# Supply Chain Cost Reduction using Mitigation & Resilient Strategies in the Hypermarket Retail Business

Mohan Selvaraju\*1, Prashanth Beleya\*2, Veera Pandiyan Kaliani Sundram#3

\*1,2 Universiti Tunku Abdul Rahman - Kampar Campus, Faculty of Science Jalan Universiti, Bandar Barat, 31900, Kampar, Perak, Malaysia ¹mohans@utar.edu.my ²prashanthb@utar.edu.my

<sup>#3</sup> Universiti Teknologi MARA, Centre for Technology & Supply Chain Management, Faculty of Business and Management, Selangor, Malaysia

³veera692@puncakalam.uitm.edu.my

Abstract — Retail businesses have become more challenging owing to the external and internal forces due to the ever evolving nature of the environment. Various measures are being taken to address the need to manage cost. The supply chain factors must not be ignored as the entire link along the retail supply chain play vital roles. This article is an attempt at presenting an overview of the current situation of the retail environment particularly in the hypermarket sector and the forces affecting their business cost which include knowledge, forecasting, procurement, and sourcing. The paper concludes through literature review that recognizes risks associated with each force that could potentially determine the cost of business for the hypermarkets. As such, an empirical study is to follow this conceptual study to analyse the hypotheses developed and to significantly identify the factors and strategies that retailers could use to reduce the impact of supply chain disruptions to their overall cost.

**Keywords** — Retail Management, Supply Chain Cost, Risk Management, Supply Chain Management

### 1. Introduction

The 21<sup>st</sup> century has seen much vulnerability which has affected businesses worldwide. This has caused supply chain disruptions to many if not most industries dealing with an array of networks globally. The Japanese tsunami in 2011 affected the auto industry, while the floods in Thailand around the same year disrupted the computer component industry. Also of great precedence has been the effect of globalization. Globalization has given rise to a new era of international competition that is reshaping global production and trade and thereby altering the organization of industries [17].

The same could be mentioned regarding the retail industry, particularly the hypermarkets. This industry is regarded as the link between suppliers of various products from various countries to customers who demand a variety of products for

International Journal of Supply Chain Management

IJSCM, ISSN: 2050-7399 (Online), 2051-3771 (Print)
Copyright © ExcelingTech Pub, UK (http://excelingtech.co.uk/)

their everyday needs. The supply chain linking the industry is very wide, whereby a disruption could cause various negative effects to the business [2]. Being a competitive industry, the hypermarkets thrive on being price competitive by providing consumers with the best bargain there is available. However, in doing so, the hypermarkets need to ensure their supply chain cost is able to weather any external shocks while maintaining efficiency internally. Management realizes the need to mitigate risks and provoke resilient strategies to reduce the overall supply chain cost to remain competitive.

After facing numerous aftershocks, the supply chain process of the hypermarkets has become more nimble and aligned towards the organization's wider strategy. Hypermarkets today deem sustained development as a vital tool to ensure survival in the industry. To adhere to this goal, they realize that managing the supply chain has become a necessary strategy to pursue. Various methods are being pursued to ensure customers get value for their purchase, and at the same time reduce cost factors for the hypermarkets. There is a growing feeling that retail management right now is confronting a remarkable change of structure, if not a change of life itself. This research endeavours to show a review of the present circumstances confronting the retailing business and to recognize retail management as the basic strength influencing their organizations and the significant zones of effect.

The ideas and practices of SCM have been touted as enhancing the execution of organizations which take an interest in them [42]. There have been various investigations of SCM usage among manufacturing firms and large retailer organizations that have set up the significance of SCM, yet to date the effects of SCM practices on little retailers have not been accounted for in the literature. Hierarchical framework has been recognized as an empowering influence of viable SCM [21], yet small firms are liable to vary from base accessible in bigger firms. Notwithstanding framework contrasts, small retailers vary from their bigger rivals in focused system, hierarchical learning style, and position

inside the supply chain structure. Regardless of these distinctions, and their significance to the economy, small retailers were given minimal consideration from supply chain management researchers.

