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A Relationship of Project Management Process Factors with SMEs Performance

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Abstract: Main problems of SMEs in UAE are lack of talented and experienced people and funding difficulties. Beside that the prevailing negative economic outlook also affecting SMEs. Several studies found that SMEs are reluctant to apply project management technique due to lack of talent, this paper present a study to connect project management process with SMEs performance in the UAE. A structural model on the relationship between project management factors with SMEs performance was developed and validated. Data used for this modelling was from the questionnaire survey involved 260 respondents from the SMEs employees. The results presented four measurement models of project management process factors that affecting the SMEs in UAE. All the measurement models had undergone evaluation using CFA analysis in AMOS software and found that the models had achieved the acceptable level of fitness. Then these models were tied up into structural model. The evaluation of the structural model was done using path analysis of the software. The results of the structural model indicated that all the hypotheses are significant. It can be concluded that all the four project management processes factors which are scope, cost, communication and risk are significantly can affect the SMEs performance in UAE.

Keywords: Project management factors, SMEs performance

1.   Introduction

Small and Medium Enterprises (SMEs) are very important in the world financial system and contribute considerably to gross domestic products (GDP) growth, employment rate, and output. SMEs denote one of the vital sources of world economic growth in each developed and creating countries. As such, SMEs are regarded the backbone of the economy. The developing competition consists of unsure political and economy landscape intensifies the challenges for SMEs in United Arab Emirates (UAE) reach to world market potentially. However, the main problems of SMEs in UAE are absence of talented and experienced employees, funding difficulties and the prevailing negative economic outlook are the main challenges that affect small and medium enterprises (SMEs). Erick & Gonzales, (2014) opined that the challenges of SMEs in UAE are related to business reputation, financial performance, ethics and social responsibility. These are the emerging crucial factors for attracting investors and long-term funding. The accessibility to financing and insufficiency of capital are the major barriers to micro enterprises and SMEs in growing economy in the United Arab Emirates (UAE). However, the majority of SMEs have to rely on internal project management which is

dominated by productivity and lack of management skills. Moreover, many SMEs in the United Arab Emirates (UAE), especially in service sector do not own any land, property or equipment to provide any form of guarantee or collateral to the financial institution. Therefore, many SMEs are hard to get loan approval from credit officers because of restrictions. This is another practical gap in project management process in terms of SMEs in UAE.

On the other hand, the assignment administration technique has been described in several varieties in enterprise milieu. Although the small business zone is viewed to be a key driver of financial growth, time and price overruns threaten the sectors manageable to assist attain the preferred growth and make sure capital expenditure. In a series of empirical studies overlaying twenty nations throughout the five continents, Adeyemi, Martin & Kasim (2017) have shown that small enterprise task management very frequently suffers from price overruns. They have proven that ninety existing of massive initiatives suffers from cost overruns. Cost overruns appear to be a global phenomenon and show up in exclusive mission sorts however it is even greater annoying that "cost escalation has not lowered over the previous 70 years" (Adeyemi, Martin & Kasim, 2017).

Time overrun, results in the growth of adversarial relationships, litigation, arbitration, cash flow problems and a general feeling of apprehension between project participants. The time overruns in small business projects have become one of the most common problems in the industry that cause a multitude of negative effects on the projects ends its stakeholders (Agostini et.al., 2017). Small business projects often undergo project delays, cost overruns and non-conformance to quality, leading to poor performance and dissatisfied parties (Jamali, Lund-Thomsen & Jeppesen, 2017). The major cost due to change is the expense of rework and this can amount to 10-15 percent of contract value (Jamali, Lund-Thomsen & Jeppesen, 2017). However, by managing these changes more effectively, these undesirable effects can be minimized.

Government and the government authorities are very concerned about SMEs because it generates a major contribution to the economy. Failing SME sector companies have a major impact on the economy. SMEs are a major support to economic growth, employment generation and contribution to government income. Therefore, reasons for business failure in United Arab Emirates (UAE), undoubtedly is very important to these people in order to improve the SME sector in United Arab Emirates (UAE).

