Effect of Trade Promotions and Price Fluctuations on Supply Chain Coordination for Big Retailers: A Review

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ABSTRACT

With the emerging high growth of Supply Chain (SC) in the business world lately, have enabled many organizations and companies such as manufacturers, wholesaler, retailers, transporters, shippers, etc; to offer efficient and effective services, products and packages to satisfy their customers. Yet, these efficiencies and effectiveness are accomplished in an individual capacity (individual silo) which does not offer these organizations and companies the comprehensive gains or returns for their investment. In fact, there is the need for organizations and companies to realize that customer needs and requirements go beyond just the products and services delivery, as every customer has different needs and requirements. Products and services become meaningful, only and only when, they are made available and position from the customer’s perspective, which ought to be the focus of every SC strategy. Manufacturers have turn to use various trading techniques such as trade promotions with the intention of optimizing just their operations resources. However, this silo optimization thinking turn back to affect their operations and that of the customers in the form of price fluctuation and bullwhip effect etc.

The main objectives for this research paper are; (i) to discuss the effect of trade promotions and price fluctuations on supply chain coordination in the retail industry and (ii) to ascertain how trade promotions and price fluctuations can be used to improve supply chain co-ordination in the retail industry.

Keywords: Trade Promotions, Price fluctuations, Supply Chain Management (SCM), Supply Chain Coordination

1. INTRODUCTION

Supply chain coordination is the process whereby all the phases or partners within the chain take actions that simultaneously enhances the overall benefit or profit of the supply chain. The supply chain coordination therefore necessitates that every phase or stage within the supply chain network takes into consideration the effect its performance has on the other phases or stages [1]. Nonetheless, individual businesses will have a preference on performing their activities alone, it is practical impossible for them to perform these activities without interrelating with another business within it supply chain [2]-[3] as buyers and suppliers depend on each other for resource and knowledge, and this is achieved through coordination [3].

As argued by [4]-[5], generalizing of the supply chains has brought about an obvious considerable transformation in the approach within which businesses coordinate from the traditional supply chain approach. In the traditional supply chain, every phase or members within the chain, perform their individual activities (silo activities) autonomously aiming at achieving their own benefits, applying only accessible information within the business as compare to the modern supply chain whereby overall synchronize execution concept is applied by utilizes the overall information and resolution to achieve “sustainable alignment”. Traditional supply chains products and services delivery to their customers are affected immensely by trade promotion and price fluctuations because of the loose ends.

In order to fully harness the total value in the supply chain, there is the strong need to build a total supply chain collaboration system which allows easy flow of information and goods across and between the partners. It is agreed that leverage buying by retailers offered significant saving. Furthermore, aggregating purchases across the company create volume discounts. However, building a stronger SC partnership through a coordinated effort or approach and buying from these partners has the same effect of increasing volume [6]. This partnership has also enabled the retailer to focus on and build a relationship within which continuous improvement opportunities could be pursued. In fact, it is argued that lately competition have shifted focus from individual companies competing among themselves to supply chains competing with supply chains [7]. The trend has changed tremendously over the last couple of years.

This paper is organized in the following manner: Section 2 presents the Research Objectives, Section 3 presents the Research Methodology adapted, Section 4 presents Literature Review, Section 5 presents Research Discussions and Challenges and Section 6 concludes the paper with recommendations.
2. RESEARCH OBJECTIVES

The main objectives of this research paper are:

1. To discuss the effect of trade promotions and price fluctuations on supply chain coordination in the retail industry.
2. To ascertain how trade promotions and price fluctuations can be used to improve supply chain co-ordination in the retail industry.

3. RESEARCH METHODOLOGY

In order to gain an insight into the topic and to gather the right information needed for this research paper, an immense literature review was conducted on Trade Promotions and, Price Fluctuations, and how they affect supply chain coordination and its improvement in the retail industry.

4. REVIEW OF THE LITERATURE

4.1. Trade Promotions

The standard approach to doing business in many industries has been through trade promotions in the form of temporary price discount [8]. However, [9] considers trade promotions as a valueless tradition to business operations because the aftermaths are more terrible. Patricia et al.,[8] also observed that, critics of trade promotion have raised several concerns that, trade promotions brings about great distortions to information flow within the supply chain which subsequently brings about bullwhip effect which ought to be avoided. Bullwhip effect which is apparently demand order inconsistencies are augmented as you move up the supply chain.[8]-[10]. Amit et al., [9] also pointed out that, advertising adds value to the brand whereas trade promotions bring about some amount of impacts or benefits to the trade, only, and only if, retailers share these benefits with their customers as “customer-pass-through’s” where customers are induced with the price reduction to sample the product or forward buy in the case of well known product to save cost.

However, [10] argued that, supply chain involves four distinct yet interrelated flows including materials, information, ownership and payment and hence cannot be argue that there is supply chain management if only materials flow is streamline. Furthermore, he stated that, to have a successful supply chain management necessitates planning, managing and controlling all the aspects of the four flows through the coordination of the key processes from raw materials producers to manufacturers, wholesalers, retailers and finally offering value to the ultimate consumers [10]. Interestingly, in most cases, it is observed that there are inventories boom, fewer sales and persistence stock-out occurring at the retailers end as a result of the retailers being persuaded or are influenced to make the decisions for lots size buying with just some few promotional funds. In spite of all these problems associated with trade promotions, every day pricing has not come that far to replace promotional buying and that retailers have however constantly patronized this service anytime they are made available to them [8].

