AVE	CR.
ITEM1	0.823							
ITEM2	0.909							
ITEM3	0.943						0.80	0.953
ITEM4	0.928							
ITEM5	0.876							
ITEM6		0.860						
ITEM7		0.918					0.80	0.942
ITEM8		0.902						
ITEM9		0.899						
ITEM10			0.951					
ITEM11			0.939					
ITEM12			0.952					
ITEM13			0.932				0.88	0.984
ITEM14			0.946					
ITEM15			0.904					
ITEM16			0.951					
ITEM17			0.945					
ITEM18				0.854				
ITEM19				0.889			0.77	0.910
ITEM20				0.890				
ITEM21					0.941			
ITEM22					0.967		0.91	0.967
ITEM23					0.950			
ITEM24						0.963		
ITEM25						0.953		
ITEM26						0.957	0.91	0.981
ITEM27						0.952		
ITEM28						0.945		

### 3.3. Reliability and Validity

Reliability was measured based on composite reliability (CR) and validity was tested by convergent validity using the average variance extracted (AVE). CR for all factors, as can be seen in Table 2, were greater than 0.70. CR values from 0.60–0.70 in exploratory factor analysis are satisfactory, and AVE values were greater than 0.50 (Hair et al. 2011; Al-Tit 2017). Therefore, the reliability and validity criteria were met.

### 3.4. Hypotheses Development

Based on the above-mentioned analysis, six critical success factors were identified: Individual factors, business characteristics, management factors, business support, capital availability and business environment. In order to investigate the effects of these factors on the success of small-sized enterprises, it was hypothesized that these success factors are positively related to small-sized enterprises success. Rose et al. (2006) studied entrepreneurs success factors in small and medium-sized enterprises in Malaysia and found that education level of the owner or manager, as one item of the individual's factors, had a positive relationship with business success. Kubickova and Prochazkova (2014) mentioned some success factors related to business environments, such as legal factors, individual factors, such as owner or manager experience. According to Al-Mahrouq (2010), there are five factors that contribute to the success of the small and medium-sized enterprises in Jordan, which are technological factors, firm's structure, financial structure, marketing and productivity, as well as human resource structure. In a study on Russian SMEs by Pletnev and Barkhatov (2016), individual factors, i.e., personal qualities and management factors, such as social responsibility were regarded as key success factors. Radzi et al.



(2017) indicated that the success of small businesses is related to entrepreneurial competency and technology usage. For Lussier and Corman (1995), business experience and use of professional advisors were key drivers of business success. Lampadarios et al. (2017) highlighted the importance of entrepreneurial factors, enterprise factors and business environment factors as success factors of small and medium-sized enterprises. In a study in the tourism industry in Saudi Arabia, Sadi and Iftikhar (2011) examined CSFs of marketing in small and medium-sized enterprises. Their results underlined that customer orientation and marketing planning were important factors while Internet usage and personal or social networks have no effect in this context. Referring to Table 1, numerous CSFs that positively related to the success of small enterprises. On the basis of the literature, the following hypotheses were proposed:

**Hypothesis 1.** *Individual factors are positively related to small-sized enterprises success.*

**Hypothesis 2.** *Business characteristics are positively related to small-sized enterprises success.*

**Hypothesis 3.** *Management factors are positively related to small-sized enterprises success.*

**Hypothesis 4.** *Business support is positively related to small-sized enterprises success.*

**Hypothesis 5.** *Capital availability is positively related to small-sized enterprises success.*

**Hypothesis 6.** *Business environment is positively related to small-sized enterprises success.*

#### 4. Research Sample

The population of this study consisted of small-sized enterprises that receive funds from The Centennial Fund, Baader Foundation and The Saudi Fund for Development, since they are the most significant financers of these businesses in Saudi Arabia during 2016. About 500 participants were randomly selected as a research sample in order to collect data on CSFs and business success. Five hundred questionnaires were distributed and 347 were returned.

Table 3 shows CSFs that used in the current study. Five items were used to measure individual factors, four factors were used to measure business characteristics, and eight factors were used to measure management factors. Three items for each factor measure both business support and capital availability. Business environment was measured using five items. References to these factors can be seen in Table 1. Business success was measured by asking respondents to rank their business success based on six items adopted from Radzi et al. (2017, p. 43). The questionnaire consisted of 28 items.

**Table 3.** Items of the used variables.

Factors	Items	Description
Individual factors	ITEM1	Owner/manager age
	ITEM2	Owner/manager education level
	ITEM3	Owner/manager business skills and experience
	ITEM4	Use of professional advisors
	ITEM5	Personal financial needs. e.g., improve living style
Business characteristics	ITEM6	Business size
	ITEM7	Business networks
	ITEM8	Business innovation
	ITEM9	Ability to compete

Table 3. Cont.

