REVERSE SUPPLY CHAIN MANAGEMENT EXPLORE THE FEASIBILITY TO INCORPORATE FORWARD SUPPLY CHAIN STRATEGY INTO THE REVERSE SUPPLY CHAIN IN THE ELECTRONIC INDUSTRY

A Thesis submitted to Department of Management Sciences in partial fulfillment of the requirement for the MBA degree

Student Name: NAJMA AFZAL

Student ID: 22992

NOV, 2014

Bahria University, Karachi Campus

DECLARATION OF AUTHENTICATION

I, Najma Afzal *, Registration No.* 22992 *Student of MBA degree at the Department of Management Sciences, Bahria University, Karachi Campus, hereby certify that the research work presented in this thesis, to the best of my knowledge, is my own. All sources used and any help received in the preparation of this dissertation has been properly acknowledged. I hereby further declare that I have not submitted this material, either in whole or in part, for any other degree at this or at any other institution.*

Signature:

Najma Afzal

Name:

Najma Afzal.

CERTIFICATE OF ORIGINALITY

It is certified that similarity index of the research work titled Reverse Supply Chain Management. *submitted by* Najma Afzal. *MBA student with Registration No.* 22992 *has been ascertained through "Turn it in" software. Similarity index ascertained is _____ % which is within the acceptable range.*

Signature:

_____

Name:

_____

Designation:

_____

ABSTRACT

Purpose- Major aim of this study was to evaluate the impact of price hike and purchasing power on sugar consumption pattern of individuals in Pakistan. The constant rising prices of food commodities including sugar, and the sugar crises the country mostly is seen caught into prompted researcher to conduct this study.

Methodology/sample- The study involved use of questionnaires filled by 240 respondents and financial data of three sugar mills for the period of 2010-11 for financial analysis. The respondent individuals belonged to different age groups, social classes and areas of residence. To analyze the data, Regression, ANOVA and Correlation tests were applied. Data from three different sugar mills from three different provinces of Pakistan was also collected and financial analysis of their annual reports was conducted to determine their growing profits.

Findings- The analysis and comparative results clearly suggested that individuals in Pakistan have decreased their sugar consumption due to increasing prices, while sugar mills are earning huge profits. It was also concluded that higher profits earned by the sugar mills was due to artificial shortage created by cartel making by the sugar mill owners in Pakistan.

Practical Implications- The outcomes of the research might help the corporate decision makers, government policy formulators and other related quarters to understand the impact of rising prices of commodities in Pakistan and to understand the overall dynamics and mechanism of sugar sector in Pakistan.

