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# The Determinants of Growth Performance of Small Services Enterprises in Yemen

## *(Penentu Prestasi Pertumbuhan Perusahaan Kecil Sektor Perkhidmatan di Yaman)*

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*ABSTRACT*

*This study investigated the determinants of growth performance of the small service enterprises (SSEs) in Yemen. It examined how the management capabilities' determinants (financial operations, firm marketing and firm management), business environment determinants (macroeconomic determinants and lack of capital) and firm resources (ease of doing business, personal traits and owner characteristics) influence the performance growth of small service enterprises. The data was collected through a survey administered to 170 samples in two cites: Sana'a and Taiz in Yemen. In using the method of the structural equation modelling (SEM) based on SPSS and AMOS programs, the results found that management capabilities determinants and business environment determinants affected the growth performance of small service enterprises in the country, but the firm resources determinants did not show statically significant impacts on these enterprises in Yemen.*

*Keywords: Growth performance; service sector; small enterprises; Yemen*

*ABSTRAK*

*Kajian ini meneliti dan pengenal pasti penentu kepada prestasi pertumbuhan perusahaan kecil dalam sektor perkhidmatan di Yaman. Ia menguji bagaimana penentu kepada keupayaan pengurusan (operasi kewangan, pemasaran dan pengurusan firma), penentu persekitaran perniagaan (penentu makroekonomi dan kekurangan modal) dan sumber firma (keselesaan mengendalikan perniagaan, sifat peribadi dan ciri pemilik) mempengaruhi pertumbuhan prestasi perusahaan kecil dalam sektor perkhidmatan. Data diperoleh melalui survei terhadap 170 buah firma yang dipilih secara rawak di dua buah bandar iaitu Sana'a and Taiz. Dengan menggunakan kaedah pemodelan persamaan struktur (structural equation modelling) serta menggunakan perisian SPSS dan AMOS, keputusan kajian menunjukkan keupayaan pengurusan dan persekitaran perniagaan merupakan faktor penentu kepada pertumbuhan prestasi perusahaan kecil dalam sektor perkhidmatan. Sebaliknya, sumber firma tidak menunjukkan sebarang impak terhadap pertumbuhan prestasi dalam kalangan firma dalam kategori ini.*

*Kata kunci: Perusahaan kecil; prestasi pertumbuhan; sektor perkhidmatan; Yaman.*

## INTRODUCTION

Small enterprises tend to be as a primary source of job or employment creation world-wide; not only, in less-developed countries (LDCs) such Yemen, but also in developed countries as well. However, small enterprises still face many problems in their growth performance (Kirby& Kaiser 2003). These include low access to finance (Voulgaris et al. 2003) and difficulties in getting loans from banks, which are due to their lack of collateral and adequate financial statements (Harner 2003), as well as poor managerial and business skills (Olawale and Garwe, 2010).According to Harner (2003), the high interest rates pose the most challenging obstacles in obtaining loans for small firms. Furthermore, as it is emphasized by Knowles and White (1995), no one should start a business in today's economy without a business plan. They contended that success of small businesses is achieved through planning, management, control, organization, financing, and positioning to seize opportunities. Kamyabi and Devi (2011) also stated that most SMEs still faced difficulty in attracting and retaining skilled employees or qualified accountants.

Hakimpoor and Arshad (2011) referred to that by stating that the difficulties faced by SMEs might be attributed to a lack of suitable marketing frameworks and severe constraints or limitations on SME marketing resources (Carson et al. 2004; O'Donnell et al. 2002). Robert (2000) postulated that the macroeconomic policy such as inflation, interest rates, exchange rate, taxation, infrastructure and corruption all affect the performance growth of small enterprises. Moreover, other's researchers such as Delmar and Wiklund (2008) & Olawale and Garwe (2010) stated that the business

environment had a significant impact on the growth of small enterprises.

However, in Yemen, small service's enterprises are challenged by several barriers that influence their growth performance, for instance, economists reported that Yemen's services sector constituted 51.7% of the GDP in 2002 and 52.2% of GDP in 2003. The U.S. government estimated that the services' sector accounted for 39.7% of the GDP in 2004 and 39.3% in 2005 (*Library of Congress Federal Research Division* 2006). However, the contribution of the service sector during recent years dramatically decreased to 35.1 in 2009 and 29.8 in 2010.

In addition, another important government report showed that the growth rates of small service enterprises in Yemen are far less than what was expected earlier. For example, the results of the Fifth Plan Strategy spanning from 2000 to 2005 showed that the growth rate of small service enterprises was 4.8% where the targeted level was 10%, (Social Fun for Development, 2008). Our research concentrates on growth performance determinants of the small service enterprises in Yemen, to do so, the following objectives have been addressed;

1. What is the impact of management capabilities determinants, business environment determinants and Resource's determinants on the growth performance of small service enterprises?
2. Is there any relationship between management capabilities, business environment and Resource's determinants that can affect the growth performance of small service enterprises in Yemen?

Nevertheless, The structure of this paper is organized as follows: section one is an introduction; section two gives the overview about the literature review, Characteristics of SMEs in Yemen and definitions of SMEs in Yemen, in addition, section three presents the methods and data. The Finding and discussion are discussed in section four, and the conclusion is in the final section.

## LITERATURE REVIEW

The small service enterprises appear to be very important, Audretsch et al. (2009) support that; by bring several reasons why service industries are essential. First, these services have increased their weight for the last few decades. Secondly, the different characteristics of the service industries with respect to the manufacturing industries are crucial to their economic performance. Thirdly, scale economies affect the service sectors differently so the mean efficient size for service firms is smaller than for manufacturing firms.