Factors	Items	Description
Management factors	ITEM10	Management commitment and support
	ITEM11	Organizational infrastructure
	ITEM12	Human resource management practices
	ITEM13	Organizational culture
	ITEM14	Work environment
	ITEM15	Internal communication
	ITEM16	Corporate social responsibility
	ITEM17	Information technology
Business support	ITEM18	Financial support
	ITEM19	Government support
	ITEM20	Family and friends support
Capital availability	ITEM21	Financial capital
	ITEM22	Human capital
	ITEM23	Social capital
Business environment	ITEM24	Economic factors
	ITEM25	Technological factors
	ITEM26	Legal factors
	ITEM27	Socio-cultural factors
	ITEM28	Ecological factors

## 5. Results and Discussion

### 5.1. Confirmatory Factor Analysis

The results of exploratory factor analysis were confirmed using confirmatory factors analysis (CFA). As exhibited in Figure 2, six factors were loaded on 25 items forming a well-fitted measurement model. Factor 1 (Individual factors) is related to four items (1, 3, 4 and 5), factor 2 (business characteristics) is linked with three items (6, 7 and 8), factor 3 (management factors) is connected with eight items (10–17), factor 4 (business support) is associated with three items (18–20). Moreover, an association between factors 5 (capital availability) and three items (21–23) was established, as well as between factor 6 (business environment) and four items (24, 25, 26 and 28). The measurement model fit summary asserted that this model fit the data well (*Number of Parameters* NPAR = 67, *Chi-Square Value* CMIN = 384.751, *Degrees of Freedom* DF = 258,  $p = 0.000$ , *CMIN/DF* = 1.491, *Comparative Fit Index* GFI = 0.919, *Adjusted Goodness of Fit* AGFI = 0.898, *Normed Fit Index* NFI = 0.939, *Comparative Fit Index* CFI = 0.979, *Root Mean Square of Error Approximation* RMSEA = 0.038).

### 5.2. Structural Model

Based on the results of CFA in which three items were removed, the structural model was developed as can be seen in Figure 3. It was revealed that factor 1 (individual factors) had a significant effect on small-sized enterprises success ( $\beta = 0.157$ , S.E. = 0.063, CR = 2.484,  $p = 0.013$ ), factor 3 (management factors) had a significant effect on small-sized enterprises success ( $\beta = 0.105$ , S.E. = 0.043, CR = 2.429,  $p = 0.015$ ) and factor 4 (business support) had a significant effect on small-sized enterprises success ( $\beta = 0.289$ , S.E. = 0.046, CR = 6.257,  $p = 0.000$ ), as well factor 5 (capital availability) had a significant effect on small-sized enterprises success ( $\beta = 0.131$ , S.E. = 0.063, CR = 2.090,  $p = 0.037$ ). On the other hand, factor 2 (business characteristics) had no significant effect on small-sized enterprises success ( $\beta = 0.002$ , S.E. = 0.049, CR = 0.039,  $p = 0.969$ ) and factor 6 (business environment) had no significant effect on small-sized enterprises success ( $\beta = 0.047$ , S.E. = 0.045, CR = 1.054,  $p = 0.292$ ). These results are summarized in Table 4.



