

## Examining the Effect of Procurement Practices on Organizational Performance in Service Organizations: A Case Study of the Arab Academy for Science, Technology and Maritime Transport

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**ABSTRACT:** The procurement function represents the largest total sum of organizational expenditure. Although this procurement fact, the function is still reference as non-strategic and is frequently subordinate to back in the financial segments in the service sectors, and is accordingly considered as a non-value adding function in some organizations. In spite of the way that eminent researchers have uncovered that organizations may eliminate waste, realize more prospects and cut expenses if they implement procurement best practices. It is notified that few organizations have adopted procurement best practices, particularly in the service sectors. From the previous studies, it is evident that there are researches undertaken to develop procurement models. Furthermore, the majority of these models are based on the Manufacturing sectors. Previously the role of procurement was underrated in the service sector. Nowadays, the strategic role of procurement in the service sector is evident nevertheless few studies attempted to develop procurement models in the service sector. In addition, the procurement models available in literature is lacking the focus on the educational institutions. The aim of this research is to examine the effect of procurement practice on organizational performance in service sector. Exploratory research design will use to analyze the procurement processes. The study will use structured questionnaires and semi structured interviews with AAST logistics Managers as primary tools for data collection. The results and findings are subject to be generalized to any educational service, as the researcher used the regression model fitted for the effect of Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics, Knowledge Management on Organizational Performance. It was shown that there is a significant positive effect of Customer Orientation and Knowledge Management on Organizational Performance, as the regression coefficients are 0.430 and 0.256 and P-values are 0.000 and 0.003 respectively. Moreover, the R square is 0.389 which means 38.9% of the variation of the Organizational Performance can be explained by the independent variables together.

**KEYWORDS:** procurement practice, organizational performance, customer orientation, supplier partnership, information sharing, reverse logistics, knowledge management.

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### I. INTRODUCTION.

The study of organizational procurement is as important to service sectors as it is to industry, in comparison with research in industrial procurement; however, the study of organizational procurement in service sectors has been very limited. In the past, determination to control expenditures was not as strong for service organization as it was for industry; it appears that this situation is changing. In view of the fact that modern organization often purchase items of high value and complex nature.

Procurement expenditure, as a percentage of the total expenditure in service-oriented institutions such as universities, is estimated to be at approximately 80% of the total expenditure (Nelson et al., 2005). Since procurement constitutes such a large portion of the organizations' expenditure, it should be conducted according to the best practices to save costs, minimize waste and streamline operations in order to gain competitive advantage (Comm and Mathaisel, 2008). However, the procurement function has traditionally been referred to as a nonstrategic function, often subordinated to finance in the public or service sectors, and therefore considered as a non-value-adding task (Baily et al., 2008).

In the service sector, procurement works in a situation of progressively exceptional examination and quickened changes driven by innovation, program surveys, and open and political desires for service upgrades (Bolton, 2007). This is due to the size of the sector and the scope of its expenditure (Hugo and Badenhorst-Weiss, 2011).

Effective and efficiency procurement method have positive results to social impacts that include improved prospects of achieving alternative government objectives, increased access by local market to government contracts, enhanced reputation for government institutions, and improved social services like better roads, airports, schools, clean water, reliable electricity, hospitals (Erridge, 2005). A poor procurement process results in higher cost to the organization. It results to delays in executing projects or delivery of products or services, which result to cost escalation, poor project execution, and delays the delivery of benefits to the beneficiary of the procurement requirement (Shirima, 2009).

## **II. LITERATURE REVIEW.**

Procurement practices refer to the strategies of procuring or acquiring Products and services (McFalls, 2016). It can also be said that Procurement practices are those managerial actions undertaken to enhance performance of the integrated supply chain. According to (Li et al., 2006), procurement practices have been known as customer orientation, strategic supplier partnership, level of information sharing, quality of information sharing, Reverse logistics and information management.

### **2.1. Customer Orientation.**

(Yee-Loong Chong and Ooi, 2008) suggests that as supply chain management engages operating with external teams namely; customers and suppliers, a strategic partnership between the supply chain partners are going to be needed. as an example, for implementing supply chain standards, strategic partnerships and supply chain members are the foremost necessary factors. Sourcing selections are elementary with relation to supply chain management. the selection of supplier, however businesses are effectively integrated to getting correct complementary skills can type a crucial practice for any business unit. (Narasimhan and Das, 1999) found that strategic sourcing initiatives improve supply chain performance and through examining the kind of sourcing selections, strategic sourcing selections were found to be powerfully associated with producing goal accomplishment in a study of 215 North American manufacturers. additionally, the construct strategic supplier partnership is associate integral component to the second order construct of supply chain management (Li et al., 2006). The shaping components of strategic sourcing are known to be: the standing of supply management among the organizational hierarchy, internal coordination of supply management with alternative functions in a very firm, active data sharing with suppliers, and comprehensive provider development activities (Kocabasoglu and Suresh, 2006).

### **2.2. Strategic Supplier Partnership.**

The choice of suppliers and the way businesses are effectively integrated to getting proper complementary skills are necessary issues. Strategic sourcing consists of strategic outsourcing and supplier capability analysis. additionally, the construct strategic supplier partnership is an integral component to the second order construct of SCM (Li et al., 2006). The shaping parts of strategic sourcing are familiar to be: the standing of supply management at intervals the organizational hierarchy, internal coordination of supply management with various functions in a firm, active information sharing with suppliers, and comprehensive supplier development activities (Kocabasoglu and Suresh, 2006).

### **2.3. Information Sharing.**

Information sharing refers to the extent to that private information is communicated on the supply chain. variety of studies have examined the worth of information sharing on the supply chain. For the foremost half, these researchers have tried to quantify the advantages of sharing information by using simulation approaches. Sharing promotional information between retailers and makers will be significantly helpful. Promotional activity can turn out disruptions inside the supply chain. A retail-level promotion may unnaturally increase demand for a temporary period. without shared information on the promotion, the manufacturer is additionally unprepared. The distributor may not have enough stock to support the demand elicited by the promotion.

### **2.4. Adoption of Information Technology.**

The advent of the net and electronic communication has enabled firms to be heaps of conscious of their customers than ever before. (Perez and Sánchez, 2003) assert that wealthy expertise of firms with electronic resource planning (ERP) tend to deliver higher blessings whereas the electronic data interchange (EDI) adoptive parent understand heaps of operational blessings, extra external pressures and mutual affection, and fewer technical and organizational difficulties than non-adopters of EDI.

