

Investigating the Role of Supply Chain Practices on Supply Chain Performance through the Mediating Effect of Trust and Organizational Culture in Paper and Board Industry of Pakistan

Kashif Mahmood

Assistant Professor at Superior University, Lahore

Ijaz Sultan

M.Phil Student at Superior University, Lahore

Muhammad Ali Yab

PhD Scholar at Superior University, Lahore

Imran Ahmad Rana

PhD Scholar at Superior University, Lahore

Abstract

Paper and board industry has long supply chain. Material comes from different steps for production and delivers to end customers. Process starts from forest where trees cut down and sent for further processing. Lead time is long from first step to end. In the entire process, many parties involve like suppliers, organization management and at the customers. A lot of collaboration and information's sharing is done for the availability of raw material for production.

Objective of this study is to measure the effect of supply chain practices (customer relationship management, strategic supplier relationship, supply chain collaboration,) on supply chain performance considering trust and organizational culture as mediating variables.

This study purpose that companies should investment in supply chain development instead of considering it as cost. If supply chain practices improve then trust and organizational culture will help in continuous improvement of supply chain performance. Companies should go for trainings for supply chain staff for awareness regarding team work, importance of information sharing and collaboration with suppliers and others. Also keep developing and maintaining the trust among partners and allow organizational culture helpful for the partners.

Keywords: Strategic Supplier Relationship, Supply Chain Collaboration, Customer Relationship Management, supply chain performance, trust, organizational culture.

1. Introduction:

Paper and Board industry produces a great number of papers and boards products. Thirty six million tons products produced every year in which newspaper, copy papers, various types of tissues, bottle labels, coffee filters and cigarette papers are included and these are the examples of daily used products. A lot of activities are concerned in the production of these products. As per management and literature, these chains of activities are known as supply chain.

Interest for the supply chain has been increased over the recent years (Carlsson, 2006).

A. Problem Statement:

Paper and board has its long supply chain and play an effective role that start from procurement and ends at the dispatch of products to end customers. If supply chain plays its positive role then productive results can be achieved by organizations. In Pakistan, organizations are hesitating to consider supply chain department as important unit of the organization. This study will show the relationship between understudy variables and guide organizations to invest in supply chain performance instead of considering it as cost.

B. Hypothesis:

H1: There is relationship between customer relationship management and trust.

H2: There is relationship between strategic supplier relationship and trust.

H3: There is relationship between supply chain collaboration and trust.

H4: There is relationship between customer relationship management and organizational culture.

H5: There is relationship between strategic supplier relationship and organizational culture.

H6: There is relationship between supply chain collaboration and organizational culture.

H7: There is relationship between customer relationship management and supply chain Performance.

H8: There is relationship between strategic supplier relationship and supply chain Performance.

H9: There is relationship between supply chain collaboration and supply chain Performance.

H10: There is relationship between trust and supply chain performance.

H11: There is relationship between organizational culture and supply chain performance.

H12: There is relationship between customer relationship management and supply chain performance under the mediating effect of trust.

H13: There is relationship between strategic supplier relationship and supply chain performance under the mediating effect of trust.

H14: There is relationship between supply chain collaboration and supply chain performance under the mediating effect of trust.

H15: There is relationship between customer relationship management and supply chain performance under the mediating effect of organizational culture.

H16: There is relationship between strategic supplier relationship and supply chain performance under the mediating effect of organizational culture.

H17: There is relationship between supply chain collaboration and supply chain performance under the mediating effect of organizational culture.

2. Literature Review:

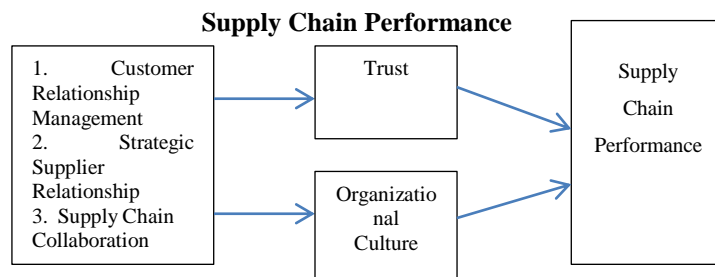
Ryals & Knox (2001), and Zablah et al.(2004), clear that customer relationship management in the business thinking as; “the plan that consider the victorious method to get devotion is by early seeking to construct and keep sustainable relationships with customers” Karakostas et al.(2005), Parvatiyar & Sheth, (2000) and According to Tarokh & Ghahremanloo (2007), CRM is a business planned move toward for analytically communicating , targeting, tracking and transforming appropriate data of customers into actionable information and strategic decision making is depend on this information.

