

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

# Inshi Perera

University of Moratuwa, Sri Lanka

# Pradeepa Jayaratne

University of Moratuwa, Sri Lanka

# 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. Lüthje 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  $\alpha$  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  $\alpha$  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.

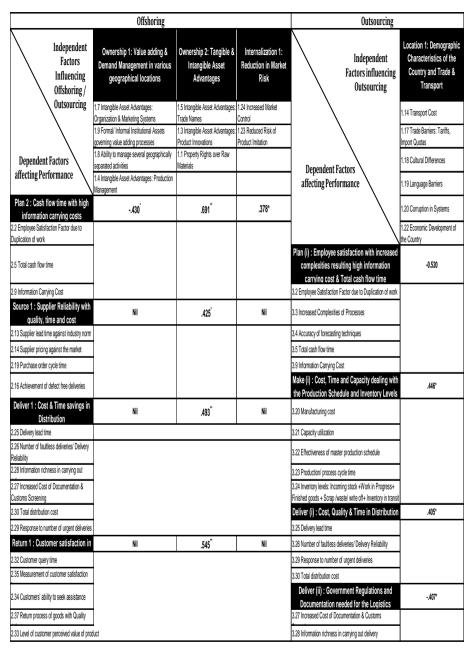


Figure 1: Research Findings on Globalisation Strategies used for Upstream Supply Chains in Apparel Industry in Sri Lanka

### References

[1] J. L. Dunning, "Multinational Enterprises and the Global Economy, Addisonesley, Reading, MA," 2008.

- [2] J. S. Lüthje, "Global operations and their interaction with supply chain performance," *Industrial Management & Data Systems*, 2012.
- [3] A. P. C. A. T. E. Gunasekaran, "Performance measures and metrics in a supply chain environment," *International Journal of Operations & Production Management*, pp. Vol. 21 No. 1/2, 2001, pp. 71-87, 2001.
- [4] J. a. G. R. Gliem, "Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales," *Midwest Research to Practice Conference in Adult, Continuing, and Community Education*, 2003.

**Keywords:** Globalisation, Offshoring, Outsourcing, Non-parametric, PCA, Cronbach