## **2.5. Reverse Logistics.**

Reverse logistics is outlined as the effective and economical management of the series of activities required to retrieve a product from a consumer so as to either eliminate it or recover value (Clifford Defee et al., 2009). On their half (Rogers and Tibben-Lembke, 1999) outlined reverse supply chain as the technique of designing, implementing and dominant the economical, cost-efficient flow of raw materials, in-process inventory, finished product and connected info from the purpose of consumption to the purpose of origin for the aim of recapturing or creating worth or for correct disposal.

## **2.6. Knowledge Management.**

Global competition and fast technological changes particularly in information and Correspondence and web advances makes rivalry learning based along these lines poignant SCM across companies (Lang, 2001). A stronger stress on information management as a part of structure strategy might facilitate supply managers to manage uncertainty higher. it's determined that institution of inner information the executive's frameworks for associations produce a bigger base for implicit learning to be leveraged. On the opposite hand, external knowledge management brings worth chain members nearer along and adds worth to the product through accrued quality and client perception of brand name platforms.

## **2.7. Procurement practices and organizational performance.**

A procurement system is also a really vital part of a company's supply chain system. Typically, an organizations procurance perform is split into strategic and operational processes since activities and priorities in these two areas are entirely fully completely different (Turban, 2000). supplier management, the pooling of purchase requisitions and procurance-oriented development are tasks that are typically appointed to strategic procurement. E-procurement permits companies to decentralize operational procurance processes and centralize strategic procurance processes as a result of the upper supply chain transparency provided by E-procurement systems.

Delaney and Huselid (2006) purpose that organizational performance is usually evaluated by quality service and products, satisfying customers, market performance, service innovations, and employee relationships. On the other hand, (Hoque and James, 2000) in their study of organizational performance supported balanced scorecard, declared that structure performance area unit typically appraised by come of investment, margin on sales, capability utilization, client satisfaction and product quality. at intervals a similar approach, (Green and Inman, 2007) known that return on investment, sales and market growth, and profit are necessary factors which can be measured by organizational performance. altogether these performance measures, procurance practices have a positive relationship or usually have a control on the extent of organizational performance.

A strong customer leads to improved marketing and financial performance (Green Jr et al., 2005). As customers begin to demand that the product and services that they purchase be eco-friendly, it's a necessity that manufacturers generate intelligence related to these dynamic customer demands. A manufactured product that's still unsold in inventory, as a result of it does not satisfy client demand is blatantly environmentally unfriendly. A company's client relations practices can have a sway on its success in managing the supply base in addition as its performance (Turner, 1993). A way a and only winning offer build administration includes downstream combination for customers furthermore Since those oversaw economy for upstream suppliers. Each substance inside the supply chain might a chance to be A supplier and in addition a client. When A client determined organization dream will be upheld in indistinguishable twin chance for powerful TQM and supply base administration practices, it'll assembling a focused try dependent upon mixed bag for arranged routes that. These typify could build to productivity, diminishments in creator Furthermore cycle time, expanded customer satisfaction, business sector impart What's more benefits.

Yee-Loong Chong and Ooi (2008) assert that a good organized and executed procurement can make it potential for corporations to decrease their inventories, have better customer service, diminish costs in addition as aid quick inventory turns. one among the biggest blessings of procurance inside the situation of short-run objectives is increasing productivity and decreasing inventory and reducing lead time. based on long run objectives, this factor has important role in increasing company's market share and having outside integration of the procurance (Li et al., 2006).

A good procurement system is significant to an effective organization's supply chain system. The sign to system performance in meeting its supposed goals in service sector is characterised by adequate management of the procurance function. Best procurement practices improve efficiency and effectiveness of a company that interprets to an improvement of its overall performance. Overall procurement practices like supplier relationship management, ethical procurement, information sharing, adoption of technology and adopting green supply chain management make sure that organizational performance is increased by supporting procurement functions in service organizations.

### **III. RESEARCH METHODOLOGY.**

The research methodology mentioned during this section are divided into an outline of the research design, research questions and hypotheses. Also, the research framework is delineated together with the exploration model and factors of the research. Additionally, the targeted population are outlined moreover because the analysis sample. Finally, the data collection process and also the statistical tools used in a while within the empirical study are introduced.

#### **3.1 Research Approach.**

The approach used in this research is both descriptive and exploratory. Descriptive research aims at describing the core aspects of a phenomenon and providing information to answer the questions relating to the fundamental characteristics of the research problem. The descriptive approach is in line with the objective of this examination is to depict the connections between acquisition rehearses measurements and authoritative execution, in addition to define a framework for procurement processes to fit into service organizations especially higher education sector. This is done through a cross-sectional research which involves the comparison of different case studies to explore what happens at that specific point in time.

The cross-sectional investigation is that the most typically used descriptive analysis projected in managerial research, as a lot of research studies are supposed to get an image of a marketplace or a particular business at one spot in time. Descriptive research is often carried out to produce basic knowledge on the basis of which further research is developed. However, this research sought to further engage with the research problem by adopting a subsequent exploratory approach. Exploratory research is primarily concerned with discovering new insights about a phenomenon and to map out the real nature of the research subject through data collection methods such as interviews and center gathering talks with key partners. Exploratory researches are often used when there is limited available research or a deficient body of knowledge within the researched area such as in the current topic of procurement practices its impact on organization performance (Kolb, 2008).

Quantitative research is often contrasted with qualitative research. The distinct characteristics of both research approaches support researchers to make appropriate decisions on designing new research in the initial stage. As stated by Vargo and Lusch (2008) "The production of significant worth is the center reason and focal procedure of financial trade". No matter what the business are selling or buying or offers a wide variety of services and consulting services for other businesses, the purposes for doing it always wind around the concept of value. Therefore, the researcher will depend on a mixed research-based approach of both; quantitative and qualitative methods to gain advantage of both methods and try to avoid disadvantages that might be present by using one type of research approaches.

#### **3.2 Data Collection and Sampling.**

data collection is the method of amassing data from a sample of the population for the cause of statistics analysis and to find the research output and findings. as the modern-day studies depicts a mixed studies-based method, data can be accumulated via two levels, where the primary one can have for cause of the qualitative stage, while the other may have for reason of the quantitative stage.

To apply the qualitative approach, a semi-structured interview will be used to negotiate the managers of logistic sector in AASTMT about procurement practice and its effect on organizational performance. Semi-structured interviews are adequate tools for data collection using a mixed of descriptive and exploratory approach given that they enable the researcher to follow a specific set of questions while leaving room for flexibility and allowing the interviewer to encourage interviewees to cover additional ground and provide new knowledge unaccounted for in the initial set of questions.