Retailers regularly offer wide number of various items obtained from an assortment of suppliers. Hence, dissecting supply chain structure in this setting is rather mind boggling. To disentangle this analysis, a Category Management system is embraced for this study. This focal point was decided for dissecting retail supply chain structure for two reasons. In the first place, the many-sided quality of the augmented store network in a fast-moving buyer merchandise connection makes execution crucial. Analyzing singular item class

supply chains disentangles this undertaking. Second, the Category Management worldview has turned out to be genuinely mainstream among retail vital practices and has been distinguished as an imperative driver of store network execution [28].

## 2. Conceptual Framework

The uncertainty aroused in the supply chain environment resulted in unpredictable cost in the retail marketing businesses. This paper elaborates the possibility of strategic irrepressible mitigation methods to confront such cost.

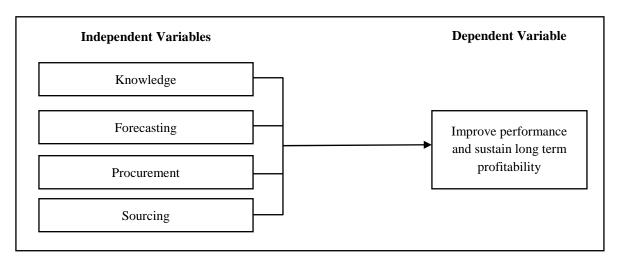


Figure 1. Research Framework

## 3. Research Objective

Research objective is a statement of research purpose which the researcher wants to investigate [43]. Thus, this study is to demonstrate the uncertainty situation aroused in the supply chain environment that caused uncertainty to many organizations engrossed with unpredictable cost. This paper conceptually elaborates the possibility of strategic irrepressible mitigation methods to confront such cost.

- i. To examine how the four independent variables influence the supply chain cost
- ii. Identify the resilient strategy to sustain the long term profitability in the retailing.
- iii. To evaluate the mitigation methodology to manage the supply chain cost effectively.

## 4. Significance of Study

A Hypermarkets retailers alienated with gigantic level of deficiencies because of vulnerability circumstances periphery inside the supply chain. Hence, this study includes the conceivable system of alleviation to oversee and guarantee a

manageable productivity. Notwithstanding the supply chain coordination, retailers still assimilated with dissimilarity regarding the four independent variables.

#### 5. Literature Review

Hypermarkets are modern forms of grocery retailing whereby customers get their requirements at one stop outlets. Hypermarkets are channels for product distribution to customers. [23]. The concept of various goods available under one roof, parking amnesties, discounted items, miscellanies' services have invented a new word in the industry which is hypermarket [24]. Malaysia's first hypermarket was introduced in 1993 and known as Makro. Since then, various international hypermarkets have joined the bandwagon by launching their businesses here which include AEON, Tesco, Carrefour, and local brand Mydin among the few. With competition heating up aggressively, hypermarkets had to be not just efficient, but also ensure resilience growth in the supply chain business.

Supply chain efficiency differ greatly from supply chain resilience [40]. The former is aimed at improving processes that will enhance the bottom line of an organization, while the latter is designed to withstand aftershocks such as the

ones previously mentioned in the introduction. However, both require dealing with risks, a variable that is unpredictable, yet greatly influences the outcome of any external or internal shocks. [9] identified types of risks associated to the retail industry as well as strategies to mitigate those risks. The risks are split into supply risks, demand risks, and miscellaneous risks. Supply risks involve disruptions to the availability of products in the retail industry to its customers while the demand risks are risks that could potentially affect the operations of the retail industry. These risks are more internally oriented compared to the supply risks. Miscellaneous risks are risks that could potentially affect the costs of doing businesses other than supply and demand risks. The point to note, however are the risks present throughout the supply chain and the retail business particularly at the hypermarkets which need to be continuously assessed as various aspects of risks are involved and the parties linked to the supply chain.

Most experts are completely insightful of the risks that can possibly upset supplies. Minor configuration issues, machinery breakdowns or significant regular worldwide fiascos speak to risk that supply chain managers must consider when moderating against disturbances. In any case, one sort of risk is regularly ignored in supply chain management: reputational hazard. In spite of the fact that the mitigation risk practices of the organization have minimized disruptions, the dangers to their notoriety, as an aftereffect of their supply chain, were disregarded. Commonly, reputational dangers are not problematic to assets, which partially clarifies why the related expenses are frequently very hard to decide. Given the fragile way of notoriety, they might be past valuation.