Generally, service firms are relatively easy to start and the economy of scale is not widely sufficient to give larger firms a significant competitive advantage. In this sense, Audretsch et al. (1998) argued that scale economies affect service firms differently from manufacturing firms. For instance, and unlike the manufacturing sector, the firm's size seems to be less important in explaining the intensity of activity within the service sector. Moreover, Audretsch et al. (1998) pointed out that the patterns of firm growth in the service and manufacturing industries are different. Geroski & Toker (1996) argued that the sunk costs in manufacturing industries cause the heterogeneous behaviour, and the reason for this is that initial investment in the service industries is generally assumed to be lower than in the manufacturing industries (Teruel-Carrizonz 2010) in some instances; in the European Union, the economic importance of Small and Medium Enterprise (SMEs) within the sector of services is highly recognized. According to Eurostat (2008), in total, there were almost 19 million enterprises in the EU-27's non-financial business economy in 2004. Of these, 99.8% were SMEs, the majority of, which were micro enterprises (employing fewer than 10 persons).

However, there are several factors may affect the growth performance of small service enterprises. Some researchers identified those factors determining the growth of SME positively; others identified those factors affecting the growth negatively. The current study talk over those factors negatively hampered the growth performance of SSEs for instance, Reinecke (2002) in his study indicated that tax deposit system and tax differentials in the Uganda penalized small enterprises thereby affecting their growth. According to Voulgaris et al. (2001), impediments to growth were found to be low access to financing and to sources of information and technology. Lack of technical and managerial skill, inadequate organizational adaptability and ability to acquire or use new technology were considered also as impediments to growth. The authors argue that the shortage of resources experienced by most small firms suggest that substantial benefits might be obtained through the development of strategic partnership with other small or even large- size firms.

According to Voulgaris et al. (2003), successful growth of firms was related to entrepreneurial attributes. Moreover, the same researchers found that many entrepreneurs choose not to grow because of fear of loss of personal control over the firm, fear of having to go into debt or reluctance to pass the responsibility of running the business over to professional managers. A similar argument was offered by Andreff (2003). They indicated that in theoretically; the business creator was above all an "entrepreneur" whose individual characteristics were part of the determinants of new-business growth.

Another study by Orser et al. (2000) showed that the important growth determinants of private firms were not only the education, age and gender composition of the firm's owner-manager but also the staff and its level of income. Furthermore, like constraints included low capital, poor managerial and business skills may affect the growth performance of SSEs (Orser et al. 2000; Otero 1987). Moreover, Fink and Ploder, (2006) argues for the

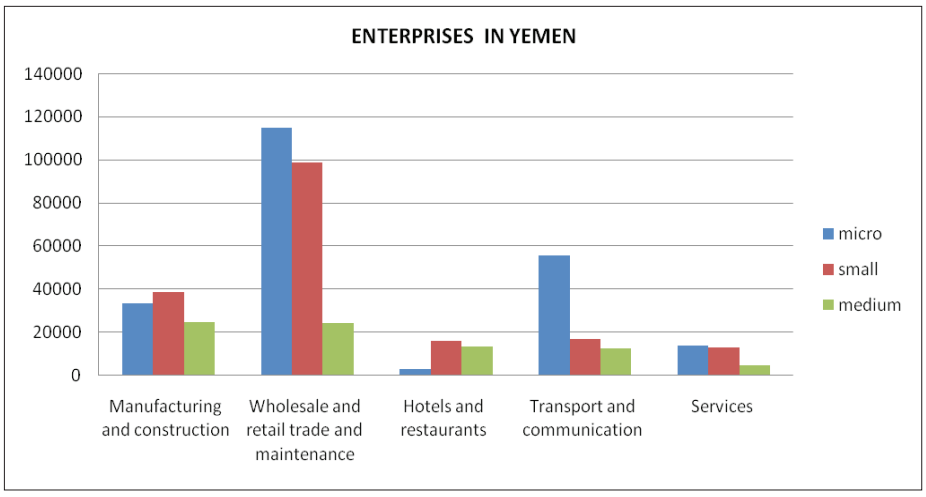
perfect management is the knowledge management as it is a process which is part of an organization's business processes. This view is supported by Olawale & Garwe 2010). Quoted that, Managerial competencies are sets of knowledge, skills, behavior and attitudes that contribute to personal effectiveness (Hellriegel et al. 2008).

Empirical evidence shows by Liedholm and Mead 1999 revealed that the age of the business, the sector and location in which the business operated to be factors in determining the growth of SMEs. Beck et al. (2006), concludes that credit availability to enterprises, and especially to SMEs, depends on the infrastructure that supports financial transactions, including the legal system and the information environment. Other researchers stressed other factors relevant to the environments of SMEs. Since the environments of SMEs vary along dimensions such as dynamism, heterogeneity, hostility and munificence (Robert 2000), these external factors rather than the managers' motivations, and strategic actions may largely determine how much the firm grows.

Earlier Penrose (1968) discuss the opportunities for small firms to enter and grow in a market, which she calls the intersticesin an economy. These are productive opportunities which small firms see and believe they can take advantage of left open by the large firms. The growth effects of other dimensions of environments were less well established. Moreover, Orser et al. (2000) found a weak negative effect of environmental hostility, and no effect of heterogeneity. It is likely that these other environmental conditions were associated with contradictory effects so that the overall effect could be zero or tilt over in either direction depending on the specific context. For example, resource munificence may facilitate the building of capacity to grow but also attract newer entrants who competed for the market potential for growth. It was argued that in heterogeneous markets, entrepreneurial opportunities were more likely to arise as developments in one market creates demand for a firm's products in related areas (Zahra et al. 2007). However, heterogeneity may also indicate that the market was fragmented into small niches across which individual firms would find it difficult to expand. Thus, the evidence suggests that firm growth is, to a certain extent, externally determined. Moreover, previous studies posited that explanations at different levels tended not to highlight environmental characteristics as being the most influential (Davidsson & Delmar 1997). Based on the previous detailed discussion on the determinants of the growth of SSEs, it can be concluded that the growth can be determined by several factors such as the firm size, age, sectors in which SMEs operate, the well-organized management, and good financial system, and so forth, and we can also assume that there are also other determinants of the growth of SMEs such as the government policy toward the small firms and the business environment and finally, the competition as it seems to strongly affect the SMEs.