A lot of insurance policies and applications had been put in place by means of the authorities of UAE to exchange the trend of commercial enterprise closure in the country. However the problem persist. Programs such as entrepreneurship trainings, provision of soft loans and waivers have been directed toward SMEs in order to treatment the situation but to no avail. The scenario means that there different matters that were now not executed as they were supposed to be done.

2.   Methodology

The study adopted quantitative approach is only. The data was collected through structured questionnaire form. Furthermore, the survey was conducted in several methods such as face to face, email, web-based survey, and telephone. Total of 300 questionnaire forms were distributed to the targeted respondents. However only 260 respondents had responded and returned back the survey form. All the data from these respondents were analysed and found to be valid. The collected data was used to develop and evaluate the measurement and structural models of this study. The modelling was using AMOS-SEM software. At the initial stage, all the four measurement models were analysed using the re-specification and deletion techniques until the model achieved the measurement criteria of fitness. Once all the measurement models had achieved the fitness values then these models were tied up to form the structural model. Same techniques were applied to the structural model until it achieved the acceptable measurement criteria of fitness.

3.   Analysis of Measurement Model

After determining the structure and reliability of the construct through exploratory factor analysis (EFA) at a pilot survey level, a CFA needs to be performed in order to empirically test the hypothesized relationships presented in the model. CFA is considered a reliable technique for testing the validity of theory (Hair, 2017). The validity of the framework was tested by employing covariance-based structural equation modeling (CB-SEM) technique. The analysis followed the CB-SEM methodology prescribed in the number of multivariate text (Hair, 2017, Byrne et. al., 2010). The analysis began with specification of the model; model identification; estimation of parameters; assessment of goodness-of-fit and finally model re-specification. The validity of the models was evaluated based on the established criteria for CB-SEM evaluation presented in Table 1. (Hair, 2017, Byrne et. al., 2010) suggested that a model should satisfy the requirement of at least one index from each of the indexes categories, that is, absolute fit, incremental fit and parsimonious fit indices. In respect of the RMSEA, Byrne et.al.,(2010) pointed that a range of 0 to 0.08 is considered acceptable in assessing model fit.

Table 1 - Goodness-of-fit indices and acceptance levels (Hair, 2017, Byrne et.al., 2010)

Index Category	Indices Used	Acceptable level
Absolute fit	Chisq.	P < 0.05
Absolute fit	RMSEA	Value < 0.08
Absolute fit	GFI	Value > 0.90
Incremental fit	AGFI	Value > 0.90
Incremental fit	CFI	Value > 0.90
Parsimonious fit	Chisq./df	Value ≤ 5.0

The measurement model of Project Management process factors on the Performance of SMEs is a graphical representation of the relationship between response items and their underlying construct and then analysis is carried out using CFA. There four latent constructs of independent variable and one dependent variable construct. However, Awang, (2015) and Hair et. al., (2010) suggested that the measurement of a latent construct shall not be less than four (4). This is to ensure that there is no problem for the model identification during the analysis process. AMOS was applied for identifying the construct of project management on the performance of SMEs model. The factor loading for each item, squared multiple correlation (R^2) and fitness indexes for the impact of project management on the performance of SMEs construct was examined. The results of the five measurement models are as follow;

3.1 SEM Performance measurement model

Fig.1 presents the final model of SME performance measurement model showing the items within the model and the observed values which had achieved the acceptable cut-off values of fitness.
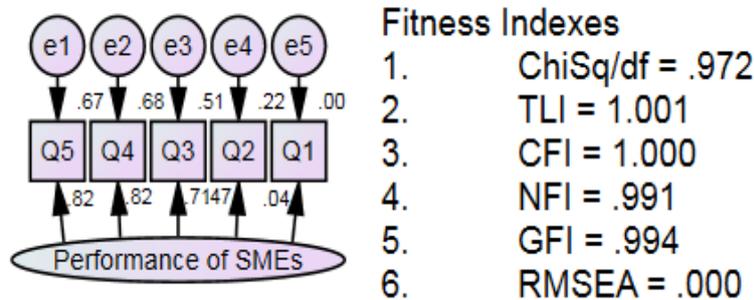

