Impact of Purchasing and Supply Management Practices on Firm Performance Study of Garment Retailing in Pakistan

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ABSTRACT

Purchasing and supply management practices play very important role for the performance of the firm, both are recognized as key success factor for an organization. The purpose of this study is to analyze the relationship of purchasing and supply management practices with firm performance. In this research data is collected from 440 respondents with the help of questionnaire. The modeling includes regression technique to analyze impact of purchasing and supply management practices on firm performance. On the basis of results of the study it was found that the strategic purchasing and supply management practices have significant impact on firm performance. Study was carefully conducted. But there were some limitations. Research was conducted by covering small population of retail garment sector as in Rawalpindi and Islamabad Pakistan; it would be good if it is completed by covering more cities.

1. Introduction

Supply chain management firstly introduced in 1982 and it was described as *"It is the organized and tactical combination of different functions of business. It includes all the function performed during the production of units to delivering them to the final consumer or customer. If the supply chain is effectively managed, it will add value to the services, products and information for consumer and stakeholders" (*Cooper, M.C., Lambert, D. M., Pagh, J. D 1997).

1.1 Purchasing

Car and Pearson (1999) said that Strategic Purchasing plays a vital role in supply chain management and organization performance, it increases the performance of companies by which their profitability increases and satisfies the customer's need better than the competitors. Ellram and Pearson (1993) argued that purchasing of raw material is more important because it takes more than fifty percent of the cost on the products.

1.2 Supply Chain Practice

Six practices of supply chain management identified are said to be very important; strategic supplier partnership, relationships with customers and suppliers, quick, efficient and accurate information sharing, better quality of information, internal lean practices in the organization and postponement (Li et al. 2005). Nahmias (2001) pointed out that information plays a key role in supply chain functions. According to Fraza (2000) supply chain management totally connected with the CRM and SRM.

1.3 Firm Performance

Some of the areas are the backbone of a business and these areas must be carefully monitored and implemented,

they add value to the company performance. .These key areas are critical success factors for any organization (Rockart, J. F. 1979).

1.3.1 Development of reliable supplier

Singh, Garg, and Deshmukh, (2008) suggested that for competing in global market, a firm should have efficient and effective collaboration and coordination with its suppliers and customers.

1.3.2 Top management commitment

Sandberg and Abrahamsson (2010) pointed out that top management plays very important role for effective supply chain management which positively increases the organization performance.

1.3.3 Use of modern technology

Antoniadis and Ananikas, (2004) suggested that to survive in the increasing competition in a global market, organizations are forced to improve their supply chains. SCM made it able for an organization to use technology to respond their customer and trading partners in better and effective way to provide the customer satisfaction through responding them quickly.

1.3.4 Higher flexibility in production system

Production system flexibility enables a firm to change or modify product according to the demand of the customer (Ravinder Kumar 2015).

1.3.5 Forecasting of demand on point of sale

Francesca, Bianco and Mauro (2008) observed that data which is available at the point of sale (POS) is very important for a firm, and it also plays important part for supply chain responsiveness.

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1.3.6 Customer Satisfaction

According to Simchi-Levi (2003) it is very important for the business person to understand the perception of their customer because the customer does not always perceive things in same pattern.

1.4 Problem identification

With the help of bottleneck analysis it can be measure that which supply chain phases and activities are most beneficial for increasing competition (Federico D'Amico, 2017). Companies in today's competitive environment need to be more strategic and conservative regarding their purchase decision and supply management, customers are now more aware and calculated when they are going to take the buying or purchase decisions. The study helps the purchase and supply managers while taking purchase decisions in retail garments industry of Pakistan. Without proper refined purchasing and supply management practices organizations could not be able to face the challenges and compete with their competitor (Vasconcellos and Hambrick 1989)

1.5 Problem Statement

How an organization could gain and increase its economic prosperity through strategic purchasing and supply management practices. Strategic purchasing and supply management practices also affect those key success factors either positively or negatively which are important for the organization. The problem is that how purchasing and supply management practices affect the firm performance and how to improve their performance in retail garments industry.

1.6 Objectives of the Research

1. To investigate how purchasing effects the firm performance.
2. To elaborate the effects of supply management practices on firm performance.

1.7 Significance of Study

The most important contribution of this study is that there is not enough research which has been conducted in the retail garment sector of Pakistan and to fill out the academic gap in textile retailing garment industries of Pakistan. This research also revealed the importance of the purchasing and supply management for textile industry, study also important for purchase, supply chain, relationship managers and for all hierarchies' works in the textile organization. For manufacturer, this study dedicated the flow of information from customer to manufacturer, passing through different stages of supply chain which directly and indirectly provides benefit to an organization's success through estimation of accurate demand and supply analysis, reducing the risk, information quality assurance level, stock keeping analysis which makes the textile organizations more prosper and helps to achieve the economic goals easily.