## CHARACTERISTICS OF SMES IN YEMEN

The enterprises in Yemen are generally characterized as individual small enterprises in nature. According to the baseline survey of MSEs, carried out in 2000, the number of MSEs in Yemen was estimated to be around 311,000 enterprises employing around 500,000 workers, out of which 224,000 are individual enterprises, constituting 72% of the total. There are 76,000 enterprises employing from 2 to 4 workers, which represent 25% of the total. Further, around 11,000 units which employ from 5 – 15 workers, and represent 3% of the total number of the enterprises. In Addition, the percentage of investments in these enterprises represents around 72% of the total investments in Yemen. However, chart 1, illustrates the distribution of enterprises in Yemen according to sectors and economic activities.




*Source:* baseline survey of SMEs, 2000

CHART 1. Distribution of Enterprises in Yemen by sectors and economic activities

## DEFINITIONS OF SMES IN YEMEN

In Yemen, there are several definitions. For instance, the ministry of trade and industry (2008) defined SMEs as a unit with less than 10 workers. Another definition suggested by (Social Fund Development 2009) the National Strategy for Development of SMEs states that SMEs are enterprises, including any revenue – generating activity in the area of industry or commerce or services, and they define the small enterprises as a unit with one to four workers and the medium the unit is between four to ten workers, and lastly, the large enterprises are those with above ten workers. However, the current study is adopted by the official definition of Social Fund Development 2009).

## CONTRIBUTION OF SERVICE SECTOR TO YEMEN ECONOMY

The Yemeni service sector is dominated by government service, which was estimated around 45% of total services and 23% of GDP during 1990-2000 followed by transportation and communications 10% of GDP in 2000 and the wholesale and retail trade 7% of GDP in 2000. Other services, including maintenance, social and personal services, private non-profit service and financial instructions represented 7.3% and 4.2%of GDP respectively during 1990-2000 as shown in Table 1.

## DATA AND METHODS

The current study using the structural equation model method to investigate the objective that addressed, questionnaires were handed out to the owners of small enterprises in a service sector in two cities in Yemen; namely, Sana'a and Taiz. The questionnaire was personally administrated with a team selected by the researcher helped with the data collection. The process of distributing and collecting the questionnaires lasted almost two month and half (29 September 2012 to 13 December 2012). A total of 170 questionnaires were gathered during this study, and the cluster (group) random sampling was adopted as well as the multiple stages. Furthermore, the population, housing and establishment census in 2004 was also used to create a frame for the research. First, the sample questionnaire adopted in the current study was written in English, and then translated into Arabic, and it was pre-tested on 10th November in 2011. However, appendix A proved the measurements of the instruments of the survey of the current study for the both independent and dependent variables.

Above and beyond, the test of reliability carried out through this study proved sufficient internal consistence. Cronbach's Alpha was used to test the reliability of this research; however, the result of Cronbach's Alpha shows that, for whole variables is accounted for 0.672 furthermore, it indicated that the lower reliability test, Cronbach's Alpha accounted for an firm management .468 and the highest result was with the Owner characteristics which accounted for .709. (See appendix, B) so it can be concluded that all the variable of this study had sufficient internal consistence.

Besides, the Factor analysis (FA) technique was used for the current study as FA could be summarized or to reduce data (Hair et al. 2006) as reducing data diminishes the number of variables in the data sets for subsequent simplified use in further multivariate techniques.In this study, the principal component analysis (PCA) was chosen as a factor extraction method instead of the common FA. PCA emphasizes parsimonious prediction of factors, whereas FA emphasizes their identification. The method for A Quartimax with Kaiser Normalization rotation was used, which allows easier identification of uncorrelated factors was specified. For the previously mentioned factors, the following research depended on the proposed measurement models to justify that eigenvalue was

TABLE 1. Contribution of Services Sector to Yemen Economy

| No | Sub-Sector | Share of GDP | | | |
|---|---|---|---|---|---|
| | | 1990 | 1995 | 2000 | 2005 |
| 1 | Trade, hotel and restaurant, maintenance | 10.0 | 12.0 | 8.6 | 10.2 |
| | Wholesale and retail trade | 8.3 | 9.7 | 7.2 | 8.4 |
| | Hotel and restaurant | 0.7 | 1.0 | 0.7 | 0.9 |
| | Maintenance and repair | 0.9 | 1.2 | 0.8 | 0.9 |
| 2 | Transportation and communications | 15.5 | 12.6 | 10.3 | 12.2 |
| 3 | Finance, insurance and real estate | 9.8 | 9.6 | 7.8 | 9.3 |
| | Finance, insurance | 3.7 | 3.7 | 2.9 | 3.8 |
| | Real estate and business services | 6.1 | 5.9 | 4.9 | 5.5 |
| 4 | Personal and social services | 1.1 | 1.2 | 0.8 | 0.9 |
| 5 | Government services | 16.9 | 12.9 | 10.8 | 10.4 |
| | Total serves value added | 47.9 | 48.3 | 35.5 | 43.1 |

*Source*: Central Statistic Organization in Yemen (CSO), 2007

greater than 1.0, that a screen test confirmed the number of factors, and that the percentage of variance explained were very close to 60% as a minimum. Factor loadings greater than 0.5 seem to be generally accurate for practical significance. Furthermore, commonalities lower than 0.5 indicated that less than a half of the variance of the measured variable was accounted for by the factor solution.