Ideally, a reputed organization should alleviate the adverse outcome of any crisis [47], being a primary origin to wellspring against the competitors [15], allure capital and close contracts, and affects buyers' attitude [12]. Hence, corporate notoriety is a beneficial resource [22], and the importance to direct it, exhibits the need to fathom its estimations.

## 5.1 Knowledge Management Towards Cost Effectiveness

Despite contradiction, productivity and receptiveness are essential elements in the supply chain process [8,36]. While accomplishing better efficacy, there is a possibility of conceding receptiveness. Thus, performing high proficiency during the distribution and remaining receptive to customer is essential. Inconsistent supply affects promptly on the aggressiveness of a firm, causes high supply chain cost and the customer endure.

To reduce the overall distribution cost, retailers rely on merge orders [7] and improve the lead time and zoning the areas accordingly [32,34]. Hypermarket retailers need to deploy various mechanism such as market segmentation, pricing strategy and vendor managed inventory (VMI) without ignoring the supply chain capability and limitation.

By centralising and consolidating the distribution, retailer should be able to respond to the customer's requirements. Retailers also need to build an appropriate organizational culture, business strategy and proper leadership style to tap the changes circulated within the environment. This will be achieved only with top-notch SCM analysis [8] and proper hypothesis [10].

Although different methodologies are applied, a strategic knowledge management is essential to development every level of employees to gain organizational vision and mission. [18] argues that every organization survive because of knowledge management exists and utilised widely within in the organization. Knowledge management concept worked in a holistic manner that incorporates and integrate within the retail environment. Using a specific idea of resources would improve the supply chain connectivity and network where there is a possibility of reducing supply chain cost.

# 5.2 Forecasting Strategy to Manage Supply Chain Cost Effectiveness

Traditionally, organizational experts have used inadequate data and information or poor prediction methodology to derive forecasting which results in appropriate outcome. In the retail sector, managers face enormous levels of uncertainty that has made them to default the accuracy and cause high level of inevitable supply chain cost. Research [19] has recommended that a proper method of forecasting should be implemented in order to obtain accuracy and reduce organization a burden [38]. Relatively sometimes, the forecasting [26] positively resulted during the high uncertainty and low quantitative data where strategic forecasting policy being implemented. Uncertainty such as uneven population category, distracting technologies, new enterprise and other challenges that continuously happen where survival always is unpredictable. Due to this, managers conduct an internal and external assessment to derive the best way to achieve the supply chain cost

Some researches emphasized that only by developing a strategy of sharing core information, buyers and sellers would gain and reduce the liability between these two parties [5]. However, the forecasting never results positively with suppliers due to poor communication where frequently, supply chain process failed in terms of delay, wrongly perceived and executed [20,31]. With all these negative impacts, there is a high possibility of information incompetency [29]. During any information sharing with regard to forecast, it is necessary to understand the consequences that can cause bad customer - supplier relationship [16], where integrity and communication between buyer and seller is of concern. Managers seek open and complete future assurance while making any decision where every prospect, ideas and policies based on two things that are opportunity and threats. For any business sustainability, it is necessary to fulfil and respond to customers to gain competitive advantage [37]. Managers

should be able to view and prepare for good and bad situations. Basically, forecasting becomes null and void if there is foresight management style [45].

# 5.3 Strategic Procurement and Sourcing in the Reduction of Supply Chain Cost

Supply chain has developed into global levels due to vast requirement of goods and services [46]. Obviously, hypermarket retailers enhanced the scope of business where global sourcing plays a prominent role. Not only within their country but across continents to gain more exposure in buying and selling. Hence, it is required for any retailer to build networks worldwide to achieve competitive advantage. While widening the scope of procurement, retailers need to magnify wider range of cost such as assembling cost, transportation, freight infrastructure, social liability, mobility and other relevant government tariffs and taxes [6].

Once the procurement experts' steps into the international trading arena, it is vital for buyers to develop advance knowledge pertaining to the buying skills and sustaining low cost within the limits [30]. Managing procurement and negotiating perfectly and consistently is crucial to ensure profitability is assured and this will reduce the supply chain cost effectively [1,35]. Furthermore, managers need to be trained with regard to procurement skills but this is still subject to debate. This is because international procurement grows every minute and organizations couldn't tap the speed of development and face the consequences.