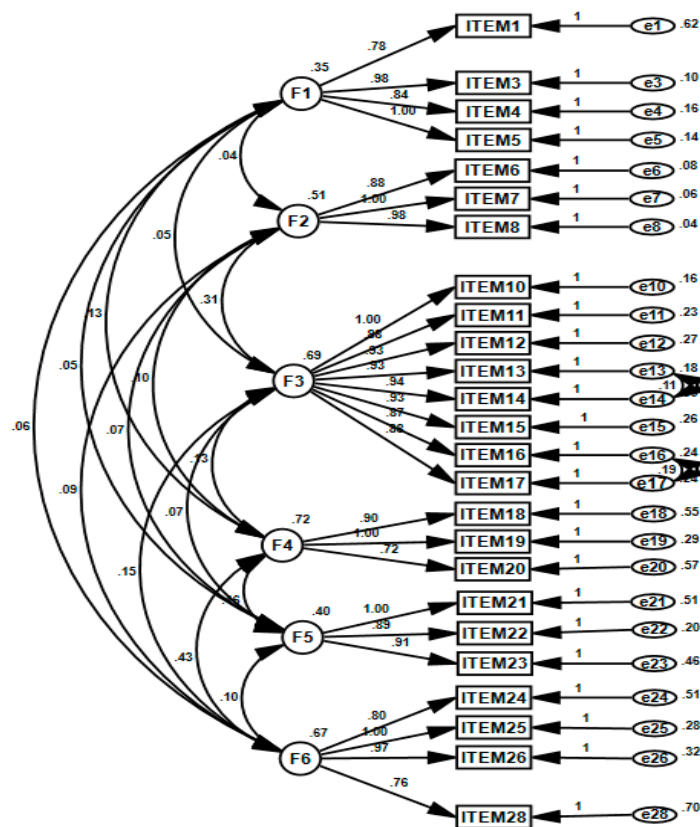


Figure 2. Results of confirmatory factors analysis (CFA).

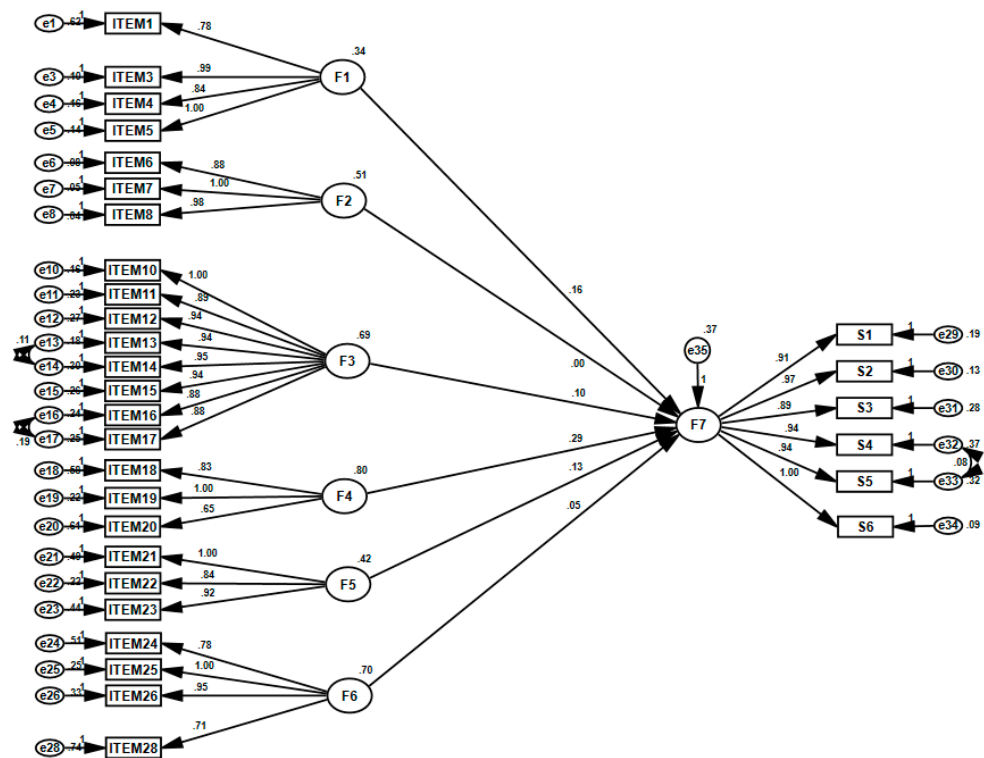


Figure 3. Results of the structural model.

**Table 4.** Results of structural model.

Hyp. No.	Path	$\beta$	S.E.	CR	P
H1	Individual factors → business success	0.157	0.063	2.484	0.013
H2	business characteristics → business success	0.002	0.049	0.039	0.969
H3	Management factors → business success	0.105	0.043	2.429	0.015
H4	business support → business success	0.289	0.046	6.257	0.000
H5	Capital availability → business success	0.131	0.063	2.090	0.037
H6	business environment → business success	0.047	0.045	1.054	0.292

The results in Table 4 confirm that four hypotheses out of six were supported. Hypotheses H1, H3, H4 and H5 were supported and hypotheses H2 and H6 were rejected. That is, individual factors, management factors, business support and capital availability had significant effects on small-sized enterprises success, while business characteristics and business environment had no such effects.

The most important factors that affect the success of small and medium-sized in Saudi Arabia were those related to business support, such as financial support, government support, and family and friends support. These results were in agreement with Chong (2012). Those factors were followed by individual factors, such as entrepreneur age, skills and business skills, use of professional advisors and personal financial needs were the most critical individual factors that affect the success of small business. Similar findings were echoed by Chawla et al. (2010), Chong (2012), Ng and Kee (2012), Nikolić et al. (2015), Migdadi (2009), Pletnev and Barkhatov (2016), Hazudin et al. (2015), Rose et al. (2006) and Lampadarijos et al. (2017) with their emphasis on entrepreneurial characteristics as CSFs of business success. Capital availability in terms of financial capital, human capital and social capital ranked third as critical factors that have significant effects on small-sized enterprises success.

