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TESTING THE EFFECT OF PROCUREMENT ALIGNMENT ON SUPPLY CHAIN PERFORMANCE

Razan Jamlallail[1], *Ahmed Attia*[2]

[1,2] College of Business, Effat University, Qasr Khuzam St., Kilo. 2, Old Mecca Road. P.O.BOX 34689, Jeddah 21478, Saudi Arabia

Email: [1]rhjamlallaell@effatuniversity.edu.sa, [2]ahattia@effatuniversity.edu.sa

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ABSTRACT

One of the key elements for improving the supply chain performance is to ensure achieving the procurement alignment. The main objective of this study is to identify how the procurement practices affect the supply chain performance in terms of performance overtime and competitive performance through measure the procurement alignment within specific dimensions (strategy, process, control, organization, information, and IT) and test the effect of procurement alignment on supply chain competitive and overtime performances. This study used quantitative method based on questionnaire survey to gather the data. The sample is 43 from a population of 250 employees in Petromin Corporation. The statistical analysis from SPSS software showed that there is a significant positive correlation between all eight variables, between procurement within its six dimensions and within supply chain performance two measures. However, the regression analysis showed that the independent variables effect on the supply chain performance measures is not significant enough. To summarize, the results showed that there is a positive relationship between all the mentioned variables but there is no strong effect of them on the performance as a result the hypotheses are partially rejected.

INTRODUCTION

Since decades there is an increased competitiveness between businesses, organizations are more forced to be agile, innovative and deliver high quality products within short cycles and with keeping the transaction costs down, A strong determinant of assuring a competitive advantage and improving the overall organizational performance is the ability of managing supply chain activities effectively, it is perceived as a productivity driver [1]. Supply chain

performance is seen as a competitive strategy which enhances the organizations productivity and profitability. The intensity of the measures in the success of any firm cannot be ignored as it affects the long term, short term and operational planning and control [2].

Overall businesses nowadays strive to build their own supply chains and seek to improve their performance. The concept of supply chains and the performance crosses a wide range of the companies boundaries as it includes the available basic materials, subassemblies competes and the finished products [3]. Managing and reducing cost remains to be the focal point of the firm's procurement, management, and supply chain. Besides, for the process of the supply chain to be complete, the distributions must be complete through various kinds of channels [4]. Many companies are turning their attention to procurement and supply management, one of the main elements that contribute to the supply chain performance is how well managed are the activities of procurement [3].

In the recent years the function of procurement in businesses have received an increasing attention from both scholars and practitioners, the recent interest is around the potential improvements in the performance of procurement and the various benefits such as procurement operations cost reduction, purchased goods quality improvements, shorter lead times within procurement [5]. In that situation, poor procurement practices have implicit effect on company share prices and profitability, the need to cover any loophole that can affect the continuity of a business [6]. According to (Monczka et al., 2015) if procurement practices are good it can result into several outcomes; effect on the quality, savings on the cost and contribution in the technology advancement, the authors also discussed that the disruptions in the procurement practices within the global scope can damage the performance of an organization [3].

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The purpose of this research is to investigate the effect of procurement alignment on the supply chain performance by testing the procurement alignment within different dimensions according to the literature in the next chapter, then the performance of supply chain will be tested, and finally the effect of aligning procurement practices on supply chain performance will be

measured in terms of supply chain performance overtime and supply chain competitive performance.

1. METHODOLOGY

Methodology helps to formulate the required questions for the research, also develop the hypotheses and identify the sample groups. Therefore, it's helpful when collecting data and analysing the result of the research [8]. This study used quantitative method of investigation to collect and analyse the data, and to test the hypothesis.

Hypotheses

This study is a correlational research that aims to test the relationship between eight variables, the procurement alignment and it dimensions (strategy, process, control, organization, information, and IT) and supply chain performance measures (performance overtime and competitive performance).

Two hypotheses are proposed in this study. The aim of this research is to test the effect of procurement alignment on the supply chain performance in corporations and the chosen corporation to apply the research on is Petromin Corporation.

H1: Procurement alignment is directly related to the supply chain competitive performance.
H2: Procurement alignment is directly related to the supply chain performance overtime.

Research Model

The research model shown in Figure 1 explains the relationship between aligning the different dimensions within procurement of (strategy, processes, control, organization, information, and information technology) with leading to performance gains of competitive and overtime supply chain performance, the model shows that it can either lead to gaining competitive performance or it can lead to an improved performance overtime.

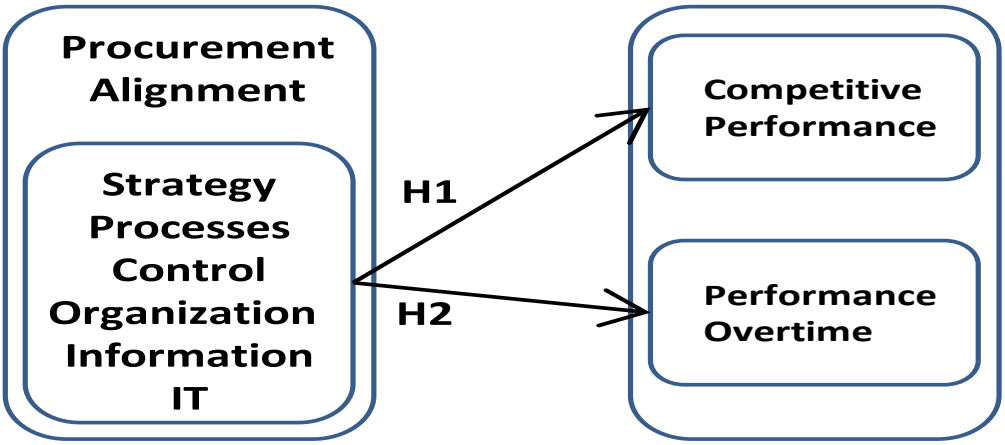

Figure 1. Research Model

Tools Of Data Collection

The tools of data collection can be defined as the process by which the researcher collects the information needed to answer the research problem or questions. Furthermore, before the researcher start collecting the data, there are four questions that the researcher must answer, first, which data to collect, second, how to collect the data, third, who will collect the data and forth, when to collect the data. There are two types of data, first is the primary data and second is the secondary data, and each kind of data has its own collection of tools, furthermore, each tool can be classified as a qualitative or a quantitative tool [9]. This study used questionnaire survey as data collection tool to gather the data.

