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Examining the Role of Supply Chain Management Practices on Bahir Dar Textile Factory Performance: PLS Path Analysis

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Abstract

This study was conducted on investigation of supply Chain practices on Bahir Dar textile factory's Performance found in Amhara National Regional State, Ethiopia. The major objective of the study was to examine the role of supply chain practices on organization's performance. Qualitative and quantitative data were employed to run the analysis. A quantitative approach, which gathered data using five point Likert scale used Smart-PLS path analysis to test hypotheses. The qualitative data gathered using open ended and closed ended questions were analyzed thematically. The research aspired to design the effective supply chain in textile factories found in Amhara National Regional State, Ethiopia and need to design the supply chain activities in order to enhance competitiveness of the textile factories and organizational performance. By employing sampling formula among Bahir Dar textile factory 154 employees were selected from a total of 250 employees who are working in supply chain related activities. In this study the researcher gives more emphasis for Post positivism paradigm-quantitative approach with a cross sectional survey type research design which provides a quantitative or numeric description of trends, attitudes, or opinions of a population. The qualitative data substantiates the quantitative results. Based on inferential statistics results customer relationship management, level of information sharing and postponement were accepted with significance level of 0.05.

Keywords: Performance; Cooperative; Supply Chain.

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1. Introduction

This section describes the background and the context of the paper. It also presents the research problems and key research objectives and gives a short introduction to the methodology and concepts used in the study. Additionally, the section discussed the scope of the study, significances, limitation and the structure of this study.

1.1. Background of the Study

The idea of a value chain was first suggested by [11] to depict how customer value accumulates along a chain of activities that lead to an end product or service [7]. Reference [11] Describes value chain as the internal processes or activities a company perform "to design, produce, market, deliver and support its product." He further states that "a firm's value chain and the way it performs individual activities are a reflection of its history, its strategy, its approach to implementing its strategy, and the underlying economics of the activities themselves." Reference [11] Describes two major categories of business activities: primary activities and support activities. Primary activities are directly involved in transforming inputs into outputs and in delivery and after-sales support [12]. These are generally also the line. "Value chain" goes beyond the more common concept of "supply chain" and focuses on the dynamic inter-linkages between its components. Reference [10] Identified several ways in which key activities within the firm's value chain could yield competitive advantage to a firm with its competitors. [10] Suggested several important characteristics that might be used to identify candidate activities, which must be subsequently separated and studied in depth. The author also highlighted the role of linkages between activities within the value chain [4]. He defines linkages as relationships between the way one value activity is performed and the cost or performance of another activity. Effective supply chain management (SCM) has become a potentially valuable way of securing competitive advantage and improving organizational performance since competition is no longer between organizations, but among supply chains [2]. According to Ministry of Trade and Industry [3], the products of Ethiopian garment industries are very wide. The main goal of Ethiopian agricultural development led industrialization (ADLI) strategy is to attain fast and broad-based development within the agricultural sector and to make this sector's development to power broad economic growth. More than 85% of the Ethiopian population, residing in the rural area, is engaged in agricultural production as a major means of livelihood [12]. Now the intent of Ethiopian government is, the industry need to take over the leading sectors in many aspects. This research is aims to assess supply chain management practices and its dimensions in case Bahir Dar textile factory in ANRS and its effect on organizational performance in order to build sustainable competitive advantage and development of the factory. Therefore, this study tried to answer "what is the role of supply chain management practices on Bahir Dar textile Performance in Amhara National Regional State, Ethiopia"

2. Materials and Methods

The mixed approach was used for this study because mixed approach consists of both qualitative and quantitative data. This method of data collection recognizes that there are weaknesses inherent in each type of data. By combining both quantitative and qualitative data, researcher can neutralize the weaknesses involved in

each single method of data collection [5]. From sample results, the researcher makes claims about the population [5]. In this study after determining the sampling frame and sample size with the help of scientific sampling formula, the researcher used simple random sampling to select the final target respondents. Regarding measurements of variables used in the study, PLS-SEM was employed. Using PLS-SEM, the researcher measured exogenous latent variables and endogenous variables at the same point in time using self-administrated five point likert type questionnaire which run from strongly disagree to strongly agree.