A study on businesses which have complete implemented CRM strategy is telling us unsuccessful ratios which are from sixty five to seventy percent (Almotairi, 2010; Kale, 2004). Organizational culture is acknowledged by the majority researchers. It is significant factor that help in accomplishment of required CRM results (Curry & Kkolou, 2004; Iriana and Buttle, 2006; Kale, 2004; Iriana et al. 2013).

Supply chain process has a set of activities taken jointly. For measuring the supply chain performance, it is necessary to know the aspects of supply chain performance that formulate the complete supply chain performance (Lambert & Pohlen, 2001; Lebas, 1995). Scpis demonstrate frequently the execution of supply chain processes and can be articulated in complete terms (Keebler et al. 1999). The supply chain of the paper and board industry can be classified into the following four sub-chains: 1) To distribute wood chips to a pulp and paper mill it comes through fiber procurement; 2) paper and pulp manufacturing; 3) order taking, production and delivering of products to customers; and 4) activities

necessary to manage repairing, maintenance and operating supplies are the activities of non-fiber procurement.

A. Theoretical Framework:



3. Methodology

Paper and board industry is selected in this research to answer the asked items. Questionnaires were distributed in selected cities of Punjab based Paper industry. The time allocated for the data collection was approximately one month. Articles selected and material collected accordingly, major journals included in this research. Quantitative research is being done under the paradigm of positivism. Deduction research method will be used in this study (Xosé H et al.2016).For this study supply chain staff is selected because they are directly involved in practicing the supply chain practices and cause to increase the supply chain performance.

4. Data Analysis:

This section consists of detailed analysis of that data which is collect by using structured questionnaires.

5. Reliability Test

There is need to check the reliability of data which is collected for this study through questionnaires. Accuracy and reliability of data is the base of quantitative research that is why reliability must be measured through Cronbach’s Alpha value. For measuring the data reliability, Cronbach’s alpha test is being used in this study (Branislav et al.2015). Data is consider reliable if values are equal to or greater than 0.8 but as per Nunnaly (1978), data is reliable if values are equal or greater than 0.70 then these values are acceptable.Below table is showing the reliability of the variables.

6. Correlation:

All correlation values are showing positive relationship among all variables. Discuss these results one by one. Customer relationship management has strong relationship between trust, organizational culture and supply chain performance. Secondly,

strategic supplier relationship has moderate relationship with trust, organizational culture and supply chain .Similarly, supply chain collaboration has weak relationship with trust, and supply Chain performance but moderate relationship between organization cultures. Trust has strong relationship with organization culture and supply chain performance. Similarly organization culture has strong relationship with trust and supply chain performance. Supply chain performance also has strong relationship with trust and organizational culture.

7. Regression Analysis:

Regression analysis is being used in present study. Multiple regression analysis is going to use in this study to measure the effect of under study practices of supply chain under the mediating effect of trust and organizational culture on supply chain performance. Firstly, discuss the significance level among these variables respectively. Table 4.5 will explain the significance level among variables. Values of F-test are significant against all variables. Below table is showing the significant relationship between variables. All assumptions allow for Running multiple regression analysis considering mediating variables.

8. Conclusion:

Different results came in front of researcher and check the relationship among these variables. Values showed the partial as well as full mediation with respect to the variables. These results highlight the fact that supply chain performance can be obtained through the practices of supply chain as well as the addition of trust and organization culture. This study provides a frame work for management that how they can improve supply chain performance by practicing these practices in a better way but there is need that manager should focus on the implementation of these practices. Results are showing, if supply chain practices will improve then trust and organization culture will also improve and based on this working the overall supply chain performance will improve. Results of this study are also confirming that aim and objectives of this study are fulfilled because supply chain performance can be improve with the help of these supply chain practices and definitely, this study adding value for practitioners, managers and others as well. Public and private companies’ policy makers will utilize the results of this study to motivate the owners for investment in SCM. It provides the empirical support for convincing firms regarding the importance of supply chain practices; dedicated efforts can get better the SC performance