Consequently, the Kaiser-Meyer-Olkin (KMO) value was using to explain the validation of a scale or index by demonstrating that its constituent items load on the same factor, and to drop the proposed scales of the items which cross-load on more than one factor. As measured by the KMO statistics, sampling adequacy predicts if data are likely to factor well based upon the correlation and partial correlation (Babbie 2004; Cavanna et al. 2001; Cohen 1988; Zikmund 1991).

Furthermore, the researcher provided two main statistical tools to examine the gathered data. This method, in addition, was based on a general descriptive analysis and carried out through SPSS version 20 to have a summary about the respondents' demographic characteristics by using the response means, frequencies, alongside with initial data examination (such as reliability tests). On the other hand, other hand, the Structural Equation Modelling (SEM) method was identified to deal with the data as well as with AMOS version 19, which involves confirmatory factor analysis and measurement model analysis. However, in SEM method to check whether the model fits the data. There are several indicators of goodness-of-fit, and most SEM scholars recommend evaluating the models by observing more than one of these indicators (Hair et al. 2006). Such as non-normed fit index (NNFI); the comparative fit index (CFI) and the root mean squared approximation of error (RMSEA). Therefore, the commonly applied fit indices are NNFI and CFI (>0.90 indicates good fit), RMSEA (<0.08 indicates acceptable fit), and commonly used $\chi 2$ statistic ($\chi 2$/ d.f. ratio of 3 or less) Hair et al. (2006). Furthermore, the present research used this correlation analysis to examine the relationships between the variables of the study. Variable association refers to a wide variety of coefficients, which measures the strength of relationship, and it is defined in various ways. In common, using the term "association" refers to measures of strength of relationship in which at least one of the variables is related to others. Appendix C shows the results obtained through the correlation tests between the independent variables and the dependent variable which is the growth performance of small service enterprises in Yemen.

## RESULTS AND DISCUSSION

This section offering the results of the current study starting with the respondents characteristics, Results of the Structural Equation Model (SEM), Result of Factor Analysis (FA), and Results of confirmatory factor analysis (CFA), the section ends with the Results of the full Measurement Model.

## RESPONDENTS CHARACTERISTICS

Table 2 presents the results of the entrepreneur's characteristics of this study. The sample size of the study covered two cities; Sana'a and Taiz with a frequency of 49.4% and 50.6% respectively. In terms of gander, the male contributed about 97.1% of the participants and 2.9% of the sample is accounted for the female participants.

TABLE 2. Respondents Characteristics of the study

| | Frequency | Percentage % |
|---|---|---|
| *Area* | | |
| Sana'a | 84 | 49.4 |
| Taiz | 86 | 50.6 |
| Total | 170 | 100.0 |
| *Gender* | | |
| Male | 165 | 97.1 |
| Female | 5 | 2.9 |
| *Age* | | |
| less than 25 years | 16 | 9.4 |
| 25-35 years | 69 | 40.6 |
| 35-40 years | 44 | 25.9 |
| more than 40 years | 41 | 24.1 |
| *Ownership* | | |
| the manager is the owner | 131 | 77.1 |
| the manager is not the owner | 39 | 22.9 |
| *Marital Status* | | |
| Single | 36 | 21.2 |
| Married | 127 | 74.7 |
| Divorces | 7 | 4.1 |
| Others | | |
| *Level of education* | | |
| No formal education | 10 | 5.9 |
| Completed Secondary school | 4 | 2.4 |
| Completed high school | 55 | 32.4 |
| Completed College Education | 19 | 11.2 |
| Completed university | 73 | 42.9 |
| Post university | 9 | 5.3 |
| *Past experience* | | |
| Yes | 142 | 83.5 |
| No | 28 | 16.5 |
| *Useful past experience* | | |
| Yes | 165 | 97.1 |
| No | 5 | 2.9 |

Further, the results of the entrepreneurs' age revealed that those who are less than 25 years represented in the present study as this group was approximately accounted for 9.4% of the participants whereas the group of entrepreneurs gaining between 25 to 35 years gain 40.6% and the age between 35-40 accounts for 25.9% and the stage age more than 40 years account for 24.1% which is represented the lowest percentage in this study in terms of age. As far as the results regarding the ownership of SSEs, it was found that those entrepreneurs who are owners and managers of firms represented almost 77.1% of the participants, and 22.9% of the participants was accounted on those entrepreneurs who are managers but not owners of firms. Moreover, the results of the entrepreneurs' marital status revealed that 74.7% of the participating entrepreneurs stated that they were married, and the lowest rate represented those entrepreneurs who were in the state of divorce 4.1%, and the remaining rates represented those who are single and others. For their educational levels, the results revealed that those participating entrepreneurs who are Completed University accounted for 42.9% which is the highest parentage among other. And the suppressing results showed that those owners who do not received formal Education in the study account for low rate which 5.9%.

Concerning the results of the participants' past experience in business, it was found that the majority of the participating entrepreneurs 83.5% stated that they had past experience in business before they run their current businesses. However, those entrepreneurs who reported that they did not have past experience in were only 16.5%. Finally, 97.1% of the participants who were questioned believed that the experience is so useful for doing current business whereas 2.9% of them stated that experience is not useful.

However, the final results also indicated that 63.5% of the participants stated that they started their business by using their own savings, and around 5.3% of them reported that they established their businesses by borrowing from their relatives, and only 1.8% of the participants stated that they had borrowed from the bank and finally 29.4% had madejoint investment with partner. In terms of the government support, the finding demonstrated that 1.176% of the responses received governmental support and 98.82% of the samples stated that they did not receive any governmental supports.

## RESULT OF FACTOR ANALYSIS

Factor Analysis was used to examine the associated factor loadings with the constructs used in this study. This principal component analysis was performed using the Barlett Test of Sphericity (BTS) and Kaiser-Meyer-Olkin (KMO) tests of appropriateness as shown in Table 3. The results (the BTS at 1159.213 and the level of significance at $P = 0.000$) indicated that the data were appropriate for the purpose of principal component analysis. The result from the KMO measure of sampling adequacy was 0.75, which indicates that there are sufficient items for each factor. The two tests support the appropriateness of the principal component analysis technique.