3. Results

The analyses included testing the hypotheses simultaneously using partial least squares (PLS), a structural equation modeling technique employing a principal component-based estimation approach [4]. PLS was selected due to the characteristics of our model and sample. The model used formative indicators, the sample size is relatively small (154 cases), and the data are non-normal. This study was conducted in order to examine supply chain management practices which include SSP (strategic supplier partnership), CR (customer relationship), LIS (level of information sharing) and PoP (postponement) on Bahir Dar textile factory Performance (FP) or organizational performance (OP). Based on the analysis the structural equation results shown in table 1 were found.

Table 1: Hypotheses Testing Result for Research Model

Hypothesis	Path	Path coefficient (β)	Observed T-Statistics	Significance level (p-Value)	Decision
H1	SSP -> FP	0.040	1.633	0.05	Supported
H2	CR -> FP	0.208	1.717	0.05	Supported
H3	LIS -> FP	0.151	1.690	0.05	Support
H4	POP -> FP	-0.142	1.326	0.05**	Rejected **

Hypothesis

- H1: Strategic suppliers' partnership will be positively related to factory performance.
- H2: Customer relationship management will be positively related to factory performances.
- H3: Level of information sharing will be positively related to factory performances.
- H4: Postponement will be positively related to factory performances.

As revealed from PLS-SEM path analysis output, most of the variables were statistically significant to affect the Organizational performance. The corresponding path coefficient (standardized β coefficient) and p-value of each hypothesizes; SSP and OP (H1), CR and OP (H2), LIS and OP (H3), and POP and OP (H4) was H1 (0.040, P=0.05), H2 (0.208, p=0.05), H3 (0.151, 0.05) and H4 (-0.142, p=0.05) for each relationship respectively. Based on the observed t-statistics using the 5000 PLS bootstrapping and the hypothesis were tested. From the

proposed hypothesis; H1, H2 and H3 were supported at level of significance 0.05. This means, they do have positive and significant effect on Bahir Dar textile factory's performance. To bring to light the path relationship and effects of path coefficient, it means that when the factory's show an increment of supply chain management practices, factory is more times likely to improve maximum level of organizational performance by amount respective standardized β coefficient.

4. Conclusion

This study granted empirical justifications for research framework that identifies the four key dimensions of the supply chain management practices and describes the relationship among supply chain practices of the Bahir Dar textile factory and its performance. It also addresses the research objective framed in line with theoretical framework and empirical evidences. What are the effects of supply chain management practices on organizational performances? In order to assess the relationships of the variables valid and reliable instruments of supply chain management practices and textile factories performance was adopted and developed. To maintain the reliability of instruments and validation of construct issues, different inferential statistics like confirmatory factory analysis and principal component analysis using smart PLS was performed and variables were refined for further analysis and discussions. The study provides empirical evidence to support conceptual framework regarding integrated supply chain practices and factory performances.

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Appendix

Confirmatory Factor Analysis (CFA)

Before components extracted (Some of the components factor loading are <0.7 based on principal component analysis). No all component factors loading are above the cut of point, which is 0.7.

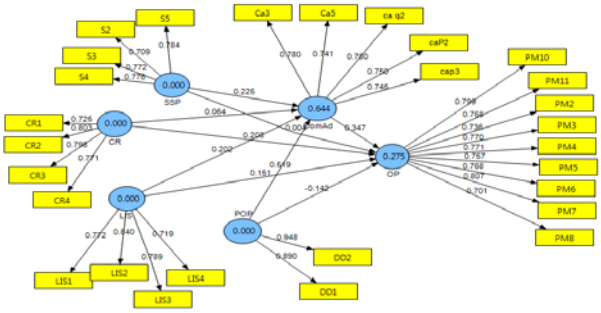

Figure 1