Despite the fact that the supply chain theory was well explained [14,27,33], it has not reasonably articulated the related supply chain practices. Comparable to the earlier statement, there are multiple research being conducted to state that supply chain implication is to improve the organization's' performance [44,48], and thus supply chain exercise is not considered as an asset to be conveyed in conjunction with the vital decision of supply chain technique.

Typically, emerging from internal, external or natural sources, risk may affect organizations and on their supply affixes because of the absence of adaptability, data sharing or limit, for occasion [39]. These downsides are considerably more impactful when broke down from the viewpoint of the worldwide system. In this way, moderating effects emerging from a risk, supply chain flexibility plans to help organizations adapt to various sorts of disturbances quickly, empowering operations to be re-established to the past execution level or even to another and better one [11].

Thus, procurement has turned out to be broadly perceived as an essential capacity, in charge of expanding aggressiveness inside an unsteady domain [25], affecting decidedly the association benefit [3] and contributing as much as different capacities to business congruity [4,13]. It is, hence, clear that acquisition assumes a key part in any association. Thusly, this capacity is equipped for overseeing pertinent internal and external authoritative issues which may make supply chain versatility.

#### 6. Discussion and Conclusion

The topic would be open for debate to current managers in the supply chain settings and moreover this study explains explicitly the methods to reduce cost in the hypermarket business. The finishing diagrams support the hypothesis designers and experts. This paper attempts to dissect the supply chain cost risk associated as a moderating risk methodology in theory. Mixing both supply chain settings with the reduction of cost in the hypermarket business prompt standardizing and evaluating of the supply chain social framework in a global field. Based on my research, vital questions pertaining to supply chain business and the cost factors would give food for thought for retailers. Qualitative research, e.g. in the form of in-depth interviews, could be employed to explore additional exploratory aspects to determine the perceived influence supply chain practices. These theoretical assessments highlight suggestions for all supply chain experts to explore further to improve the cost factors. All retail expert should recognised and comprehend the factors contributing to the various mitigating element and influences pertaining to the reduction of cost in the hypermarket. This opens further and suggestion for improvement in the retailer business.

#### References

- [1] Akmal, A.O., Sofiah, A.R., Sundram, V.P.K., and Bhatti, M.A., "Modelling marketing resources, procurement process coordination and firm performance in the Malaysian building construction industry", Engineering, Construction and Architectural Management, Vol. 22, No. 6, pp. 644 668, 2015.
- [2] Akmal, A. O., Sundram, V. P. K., Nazura, M. S., and Atikah, S. B., "The Relationship between Supply Chain Integration, Just-In-Time and Logistics Performance: A Supplier's Perspective on the Automotive Industry in Malaysia", International Journal of Supply Chain Management, Vol. 5, No. 1, pp. 44 – 51, 2016.
- [3] Alinaghian, L.S., Aghdasi, M. and Srai, J.S., "Developing a refined model for purchasing and supply system transformation: benefiting from organizational change theories in purchasing development models", 20th Annual IPSERA Conference, Maastricht, pp. 1-17, 2011.
- [4] Andrea, F., Arnaldo, C. and Romano, P., "Understanding how formal and informal communication affect purchasing, manufacturing and logistics integration", Advances in Management, Vol. 4, No. 7, pp. 22-32, 2011.
- [5] Cachon, G.P. and Fisher, M., "Supply chain inventory management and the value of shared information", Management Science, Vol. 46, No. 8, pp. 1032-48, 2000.
- [6] Caddick, J.R. and Dale, B.G., "Sourcing from Less Developed Countries: A Case Study", Journal of Purchasing and Materials Management, Vol. 22, No. 4, Fall, pp. 17-23, 1986.
- [7] Campbell, J.F., "Freight consolidation and routing with transportation economies of scale", Transportation Research Part B: Methodological, Vol. 24, No. 5, pp. 345-61, 1990.

[8] Chopra, S. and Meindl, P., Supply Chain Management: Strategy, Planning, and Operations, Pearson Prentice Hall, New York, NY, 2010.