These results are in line with Chawla et al. (2010), Omri et al. (2015), Migdadi (2009), Vyas et al. (2015). The results indicated that management factors, like management commitment and support, organizational infrastructure, human resource management practices, organizational culture, work environment, internal communication, corporate social responsibility and information technology, ranked last in terms of their effect on small-sized enterprises success. Same results were reported by Chong (2012), Ng and Kee (2012) and Wong (2005). Finally, the results found that business characteristics, e.g., business size, business networks, business innovation and ability to compete, as well as business environment factors, such as economic, technological, legal, socio-cultural and ecological factors have no effect on the success of small and medium-sized enterprises. Sadi and Iftikhar (2011) cited that personal or social networks have no effect on the success of small and medium-sized enterprises in Saudi Arabia. Differently, Lampadarijos et al. (2017) and Kubickova and Prochazkova (2014) regarded business environment factors, such as political, economic, socio-cultural, technological, legal, and ecological environments as CSFs of business success.

## 6. Conclusions

An expansive review of the literature of small and medium-sized CSFs uncovered 52 factors. Refining these factors based on suggestions of a group of academics produced a list incorporated a total of 42 factors. The initial results reveal that 28 factors out of the 42 factors were perceived as CSFs for small and medium-sized enterprises. The results of the exploratory factor analysis showed that the 28 factors were loaded on six factors. Those factors were labeled as individual factors, business characteristics, management factors, business support, capital availability and business environment. In order to achieve the objective of the study, a questionnaire was developed based on these 28 factors and distributed to a sample of respondents from small and medium-sized enterprises that receive funds from The Centennial Fund, Baader Foundation and The Saudi Fund for Development, since they are the most significant financiers of these businesses in Saudi Arabia during 2016. The confirmatory factor analysis in light of goodness-of-fit statistics confirmed that the six factors can be measured well using 25 items. Hence, the structural model was developed based on these 25 items. Significantly, the

results of our study evinced that four factors out of the six factors studied were critical to the success of small and medium-sized enterprises in the KSA, which were individual factors, management factors, business support and capital availability.

In fact, all CSFs studied in the current study can be regarded as important factors that positively affect the success of small and medium businesses. However, the interlocked nature of these factors makes some of them more important. For example, ecological factors as a key factor in the business environment can be practiced through corporate social responsibility, social factors are supported by family and friends support, as well as social capital as factors related to business support and the capital itself.

On the basis of these results, it was concluded that small-sized enterprises in Saudi Arabia are subject to the support provided by the Centennial Fund, Baader Foundation and The Saudi Fund for Development in the first place. Secondly, those enterprises are dependent on entrepreneurial characteristics, such as age, skills and personal financial needs. In the third place, capital as measured by financial, human, and social capital is a key success factor for those enterprises, in addition to management factors.

On that account, Saudi policy makers are required to look upon the continuance of financial support provided by the Centennial Fund, Baader Foundation and The Saudi Fund for Development. Moreover, the selection of business owners who are applicants to receive the above-mentioned financial support should also consider the personal characteristics of those applicants, such as age and business experience. Policy makers also should introduce a new notion regarding pre-training of business owners to acquire management and related skills before they start-up their business. In-service entrepreneurs ought to receive simultaneous professional consultations on their businesses.

The most meaningful limitation of this study is related to the cross-sectional sampling design and to respondents chosen from small-sized enterprises that receive funds from The Centennial Fund, Baader Foundation, and The Saudi Fund for Development. Further studies are required to include more respondents (e.g., private enterprises), using longitudinal research design in order to make these results general and applicable for all small and medium-sized enterprises in Saudi Arabia.

**Author Contributions:** A.A.-T., A.O. and J.E. conceptualization; Methodology, Validation, and Funding Acquisition, A.A.-T., formal analysis, and Project management, A.A.-T.; A.O., Writing: draft, A.A.-T.; J.E., Writing: revision and editing.

**Funding:** This research was funded by the Deanship of Scientific Research in Qassim University, Buraidah, Saudi Arabia.

**Acknowledgments:** The authors would like to thank the respondents who participated in this research. They would also like to thank the Deanship of Scientific Research in Qassim University, Buraidah, Saudi Arabia.

**Conflicts of Interest:** The authors declare no conflict of interest.

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