

Assessing the Impact of Global Outsourcing and Global Offshoring over the Upstream Supply Chains of Apparel Industry: A Sri Lankan Context

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1. Introduction

The increasing trend of globalisation of upstream supply chains in the apparel industry has taken in different strategic forms. Main objectives of this research are to investigate the different factors influencing each decision of outsourcing and offshoring in apparel industry in SL, different impacts on Supply Chain Performance Indicators caused by the outsourcing and offshoring decisions, and positive or negative relationships between each influencing factor for outsourcing and offshoring and the supply chain performance measurements so that the initial viability of the decision for outsourcing and offshoring could be assessed based on the current performance of the Supply Chain visible through KPIs.

2. Literature Review

The influencing factors for the strategies of offshoring and outsourcing were drafted based on Dunning's eclectic paradigm or "OLI model" [1], which summarises the impact of Globalisation of multinational corporations. Lühje in a qualitative research titled "Global operations and their interaction with supply chain performance" [2] describes the influencing factors for Globalisation as location-specific advantages (influencing Outsourcing), the ownership-specific advantages (influencing Offshoring) and internalisation specific advantages (influencing Offshoring) having nine, thirteen and five sub factors, accordingly. SCOR model is used in the questionnaire carrying thirty seven measurements according to the model defined by Gunasekaran [3] which used measures and metrics in five main areas, namely Plan, Source, Make, Deliver and Return as performance measurements.

3. Methodology and Data Analysis

The various accounts (DBA, Nike, Triumph, Women Secret, and Victoria's Secret etc.) of three organisations, which consist of more than 34 different accounts, were taken as research population. The questionnaire was based on both OLI model and SCOR Model on five-point scale Likert Questionnaire.

The data analysis sequence mentioned below was adopted for both data sets gathered on Global Offshoring and Global Outsourcing. When the standard deviation values for each category in each survey response were lower than 0.5, the responses that were identified as following a specific pattern were removed from the final data set. Cronbach's α was calculated to assess the reliability of each scale (the scale of the performance measurement section as a whole, each sub-section separately on plan-source-production-delivery-customer satisfaction and service levels, and Ownership specific, Internalisation specific and Location specific sections). If the value of Cronbach's α indicated higher than 0.7, it was assumed that the scale was reliable [4].

Factor analysis method was used to identify the variables with common characteristics/ correlation and to reduce the total number of variables to a lesser number of underlying variables. It was assumed that, if the KMO measure was greater than 0.5, the sample would be adequate. The factor extraction was implemented using Principal Component Analysis based on the Eigen value greater than 1. Varimax rotation was used to construct the rotated component matrix. Spearman's Correlation was used to identify the relationships between variables under influencing factors for Globalisation, variables under performance measurement in both Offshoring and Outsourcing based on the factor scores.

4. Research Findings and Conclusion

According to the below mentioned findings of this research, the motivating factors for any globalisation strategy would not always positively contribute towards supply chain performance.

Hence these research findings could provide an alerting framework for top management in any decision whether to outsource or offshore since they would know which area that would be affected in advance and that if the specific area to be affected was not doing well currently then the globalisation strategy would not be suitable for the company.

The figure below shows what areas in supply chain that will be affected and in what manner, if any globalisation strategy is undertaken in search of the mentioned tempting factors.

Offshoring				Outsourcing	
Independent Factors Influencing Offshoring / Outsourcing	Ownership 1: Value adding & Demand Management in various geographical locations	Ownership 2: Tangible & Intangible Asset Advantages	Internalization 1: Reduction in Market Risk	Independent Factors influencing Outsourcing	Location 1: Demographic Characteristics of the Country and Trade & Transport
	Dependent Factors affecting Performance	1.7 Intangible Asset Advantages: Organization & Marketing Systems 1.9 Formal/ Informal Institutional Assets governing value adding processes 1.8 Ability to manage several geographically separated activities 1.4 Intangible Asset Advantages: Production Management	1.5 Intangible Asset Advantages: Trade Names 1.3 Intangible Asset Advantages: Product Innovations 1.1 Property Rights over Raw Materials		1.24 Increased Market Control 1.23 Reduced Risk of Product Imitation
Plan 2 : Cash flow time with high information carrying costs	- .430⁺	.691[™]	.378[*]	Plan (j) : Employee satisfaction with increased complexities resulting high information carrying cost & Total cash flow time	-0.520
2.2 Employee Satisfaction Factor due to Duplication of work				3.2 Employee Satisfaction Factor due to Duplication of work	
2.5 Total cash flow time				3.3 Increased Complexities of Processes	
2.9 Information Carrying Cost				3.4 Accuracy of forecasting techniques	
Source 1 : Supplier Reliability with quality, time and cost	Nil	.425⁺	Nil	3.5 Total cash flow time	
2.13 Supplier lead time against industry norm				3.9 Information Carrying Cost	
2.14 Supplier pricing against the market				Make (j) : Cost, Time and Capacity dealing with the Production Schedule and Inventory Levels	.446[*]
2.19 Purchase order cycle time				3.20 Manufacturing cost	
2.16 Achievement of defect free deliveries				3.21 Capacity utilization	
Deliver 1 : Cost & Time savings in Distribution	Nil	.493[™]	Nil	3.22 Effectiveness of master production schedule	
2.25 Delivery lead time				3.23 Production/ process cycle time	
2.26 Number of faultless deliveries/ Delivery Reliability				3.24 Inventory levels: Incoming stock +Work in Progress+ Finished goods + Scrap /waste/ write off+ Inventory in transit	
2.28 Information richness in carrying out				Deliver (j) : Cost, Quality & Time in Distribution	.405[*]
2.27 Increased Cost of Documentation & Customs Screening				3.25 Delivery lead time	
2.30 Total distribution cost				3.26 Number of faultless deliveries/ Delivery Reliability	
2.29 Response to number of urgent deliveries				3.29 Response to number of urgent deliveries	
Return 1 : Customer satisfaction in	Nil	.545[™]	Nil	3.30 Total distribution cost	
2.32 Customer query time				Deliver (ii) : Government Regulations and Documentation needed for the Logistics	-.407[*]
2.35 Measurement of customer satisfaction				3.27 Increased Cost of Documentation & Customs	
2.34 Customers' ability to seek assistance				3.28 Information richness in carrying out delivery	
2.37 Return process of goods with Quality					
2.33 Level of customer perceived value of product					

Figure 1: Research Findings on Globalisation Strategies used for Upstream Supply Chains in Apparel Industry in Sri Lanka

References

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