1.8 Situational Analysis

1.8.1 Retail Market

Over the period of time many changes have been occurs in the retail industries, the growth rate of the retail market are three percent annually 3% (National retail federation, 2016).

1.8.2 Garment Industry

In worldwide industry the clothing and fashion market contributes 1.2$ trillion US Dollars, and the spending of the United States consumers are 250 billion US dollars annually on clothing and footwear industries (STATISTIC BRAIN:, 2016). Approximately the 45 % of the United State customer reveals that they buy clothes at every month either online or form physical store, around 32% of the United State

consumer explored that they buy at least once in a month however 59 % of the US customer's point out that they preferred to buy the cloths from physical stores rather than online digital cloths shopping, and people who don't buy from online stores are 24 percent (CILLEY, 2016).

1.8.3 Garment Industry in Pakistan

Pakistan stands out at no 1 in export of cotton yarn and the 4th largest country in the world to produce the cotton yarn. Textile industries profitability is increasing day by day and moving forward, the five textile companies which are operating in Pakistan (Gul Ahmed, Azgard-9, Al-Karam textile, Saif textile mills, Faisalabad city garments) reveal the profitability analysis from 2010 to 2013, point out that the net profit (NP), gross margin ratio on profit, return on asset and equity, of the textile industry was more in 2011, comparing with from 2010 and 2012. But the textile industries in 2013 to 2014 gain more profit again through of the high regional demand.

1.8.4 The Changing Culture from Unstitched to Ready-To-Wear Clothes

Since 1980 clothing industries are altering their strategy from un stitched to ready to-wear cloths, fashion principles reinforce the strategies to move further fashion ability and verity, as a result of fast growing ready-to-wear garments have positive move towards the fashion industries which reduce the lead time, and convert the production process and skills to designer ready- to-wear (Reinach, 2005; dunford, 2006)

1.8.5 Budget Analysis of Textile in Pakistan

In Pakistan the contribution of the textile industries in GDP are 8.5 percent and the total employment provided by textile manufacturing are 38 percent, the government of Pakistan calculated the export of the textile from Pakistan in the fiscal year 2012 – 2013: are 13.1$ billion US dollars, which are 1.28 trillion in Pakistani rupees, during the fiscal year 2012-2013 the total export of the Pakistan was 24.6 billion US dollars which is 2.4 trillion rupees in Pakistani. Tax credits allowed to textile sectors in Pakistan is (Garments= 4 %, Made ups= 2%, and processed fabrics= 1%), in addition no tax and duty for any import of the technology and machinery for further two years. The governments of Pakistan also introduce the training program which bears cost of 4.4 billion in Pakistan rupees for the purpose to improve the quality of the final product, and also reduce the mark-up rate to facilitate and appreciate the long term financing from 11.4% to 9% (Rukhsana Shah, secretary textile industry ministry)

2. Literature Review

2.1 Purchasing and Firm Performance

Effective sourcing strategy benefits the organizations to achieve greater organization performance (Lindgreen et al., 2009; Lindgreen et al., 2013). Innovative purchasing and supply management's practices not only improve the organization performance but also help out the industry to expand the industry level performance (Federico D'Amico, 2017). Purchasing and supply management practices are the central themes of today's researchers, subjects contain outsourcing, local to global sourcing, risk management, and contract management (Spina et al., 2013). To increasing the control on the process and to reduce the complications of the products, firms need to build more in house instruments (Novak and Stern, 2009). Responsive supply chain bears high cost as compare to the efficient supply chain, but when supplier gets more experience they are able to reduce their

cost (Argyres, 1996). Strategic Purchasing plays a vital role in other functional areas in an organization (Ellram and Carr, 1994). Strategic Purchasing performs well in the company strategic planning process, it is also known as a strategic function and basic decision maker (Ellram and Carr, 1994). Strategic Purchasing makes an organization able to prosper more in the long run relationship with the supplier, effective information flow and get more quick response which meets the need of an organization as well as the supplier (Carr and Smeltzer, 1999; Carr and Pearson, 1999). Effective communication arises by Strategic Purchasing, which is more significant by obtaining benefit from every steps of the supply chain (Kraljic, 1983; Cox, 1996; Carr and Pearson 1999; Carr and Smeltzer, 1999). Proper and competent purchasing strategy has positive effects on the performance of the organization (Swinder and Seshadri, 2001; Tan et al., 1998; Ellram and Liu, 2002; Chen et al., 2004; Carr and Pearson, 2002). According to Hunt and Davis's (2008) and Barney 1986 Purchasing and Supply Chain Management Practices may help the firm to achieve a continual competitive advantage. the supply chain management literature also point out that purchasing and supply chain management task is only a source for an organization at which an organization get competitive advantage (Hartmann and De Grahl 2011, Azadegan 2011, Hitt 2011, and Paulraj 2011).