Thus, the semi-structured interview, as a qualitative tool of research, will be directed to logistic leaders of AASTMT to explore the strategy they are currently using and the challenges they think they are facing. Also, logistic leaders in the AASTMT are considered as well to respond to a semi-structured interview to be able to know how they communicate with customers and Suppliers and how they are facing from their own visions. In addition, the interview is designed to ask logistic leaders about some information about factors that effect on procurement practices.

On the other hand, the quantitative approach will be applied through a questionnaire survey that will be used to evaluate the current status procurement practices accordingly as well as evaluating the extent of compliance with public procurement in the AASTMT. This will help the researcher reach the goal of providing a framework for procurement processes to fit into service organizations especially higher education sector.

Therefore, the questionnaire, as a quantitative tool of research will be directed to logistics sector employees of AASTMT to respond according to their opinions regarding the research variables to almost certainly assess the effect of procurement practices on organizational performance in the AASTMT. The questionnaire is designed to ask logistics sector employees about their opinions regarding procurement practices dimensions; (Customer orientation, Strategic supplier partnership, Information sharing, Adoption of IT, Reverse

logistics and Knowledge management). Finally, the questionnaire is designed to answer the question, whether these factors are significant factors or not.

### 3.3 Conceptual Framework.

Miles and Huberman (1994) outlined a conceptual framework as a visual or written product, one that “explains, either diagrammatically or in narrative form, the most things to be studied -the key factors, concepts, or variables -and the probable relationships among them”. The schematic outlines underneath won't just guide the examination however will likewise demonstrate the interrelationship among the key factors in the study as delineated in Figure 1.

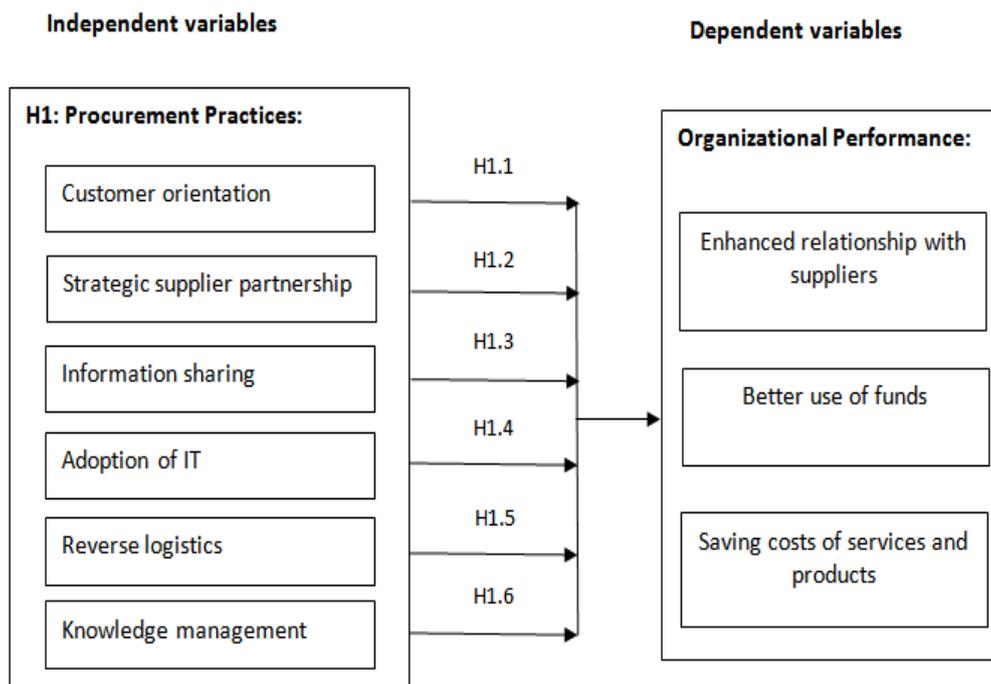


Figure1: proposed research Framework

The following hypotheses were developed from theoretical framework, as follows:

**H<sub>1</sub>: There is a significant Relationship between Procurement Practices and Organizational Performance.**

To test this hypothesis, the following sub hypotheses are formulated:

H<sub>1a</sub>: There is a significant Relationship between Customer Orientation and Organizational Performance.

H<sub>1b</sub>: There is a significant Relationship between Information Sharing and Organizational Performance.

H<sub>1c</sub>: There is a significant Relationship between Adoption of IT and Organizational Performance.

H<sub>1d</sub>: There is a significant Relationship between Reverse Logistics and Organizational Performance.

H<sub>1e</sub>: There is a significant Relationship between Knowledge Management and Organizational Performance.

## IV. EMPIRICAL STUDY AND FINDINGS.

### 4.1 Data Testing Using Validity And Reliability.

Validity and Reliability of the data under examination are two vital conditions that must be fulfilled before utilizing the data accessible in reacting to the research hypotheses. They are two prerequisites to demonstrate the exactness of results separated from the poll. Accordingly, legitimacy and dependability investigation were performed to guarantee that the data is satisfactory for examination.

#### 4.1.1 Validity Analysis.

Validity refers to the degree of exactness of the exploration results. It could be either internal or external. Internal validity refers to the examination of the precision of the outcomes acquired, while external Validity refers to the investigation of the findings with respect to whether they can be generalized (Ghauri and Grønhaug, 2005). The validity of the data could be confirmed when the Average Variance Extracted (AVE) of all factors are greater than or equal to 50% and all Items Loadings are greater than 0.4 (Fornell and Larcker, 1981). Table 1 shows that all AVEs and Item loadings are above these cut-off values, implying adequate validity for the data under study. Validity means the extent to which an instrument measures what it supposes to measure correctly (Sekaran and Bougie, 2016). The investigator used focused validity test by applying factor analysis.

focused validity tests the data using factor analysis (multivariate technique) that confirms whether or not the theorized dimensions are applicable (Sekaran and Bougie, 2016). Focalized validity might have been key to guarantee that the things measuring the same construct would be exceedingly associated (Sekaran and Bougie, 2016).

In order to test the convergent validity, the KMO test is used, where all values are greater than 0.5, referring to the fact that data is valid to use factor analysis. Also, the p-value refers to the significance of the sphericity test, where all p-values are less than 0.05, implying that sample is adequate for testing. In addition, the average value extracted for each of the scales should be calculated, which represents the average community for each latent factor. In an adequate model, Average Variance Extracted (AVE) should be greater than 0.5, which means that the factors should explain at least half the variance of their respective indicators (Sekaran and Bougie, 2016).