Keywords: Consumption, Rising prices, Sugar sector, High profit

TABLE OF CONTENTS

Acknowledgement ---- I

Abstract ---- II

Table of Contents ---- III

List of figures ---- V

List of tables ---- V

1 Introduction ---- 1

1.1 Background ---- 1

Environmental Concerns ---- *1*

Regulatory Initiatives ---- *1*

Business Pressures ---- *2*

1.2 Problem Formulation ---- 3

1.3 Research Purpose & Questions ---- 4

1.4 Delimitations ---- 5

1.5 Disposition of the thesis ---- 5

2 Theoretical Framework ---- 7

2.1 Definitions and Scopes ---- 7

2.1.1 Reverse Logistics ---- *7*

2.1.2 Reverse Supply Chain ---- *8*

2.2 Products Category of Reverse Flow ---- 9

2.3 Reverse Logistics Activities ---- 10

2.4 Reverse Supply Chain Processes ---- 12

2.4.1 Product Acquisition ---- *12*

2.4.2 Reverse Logistics ---- *13*

2.4.3 Inspection and Disposition ---- *13*

2.4.4 Reconditioning ---- *14*

2.4.5 Re-distribution and Sales ---- *15*

2.5 Reverse Supply Chain Designs ---- 15

2.5.1 Centralized reverse supply chain ---- *17*

2.5.2 Decentralized reverse supply chain ---- *18*

2.6 Supply Chain Strategies ---- 19

2.6.1 Supply Chain Strategy Selection ---- *19*

2.6.2 Lean, Agile and Leagile Philosophies ---- *22*

Lean Supply Chains ---- 22

Agile Supply Chains ---- 23

Leagile Supply Chains ---- 24

3 Methodology ---- **26**

3.1 Research Philosophy ---- 26

Epistemology ---- *26*

Ontology ---- *26*

Theory and Research ---- *27*

3.2 Research Purpose and Designs ---- 28

Research designs: Exploratory, descriptive, casual designs ---- *28*

3.3 Research Methods: qualitative vs quantitative ---- 29

3.4 Data Collection Process ---- 30

3.4.1 Primary Data Collection Process ---- *30*

3.4.2 Literature Review ---- *31*

3.4.3 Secondary Data Collection Process ---- *32*

3.5 Validity and Reliability ---- 32

3.5.1 Validity ---- *33*

3.5.2 Reliability ---- *33*

3.5.3 Testing Validity and Reliability ---- *33*

4 Empirical Findings ---- **34**

4.1 Overview ---- 34

4.2 Gome Electrical Appliance ---- 35

4.2.1 General Company Information and Product Category ---- *35*

4.2.2 Reverse Supply Chain ---- *36*

1) Product returns for refunding and exchanges ---- 37

2) Product returns for repair and maintenances ---- 38

4.3 Suning Appliance ---- 40

4.3.1 General Company Information and Product Category ---- *40*

4.3.2 Reverse Supply Chain ---- *41*

1) Product returns for refunding and exchanges ---- 41

2) Product returns for repair and maintenances ---- 42

5 Analysis ---- **44**

5.1 Perception of Reverse Supply Chain by Companies ---- 44

5.2 Reverse Supply Chain Process ---- 45

5.3 Reverse Supply Chain Strategies ---- 46

5.3.1 Criteria for Strategy Selection ---- *46*

5.3.2 Implementation of Lean, Agile and Leagile Approaches ---- *47*

6 Conclusions ---- **50**

7 Future Outlook ---- **52**

Reference ---- **53**

List of figures

Figure 1: General products flow in a reverse logistics system 2
Figure 2: Flow of Goods in Reverse Logistics System (Dyckhoff et al., 2004) 8
Figure 3: The Hierarchy of Reverse Logistics Activities (Dyckhoff, Lackes, & Reese, 2004) 11
Figure 4: Activities in closed-loop supply chain (Insanic, 2010) 11
Figure 5: A General Reverse Supply Chain (Guide & van Wassenhove, 2002) 12
Figure 6: Typical returns collection methods (Kumar & Putman, 2008) 15
Figure 7: Differences in Marginal Value of Time for Returns (Blackburn et al., 2004) 16
Figure 8: Centralized Reverse Supply Chain Model (Blackburn et al., 2004) 17
Figure 9: Decentralized Reverse Supply Chain Model (Blackburn et al., 2004) 18
Figure 10: Leagile Supply Chain with de-coupling point (Banomyong et al., 2008; modified by the author) 24
Figure 11: Deduction and Induction (Bryman & Bell, 2007) 27
Figure 12: Reverse Supply Chain Process of Product Returns for Refunding and Exchanges in Gome 37
Figure 13: reverse supply chain Process of Product Returns for Repair and Maintenances in Gome 38
Figure 14: reverse supply chain Process of Product Returns for Repair and Maintenance in Suning 42
Figure 15: Implementation of Leagile Approach in Reverse Supply Chain by Gome 48
Figure 16: Implementation of Leagile Approach in reverse supply chain by Suning 48

List of tables

Table 1: Disposition of the thesis 6
Table 2: Product Recovery Strategies (Prahinski & Kocabasoglu, 2006) 14
Table 3: Fisher's Matrix for Supply Chain Strategy (Fisher, 1997) 20
Table 4: Lee's Matrix for Supply Chain Strategy (Lee, 2002) 21
Table 5: Christopher's Matrix for Supply Chain Strategy (Christopher et al., 2006) 21
Table 6: Detailed Analyzed Products for Each Category 34