# AN ANALYSIS INTO THE IMPACT MARKETING HAS ON THE SUPPLY CHAIN WITHIN THE CLICKS ORGANISATION

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# EXECUTIVE SUMMARY

This study sets out to ascertain the impact that the marketing initiatives of a retail chain have on the inventory levels of the retail chain. The stock levels of a retail chain are the source of many frustrations. However, through developing an efficient and effective supply of inventory, a viable, competitive advantage is created for the firm.

The bullwhip effect is the name given to the fluctuation in demand for specific products that is seen through the supply chain, the discoverer of this effect was J W Forrester. The primary objective of this study is to identify whether the movement of stock through the supply chain identifies with the bullwhip effect where the influences of the marketing initiatives are felt. The secondary objective is to discover what impact the different role players have on this phenomenon, i.e. the store managers, buyers and suppliers.

The promotion process is utilised as a tool to drive the strategy of the Clicks organisation, but a side effect is the creation of the Bullwhip Effect. The main problem is that the demand for the item is increased for a specific period and then the demand is either reduced to levels lower than before the promotion or will revert to the same level as before. Sales and stock movement data was recorded and graphically displayed to determine whether the Bullwhip effect was created.

This research has highlighted the following problems:

(a) There is no direct communication between the role players.

(b) Decisions are based on somewhat dubious information.

(c) Large promotional orders are based on sales history.

(d) There are no real measures in place to rectify any errors.

(e) The measuring criteria and KPAs differ between the role players.


Recommendations derived from this research include:

(f) Increase communication between the category buyers and the store managers.

(g) Rather than bulk ship stocks to the stores, introduce a staggered shipping approach.

(h) Create a position for a specialist person who can deal with the overstocks. This person would be responsible for reallocating overstocks including returning the overstocks to the DCs.

(i) Reduce the number of "lost leaders" and extensive advertising of these "lost leaders" and rather concentrate on more generic advertising.
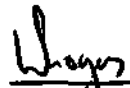
# ACKNOWLEDGEMENTS

# DECLARATION

23 January 2005

Unless specified to the contrary, this project is the result of my own work. All research references are clearly marked and a list of said references is on page 83.

_Wade Rogers_

# TABLE OF CONTENTS

## LIST OF TABLES

## LIST OF GRAPHS

## LIST OF FIGURES

## APPENDICES

# GLOSSARY OF TERMS AND ACRONYMS

| | |
|---|---|
| BSL | Business Support Leader |
| BPR | Branch Performance Report |
| Buy-in | Purchase stock for speculative reasons |
| CRP | Continuous Resource Planning |
| DC | Distribution Centre |
| DSD | Direct Store Delivery |
| ECR | Efficient Consumer Response |
| EPOS | Electronic Point of Sale |
| EDI | Electronic Data Interchange |
| EDLC | Every Day Low Costs |
| EDLP | Every Day Low Prices |
| EVA | Economic Value Added (a bonus scheme) |
| FMCG | Fast Moving Consumer Goods |
| Jab | Head Office order |
| JDA | The name of the automatic ordering system used in Clicks |
| KVI | Known Value Item |
| KPA | Key Performance Areas |
| QR | Quick Response |
| NSSC | National Store Support Centre |
| Oncer | One off stock purchase for a promotion |
| Ship pack | Set quantity of a stock unit sent to the stores |
| SBU | Strategic Business Unit |
| SCM | Supply Chain Management |
| SKU | Stock Keeping Unit |
| SSL | Store Support Leader |
| VMI | Vendor Managed Inventory |

# 1. INTRODUCTION

This dissertation investigates whether the strategy applied by the Clicks' marketing team has an impact on the supply chain of the Clicks' chain of stores. The collection of accurate sales data from the front door scanning system enables the stores to use a computerised ordering system. This allows the store teams to concentrate on the service it gives to the customers and not focus on stock issues. The primary role of the marketing department is the planning of extra sales in the chain, which force's stock into the stores. This is based on the unknown demand that the price reduction of the product creates.

The 'Holy Grail' of any retail outlet is to accurately match up demand forecasts with actual sales at the time that the particular products are promoted. This is imperative in all commodity sales outlets as no business, neither here nor abroad, can afford to tie up money in inventory. One concern in the South African retail context is the constant bombardment of FMCG (Fast Moving Consumer Goods) advertisements. All retailers have advertisements either in the press, on the radio or on the television. The main draw card utilised by these advertisements to draw customers, are the low prices of these products. The sudden high demand for these products puts pressure on the supplier and the organisation's supply chain to deliver the product to the customer.