9. Tables:

Table 1. Gender, Age and Qualification distribution of the respondent

| Demographic Factors | Dimensions | Frequency | Percentage | Cumulative Percent |
|---------------------|----------------|-----------|------------|--------------------|
| Gender | Male | 400 | 100 | |
| | | | | |
| Age | Below 20 years | 88 | 22 | 22.0 |
| | 21 - 30 years | 169 | 42.3 | 64.3 |
| | 31 to 40 years | 74 | 18.5 | 82.8 |
| | 41 to 50 years | 40 | 10 | 92.8 |
| | 51-Above years | 29 | 7.3 | 100 |
| Qualification | Bachelor | 234 | 58.5 | 58.5 |
| | Master | 158 | 39.5 | 98 |
| | Other | 8 | 2 | 100 |
| | | | | |

Table2. Measurement of Reliability

| Variable | Cases | Number of Items | Cronbach’s Alpha |
|----------------------------------|-------|-----------------|------------------|
| Customer Relationship Management | 400 | 10 | 0.773 |
| Strategic Supplier Relationship | 400 | 5 | 0.730 |
| Supply Chain Collaboration | 400 | 5 | 0.709 |
| Trust | 400 | 10 | 0.794 |
| Organizational Culture | 400 | 6 | 0.700 |
| Supply Chain Performance | 400 | 11 | 0.780 |

Table 3. Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|----------------------------|-----|---------|---------|--------|----------------|
| Customer Relationship | 400 | 1.80 | 5.00 | 3.7195 | 0.74590 |
| Supplier Relationship | 400 | 1.60 | 5.00 | 3.5210 | 0.96597 |
| Supply Chain Collaboration | 400 | 2.20 | 5.00 | 3.9905 | 0.67732 |
| Trust | 400 | 1.60 | 5.00 | 3.8850 | 0.74647 |
| Organizational Culture | 400 | 1.83 | 5.00 | 3.9842 | 0.70978 |
| Supply Chain Performance | 400 | 1.64 | 5.00 | 3.7989 | 0.73707 |

Table4. Correlation:

| | | CRM | SSR | SCC | Trust | OC | SCP |
|-------|-----------------|---------|---------|---------|---------|---------|---------|
| CRM | Pearson | 1 | 0.454** | 0.466** | 0.734** | 0.716** | 0.737** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 |
| | N | 400 | 400 | 400 | 400 | 400 | 400 |
| SSR | Pearson | 0.454** | 1 | 0.277** | 0.440** | 0.438** | 0.426** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 | .000 |
| | N | 400 | 400 | 400 | 400 | 400 | 400 |
| SCC | Pearson | 0.466** | 0.277** | 1 | 0.319** | 0.355** | 0.317** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .000 | .000 |
| | N | 400 | 400 | 400 | 400 | 400 | 400 |
| Trust | Pearson | 0.734** | 0.440** | 0.319** | 1 | 0.708** | 0.941** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 | .000 |
| | N | 400 | 400 | 400 | 400 | 400 | 400 |
| OC | Pearson | 0.716** | 0.438** | 0.355** | 0.708** | 1 | 0.749** |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | | .000 |
| | N | 400 | 400 | 400 | 400 | 400 | 400 |
| SCP | Pearson | 0.737** | 0.426** | 0.317** | 0.941** | 0.749** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | .000 | |
| | N | 400 | 400 | 400 | 400 | 400 | 400 |

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

Table 5: Regression Analysis:

| Variables | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---------------------------|-----------------------------|------------|---------------------------|--------|-------|
| | B | Std. Error | | | |
| (Constant) | 0.531 | 0.179 | | 2.959 | 0.003 |
| CRM | 0.410 | 0.054 | 0.409 | 7.543 | 0.000 |
| SSR | 0.078 | 0.028 | 0.100 | 2.764 | 0.006 |
| SCC | -0.220 | 0.053 | -0.200 | -4.168 | 0.000 |
| Dependent Variable: Trust | | | | | |
| (Constant) | 0.685 | 0.177 | | 3.880 | 0.000 |
| CRM | 0.347 | 0.053 | 0.365 | 6.497 | 0.000 |
| SSR | 0.081 | 0.028 | 0.111 | 2.943 | 0.003 |
| SCC | -0.167 | 0.052 | -0.159 | -3.213 | 0.001 |
| Dependent Variable: OC | | | | | |
| (Constant) | 0.385 | 0.174 | | 2.216 | 0.027 |
| CRM | 0.378 | 0.053 | 0.383 | 7.196 | 0.000 |
| SSR | 0.065 | 0.027 | 0.085 | 2.393 | 0.017 |
| SCC | -0.263 | 0.051 | -0.242 | -5.152 | 0.000 |
| Dependent Variable: SCP | | | | | |
| (Constant) | -0.079 | 0.083 | | -0.947 | 0.34 |
| Trust | 0.859 | 0.026 | 0.837 | 32.487 | 0.000 |
| OC | 0.139 | 0.028 | 0.128 | 4.985 | 0.000 |
| Dependent Variable: SCP | | | | | |