Fig. 1 - SME performance measurement model

3.2 Project Scope Measurement Model

Fig.2 presents the final model of scope measurement model showing the items within the model and the observed values which had achieved the acceptable cut-off values of fitness.
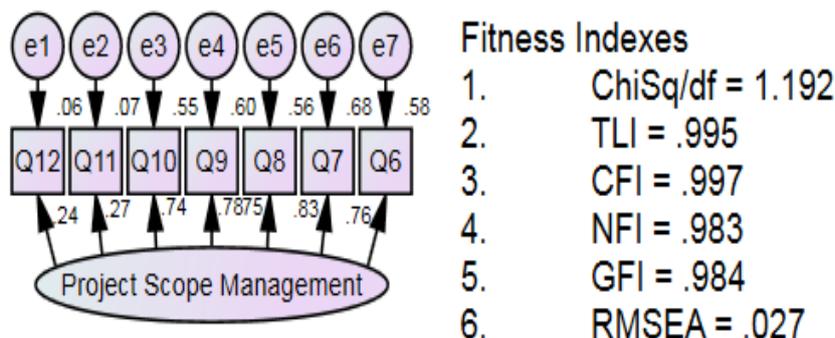

Fig. 2 - Scope measurement model

3.3 Cost Measurement Model

Fig.3 presents the final model of cost measurement model showing the items within the model and the observed values which had achieved the acceptable cut-off values of fitness.
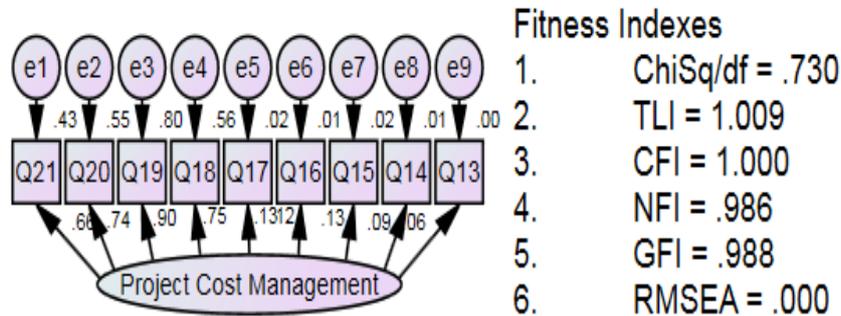

Fig. 3 - Cost measurement model

3.4 Communication Measurement Model

Fig.4 presents the final model of communication measurement model showing the items within the model and the observed values which had achieved the acceptable cut-off values of fitness.
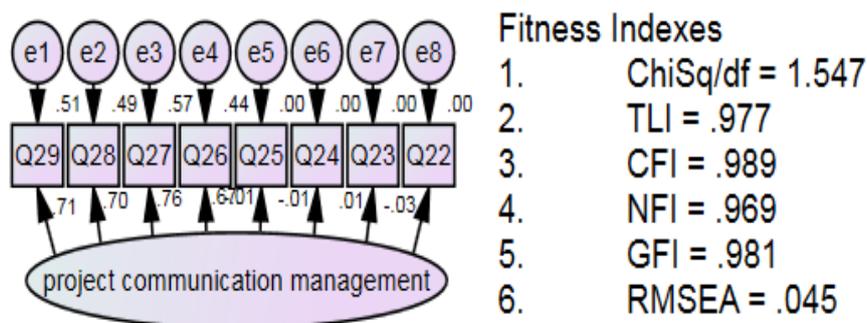