In most cases the increase in demand causes the supplier to increase stock levels and they have just enough stock to deliver when the demand subsides. The stock manufactured for the promotion then becomes an overstock.

Service levels during the promotion are a concern and problems such as incorrect pricing, computer systems not working and stock shortages' cause customer frustrations. All South African customers have arrived at a retail outlet, at some stage, only to discover that the item that they have rushed out to purchase during their lunch hour is no longer available, due to a stockout situation. Whether the store actually had the stock in the first place is highly debatable and most customers will state that it was just a ruse to get them into the store. It is equally frustrating from a supplier's perspective, as they have spent large amounts of money on a promotion only to find that they have no stock on the shelf.

The result of an overstock situation is that the store is unable to purchase the latest trendy products and has to sit with last year's product that has no chance of being sold. This is the stock that is covered in dust and adorns the shelves until the price is reduced enough to entice a bargain hunter to take it home.

The cost involved in inventory is one facet that the Clicks organisation is yet to reduce. New systems have been put in place to manage the inventory and to reduce the human element in the equation, yet the asset turnover for the chain has not achieved what it set out to achieve. In fact, the exact opposite is true; the inventory levels have risen since the use of automatic replenishment systems, and the level of stock outs has moved in the same direction. A current figure for stock holding for the Clicks chain is R 822,299,459.00, which is up from last year's figure of R 693,088,083.00 (an increase of ±19%). The stockturns have gone from 4.28 to 3.96 stockturns; this is a change of -0.32 (a decrease of ±8%).

A solution to the eternal problem of stock level controls in a retail environment has to be found and the retailer who perfects it will have a competitive advantage over the rest.

The following research seeks to satisfy the following objectives:

1.  Detail the different strategies of the two functions of marketing and supply chain.
2.  To determine the perception of individuals, in the different departments, of the impact that promotional activities have on the Clicks' supply chain.
3.  Evaluate the stock movement resulting from the promotional activity.
4.  Evaluate the effects on the stores that have to carry the promotional stocks.
5.  Evaluate the effect that bulk orders, placed for promotions, have on the suppliers.

## 1.1. The Aim of the Research

In the Nu Clicks organisation the greatest cost involved in the day to day running is the cost of the stock on the shelf. In most cases, the stock is purchased in based on normal day to day sales. The issue of overstocks and shortages is highlighted during promotional periods when stock is reduced in price to induce increased demand. A problem arises when the promotional period creates overstocks in the stores.

The aim of this research is to identify the problems associated with the ordering in of extra stock for promotions and to attempt to identify new methods that may be used in the control of inventory for the retail organisation.

## 1.2. The Motivation for this Research

As *Sabath and Autry (2000: p91)* point out, deciding how much stock is needed and where it is needed is one of the toughest challenges that face supply chains.

The motivation for the research of this project stems from the following:

1. Retail stores have new computer systems to order stock automatically, yet the stock levels in Clicks remains an issue.
2. The suppliers are not satisfied with the quantity of stock ordered in for promotions.
3. The more stock that sits in the stores, the more losses can occur due to obsolescence, damage, theft, and capital charges.
4. Though there is extensive research from the side of the supplier, there is very little from the side of the retailer, with regard to the Bullwhip Effect.

*Alwan, et al (2001: p207)* in their research draw attention to the Bullwhip Effect and the fact that demand variability varies as one moves up the supply chain. They concur with *Lee, et al (1997: p1)* in stating that the forecasting and the ordering policies are two of the key causes in the Bullwhip Effect. They studied this in a two-stage supply chain. In the Clicks organisation there are two stages: stock is first delivered to a distribution centre (DC), where the ship packs are decreased prior to being delivered to a store. This means that the company has a minimum of three weeks stock in the distribution centre and three weeks stock in the stores. In the past, only the stores would hold stock of the toiletry lines and not the DCs. The additional stock that is now carried is to improve customer service yet at the same time to reduce the overall stock holding of the organisation.

Ask any retail manager employed at Clicks and they will tell you, in no uncertain terms, that the category buyers at Head Office send too much stock to them and are negatively affecting their business. Their biggest single cost next to the rental of the premises is the capital charge, which is interest charged on the stock kept in the store. The category buyers, on the other hand, assume that it is the stores that are not following instructions, and is the cause of the stocks not achieving a 'sell-through' during the promotion.

There must however be common ground where both parties can come together and assist each other to achieve the organisation's overall goals.

## 1.3. The Automatic Replenishment Systems at Clicks

In the past it was difficult for the stores to have a situation where there was sufficient inventory on the shelf due to correct ordering. Problems surrounding inventory management included excessive inventory, poor customer service, lost sale opportunities and ineffective production scheduling ( *Daugherty, Myers and Autry (1999: p2)* ). With the advent of front end scanning, the retail outlets are able to gain a complete picture of the sales that occur in every store across the country.