- [9] Chopra, S., and Sodhi, M.S., "Managing risk to avoid supply chain breakdown", MIT Sloan Management Review, Vol. 46, No. 1, pp. 53–62, 2004.
- [10] Chorn, N.H., "The 'alignment' theory: creating strategic fit", Management Decision, Vol. 29, No. 1, pp. 20-4, 1991.
- [11] Christopher, M. and Peck, H., "Building the resilient supply chain", International Journal of Logistics Management, Vol. 15, No. 2, pp. 1-14, 2004.
- [12] Dowling, G.R., Creating Corporate Reputations: Identity, Image, and Performance, Oxford University Press, Oxford, 2001.
- [13] Ellegaard, C. and Koch, C., "The effects of low internal integration between purchasing and operations on suppliers' resource mobilization", Journal of Purchasing & Supply Management, Vol. 18, No. 3, pp. 148-158, 2012.
- [14] Fisher, M.L., "What is the right supply chain for your product?", Harvard Business Review, Vol. 75, No. 2, pp. 105, 1997.
- [15] Flatt, S.J. and Kowalczyk, S.J., "Corporate reputation persistence and its diminishing returns", International Journal of Business and Social Science, Vol. 2, No. 19, pp. 1-10, 2011
- [16] Forslund, H. and Jonsson, P., "The impact of forecast information quality on supply chain performance", International Journal of Operations & Production Management, Vol. 27, No. 1, pp. 90-107, 2007.
- [17] Gereffi, G., "Global Value Chains and International Competition", Antitrust Bulletin, Vol. 56, No. 1, pp. 37-64, 2011.
- [18] Grant, R. M., "Toward a knowledge-based theory of the firm", Strategic Management Journal, Vol.17, Special Issue: Knowledge and the firm (winter), pp. 109-122, 1996.
- [19] Green, K.C. and Armstrong, J.S., "Structured analogies for forecasting", International Journal of Forecasting, Vol. 23, No. 3, pp. 365-376, 2007.
- [20] Gustavsson, M. and Jonsson, P., "Information quality deficiencies and consequences in supply chain information exchange", Proceedings of the Annual NOFOMA Conference 2007, 2007.
- [21] Ibrahim, A. R., Zolait, A. H., and Sundram V.P.K., "SCM Practices and Firm Performance: An Empirical Study of the Electronics Industry in Malaysia", International Journal of Technology Diffusion, Vol. 1, No. 3, pp. 48-55, 2010.
- [22] Iwu-Egwuonwu, R.C., "Corporate reputation & firm performance: empirical literature evidence", International Journal of Business and Management, Vol. 6, No. 4, pp. 197-206, 2011
- [23] Kaliappan, S.R., Alavi, R., Abdullah, K. and Zakaullah, M.A., "Spillover effects of foreign hypermarkets on domestic suppliers in Malaysia", International Journal of Retail & Distribution Management, Vol. 37, No. 3, pp. 226-249, 2009.