Fig. 4 - Communication measurement model

3.5 Risk Measurement Model

Fig.5 presents the final model of risk measurement model showing the items within the model and the observed values which had achieved the acceptable cut-off values of fitness.
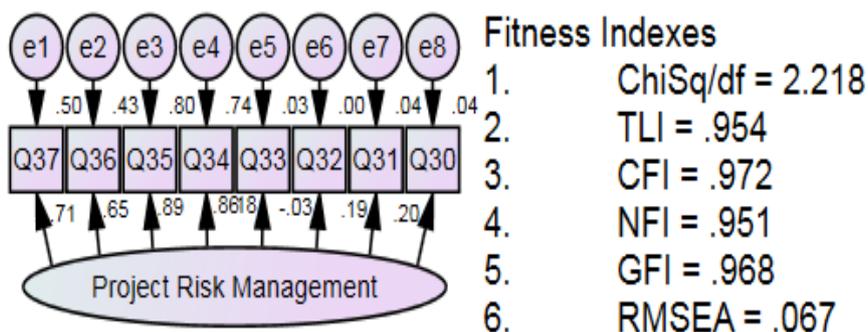

Fig. 5 - Risk measurement model

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4.   Analysis Of Structural Equation Modelling

After the unidimensionality, reliability and validity of the constructs were ascertained, the next stage of analysis model is the entire constructs into a single structural equation model using AMOS. The reason for the pull out is to display the causal effects between one construct and the other in line with the set hypotheses. The exogenous and endogenous variables in the assessment framework were arranged. The arrangement stated with the exogenous variables intervening variable and the endogenous variable at the end. The connection between each construct is linked with arrow in the hypotheses' direction as presented in Fig.6. However, the model was used to analyse the multidirectional relationships within the entire constructs.
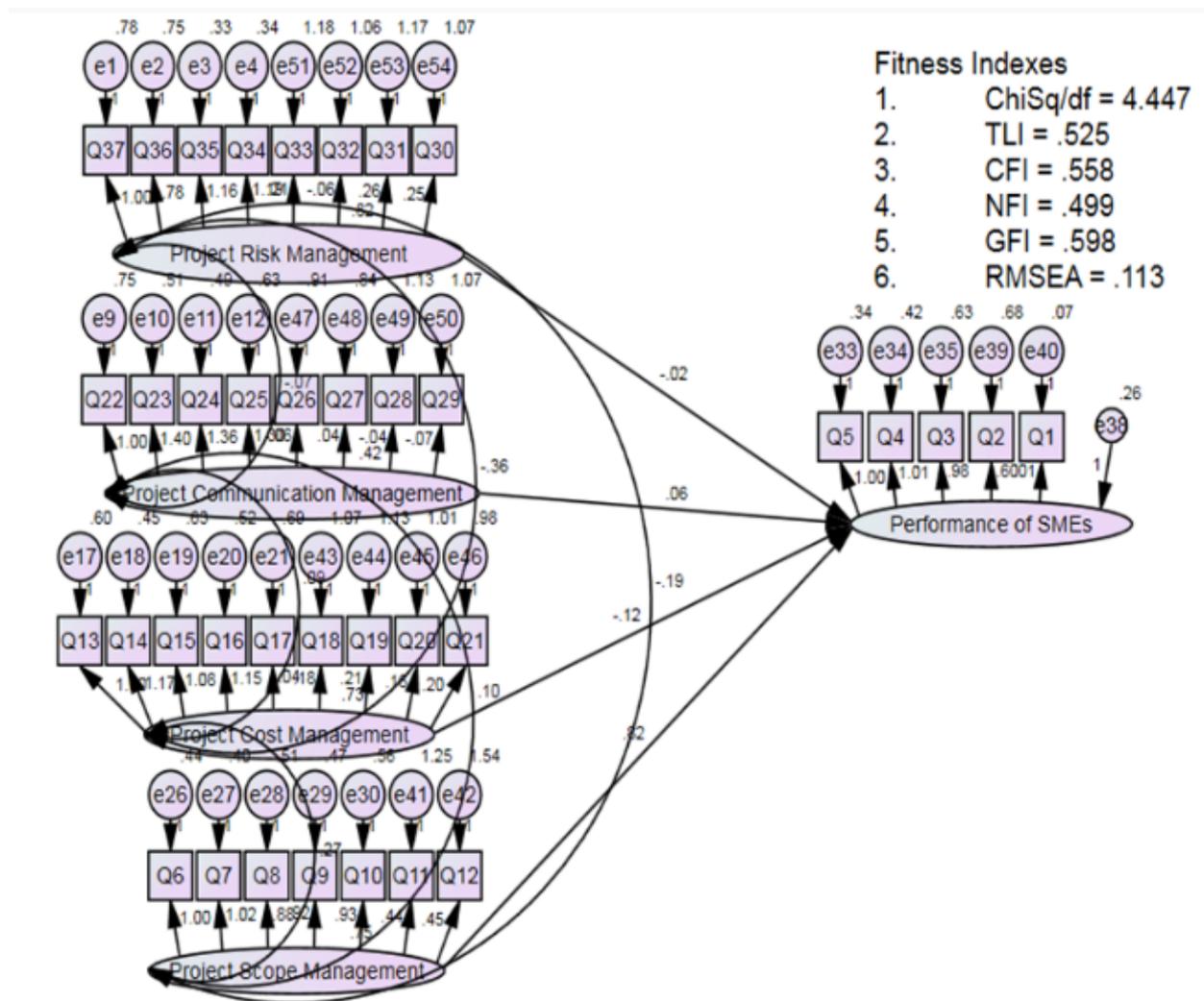