On the basis of the literature first hypothesis developed

H1: Purchasing has a significant effect on the firm performance.

2.2 Supply management practices on Firm Performance

Supply management practices increases the organization market share and return on investment (Shin, Collier, & Wilson, 2000; Prasad & Tata, 2000). A best Supply chain management practice makes an organization to achieve competitive advantage and also helps an organization to develop a unique image in the customer mind at low cost and high quality (Carr& Person, 1999; Stanely& Wisner, 2001; Muhammad naseer qayyum, 2012). Manufacture should increase their understanding level and recognize the importance of the Supply Chain Management Practices for the purpose of achieving organization goals (Childhouse & Towill, 2003; Moberg, Cutler, Gross, & Speh, 2002; Power, Sohal, & Rahman, 2001; Tan, Lyman, & wisner, Supply Chain management: a strategic perspective, 2002). Patterson et al. (2003) pointed out that with the use of information technology, companies become able to survive in competitive environment. Fiala (2005) pointed out that the advancement in information technology and the structure of network have significant relationship with supply chain partners by coordinating more closely. Christopher (2011) said that importance of information technology in supply chain cannot be ignored; it was described that information always plays very important part in efficient and effective logistic management. It was proposed by Jones and Womack in (2002) that by reducing of non-valued action or activities at the levels of supply chain will increases customer satisfaction, because unnecessary inventory, transportation and unproductive information flows are the key driver for inefficiency of supply chain. According to Zhao and Lee (2002) there is a positive impact of information sharing on reduction of inventory and reduction of the cost. Fawcett (2007) analyzed two element of information sharing one is connectivity and second is willingness and it was found that both of them influenced organization performance. Study of

Aajy and Mahraj (2000) shows that information sharing has a huge impact on overall supply chain running cost. Zha and Ding (2005) said in tough competition it is very important for the supply chain partners for the survival to increase their competitive advantage by the sharing of quality information. For clear, common and observable demand pattern companies focus more on collaboration. It is very essential for successful supply chain management performance (Holweg, M., Disney, S., Holmström, J., Småros, J. 2005). Collaboration in partnership is the key action in supply chain and companies must incorporate it between their suppliers and customers (Mentzer, J. T., DeWitt, W., Keebler, J. S., Min, S., Nix, N. W., Smith, C. D., Zacharia, Z. G 2001).

Kumar (2001) mentioned that different planning and IT tools used to implement and administer the different activities and relations in the supply chain entirely. Examples of these tools are DW (data base) and CRM (customer relationship management). Furslund in 2014 suggested that quality relationship between supplier and retailer effect the logistics performance. Hamister in 2012 pointed out that tactical relationship of retail supplier has positive effect on firm performance. Teller (2012) defined that key supplier relationship management (KSRM) has major role in the supply chain management implementation and also in improving the supply chain implementation in an organization. Organization success and performance improvement depends on the quality relationship of an organization with its customers (Tan, Kannan and Handfield, 1998). Lockamy and McCormack (2010) stated that efficient and effective material sourcing strategy helps in purchasing material at low cost. Domestic and import option can be used for purchasing material at low cost. Jarrell (1998) suggested that quality in information enables an organization to launch new product speedily and enable the organization to do reliable placement of their product.

On the basis of the literature second hypothesis developed

H2: Supply Management Practices has a significant impact on Firm Performance

2.3 Theoretical Framework
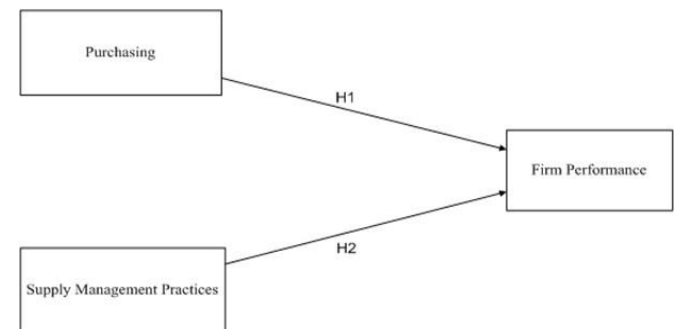
2.4 Hypotheses Statement

H1: Purchasing has a significant impact on the Firm Performance. (Alternate)