TABLE 3. KMO and Bartlett's Test

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .754 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1159.213 |
| | df | 66 |
| | Sig. | .000 |

Moreover, Table 4 shows that, there are three components had Eigen values greater than one account for 66.361% of the total variance. According to the rules of principal component analysis, only factors that have Eigen values greater than one should be retained. As revealed by the results in the table, the first component has an Eigen value of 4.572 and a variance of 38.101%. The component consists of two items, which are macroeconomic determinants (.839), lack of capital (.752). This Component is labelled "Business environment determinants."

The second component has an Eigen value of 2.175 and a variance of 18.123%. The component consists of three items namely; financial operations (.831), and Firm management (.823), firm marketing (.728). This component is labelled as the Management Capabilities determinant. The third component has an Eigen value of 1.216 and a variance of 10.136%. The component consists of three items namely; ease of doing business (.796), personal traits (.546), and owner characteristic (-.492-). This component is labelled "Firm Resources determinants."

## THE RESULTS OF THE CONFIRMATORY FACTOR ANALYSIS (CFA) MODEL

This section present the results of confirmatory factor analysis for the current study, accordingly to the rule of SEM method, initially the researcher should run the model of CFA which is the relationships between the independent variables and the latent constructs, however, if the model fit the data well, the next step is to run the full measurement model or which it called the full measurements model which is consist the relationships between the dependent and independent variables. The current study followed this ways for running the model.

According to previous studies, a model test statistic is a test of whether the covariance matrix implied by the researcher's model is close enough to the sample covariance matrix that the differences might reasonably be considered as being due to sampling error (Kline 2011). However, a total of seven approximate fit indexes

TABLE 4. Total Variance Explained of Constructs Total Variance Explained

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | % of Variance | Cumulative% | Total | % of Variance | Cumulative% | Total | % of Variance | Cumulative% |
| 1 | 4.572 | 38.101 | 38.101 | 4.572 | 38.101 | 38.101 | 3.021 | 25.179 | 25.179 |
| 2 | 2.175 | 18.123 | 56.225 | 2.175 | 18.123 | 56.225 | 2.491 | 20.755 | 45.934 |
| 3 | 1.216 | 10.136 | 66.361 | 1.216 | 10.136 | 66.361 | 2.451 | 20.427 | 66.361 |
| 4 | .943 | 7.857 | 74.218 | | | | | | |
| 5 | .838 | 6.984 | 81.203 | | | | | | |
| 6 | .672 | 5.603 | 86.806 | | | | | | |
| 7 | .510 | 4.252 | 91.057 | | | | | | |
| 8 | .357 | 2.973 | 94.030 | | | | | | |
| 9 | .283 | 2.360 | 96.390 | | | | | | |
| 10 | .196 | 1.637 | 98.027 | | | | | | |
| 11 | .147 | 1.227 | 99.254 | | | | | | |
| 12 | .090 | .746 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

However, Table 5 demonstrates the factor loading for the constructs factors for the current research.

TABLE 5. Factor Loading for Constructs

| Rotated Component Matrix[a] | | | |
|---|---|---|---|
| | Component | | |
| | 1 | 2 | 3 |
| Macroeconomic Determinants | .839 | | |
| Lack of Capital | .752 | | |
| Financial Operations | | .831 | |
| Firm Management | | .823 | |
| Firm Marketing | | .728 | |
| Ease of doing Business | | | .796 |
| Personal Traits | | | .546 |
| Owner characteristic | | | -.492- |

Extraction Method: Principal Component Analysis.
Rotation Method: Quartimax with Kaiser Normalization.

*Source*: Survey 2012

as shown in Table 6 present the CFA model fit from a different perspective. Thus, the values of approximate fit index for the CFA model present a mixed picture. For instance, the value of RMSEA is .07, and the close – fit hypothesis is not rejected ($P = .022$). Thus, based on that, the covariance matrix predicted by the model in Figure (1) indicates that the relative fit of the CFA model is about .95 improvement over that of the independence model fit (CFI = .95). Furthermore, the values of the normed model fit (NFI) and increment fit index (IFI) are .91 and.95 respectively. McDonald, R.P. & Ho, M.R. (2002) claimed that the SEM literature recommended that a range of .89 to .94 as a good fit of any model. However, this indicates

TABLE 6. Goodness fit of CFA model

| | CMIN/DF | RMR | RMSEA | NFI | IFI | CFI |
|---|---|---|---|---|---|---|
| 25.092 | 1.930 | .449 | .07 | .91 | .95 | .95 |

*Note*: - RMR = Root-mean-square residual, RMSEA = Root mean square error of approximation NFI = Normed Fit Index, IFI = Incremental Fit Index, CFI = Comparative Fit Index

that the CFA model of this study fits the date very well by accounting between 91% to 95% of the goodness of fit. Thus, it can be concluded that the CFA model of the current study as shown in Figure 1 which comprises three latent variables and eight measurement variables is acceptable since it fits the data very well.

## THE FULL MEASUREMENT MODEL

*Model Fit Evaluation* The fit indices for the full measurement model of study as in Table 7 show that the NFI, IFI, and CFI accounted for 0.92, 0.96, 0.96 respectively, which is point to that the model was 92% to 96% of a very good fit. Furthermore, the Chi- square accounts for 30.064, and the RMSEA accounts for 0.06. This is less than the acceptable ratio of 0.08. Such resulting rates indicate that the model fits the data very well, and the model is acceptable. As shown in Figure 2, the full measurement model of the present study comprises three latent components and eight measurement variables.