Fig. 6 - Structural model

The structural model has achieved its fitness requirements, it demonstrates low factor loading after the deleting processes that form the final structural model. The deletion was conducted according to (Ishiyaku, Kasim & Harir, 2017 and Byrne, 2013) where the modification indices that show high covariance and demonstrate high regression weights which need the deletion.

4.1   Results of Hypothesis Testing

Based on Fig. 6 of the paths in the structural model, the results of the hypotheses testing are summarized in Table 2.

Table 2 - Results of hypotheses testing

	Hypothesis of the model	Estimate	P-value	Result
H1	Project scope management has significant relationship with SMEs performance in UAE.	0.587	***	Supported
H2	Project Cost Management has significant relationship with SMEs performance in UAE.	0.350	***	Supported
H3	Project communication management has significant relationship with SMEs performance in UAE.	0.673	***	Supported
H4	Project risk management has significant relationship with SMEs performance in UAE.	0.684	0.003	Supported

#*** represents P-value is less than 0.001

Based on Table 2, the results show that there is a substantial relationship between project scope management and business performance of SMEs in UAE. This means that project scope management is significant in controlling the performance of SMEs. If UAE government could channel a proportion of it's spending to improve the skills of SME employees on this matter. In addition, this research finding is consistent with the empirical findings by Andresen, Biemann, & Pattie, (2015) and Rawlinson & Sambridge (2004) and supported the effectiveness of scope management which significantly influence the company's performance. The second hypothesis seems agreed with the result that project cost management has a major impact on SMEs business performance in UAE. Same with the third hypothesis that there is strong relationship between the project communication management and business performance of SMEs in UAE. The outcome is strongly supported and as demonstrated in the final structural. Finally the fourth hypothesis also agreed with the results that risk management has a direct impact on business performance of SMEs in UAE. It can be concluded that all the four project management processes factors which are scope, cost, communication and risk are significantly can affect the SMEs performance in UAE

5. Conclusion

The results obtained from this modelling works were based on the UAE respondent's responses. It presented four measurement models of project management process factors that affecting the SMEs in UAE. All the measurement models had undergone evaluation using CFA analysis in AMOS software and found that the models had achieved the acceptable level of fitness. Then these models were tied up into structural model. The evaluation of the structural model was done using path analysis of the software. The results of the structural model indicated that all the hypotheses are significant. It can be concluded that all the four project management processes factors which are scope, cost, communication and risk are significantly can affect the SMEs performance in UAE.

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