Manufacturers have to work harder to get their promotional offers accepted by retailers instead of the competitor’s promotions [8]. This economic focus approach adapted has a long-term risk on the manufacturer’s operations [8]. Davies, M., [11] argued that, trade promotions do not just offer only a tactical potential but can also be adapted strategically to build and sustain competitive lead. Patricia et al., [8] also argued in the same direction by pointing out to the fact that, a strategic alternative is required to avoid a position in which persistently growing promotional discount are expected.

4.2. Price Fluctuation

Price fluctuation is a common practice adapted by producing companies to stimulate high demand which is well known as the main causal agent of the Bullwhip effect [12]. It is assumed in most inventory models that purchase prices or unit production costs are constant over the planning period without considering price changes, yet price fluctuation do occur and on a scale that cannot just be ignored as that will lead to terrible decision errors [13]. Seung-Kuk, et al., [10] reported that, “material requirements planning or economics of transportation require companies to order goods at certain times”. This “pendalumic” batching causes surges, no or little, and huge demands at various times. However, price fluctuations which are caused by “price discounts or promotions” during trade promotions, goes on to even worsen the situation by distorting the buying trend which creates huge inconsistencies in demands and demands unevenness [10].

Jan et al., [14] argued that, with promotions and trade deals, prices of goods tend to fluctuate which apparently increase demand variability. When this happens, customers tend to buy more than the quantities required when prices are reasonable low, and buy less than needed to deplete their stock or even not at all when prices get to normal or even higher. It is therefore argued that, maintaining prices and reducing trade promotions are all ways of reducing demand inconsistencies [14]. Amit et al., [9] argued that, this “boom and bust” sales cycle results in creating problems back to the manufacturers because their operational plants aren’t design for such production cycles resulting in a “whiplash
effect”. As already mentioned, price fluctuations which are as a result of trade promotions has the intention of the producer to simulate demand, thus reducing the inventory at the producers end. This rather causes more harm than good to the supply chain, hinders competition as the producer’s benefits are always the core intention. It should however be noted that, the focus of competition have changed drastically. Currently competitions are not between individual companies but between supply chains [7]. New management tools powered by IT are fostering the integration of companies in supply chains to create emergency response capabilities to be more efficiently, yet some more important issues ought to be resolved to achieve such an efficient operation of Supply Chains [12]. Price fluctuation is therefore considered as one of the factors that contribute to the supply chain demand amplification and inconsistencies.

5. RESEARCH DISCUSSIONS
This aspect of the paper presents a discussion on trade promotions, it effects on supply chain coordination, and how it can improve supply chain coordination in retail shops. It also touches on price fluctuations, it affects on supply chain coordination, and how it can improve supply chain coordination in retail shops.

5.1. Trade Promotions
Chopra et al., [1] argued that, “Manufacturers uses trade promotion to offer a discounted price and a time period over which the discount is effective”. For instance, business X might offer a price discount say Y% for all goods bought from them within a stipulated period say between December 01 to 30, which means that any purchase made within this period will attract a discount of Y%. Kotler, P. [15] also made it clear that, manufacturing businesses do employ a number of trade promotional techniques such as price-off, allowance and free good to get the finish product off their shelf. He further went on to say that; trade promotions have been observed as having the highest percentage of the “promotion cake” as it takes roughly 46.9% while customer service is about 27.9%, with media advert taking 25.2%.

- **Price-off**: An immediate price discount given for each product procured within a stipulated time horizon.
- **Allowance**: The money given as a payback to retailers accepting to attribute to the producer’s or manufacturer’s products in their little way.
- **Free goods**: Additional quantities of products given to any “buying and selling” businesses that procure a certain amount of goods or attribute some level of essence or volume.

5.1.1. Effect of trade promotions on supply chain coordination for retail shops
According to [1] the purpose of trade promotions is to manipulate the retailers to perform in a way that will facilitate the manufacturers in realizing their dreams/intentions. Kotler, P. [15] also see trade promotion as an approach adapted by manufacturers to facilitate the award of money to trade for the following four motives;

- **Trade promotion can persuade the retailer to carry the brand**: Manufacturers push retailers with all kinds of trade promotional techniques to get the products off their shelf onto the shelf on the retailer’s and once the products are there, retailers preserve a trademark alongside a competition.

- **Trade promotion can persuade the retailer to carry more units than the normal amount**: Manufacturers put forward the volume allowances concept to get the retailers to hold enough stock in their warehouses or stores, which end up in stock reallocated from the manufacturers to the retailers as well as the customers.

- **Trade promotion can induce the retailers to promote the brand by featuring, display, and price reduction**: Manufacturers will be looking for entrance exhibit, continuous showcase of their products on the shelves of retailers, or price diminution label which is achievable by tendering the retailers by means of payment compensated on “proof of performance”.