*Assessment of Normality Test of Full Measurement Model* The result of normality test of full measurement

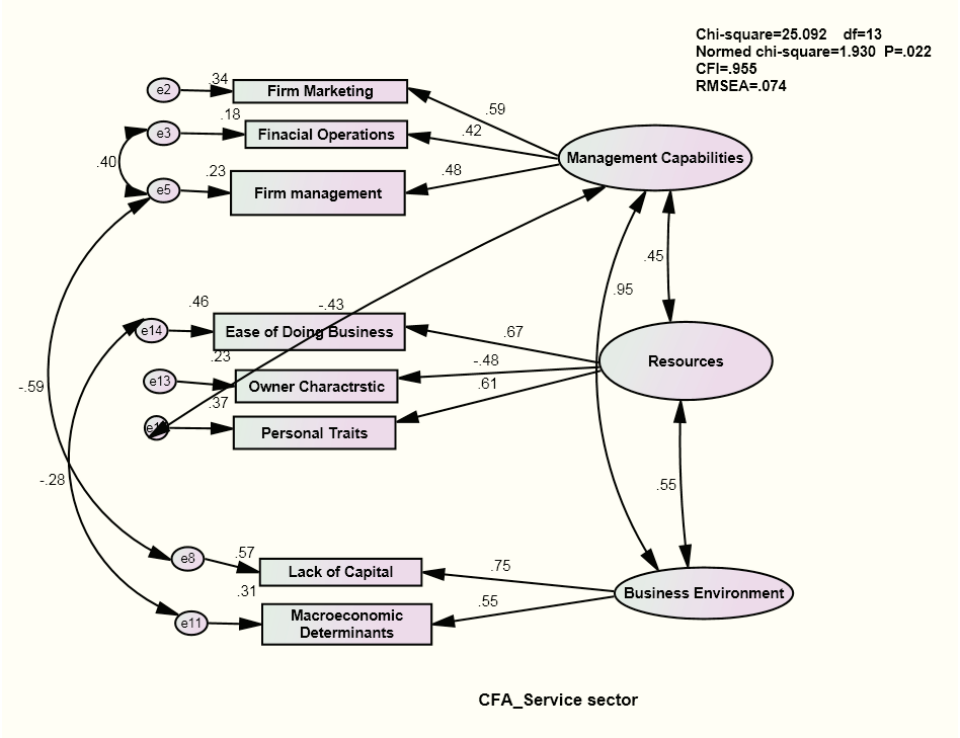



FIGURE 1. CFA Measurement Model

TABLE 7. Goodness fit forFull Measurement Model

| | CMIN/DF | RMR | RMSEA | NFI | IFI | CFI |
|---|---|---|---|---|---|---|
| 30.064 | 1.670 | .464 | .06 | .92 | .96 | .96 |

*Note:* - RMR = Root-mean-square residual, RMSEA = Root mean square error of approximation NFI= Normed Fit Index, IFI= Incremental Fit Index, CFI = Comparative Fit Index

model in small service enterprises as in Table 8 indicated that the data of the sample were normalities distributed and this evident as the skew ratio is under the standard cut-off point less than 3. Moreover, the results of kurtosis were less than the acceptable rate that account for 10 for all variables.

*Standardized Structural Path Coefficient for a Full Measurement Model* Table 9 illustrated the results of the standardized structural path coefficient for full measurement model. Based on these results, it is obvious that all the parameter estimates seem significantly associated with one another. In addition, the results of the model revealed that the management capabilities determinants affect the growth performance of small service enterprises at the level of significance P = .002, and the business environment determinants impact on the growth performance at the level of significance P = 004. Moreover, the firm resource determinants did not statistically impact the growth performance of small service enterprises by accounting for P = .423.

TABLE 8. Assessment of Normality for the full Measurement Model

| Variable | min | max | skew | c.r. | kurtosis | c.r. |
|---|---|---|---|---|---|---|
| Performance growth of SME | 10.000 | 21.000 | .136 | .724 | –.658 | –1.750 |
| Personal Traits | 11.000 | 20.000 | –.716 | –3.809 | –.588 | –1.565 |
| Ease of doing Business | 7.000 | 15.000 | –.880 | –4.682 | –.573 | –1.526 |
| Owner Characteristic | 2.000 | 6.000 | .139 | .740 | –.744 | –1.981 |
| Lack of Capital | 8.000 | 15.000 | –.612 | –3.256 | .230 | .612 |
| Macroeconomic Determinants | 10.000 | 25.000 | –1.489 | –7.928 | 2.274 | 6.052 |
| Firm Marketing | 4.000 | 20.000 | –.172 | –.913 | .347 | .924 |
| Financial Operations | 5.000 | 25.000 | .114 | .605 | –1.403 | –3.734 |
| Firm Management | 4.000 | 20.000 | .029 | .155 | –1.126 | –2.997 |
| Multivariate | | | | | 13.658 | 6.328 |

TABLE 9. Standardized Structural Path Coefficients

| | | | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|---|---|
| Firm Management | <--- | F1 | .748 | .178 | 4.191 | *** |
| Financial Operations | <--- | F1 | 1.200 | .247 | 4.864 | *** |
| Macroeconomic Determinants | <--- | F3 | 1.391 | .251 | 5.544 | *** |
| Lack of Capital | <--- | F3 | 1.000 | | | |
| Firm Marketing | <--- | F1 | 1.000 | | | |
| Owner Characteristic | <--- | F2 | –.377 | .075 | –5.041 | *** |
| Personal Traits | <--- | F2 | 1.016 | .202 | 5.037 | *** |
| Ease of Doing Business | <--- | F2 | 1.000 | | | |
| Performance growth of SME | <--- | F1 | .797 | .254 | 3.137 | .002 |
| Performance growth of SME | <--- | F2 | .850 | .293 | 2.901 | .004 |
| Performance growth of SME | <--- | F3 | –.401 | .500 | –.802 | .423 |

Note, *** = .001, S.E= Standard error, C.R = critical ratio.F1= internal determinants, F2= external determinants, F3= firm resources.