H0: Purchasing has insignificant impact on the Firm Performance. (Null)

H2: Supply Management Practices has a significant impact on Firm Performance. (Alternate)

H0: Supply Management Practices has insignificant impact on Firm Performance. (Null)

3. Methodology

The study was conducted in 2018. Quantitative research methodology is used. Data were collected directly from the purchase managers, operation managers and owner of the

retail store. Questionnaires measurement instrument was used and collected 440 retailer's response on a five-point Likert scale. The population of the study was the garment retailers of Rawalpindi and Islamabad, convenient sampling technique is used. Because of unknown population, estimation of sample size was made with the help of the Godden formula mention in the book of Zeck Ment. The formula is

$$(SS) = Z2 * p * (1-p)/H2 .$$

Sample size = 1.96*1.96*0.5(1-0.5)/ (0.05*0.05) = 384.16 or 385.

After that, collected data was entered in Statistical Package for Social Sciences (SPSS) and EVIEWS for the regression analysis.

4. Results and Discussion
4.1Reliability Test

Variable	No. of items	Cronbatch's Alpha
Firm Performance	07	.918
Supply Chain Practices	12	.880
Purchasing	09	.950

The Reliability Statistics table provides the actual value for Cronbach's alpha. It can be seen that Cronbach's alpha is 0.918 7, .880 12, .950 9 respectively which indicates a high level of internal consistency for our scale.

4.2 Correlation

	F_PERFORMANCE	PRACTICES	PURCHASING
F_PERFORMANCE	1.000000	0.734290	0.581880
PRACTICES	0.734290	1.000000	-0.031047
PURCHASING	0.581880	-0.031047	1.000000

According to the results in above table Firm Performance carry strong correlation with practices and purchasing that is r=.73 and r=.58 with the same direction. Practices and purchasing correlation is weak is sign showing very few chances of occurrence of multi-collinearity.

4.3Multiple regressions
4.3.1 Data normality test

Normality test Jarque-Bera indicate that data collected of Firm Performance, Practices and purchasing is statistically normal as mentioned in graphs simultaneously, $p > 0.05$
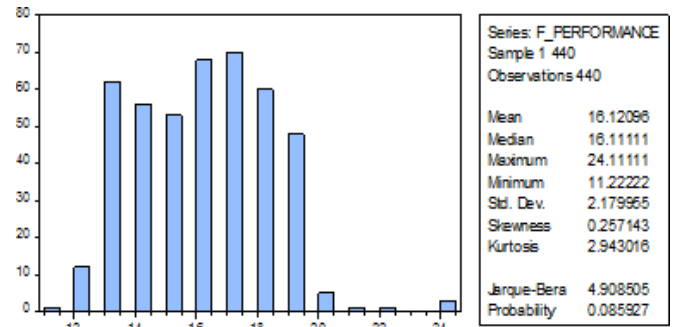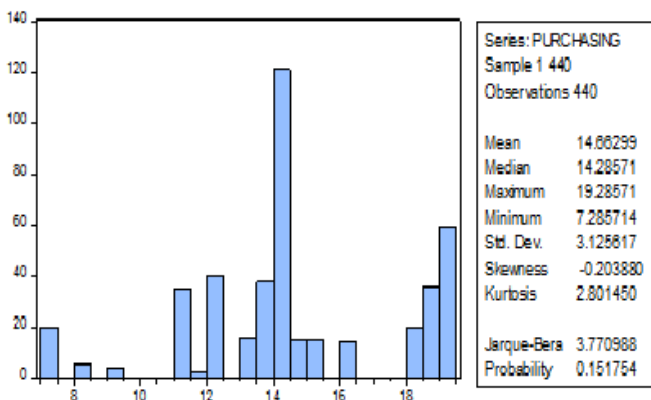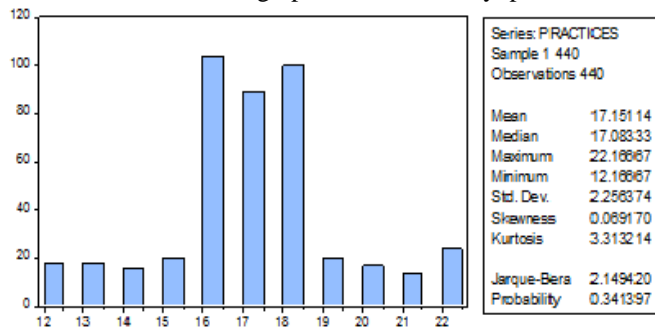
4.3.2 Hetroskedasticity
Detection