Table 1 shows the results of the pilot study conducted for 67 respondents. It could be observed that Customer Orientation, Adoption of IT, Reverse Logistics, Knowledge Management, Training and Sensitization, Contribution in Tendering Procurement methods, Procurement Staff Qualification, Challenges of Compliance, Organizational Performance, Strategic Supplier Partnership, Information Sharing and Challenges of Procurement Practices are within the acceptable cutoff values for KMO, AVE, FL and Cronbach's Alpha, implying adequate reliability and validity for the research constructs.

**Table 1: Validity and Reliability of the Research Variables.**

| Variables                           | KMO  | AVE      | Cronbach's Alpha | Items | Factor Loading (FL) |
|-------------------------------------|------|----------|------------------|-------|---------------------|
| Customer Orientation                | 0.5  | 77.468 % | .709             | CO1   | .775                |
|                                     |      |          |                  | CO2   | .775                |
| Strategic Supplier Partnership      | 0.5  | 77.833%  | .702             | SSP1  | .778                |
|                                     |      |          |                  | SSP2  | .778                |
| Information Sharing                 | 0.5  | 80.905%  | .764             | ISH1  | .809                |
|                                     |      |          |                  | ISH2  | .809                |
| Adoption of IT                      | 0.5  | 80.576%  | .752             | IT1   | .806                |
|                                     |      |          |                  | IT2   | .806                |
| Reverse Logistics                   | 0.5  | 77.628%  | .712             | RL1   | .776                |
|                                     |      |          |                  | RL2   | .776                |
| Knowledge Management                | 0.5  | 77.308%  | .702             | KM1   | .773                |
|                                     |      |          |                  | KM2   | .773                |
| Challenges of Procurement Practices | 0.5  | 87.691%  | .857             | C1    | Deleted             |
|                                     |      |          |                  | C2    | Deleted             |
|                                     |      |          |                  | C3    | .877                |
|                                     |      |          |                  | C4    | .877                |
| Organizational Performance          | 0.78 | 69.08%   | 0.838            | OP1   | 0.791               |
|                                     |      |          |                  | OP2   | 0.712               |
|                                     |      |          |                  | OP3   | Deleted             |
|                                     |      |          |                  | OP4   | Deleted             |
|                                     |      |          |                  | OP5   | 0.417               |
|                                     |      |          |                  | OP6   | 0.843               |
| <b>Overall reliability</b>          |      |          | <b>0.889</b>     |       |                     |

**4.1.2 Reliability Analysis.**

For the aim of analysis of measures of concepts, any multidimensional scale ought to be reliable and valid. In order to check reliability of the research, Cronbach's Alpha, as the most ordinarily used check of reliability, was applied. Alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from dichotomous (that is, questions with two possible answers) and/or multi-point formatted questionnaires or scales (i.e., rating scale: 1 = poor, 5 = excellent). The higher the score, the more reliable the generated scale is. It was indicated that 0.7 is an acceptable reliability coefficient but lower thresholds are sometimes used in the literature (Sekaran and Bougie, 2016). An overall Cronbach's alpha of reliability testing was found to be 0.889. Above Table 1 shows that all Cronbach's alpha values for this research exceed 0.7, implying that the data is reliable.

**4.2 Descriptive Analysis.**

The descriptive statistics is a way to illustrate and understand characteristics of a specific data set, making short summaries about the sample and measures of the data. There are three main types of descriptive statistics, which are frequencies, measures of central tendency (e.g. averages), and measures of variability (e.g.

standard deviation). Measures of central tendency give one value that represents the whole set of scores, like the mean. Measures of variability shows the degree to which scores that differ from the mean. Frequency statistics gathers the number of times each variable is repeated, for example, the number of males and females inside the sample. In the following section, means, standard deviations, and frequency statistics is conducted on both demographic data and the research variables. Table 2 shows the frequency tables for the research variables. It is observed that responses vary between Neutral and strongly agree

**Table 2: Descriptive Analysis for the Research Variables.**

| Demographics                  | Frequency | Percent | Total |
|-------------------------------|-----------|---------|-------|
| <b>Gender</b>                 |           |         |       |
| Male                          | 78        | 76.5    | 102   |
| Female                        | 24        | 23.5    |       |
| <b>Age group</b>              |           |         |       |
| 25 years or less              | 4         | 3.9     | 102   |
| 26-35 years                   | 45        | 44.1    |       |
| 36-45 years                   | 32        | 31.4    |       |
| 46-55 years                   | 19        | 18.6    |       |
| 56 years and above            | 2         | 2       |       |
| <b>Last Position</b>          |           |         |       |
| Logistics affair Director     | 3         | 2.9     | 102   |
| Procurement manager           | 2         | 2       |       |
| Assistant Procurement manager | 7         | 6.9     |       |
| Procurement officer           | 25        | 24.5    |       |
| Other                         | 65        | 63.7    |       |
| <b>Education Level</b>        |           |         |       |
| Master's / Doctoral degree    | 48        | 47.1    | 102   |
| Bachelor's degree             | 54        | 52.9    |       |
| Diploma                       | 0         | 0       |       |
| <b>Years of Experience</b>    |           |         |       |
| Less than 5 years             | 33        | 32.4    | 102   |
| 5 - 10 years                  | 39        | 38.2    |       |
| 11-20 years                   | 17        | 16.7    |       |
| More than 20 years            | 13        | 12.7    |       |

**4.3 Normality Testing for the Research Variables.**

In order to check the normality for the data, two types of tests are conducted; formal and informal. Table 3 shows the formal testing of normality assumption for the research variables using the Kolmogorov-Smirnov test of normality. It could be observed that the research variables are not normally distributed, as the corresponding P-values are less than 0.05. Consequently, spearman correlations are used to describe the relationships between the research variables.

**Table 3: Formal Testing of Normality.**

| Variables                      | Kolmogorov-Smirnov <sup>a</sup> |     |      | Shapiro-Wilk |     |      |
|--------------------------------|---------------------------------|-----|------|--------------|-----|------|
|                                | Statistic                       | df  | Sig. | Statistic    | df  | Sig. |
| Customer Orientation           | .298                            | 102 | .000 | .750         | 102 | .000 |
| Strategic Supplier Partnership | .294                            | 102 | .000 | .764         | 102 | .000 |
| Information Sharing            | .304                            | 102 | .000 | .785         | 102 | .000 |
| Adoption of IT                 | .264                            | 102 | .000 | .811         | 102 | .000 |
| Reverse Logistics              | .232                            | 102 | .000 | .859         | 102 | .000 |

|                            |      |     |      |      |     |      |
|----------------------------|------|-----|------|------|-----|------|
| Knowledge Management       | .260 | 102 | .000 | .839 | 102 | .000 |
| Organizational Performance | .303 | 102 | .000 | .752 | 102 | .000 |

**4.4 Testing Research Hypotheses.**

In this section, the hypotheses under study are tested using the correlation, regression and SEM modeling.