The collection of this data enables the latest system of inventory control methods where a computer system automatically orders in stock for the stores at a fixed time period. Lead and review time periods, together with minimum display quantities are used to determine order quantities. The lead and review periods are set up so that the store should always receive in fresh stock before the old stock is sold out. The display minimums are there so that the store should always look presentable. No one wants to walk into a store that has too little stock on the shelf. A quiet store that has little foot traffic, still has to have a presentable display to the public.

Automatic replenishment programmes have a number of different names; the two popular names are Continuous Resource Planning (CRP) and Vendor Managed Inventory (VMI). For industry specific, there are programmes such as the Efficient Consumer Response (ECR) and Quick Response (QC) ( *Daugherty, et al (1999: p2)* ).

### 1.3.1.    The History of Stock Replenishment at Clicks

As with all retailers that started up in the 1960's, Clicks had a manual stock ordering system. The system was based on the physical counting of stock items, both on the shelves and in the Distribution Centres (DCs). The sales were worked out using an order calculator that took into account the starting balance, the deliveries and the sales. The system did not however, take into account the exact sales that went through the tills, as the computer system was not linked to the tills.

The stock information was listed on a card system that was used to perform a number of different functions. The cards were used for the pricing of the products as the prices were updated on a regular basis, and for all of the supplier's details to place the orders.

As the order system was purely a manual system, the order was placed over the phone to the suppliers from each store. This system was very slow and could take, from the start of handing out the cards to the finished order being placed, from a day to a number of days depending on the availability of manpower. The fact that there was a number of different individuals in the process made it more difficult to control.

The cards were typically given to the storeman who was responsible for counting the products in the storeroom. Though the counting of the stock in the storeroom was a fairly simple process, errors at this level had the greatest impact on the order equation. The cards were then sent through to the floor staff to count the products on the shelf. This was a much longer process as the products were, at this time, no longer in packs but displayed as single units.

This was a big stumbling point as the suppliers had products all over the store. Certain suppliers had products in the men's department; ladies' department, soaps and tooth paste and clean aids' departments. This meant that the person who was counting had to move from department to department in order to complete the cards. The cards then moved from the counters to the staff who had to work out the order utilising the order computer. When the cards were worked out, they then went to the manager in charge who would check that they were as correct as could be. The cards would then be passed on to the receiving clerk who would phone the order through. Finally they were given back to the manager who would sign off the orders and put the cards back in the office.

The process was a long one, which left the staff little time to look after the needs of the customers in the stores. Management spent more time looking after the whole order process than the order itself.

The spin off from this long process is that the time it took to deliver the much-needed stock was very long and was not at all accurate. This led to situations of too much stock and then too little stock. Customer service was poor to say the least. The following table charts the change in the ordering system that the company has under taken.

| The Pre Scanning System (1965-1993) | The Intermediate Stage (1998-2001) | The Automatic System (2001-now) |
| --- | --- | --- |
| Information stored on cards. | System kept data printed out on demand. | System keeps data. |
| Sales worked out from cards. | Sales generated from tills. | Sales generated from tills. |
| Purchases recorded on cards. | Purchases not used. | Purchases captured automatically. |
| Stock manually counted on the shop floor and in the storeroom. | Only back stock counted. Shelf stock checked but not recorded. | Stock counts kept and automatically adjusted with sales. |
| Minimum of three staff utilised in store. | Two staff utilised in each store. | One staff member checks that the system is working for all stores. |
| Orders phoned through. | Orders phoned through. | Electronic sales data sent to Head Office. Orders transmitted electronically. |
| Deliveries maintained on card system. | Deliveries maintained on paper. | Deliveries maintained on the data warehouse. |
| Manager controls process. | Manager controls process. | Manager checks on process. |
| Decentralised ordering. | Decentralised ordering. | Centralised ordering. |
| Stock delivered by suppliers to the stores. | Stock delivered by suppliers to the stores. | Stock delivered by suppliers to the DC. DC delivers to the stores. |

**Table 1 : Changing Order Systems**

### 1.3.2.    The Marketing Department's Contribution at this Time

While the store had a system in place to approximate the order, the buyers in Head Office had even less to base their orders on. They did not have accurate sales data or even balances to work from, but all orders were based on past orders and the amount of money that the store took in each month. There were instances where count sheets were sent out to the stores but this process was long, as the count sheets had to be mailed out to each store. The stock was then purchased in and pushed out to the stores. This system is still utilised for promotional orders.