Sample size

Formulating a sample is done by selecting a group of people from the population to be involved in the research. This study considered one company which is Petromin Corporation and there are about 43 employees have participated in this study.

RESULT AND DISCUSSION

The purpose of this research was to investigate the effect of procurement alignment on supply chain performance, by identifying the relationship between the procurement alignment dimensions and the supply chain performance. The responses were collected from Petromin Corporation in Saudi Arabia through distributing a questionnaire and 43 employees were participated. The analysis of the data was done through applying the SPSS software.

Reliability Test

A reliability assessment was conducted using Cronbach's alpha, for this study. The Cronbach's alpha value is measured for all questions to ensure that the variables proposed were internally consistent. The minimum alpha is counted as 0.70 according to Tavakol and Dennick, (2011) [10]. Table 1 and Table 2 show all of the independent variables within procurement alignment and dependent variables within the supply chain performance have an acceptable level of reliability (Cronbach's Alpha > 0.70) respectively. To sum up, all research variables have Cronbach's alpha score above 0.70 which indicate that the reliability of the questionnaire is high.

Table 1. Reliability Test For The Independent Variables

Independent Variables	**Cronbach's Alpha**
Strategy	0.892
Process	0.797
Control	0.828
Organization	0.812
Information	0.795
IT	0.841

Table 2. Reliability Test For The Dependent Variables

Dependent variables	**Cronbach's Alpha**
Performance overtime	0.824
Competitive performance	0.860

Correlation Matrix

Correlation can be defined as a statistical method that is used to determine if there is a relationship between two or more variables, statisticians use a numerical measure to identify if two or more variables are related and to determine the strength of the relationship between the variables [11]. The results shown in Table 3 identify that the correlations between the variables within procurement alignment and the performance measures "Performance overtime" and "competitive performance" is a positive, significant correlation between all pairs of variables under the study.

Table 3. Correlation Between Variables (N=43)

		Strategy	Process	Control	Organization	Information	IT	Performance overtime	Competitive performance
Strategy	Pearson Correlation	1	.562**	.650**	.521**	.373*	0.178	.401**	.339*
	Sig. (2-tailed)		0	0	0	0.014	0.255	0.008	0.026
Process	Pearson Correlation	.562**	1	.823**	.663**	.531**	.444**	.463**	0.232
	Sig. (2-tailed)	0		0	0	0	0.003	0.002	0.134
Control	Pearson Correlation	.650**	.823**	1	.718**	.418**	.455**	.462**	.302*
	Sig. (2-tailed)	0	0		0	0.005	0.002	0.002	0.049
Organization	Pearson Correlation	.521**	.663**	.718**	1	.529**	.341*	.439**	.310*
	Sig. (2-tailed)	0	0	0		0	0.025	0.003	0.043
Information	Pearson Correlation	.373*	.531**	.418**	.529**	1	.340*	0.266	.447**
	Sig. (2-tailed)	0.014	0	0.005	0		0.026	0.085	0.003
IT	Pearson Correlation	0.178	.444**	.455**	.341*	.340*	1	0.005	0.174
	Sig. (2-tailed)	0.255	0.003	0.002	0.025	0.026		0.975	0.263
Performance	Pearson	.401**	.463*	.462*	.439**	0.266	0.00	1	.425**

	Correlation		*	*			5		
	Sig. (2-tailed)	0.008	0.002	0.002	0.003	0.085	0.975		0.005
Competitive	Pearson Correlation	.339*	0.232	.302*	.310*	.447**	0.174	.425**	1
	Sig. (2-tailed)	0.026	0.134	0.049	0.043	0.003	0.263	0.005	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Regression

Regression is a statistical method used to identify the relationship nature between variables, positive or negative, linear or nonlinear. There are different techniques for analysing and modelling several variables, when the focus is on the relationship between a dependent variable and one or more independent variable. The purpose of the regression analysis is to understand how the value of the dependent variable changes when any one of the independent variables is varied [11]. Table 4 and Table 5 demonstrate the regression for performance overtime and competitive performance respectively. The analysis shows there not significant relationship between supply chain learning and internal integration because the R square value is less than 0.7.

Table 4. Regression For Performance Overtime

Variable	**R2**
Performance overtime	.320

Dependent variable: performance overtime R2 = 32%

Table 5. Regression For Competitive Performance

Variable	**R2**
Competitive performance	0.263

Dependent variable: competitive performance R2 = 26.3%

CONCLUSION

The results showed that there is a positive effect of procurement alignment on the supply chain performance. The correlation analysis that was done to determine the existence of the relationship between the variables showed that there is a significant positive relationship between all of the eight variables. However, the regression analysis that was used to determine the nature of the relationship between the variables showed that the independent variables effect on the supply chain performance measures of competition and overtime is not significant enough or no evidence of a strong effect. Therefore, the hypotheses are partially rejected.

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