**4.4.1 Testing the Relationship between Procurement Practices and Organizational Performance.**

This section investigates the relationship between Procurement Practices on Organizational Performance. As the formal and informal tests shows that data under study are not normally distributed, Spearman correlation coefficient is used. Table 4 shows the correlation matrix for the relationship between Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics, Knowledge Management on Organizational Performance. It was found that there is significant relation between Customer Orientation, Information Sharing, Adoption of IT, Reverse Logistics, Knowledge Management, as the corresponding P-value is less than 0.05 and correlation coefficients are 0.525, 0.369, 0.235, 0.257 and 0.415 respectively.

**Table 4: Correlation Matrix between Procurement Practices and Organizational Performance**

|                                |                        | CO     | SSP    | ISH    | IT     | RL     | KM     | OP    |
|--------------------------------|------------------------|--------|--------|--------|--------|--------|--------|-------|
| Customer Orientation           | Spearman's Correlation | 1.000  |        |        |        |        |        |       |
|                                | Sig. (2-tailed)        | .      |        |        |        |        |        |       |
|                                | N                      | 102    |        |        |        |        |        |       |
| Strategic Supplier Partnership | Spearman's Correlation | .463** | 1.000  |        |        |        |        |       |
|                                | Sig. (2-tailed)        | .000   | .      |        |        |        |        |       |
|                                | N                      | 102    | 102    |        |        |        |        |       |
| Information Sharing            | Spearman's Correlation | .444** | .262** | 1.000  |        |        |        |       |
|                                | Sig. (2-tailed)        | .000   | .008   | .      |        |        |        |       |
|                                | N                      | 102    | 102    | 102    |        |        |        |       |
| Adoption of IT                 | Spearman's Correlation | .277** | -.016  | .370** | 1.000  |        |        |       |
|                                | Sig. (2-tailed)        | .005   | .874   | .000   | .      |        |        |       |
|                                | N                      | 102    | 102    | 102    | 102    |        |        |       |
| Reverse Logistics              | Spearman's Correlation | .374** | .078   | .431** | .367** | 1.000  |        |       |
|                                | Sig. (2-tailed)        | .000   | .438   | .000   | .000   | .      |        |       |
|                                | N                      | 102    | 102    | 102    | 102    | 102    |        |       |
| Knowledge Management           | Spearman's Correlation | .304** | .095   | .523** | .295** | .449** | 1.000  |       |
|                                | Sig. (2-tailed)        | .002   | .344   | .000   | .003   | .000   | .      |       |
|                                | N                      | 102    | 102    | 102    | 102    | 102    | 102    |       |
| Organizational Performance     | Spearman's Correlation | .525** | .146   | .369** | .235*  | .257** | .415** | 1.000 |
|                                | Sig. (2-tailed)        | .000   | .143   | .000   | .018   | .009   | .000   | .     |
|                                | N                      | 102    | 102    | 102    | 102    | 102    | 102    | 102   |

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

The regression models of the Procurement Practices are conducted on Organizational Performance. Results are shown in Table 5, where the simple regression for the effect of Customer Orientation on Organizational Performance. It illustrates that there is a significant positive effect, as the regression coefficient is 0.541 and P-value is 0.000. Moreover, the R Square is 0.255 which means that 25.5% of the variation of the Organizational Performance can be explained by the independent variable Customer Orientation.

**Table 5: Regression Model of Customer Orientation and Organizational Performance.**

| Model                | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. | R Square |
|----------------------|-----------------------------|------------|---------------------------|-------|------|----------|
|                      | B                           | Std. Error | Beta                      |       |      |          |
| (Constant)           | 1.890                       | .407       |                           | 4.646 | .000 | 0.255    |
| Customer Orientation | .541                        | .093       | .505                      | 5.844 | .000 |          |

a. Dependent Variable: Organizational Performance

Therefore, based on the analysis the first sub hypothesis of the first hypothesis is supported

Table 6 shows the simple regression for the effect of Strategic Supplier Partnership on Organizational Performance. It illustrates that there is a significant positive effect, as the regression coefficient is 0.212 and P-value is 0.040. Moreover, the R Square is 0.042, which means that 4.2 % of the variation of the Organizational Performance can be explained by the independent variable Strategic Supplier Partnership.

**Table 6: Regression Model of Strategic Supplier Partnership and Organizational Performance.**

| Model                          | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. | R Square |
|--------------------------------|-----------------------------|------------|---------------------------|-------|------|----------|
|                                | B                           | Std. Error | Beta                      |       |      |          |
| (Constant)                     | 3.331                       | .443       |                           | 7.519 | .000 | 0.042    |
| Strategic Supplier Partnership | .212                        | .102       | .204                      | 2.083 | .040 |          |

a. Dependent Variable: Organizational Performance

Therefore, based on the analysis the second sub hypothesis of the first hypothesis is supported

Table 7 shows the simple regression for the effect of Information Sharing on Organizational Performance. It illustrates that there is a significant positive effect, as the regression coefficient is 0.456 and P-value is 0.000. Moreover, the R Square is 0.219, which means that 21.9 % of the variation of the Organizational Performance can be explained by the independent variable Information Sharing.

**Table 7: Regression Model of Information Sharing and Organizational Performance.**

| Model               | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. | R Square |
|---------------------|-----------------------------|------------|---------------------------|-------|------|----------|
|                     | B                           | Std. Error | Beta                      |       |      |          |
| (Constant)          | 2.375                       | .358       |                           | 6.631 | .000 | 0.219    |
| Information Sharing | .456                        | .086       | .468                      | 5.292 | .000 |          |

a. Dependent Variable: Organizational Performance

Therefore, based on the analysis the third sub hypothesis of the first hypothesis is supported

Table 8 shows the simple regression for the effect of Adoption of IT on Organizational Performance. It illustrates that there is a significant positive effect, as the regression coefficient is 0.219 and P-value is 0.008. Moreover, the R Square is 0.069, which means that 6.9 % of the variation of the Organizational Performance can be explained by the independent variable Adoption of IT.