- **Trade promotion can stimulate retailers and their sales clerks to push the products**: Because manufacturers themselves on their operations compete for retailers by offering push money etc, they motivate the retailers to push the product through to the marketplace.

Trade promotions affect product demand, and how well the supply chain can fulfill that demand affects costs and revenue [16]. To be able to control or minimize cost tremendously and improve revenue massively is by balancing demand with supply and one way of letting this happen or achieving this is through supply chain coordination which offers the chain a seamless, easy and faster flow of information and products from manufacturers/producers to customers.

5.1.2. How trade promotions improve supply chain coordination
Even though, the motives behind the trade promotions to the manufacturers have some great number of negative effects on the retailers, it still has some positive improvements on the retailers operations and the entire supply chain. Some of these benefits that the retailers stand to derive from the trade promotions are listed below by [1] are as follows;

- Prices of products are reduced to retailers resulting in the decreased in the prices to the customers. This further result in an increase in sales for the entire supply chain.
- Inventory held at the retailer’s warehouse or stores increases, resulting in successive stock and running period within the supply chain amplify.
- Since forward buying transpires during the promotional period, retailers turn to achieve a decrease in the opportunity cost of products for product trade subsequent to promotion coming to an end.

5.2. Price Fluctuations
As a result of price fluctuations in the market, retailers adapt to forward buying. “Manufacturers and distributors periodically have special promotions like price discounts, quantity discounts, coupons, rebates, and so on” [17]-[18], all of which ends up in creating price fluctuations. In addition to that, manufacturers put forward trade transaction which include exceptional discounts, price conditions, and payment conditions across to retailers and wholesalers, which comes in the form of indirect discount to them.

5.2.1. Effect of price fluctuations on supply chain coordination for retail shops
The main procurement dilemma that happens in most retailers operations is the huge fluctuations in price that happens most frequently in short phases. Businesses or retailers that try to cope with this situation face a lot of challenges. This becomes challenging and even extremely challenging in situations where the demands are in large quantities [19]. The following reflect some of the effects price fluctuations have on retailer’s operations;

- There is an increase in the material cost from the manufacturer’s side thereby causing an increase in the retailer prices. This further cause the selling price at the retailer’s end to increase resulting in low sales or revenue since demand drops as prices of products goes up.
- Price fluctuation increases “bullwhip effect” and “rational gaming effects” on orders placed by retailers since manufacturers will not be able to meet the full retailers demand due to inaccurate demand pattern [17]-[18].
- Situations like in contract purchases between manufacturers and retailers, manufacturer may end up in waiting on price fluctuations periods where prices are lower before they also purchase their raw materials thereby causing unreasonable delays on delivery of finish products to the retailers resulting in loss of business.

5.2.2. How price fluctuations improve supply chain coordination
Price fluctuation is another uncertainty catalyst which will need to be reduced drastically or better still total eliminated to achieve a better outcome from the supply chain coordination implementation. However, the following have been identified by [1] as some of the positive improvements on the retailers and the entire supply chain that price fluctuation offers;

- Because of the continuous price changes, retailers turn to purchase at regular intervals through aggregate planning during the lower price period and sells them when the prices are up making them earned considerable amount of profits.
- Cycle stock are stocked to obtain the improvement of the economics of scale and decreases cost contained by the supply chain which result from a decrease in the business operational investment constraint.
- “Activity based costing (ABC) can help explicitly recognize the excessive cost associated with forward-buying and diversion. That is, the spread of ABC can help spread the everyday low price (EDLP) cause” [17]-[18].

6. CONCLUSION
Rhonda et al., [20] reported that, manufacturers usually use trade deals to simulate demand from the retailers for their products. However, these ends up in retailers buying products in quantities that are actually not reflecting their immediate needs. This therefore creates a misleading effect on manufacturers’ operations and the total supply chain as it does not help in future planning. As put by [20], these trade promotions can be costly to the supply chain as it has an amplifying effect (bullwhip effect) on demand as it moves upstream the chain. To remedy this high supply chain distortive and drawback effect requires the need for effective coordination.
Synchronization techniques or tools such as information sharing and motivation configuration are introduced to decrease the variance among the “supply-and-demand” concept resulting from bullwhip effect and to some extent system nervousness. Sharing of information across the value chain is a crucial approach in minimizing the high rate of uncertainty in the supply chain. For nearly or almost accurate or actual demand to be satisfied by the retailers or suppliers, the customers demand and retailers/suppliers inventory will need to be known to the manufacturers through the use of information sharing [3].

In an attempt to increase supply chain coordination while reducing bullwhip effect, which is obviously one of the very serious problematic supply chain management (SCM) operations drawbacks, there are several ways to get this done. Some of the approaches that can be adapted include eradicating of “price promotions” that results in demand thorn, harmonizing scheduling sequences and reorganization refill by means of programs such as VMI & CPFR [21]. In fact, it is widely known that, adapting vendor-managed inventory (VMI) or collaborative planning forecasting replenishment (CPFR) supply chains, might most probably eliminate bullwhip effect, rationing and shortage gaming effect and order batching effect. This way, demand will be “almost nearly” met by the supply chain.

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