*Explanation of the Result of Full Measurement Model*

Figure 2 shows the results of the full measurement model in small service enterprises. Such results revealed that there is a positive relationship between the management capabilities determinants and the growth performance by (.67). Moreover, there is a positive relationship between the firm resources determinants, and the growth performance by (.44), and the value of the relationship between the business environment determinants and the growth performance of small service enterprises indicates a negative relationship as it was (-.19). For the management capabilities determinants, it was manifested by a limitation of the firm marketing ($\beta$ = .70), shortage of financial operations ($\beta$ = 44) and weak firm management, ($\beta$ =.38). Furthermore, the measurement model recommended that the firm resource determinants was manifested by the inappropriate ease of doing business ($\beta$ = .65), a weak owner characteristic ($\beta$ = –.49) and the unsuitable personal traits ($\beta$ =.62), and the third component business environment determinants was manifested by the lack of capital ($\beta$ =.80) and the inappropriate macro-economic conditions ($\beta$ =.55)

It was also observed that there are positive relationships between the management capabilities determinants and the firm resource determinants by (.46) and between the firm resource determinants and

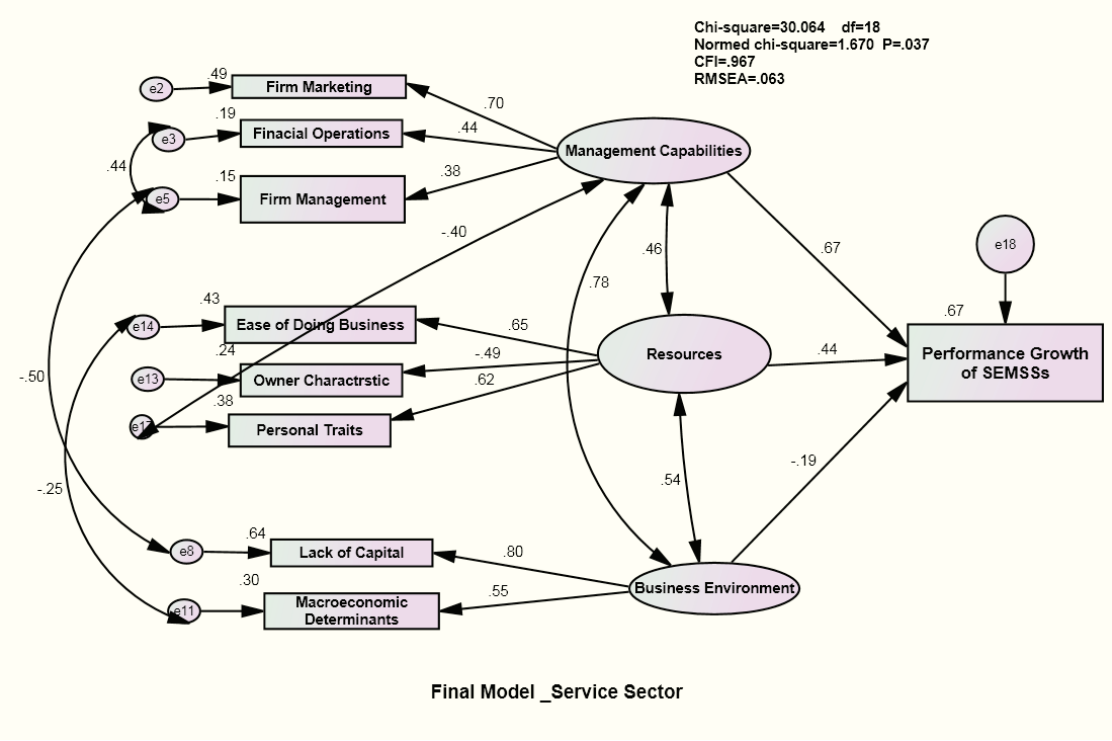



FIGURE 2. Full Measurement Model

business environment determinants by (.54). Another positive relationship was found between the management capabilities and business environment (.78). Nevertheless, the results obtained from applying the full model revealed that the management capabilities determinants affected the growth performance of small service enterprises in Yemen by (.67) which is considered as the highest rate and stronger effect. There is also a highly significant effect of the three types of latent variables (management capabilities determinants, business environment determinant and firm resources determinants) on the growth performance of small service enterprises in Yemen by (.67). Moreover, the Figure presents the squared factor a loading which is varied from 64 to 15 which is considers as the acceptable percentage of squared for the model.

Similar results found by Delmar and Wiklund (2008) they examined the importance of management competence in small firm success. They found out that lack of managerial experience, skills and personal qualities as well as other factors such as adverse economic conditions, poorly thought out business plans and resource starvation are found as the main reasons why new firms fail.

Another aspect is the owner characteristics, for instance, Atsede et al. (2008) argued that the owner/ manager characteristics proved to influence the growth. These include age, education, previous experience, and three motivation variables, namely finance, employment creation and self-fulfilment. Generally, Human resources are strategic resources that are important to the organization as knowledge, skills, abilities, behaviours and interaction of the employees who have the potential to influence the performance of the organization (Osman, Ho & Galang 2011). Further, Schere (1982) argued that tolerance for ambiguity is an important trait for entrepreneurs because the challenges and potential for success associated with business are by nature unpredictable.