Obs*R-squared Probability value in table is 0.0000 so we reject the alternate hypothesis of no Homoskedasticity means that there is Hetroskedasticity. That mean SE is wrong. This issue has been resolved in next step

Heteroskedasticity Test White			
F-Statistic	10.42982	Prob.F(5.434)	0.0000
Obs*R-squared	47.19870	Prob.Chi-Square(5)	0.0000
Scaled explained SS	65.90574.	Prob.Chi-Square(5)	0.0000

Resolved

After taking log of all variables, the results indicate Obs*R-squared probability value became more than .05 that means there is no Hetroskedasticity in our model further more.

Heteroskedasticity Test White			
F-Statistic	2.183603	Prob.F(5.434)	0.0551
Obs*R-squared	10.79733	Prob.Chi-Square(5)	0.0555
Scaled explained SS	12.77382	Prob.Chi-Square(5)	0.0256

4.3.3 Multicollinearity
Detection

Auxiliary regression is performed by taking purchasing as dependent variable and practices as independent variable.

Results in table show that there is insignificant relationship among both variables that means there is no multicollineraity in the model.

Dependent Variable: PURCHASING			
Method: Least Squares			
Date:02/23/18 Time:01:44			
Sample:1439			
Included observation:439			
Variable	Coefficient	Std.Error	t-Statistic	Prob
C	15.43072	1.151117	13.40499	0.0000
PRACTICES	-0.044875	0.066592	-0.673876	0.5007

4.3.4 Multiple Regressions

A multiple linear regression was calculated after applying regression assumptions to predict the impact of purchasing and supply management practices, results indicate that there is significant and positive relationship between variables; Purchasing and firm performance (r = 0.5230, p-value=0.000 which is less than $p < 0.05$). Supply management practices and firm performance (r = 0.4724, p-value=0.000which is less than $p < 0.05$).Results were supporting H1 and H2. H1 there is significant impact of purchasing on firm performance. H2 there is positive and significant impact of supply management practices on firm performance.

Adjusted R-squared shows R2=.819, combined 81% variation in Firm Performance is explained by practices and purchasing and remaining by other factors.

(F-statistic) results shows (F=995.5437, p<0.000) indicates model is significantly fit; practices and purchasing have significant relationship with performance. The table

indicates the statistical significance of the regression model that was run. Here, p < 0.0000, which is less than 0.05, and indicates that overall the regression, model statistically significant.

According to the results, the regression equation identified as follow
Y = -0.002 + 0.523X1 + 0.4724X2

Dependent Variable: LOG(F_PERFORMANCE)				
Method: Least Squares				
Date:02/23/18 Time:01:53				
Sample:1440				
Included observation:440				
Variable	Coefficient	Std.Error	t-Statistic	Prob
C	0.002259	0.060773	0.037178	0.9704
LOG (PURCHASING)	0.523037	0.035394	14.77763	0.0000
LOG (PRACTICES)	0.472493	0.035987	13.12973	0.0000
R-squared	0.820023	Mean dependent var		2.527049
Adjusted R-squared	0.819199	S.D.dependent var		0.133533
S.E. of regression	0.056779	Akaike info criterion		-2.892494
Sum squared resid	1.408841	Schwarz criterion		-2.881501
F-statistic	995.5437	Durbin-Watson stat		1.900143
Prob(F-statistic)	0.000000			

5. Limitation and future direction

Although this study has been conducted carefully. But there were some limitations. The research was conducted by covering small population of retail garment sector as in Rawalpindi and Islamabad Pakistan; it will be good if it is completed by covering more cities, the designed questionnaire for this research covered some of dimensions of supply management practices. It would be better if more dimensions are analyzed which would provide more evidence for checking the impact on the variable of interest. Researcher compared the study results with the research which has been conducted by Oktay Coban in (2012) entitled "the impact of strategic purchasing and supply management performance". Results of Coban's (2012) study showed that there is a significant role of strategic purchasing with the performance, material quality and inventory level and results of this study also showed there is a significant role of purchasing with the performance. According to the Coban (2012) if the Purchasing and Supply Management functions are strategically align, it will decrease the resourcing cost of an organization and increase organization's performance.

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Appendix
4.3 Outlier's detections

Graph shows there is no outlier in the responses captured in purchasing, firm performance and practices. So variables are appropriate to proceed further for data analysis in this aspect.