- [24] Kamath, P. and Godin, C., "French Carrefour in South East Asia", British Food Journal, Vol. 103, No. 7, pp. 479-494, 2001.
- [25] Lawson, B., Cousins, P.D., Handfield, R.B. and Petersen, K.J., "Strategic purchasing, supply management practices and buyer performance improvement: an empirical study of UK manufacturing organisations", International Journal of Production Research, Vol. 47, No. 10, pp. 2649-2667, 2009.
- [26] Lee, W.Y., Goodwin, P., Fildes, R., Nikolopoulos, K. and Lawrence, M., "Providing support for the use of analogies in demand forecasting tasks", International Journal of Forecasting, Vol. 23, No. 3, pp. 377-90, 2007.
- [27] Lee, H.L., "Aligning supply chain strategies with product uncertainties", California Management Review, Vol. 44, No. 3, pp. 105-119, 2002.
- [28] Lloyd, S., "Applying the nominal group technique to specify the domain of a construct", Qualitative Market Research: An International Journal, Vol. 14, No. 1, pp. 105-121, 2011.
- [29] McCarthy, T.M. and Golicic, S.L., "Implementing collaborative forecasting to improve supply chain performance", International Journal of Physical Distribution & Logistics Management, Vol. 32, No. 6, pp. 431-454, 2002.
- [30] Noraizah, A. B., Peszynski, K., Azizan, N., and Sundram, V.P.K., "Abridgment of Traditional Procurement and E-Procurement: Definitions, Tools and Benefits", Journal of Emerging Economies and Islamic Research, Vol. 4, No. 1, pp. 2-18, 2016.
- [31] Petersen, K., Ragatz, G. and Monczka, R., "An examination of collaborative planning effectiveness and supply chain performance", The Journal of Supply Chain Management, Vol. 41, No. 2, pp. 14-25, 2005.
- [32] Potvin, J.-Y. Xu, Y. and Benyahia, I., "Vehicle routing and scheduling with dynamic travel times", Computers & Operations Research, Vol. 33, No. 4, pp. 1129-37, 2006.
- [33] Qi, Y., Zhao, X. and Sheu, C., "The impact of competitive strategy and supply chain strategy on business performance: the role of environmental uncertainty", Decision Sciences, Vol. 42, No. 2, pp. 371-389, 2011.
- [34] Raff, S., "Routing and scheduling of vehicles and crews: the state of the art", Computers & Operations Research, Vol. 10, No. 2, pp. 63-211, 1983.
- [35] Rajagopal, S. and Bernard, K.N., Strategic Procurement in the Airline Industry: An Examination of the Impact of Purch, 1903
- [36] Rajagopal, P., Nur Atika, Z.Z., Atika, S.B., Appasamy, G. and Sundram V.P.K, "Determinants of Supply Chain responsiveness among Firms in the Manufacturing Industry in Malaysia", International Journal of Supply Chain Management, Vol. 5, No. 3, 2016.
- [37] Rajagopal, P., Sundram, V. P. K. and Babudass M.N., "Future Directions of Reverse Logistics in Gaining Competitive Advantages: A Review of Literature", International Journal of Supply Chain Management, Vol. 4, No. 1, pp. 39-48, 2015.
- [38] Savio, N. and Nikolopoulos, K., "Forecasting the economic impact of new policies", Foresight, Vol. 11, No. 2, 2009.
- [39] Stecke, K.E. and Kumar, S., "Sources of supply chain disruptions, factors that breed vulnerability, and mitigating

- strategies", Journal of Marketing Channels, Vol. 16, No. 3, pp. 193-226, 2009.
- [40] Sundram, V. P. K., Atikah, S. B., and Chandran, V. G. R., Supply Chain Management: Principles, Measurement and Practice. University of Malaya Press, Kuala Lumpur, 2016.
- [41] Sundram V.P.K., Chandran, V.G.R., and Bhatti, M.A., "Supply chain practices and Performance: the indirect effects of supply chain integration", Benchmarking: An International Journal. Vol. 23, No. 6, pp. 1445-1471, 2016.
- [42] Sundram, V. P. K., Chandran, V. G. R., and Ibrahim, A. R., "Supply chain management practices in the electronics industry in Malaysia: Consequences for supply chain performance", Benchmarking: An International Journal, Vol. 18, No. 6, pp. 834-855, 2011.
- [43] Sundram, V. P. K., Chandran, V. G. R., Atikah, S. B., Rohani, M., Nazura, M. S., Akmal, A. O., and Krishnasamy, T., Research Methodology: Tools, Methods and Techniques, MLSCA, Selangor, 2016.

- [44] Tan, K.H., Lyman, S.B. and Wisner, J.D., "Supply chain management: a strategic perspective", International Journal of Operations & Production Management, Vol. 22, No. 6, pp. 614-631, 2002.
- [45] Tersine, R.J., "Logic for the Future: The Forecasting Function", Managerial Planning, pp. 32-6, March/April 1980.
- [46] Thirunavukkarasu, K., Ahmad Razi. A., Akmal, A. O., Farha, A. G., Mohamed Afiq, Z. and Sundram V. P. K., Logistics and Supply Chain Managements: A Malaysian Perspective, Petaling Jaya, Selangor Malaysian Logistics and Supply Chain Association, 2014.
- [47] Vanhamme, J. and Grobben, B., "Too good to be true! The effectiveness of CSR history in countering negative publicity", Journal of Business Ethics, Vol. 85, No. 2, pp. 273-283, 2009.
- [48] Zhou, H. and Benton Jr, Q., "Supply chain practice and information sharing", Journal of Operations Management, Vol. 25, No. 6, pp. 1348-1365, 2007.