According to Szarka (1990), the social networks are categorized into individual networks of friends, relatives, colleagues, acquaintances, and organizational networks where the interactions are business to business. The results of the study regarding the social networks were also supported by Carson et al. (2004); Humphrey and Schmitz (1996) and Hakimpoor et al. (2011). They demonstrated that the networks that allow the small businesses to develop internal competencies provide them with the opportunity to gain or sustain a competitive advantage over other businesses outside the network. Carson et al. (2004) as the researcher revealed that social networks and social capital have direct consequences of their application in terms of business performance of small and medium enterprises. In the other hand, the access to finance is essentially for SMEs, the Europe Commission study conducted in 2003 found that poor business performance was one of the major reasons as to why small enterprises did not receive credit. Furthermore, they contend that a firm's financial performance is a key determinant of access to financing as it indicates the firm's ability to refund the loan. In addition, Daniel (2012) uses data from a firm-level survey carried out in Cameroon to investigate the types of public services for which small and medium-sized enterprises pay bribes, the characteristics of these transactions and to estimate the impact of bribe payments on the SMEs growth. His results show that tax inspectors, police officers, hygiene and epidemiological officers, officials from ministries and other public bodies, customs officers and electricity officers exercise pressure on business people most often for informal payment. Moreover, corruption and firm performance reveal that bribe payments significantly slow SMEs growth.

Moreover, the macroeconomic environment it seems to be very important for business success, Akinboade and Kinfack (2012) found that high tax rates and tax complicity discourage the growth of SMEs. As pointed out by Holtz-Eakin, et al. (1994), in order for SME's sectors to grow, the level of taxation set must be friendly and not stifle the running through the business. Besides, Ojeka (2011) found out that from most SMEs surveyed were faced by the problem of high tax rates, multiple taxation, complex tax regulations and lack of proper enlightenment or education about tax-related issues. Other researchers suggested creating more business-friendly environments through government policies, which were shown to be another influential factor on the SME growth performance (Eifer 2009; Klapper et al. 2009; Driemeier et al. 2010).

## CONCLUSION

This study investigated the determinants that influence growth performance of by small service enterprises in Yemen.It examined how the management capabilities' determinants (financial operations, firm marketing and firm management), business environment determinants (macroeconomic determinants and lack of capital) and firm resources (ease of doing business, personal traits and owner characteristics) influence the growth performance of small service enterprises. A deep analysis using the structural equation modelling revealed that management capabilities and business environment determinants affected the growth performance of small service enterprises, but firm resources determinants did not have statically significant impacts on these enterprises in Yemen.

Other important findings are the positive relationships between management capabilities determinants and firm resource, between firm resource and business environment and between management capabilities and business environment determinants. Based on these results, it is important to note that management capabilities affected the growth performance small service sector in Yemen by the highest rate and the strongest effect. The results

also show that there is a large significant effect of the three types of factors (management capabilities, business environment, and resource's determinants) on the growth performance of a small service sector in Yemen by (.67).

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APPENDICES

APPENDIX A: Instruments of the survey

| No | Variables Names | Items |
|---|---|---|
| 1 | Firm Management | dimensions such as knowledge for business, absent of employees training, lack of motivating employees, the difficulties facing the owner including running the business alone, difficulties of attractive well skilled staff, the process of decision making, poor organization skills. |
| 2 | Firm marketing | Accessibility of writing and strategic business plan, marketing planning and lacking of services after sales. |
| 3 | Financial Operation | Lack of internal finance, deficiency of external finance, absence of regular financial reports, unavailability of writing financial plans, and lack of an information system for financial operations. |
| 4 | Ease of Doing Business | Involving dimensions such as cost of registration, property rights, unfair competition, cost of entry, crimes, difficulties to entry, and many licenses needed to get primate to work. |
| 5 | Macroeconomic Determinants | poor government regulations, the high tax rates, the corruption among the government officers, the difficulty in getting access to road, electricity, water, and telephone and the lack of strict governmental control on smuggling products. |
| 6 | Personal Traits | Need of achievement, the ability to taking risk, tolerance for ambiguity, locus of control, self-efficacy, goal setting and the willing to achieve higher position in the society. |
| 7 | Owner Characteristics | Marital status for owner, owner's age, owner education, and the past experience of the owner. |
| 8 | Lack of capital | shortages of cash in hand, lack of additional capital, and non-existence of a fund for research and development. |
| 9 | Growth Performance | Market size, additional capital, sales volume, profit volume, number of employees, extend of new branches of business and fixed assets. |

APPENDIX B 1. The Reliability test of whole variables

Reliability Statistics

| Cronbach's Alpha | N of Items |
|---|---|
| .672 | 8 |

APPENDIX B 2. Reliability test for each variable

Item Statistics

| Variables name | Mean | Std. Deviation | N | Cronbach's Alpha |
|---|---|---|---|---|
| Firm marketing | 14.0294 | 3.31471 | 170 | .634 |
| Financial operations | 14.2353 | 6.39091 | 170 | .560 |
| Firm management | 39.5706 | 9.22681 | 170 | .468 |
| Ease of doing business | 13.2824 | 2.16815 | 170 | .652 |
| Owner characteristics | 3.6059 | 1.10564 | 170 | .709 |
| personal traits | 17.4882 | 2.33886 | 170 | .671 |
| Lack of capital | 12.7118 | 1.62247 | 170 | .646 |
| Macroeconomic Determinants | 22.2471 | 3.32787 | 170 | .643 |

APPENDIX C. Variables correlation of the study

Correlation Matrix

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Correlation | Macroeconomic Determinants | 1.000 | | | | | | | | | | | |
| | Lack of capital | .388 | .609 | 1.000 | | | | | | | | | |
| | Financial operations | .167 | .423 | .332 | 1.000 | | | | | | | | |
| | Firm management | .291 | .317 | –.002– | .515 | 1.000 | | | | | | | |
| | Firm marketing | .425 | .732 | .489 | .760 | .499 | 1.000 | | | | | | |
| | Ease of doing Business | .047 | .388 | .260 | .174 | .107 | .475 | 1.000 | | | | | |
| | Personal traits | .259 | .274 | .271 | .062 | –.049– | .217 | .413 | –.202– | –.334– | .342 | 1.000 | |
| | Owner characteristic | –.229– | –.389– | –.331– | –.193– | .030 | –.381– | –.316– | .135 | .219 | –.547– | –.248– | 1.000 |