**Table 8: Regression Model of Adoption of IT and Organizational Performance.**

| Model          | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. | R Square |
|----------------|-----------------------------|------------|---------------------------|-------|------|----------|
|                | B                           | Std. Error | Beta                      |       |      |          |
| (Constant)     | 3.341                       | .338       |                           | 9.897 | .000 | 0.069    |
| Adoption of IT | .219                        | .080       | .263                      | 2.726 | .008 |          |

a. Dependent Variable: Organizational Performance

Therefore, based on the analysis the fourth sub hypothesis of the first hypothesis is supported

Table 9 shows the simple regression for the effect of Reverse Logistics on Organizational Performance. It illustrates that there is a significant positive effect, as the regression coefficient is 0.178 and P-value is 0.019. Moreover, the R Square is 0.054, which means that 5.4 % of the variation of the Organizational Performance can be explained by the independent variable Reverse Logistics.

**Table 9: Regression Model of Reverse Logistics and Organizational Performance.**

| Model             | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. | R Square |
|-------------------|-----------------------------|------------|---------------------------|--------|------|----------|
|                   | B                           | Std. Error | Beta                      |        |      |          |
| (Constant)        | 3.553                       | .297       |                           | 11.963 | .000 | 0.054    |
| Reverse Logistics | .178                        | .075       | .232                      | 2.385  | .019 |          |

a. Dependent Variable: Organizational Performance

Therefore, based on the analysis the fifth sub hypothesis of the first hypothesis is supported

Table 10 shows the simple regression for the effect of Knowledge Management on Organizational Performance. It illustrates that there is a significant positive effect, as the regression coefficient is 0.389 and P-value is 0.000. Moreover, the R Square is 0.216, which means that 21.6 % of the variation of the Organizational Performance can be explained by the independent variable Knowledge Management.

**Table 10: Regression Model of Knowledge Management and Organizational Performance.**

| Model                | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. | R Square |
|----------------------|-----------------------------|------------|---------------------------|-------|------|----------|
|                      | B                           | Std. Error | Beta                      |       |      |          |
| (Constant)           | 2.683                       | .303       |                           | 8.850 | .000 | 0.216    |
| Knowledge Management | .389                        | .074       | .465                      | 5.246 | .000 |          |

a. Dependent Variable: Organizational Performance

Therefore, based on the analysis the sixth sub hypothesis of the first hypothesis is supported

Table 11 shows the regression model fitted for the effect of Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics, Knowledge Management on Organizational Performance. It illustrates that there is a significant positive effect of Customer Orientation and Knowledge Management on Organizational Performance, as the regression coefficients are 0.430 and 0.256 and P-values are 0.000 and 0.003 respectively. Moreover, the R square is 0.389 which means 38.9% of the variation of the Organizational Performance can be explained by the independent variables together.

**Table 11: Regression Model of Procurement Practices and Organizational Performance**

| Model                          | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. | R Square |
|--------------------------------|-----------------------------|------------|---------------------------|--------|------|----------|
|                                | B                           | Std. Error | Beta                      |        |      |          |
| (Constant)                     | 1.059                       | .504       |                           | 2.101  | .038 | 0.389    |
| Customer Orientation           | .430                        | .109       | .401                      | 3.942  | .000 |          |
| Strategic Supplier Partnership | -.056                       | .097       | -.054                     | -.580  | .563 |          |
| Information Sharing            | .156                        | .103       | .159                      | 1.512  | .134 |          |
| Adoption of IT                 | .072                        | .073       | .087                      | .991   | .324 |          |
| Reverse Logistics              | -.106                       | .073       | -.138                     | -1.444 | .152 |          |
| Knowledge Management           | .256                        | .084       | .306                      | 3.065  | .003 |          |

a. Dependent Variable: Organizational Performance

Therefore, the first hypothesis is partially supported.

**4.4.2 Structural Equation Modeling for Procurement Practices Effect.**

Table 12 illustrate the SEM model conducted for the effect of Procurement Practices on Organizational Performance. It could be observed that the model fit indices; CMIN/DF = 1.586, GFI = 0.917, CFI = 0.947, AGFI= 0.815, and RMSEA = 0.076 are all within their acceptable levels as it shows in the following table.

**Table 12: Fit Indices and Thresholds for Procurement Practices Model.**

| Measure       | Results | Threshold  |
|---------------|---------|--|
| Chi-square/df | 1.586   | < 2 excellent; < 3 good; < 5 sometimes permissible             |
| P-value       | .928    | > 0.05   |
| GFI           | .917    | > 0.80   |
| AGFI          | .815    | > 0.80   |
| NFI           | .877    | > 0.80   |
| TLI           | .900    | > 0.80   |
| CFI           | .947    | > 0.95 great; > 0.90 traditional; > 0.80 sometimes permissible |
| RMR           | .034    | < 0.09   |
| RMSEA         | .076    | < 0.05 good; 0.05-0.10 moderate; > 0.10 bad                    |
| PCLOSE        | .130    | > 0.05   |