8. References:

1. Roya Rahimi Ebru Gunlu,(2015). Implementing customer relationship management (CRM) in hotel industry from organizational culture perspective: case of a chain hotel in the UK. *International Journal of Contemporary Hospitality Management*, 28(1).
2. Shu Mei Tseng. (2016). Knowledge management capability, customer relationship management, and service quality. *Journal of Enterprise Information Management*, 29(2).
3. David a Marshall. (2015). Assessing the Value of Supply Chain Information Sharing in the New Millennium. *Supply Chain Management*, 4(4).
4. Moon Gyu kim, Yoon Min Hwang & Jaejeung Rho. (2015). The impact of fid utilization and supply chain information sharing on supply chain performance: Focusing on the moderating role of supply chain culture. *Maritime Economics & Logistics*, 18(1), 78-100.
5. Weixin Shang, Albert y ha & Shilu Tong. (2015). Information Sharing in a Supply Chain with a Common
6. Retailer. *Management Sciences*, 62(1), 245-263.
7. Chhabi Ram Matawale, Saurav Datta & Ss Mahapatra. (2016). Supplier/Partner Selection in Agile Supply Chain: Application of Vague Set as a Decision Making Tool. *Benchmarking: An International Journal*, 23(4), 866 - 892.
8. Christoph Teller et al. (2016). The importance of key supplier relationship management in supply chains. *International Journal of Retail & Distribution Management*, 44(2),109-123.
9. Luu Trong Tuan. (2016). From cultural intelligence to supply chain performance. *The International Journal of Logistics Management*, 27(1), 95-121.
10. Bethlehem Tamiru Gizaw & Alev Taşkin Gümüş. (2016). Humanitarian Relief Supply Chain Performance Evaluation: A Literature Review. *International Journal of Marketing Studies*, 8(2),.
11. Ekrem Tatoglu et al. (2016). How do supply chain management and information systems practices influence operational performance? Evidence from emerging country smes. *International Journal of Logistics Research and Applications: A Leading Journal of Supply Chain Management*, 9(3), 181-199.
12. Erlindan Yunus & Suresh k Tadisina. (2016). Drivers of supply chain integration and the role of organizational culture Empirical evidence from Indonesia. *Business Process Management Journal*, 22(1), 89-115.
13. Jianping Peng et al. (2016). Mediation effect of business process and supply chain management capabilities on the impact of IT on firm performance: Evidence from Chinese firms. *International Journal of Information Management*, 36(1), 89-96.
14. Xosé h, Vázquez Antonio Sartal Luis m & Lozano-Lozano. (2016). Watch the working capital of tier-two suppliers: a financial perspective of supply chain collaboration in the automotive industry. *Supply Chain Management: An International Journal*, 21(3), 321-333.
15. Lucas Waweru. (2015). The role of top level management in supply chain performance: A Case study of Meru Toen,kenya. *European Journal of Business and Social Sciences*, 4(3).
16. Erik Sandberg. (2010). The Role of Top Management in Supply Chain Management Practices. *International Journal of Retail & Distribution Management*, 38(1), 57-69.
17. David Gallear, Abby Ghobadian & Qile he. (2014). The mediating effect of environmental and ethical behaviour on supply chain partnership decisions and management appreciation of supplier partnership risks. *International Journal of*
18. Stefan Hoejmoose, Stephen Brammer & Andrew Millington. (2012). Green” supply chain management: The roOf trust and top management in B2B and B2C markets. *Industrial Marketing Management*, 41(4), 609-62