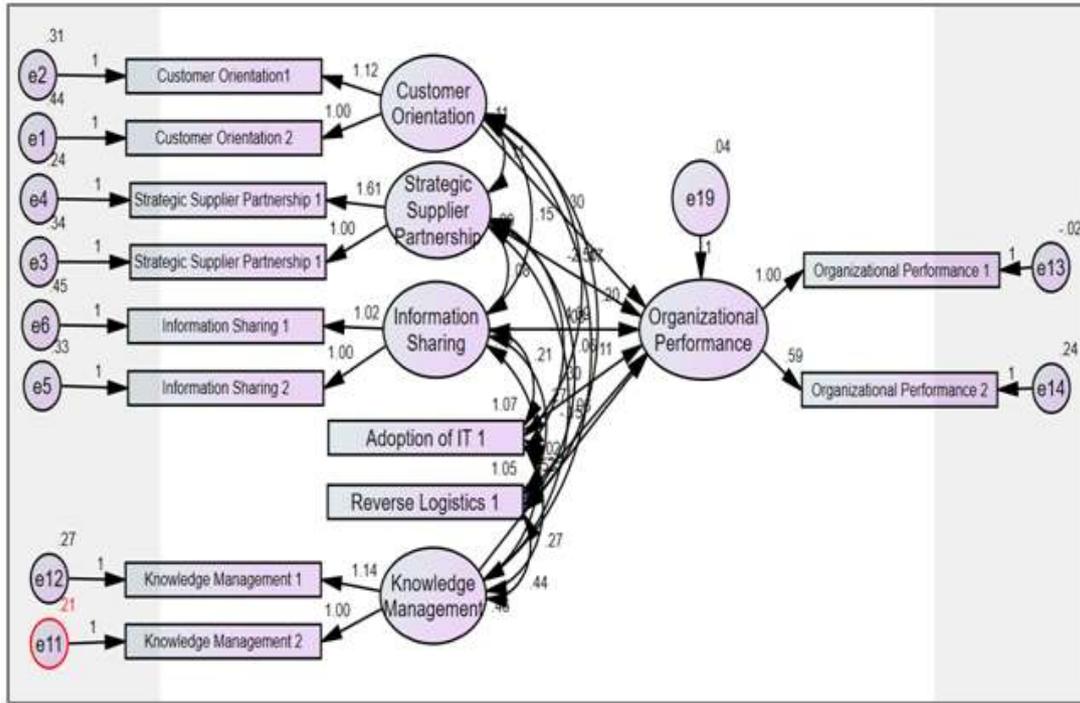


Figure 2 SEM for Procurement Practices and Organizational Performance.

Table 13 shows the SEM analysis of the impact of Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics and Knowledge Management on Organizational Performance. It could be observed that there is an insignificant impact of Procurement Practices on Organizational Performance as P-values are more than 0.05.

Table 13: SEM Analysis of Procurement Practices and Organizational Performance.

|                            |      |                                | Estimate | P-value | R Square |
|----------------------------|------|--------------------------------|----------|---------|----------|
| Organizational Performance | <--- | Customer Orientation           | .298     | .913    | .928     |
| Organizational Performance | <--- | Strategic Supplier Partnership | -2.499   | .790    |          |
| Organizational Performance | <--- | Information Sharing            | 4.092    | .683    |          |
| Organizational Performance | <--- | Knowledge Management           | -1.020   | .799    |          |
| Organizational Performance | <--- | Adoption of IT                 | -.303    | .734    |          |
| Organizational Performance | <--- | Reverse Logistics              | -.149    | .746    |          |

## V. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In fact, this section presents the ability of the research to achieve the research objectives that was stated in the introduction. The first objective is to analyze the role of procurement processes towards achieving the effectiveness of organizational performance.

Considering the analysis of the first hypothesis “Testing the Relationship between Procurement Practices and Organizational Performance” by using the correlation, it was found that there is a significant relation between Customer Orientation, Information Sharing, Adoption of IT, Reverse Logistics, Knowledge Management, as the corresponding P-value is less than 0.05 and correlation coefficients are 0.525, 0.369, 0.235, 0.257 and 0.415 respectively.

Actually, (Li et al., 2006) claimed that Procurement practices are those managerial actions undertaken to enhance performance of the integrated supply chain. Moreover, procurement practices have been known as customer orientation, strategic supplier partnership, level of knowledge sharing, quality of knowledge sharing, Reverse logistics and information management. Thus, our finding was supported.

Regarding the analysis of the first sub hypothesis of the first hypothesis “Testing the Relationship between Customer Orientation and Organizational Performance” by using the regression, it was found that there is a significant positive effect, as the regression coefficient is 0.541 and P-value is 0.000. Moreover, the R Square is 0.255 which means that 25.5% of the variation of the Organizational Performance can be explained by the independent variable Customer Orientation.

In fact, it was suggested that procurement practices are those managerial actions undertaken to enhance performance of the integrated supply chain. Customer Orientation was considered one of the antecedents affecting procurement practices(Li et al., 2006). Thus, our finding was supported.

Regarding the analysis of the second sub hypothesis of the first hypothesis “Testing the Relationship between Strategic Supplier Partnership on Organizational Performance” by using the regression, it was found that there is a there is a significant positive effect, as the regression coefficient is 0.212 and P-value is 0.040. Moreover, the R Square is 0.042, which means that 4.2 % of the variation of the Organizational Performance can be explained by the independent variable Strategic Supplier Partnership.

Moreover, procurement practices was proposed as managerial actions which are taken to enhance performance of the integrated supply chain and Strategic Supplier Partnership is considered as one of the factors affecting it(Li et al., 2006). Thus, our finding was supported.

Regarding the analysis of the third sub hypothesis of the first hypothesis “Testing the Relationship between Information Sharing and Organizational Performance” by using the regression, it was found that there is a there is a significant positive effect, as the regression coefficient is 0.456 and P-value is 0.000. Moreover, the R Square is 0.219, which means that 21.9 % of the variation of the Organizational Performance can be explained by the independent variable Information Sharing.

It was claimed by (Smáros et al., 2003) that Information sharing practices such as vendor-managed inventory (VMI) provide makers a lot of correct info than before e.g. client sales information. It was suggested that procurement practices are those managerial actions undertaken to enhance performance of the integrated supply chain. Information sharing was suggested as one of the antecedents affecting procurement practices(Li et al., 2006). Thus, it supports the finding of the research.

Regarding the analysis of the forth sub hypothesis of the first hypothesis “Testing the Relationship between Adoption of IT and Organizational Performance” by using the regression, it was found that there is a there is a significant positive effect, as the regression coefficient is 0.219 and P-value is 0.008. Moreover, the R Square is 0.069, which means that 6.9 % of the variation of the Organizational Performance can be explained by the independent variable Adoption of IT.

In addition, the advent of the internet and electronic communication has enabled firms to be a lot of awake to their customers than ever before(Perez and Sánchez, 2003). Thus, this agreed with the finding.

Regarding the analysis of the fifth sub hypothesis of the first hypothesis “Testing the Relationship between Reverse Logistics and Organizational Performance” by using the regression, it was found that there is a there is a significant positive effect, as the regression coefficient is 0.178 and P-value is 0.019. Moreover, the R Square is 0.054, which means that 5.4 % of the variation of the Organizational Performance can be explained by the independent variable Reverse Logistics.

Moreover, it was proposed that procurement practices are those managerial actions undertaken to enhance performance of the integrated supply chain. Reverse Logistics was proposed as one of the antecedents affecting procurement practices(Li et al., 2006). Thus, the finding of the research is supported.

Regarding the analysis of the sixth sub hypothesis of the first hypothesis “Testing the Relationship between Knowledge Management and Organizational Performance” by using the regression, it was found that there is a there is a significant positive effect, as the regression coefficient is 0.389 and P-value is 0.000. Moreover, the R Square is 0.216, which means that 21.6 % of the variation of the Organizational Performance can be explained by the independent variable Knowledge Management.

In fact, e-procurement helps in rising auditing and higher security by enabling employees and auditors to verify and track the movement of orders through the system, shorten the delivery time by cutting time looking forward to documents within the mail, eliminate zone obstacles, because the e-procurement are often used any time of the day, and cut back inventory levels, thence prices related to inventory. additionally, e-procurement helps to maximize labor by empowering the staff World Health Organization wish the product to form the transactions that area unit right for his or her work(Johnson and Klassen, 2005). Therefore, the research finding is supported.

Regarding the full regression model fitted for the effect of Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics, Knowledge Management and Organizational Performance. It was found that there is a significant positive effect of Customer Orientation and Knowledge Management on Organizational Performance, as the regression coefficients are 0.430 and 0.256 and P-values are 0.000 and 0.003 respectively. Moreover, the R square is 0.389 which means 38.9% of the variation of the Organizational Performance can be explained by the independent variables together.

On the other hand, the SEM analysis of the impact of Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics and Knowledge Management on Organizational Performance. It could be observed that there is an insignificant impact of Procurement Practices on Organizational Performance as P-values are more than 0.05. Therefore, the first hypothesis is partially supported.

Actually, (Delaney and Huselid, 2006) agree with the finding as he claimed that organizational performance will be evaluated by quality service and products, satisfying customers, market performance, service innovations, and worker relationships. Furthermore, (Hoque and James, 2000) proposed that organizational performance supported balanced scorecard, expressed that organizational performance will be improved by come of investment, margin on sales, capability utilization, client satisfaction and products quality. In addition, (Green and Inman, 2007) known that come on investment, sales and market growth, and profit area unit necessary factors that may be measured by organizational performance. Altogether these performance measures, procurement practices have a positive relationship or typically have an effect on the extent of organizational performance. Therefore, the first hypothesis is supported.

The second objective of this research was to examine the extent to which procurement implementation process leads to effective organizational performance.

In order to achieve the third objective and reach successful implementation the significant factors in the full regression models of the two hypotheses of the research have to be considered.

By using simple regression, it was found that there is a there is a significant positive effect of Customer Orientation on Organizational Performance, as the regression coefficient is 0.541 and P-value is 0.000. Moreover, the R Square is 0.255 which means that 25.5% of the variation of the Organizational Performance can be explained by the independent variable Customer Orientation. While in the full regression model Customer Orientation regression coefficient 0.430 and P-value is 0.000.

Moreover, by using simple regression, it was found that there is a there is a significant positive effect of Knowledge Management on Organizational Performance, as the regression coefficient is 0.389 and P-value is 0.000. Moreover, the R Square is 0.216, which means that 21.6 % of the variation of the Organizational Performance can be explained by the independent variable Knowledge Management. While in the full regression model Knowledge Management regression coefficient 0.256 and P-value is 0.003.

Additionally, it was suggested by (Guy and Diehl, 2000), that there are six dimensions although that we are able to decide the level of institutionalization of any structure and its ability to adapt to alter, including: autonomy, complexity, coherence, congruity and exclusivity. Implementation of organizational activities depends on the relationships between and at intervals organizations. A method to explain this relationship and its result on implementation of organizational activities is that the principal agency theory holds that soldiering is probably going to occur once there's some disagreement between policy manufacturers and also the forms.

### **5.1 Research Conclusion.**

The research was applied on the Arab Academy for Science and Technology and Maritime Transport. Yet, the results and findings are subject to be generalized to any educational service, as the researcher used the regression model fitted for the effect of Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics, Knowledge Management on Organizational Performance. It was shown that there is a significant positive effect of Customer Orientation and Knowledge Management on Organizational Performance, as the regression coefficients are 0.430 and 0.256 and P-values are 0.000 and 0.003 respectively. Moreover, the R square is 0.389 which means 38.9% of the variation of the Organizational Performance can be explained by the independent variables together.

However, by using the SEM analysis of the impact of Procurement Practices; Customer Orientation, Strategic Supplier Partnership, Information Sharing, Adoption of IT, Reverse Logistics and Knowledge Management on Organizational Performance. It could be observed that there is an insignificant impact of Procurement Practices on Organizational Performance as P-values are more than 0.05.

### **5.2 Research Implications.**

In fact, this research may have a wide effect and a lot of implications considering the education services. Consequently, decision makers should consider developing and implementing strategies which enhance Customer Orientation, Knowledge Management regression to improve Organizational Performance in turn.

Moreover, researchers should consider studying more factors that improve Organizational Performance as well as studying other variables that enhance the relationship between research variables and Organizational Performance. Furthermore, researchers might consider testing other variables which may enhance the relationship between research variables and Organizational Performance.

### **5.3 Research Contribution and Originality.**

This research contribution arises from examining the combination of these variables in Education service. Also, this research was considered as the first to examine the effect of Procurement practices (Customer orientation, Strategic supplier partnership, Information sharing, Adoption of IT, Reverse logistics and Knowledge management) on Organizational Performance.

#### **5.4 Recommendations for Current Research.**

Research recommendations arise according to the research and findings. Some of which are suggested for the current research, while other recommendations are inducted for future research. Regarding the recommendations for the current research and to improve Organizational Performance, it is recommended to enhance Customer Orientation and Knowledge Management to improve Procurement practices as a result, as these variables are considered as significant variables regarding Procurement practices. By improving Procurement practices, Organizational Performance will be improved as a result.

Generally, the significant variables affecting Procurement practices should be highlighted as they are considered the factors affecting the Organizational Performance and they might be considered as barriers for Organizational Performance improvement.

Regarding the future work recommendations, it is recommended to examine other educational services and also to enlarge sample size as small sample size might negatively affect the results and in turn affect the research recommendations.

#### **5.5 Recommendations for Future Research.**

Regarding the future work recommendations, it is recommended to examine other educational institutes in Egypt to be able to get more generalized output. This might be helpful in achieving better organizations performance through better procurement practices.

Moreover, it is recommended to examine other educational institutes in developed and developing countries and apply a comparison between them. Also, enlarging sample size might be beneficial as small sample size might negatively affect the results and in turn affect the research recommendations.

#### **5.6 Research Limitations.**

As usual in most empirical studies, the research has some limitations. Taking the sample under study in consideration, some limitations was found to reach larger sample for more employees in the Arab Academy for Science and Technology and Maritime Transport in which results and findings might be more accurate as a result of larger sample size. In addition, the researcher was not able to reach other educational institutes from the public sector.

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