When it came to the promotions, the stores had orders thrust upon them and it was generally too much stock or too little stock. Even the costing of these sales items could not be worked out properly. The stock cost was averaged out and if an over sale of the stock occurred then the store was the ultimate loser. The accounting method that is used to value stock is the last cost method whereby the last purchase price of the item is taken and then used to calculate the total value of the item. For stock that is in the stores or in the DC, the stock is counted in order to adjust the total stock in the business. This means that the stock that the store had prior to the promotion, and was received before the promotional stock, is taken into account. Even though the stock was received at a higher price it is sold at the sale price. At this time the company was still a fledgling organisation and did not employ the most modern technology at its disposal.

### 1.3.3. Till Scanning and Computer Software

In 1992, Clicks decided to implement a new marketing sensation in the country. The Clicks' Club Card was introduced to the country and the aim of this new marketing tool was to push Clicks to the forefront of the marketing world in South Africa and to increase turnover by a predicted 30%.

The whole system was based on the swiping of a Club Card through a computerised till point and this transaction was then to be kept in the till until it could be transmitted to the main frame computer in the Head Office. The system would then utilise all of the collected data to introduce an efficient automatic ordering system. The system worked off the product's bar code or specific item code, using a till computer that had a scanner and finally a computer system, that was able to take all the data and transform it into information that could be utilised. The system at this time was used to allocate points to the customer's Club Card.

More important, there was a system in Clicks that could record the actual sales that occurred.

### 1.4. Implications to the Supply Chain

According to *Daugherty, Myers and Autry (1999: p2)* automatic replenishment systems are put in place in order to make the whole process of maintaining inventory at a retail level more efficient, but it must not be at the expense of sales and customer relations. There are a number of features that the retailer must have in order for an automatic replenishment system to work: a decision support system, product identification technology (bar coding) and electronic data interchange.

At Clicks, with a system in place that could identify the sales, another system was put in that could order stock directly from the three DCs (distribution centres) to the stores. This system was restricted to the inventory that was sent to the stores from the DCs and not from the FMCG suppliers. The system that is utilised for this is the *JDA System* (named after the person who developed the software programme, namely James Dean Anderson).

After an initial test period, it was decided to take this system further and more suppliers were requested to deliver to the DCs and the stores had to order from the DCs. Where the FMCG lines were to be delivered to the DCs there had to be a system in place that could order stocks from the suppliers. The system that has been employed is the POMS system, which is the Purchase Order Management System.

This system utilises the stock balances in the DCs and the stock issues from the DCs to the stores. Both systems (the JDA and POMS systems) use the lead, review and previous issues/sales to order in stock for Clicks.

## 1.4.1. The Purchase Order Management Formula

The main difference between the two systems is that the JDA system is fully automatic, whereas in the POMS system there is still a person who influences the order that is placed. In the POMS system there has to be discretion by the person who places the order as promotional orders are placed at the same time as the normal orders.

There is a simple equation that is used to order in the extra stock:
(Lead time) + (review time) + (safety stock) + (promotional order stock) - (balance of stock on hand)

Lead time is the number of weeks that the supplier will normally take to deliver to the DCs. In simple terms, if the supplier takes a week to deliver then the lead-time will be one (1). If the supplier takes fourteen (14) days to deliver then the lead-time will be two (2).

The same will apply to the review time if the supplier has only a few lines and is unable, due to cost constraints, to deliver every week; then they can deliver every second week. The formula will then be two (2) or one (1) for every week that the supplier will take to deliver.

Safety stock will be one week in all circumstances. The exceptions are the KVI (Known Value Item) lines which have to be in stock at all times. Here the safety stock level is increased to two.

The Merchandise Planners give promotional order stock to the POMS department. The Merchandise Planners decide on the quantity of the stock that needs to be pushed out to the stores. They will normally take the figure based on the sales of the stores at that specific time.

## 1.4.2. The Marketing Function in Clicks

There is a primary difference between the marketing department at Clicks and manufacturing organisations, i.e. the category buyers. The marketing department will decide upon the theme and type of advertisements that will take place. The category buyers determine which item, at what price, which store, and in what quantities these products will be promoted.

The category buyers deal with the suppliers directly and negotiate deals. The function of the marketing department is divided between these two functions and has been for the entire existence of the Clicks chain.

Clicks have gone through a number of technology and business changes, though not as quickly as some of the other retailers. This introduction has illustrated the path that Clicks has taken from a completely manual system to a more automatic system.

The researched literature on the topics of strategies and the Bullwhip Effect will now be reviewed in the next section.

# 2. LITERATURE REVIEW

## 2.1. Introduction

J W Forester first publicised the difference between the actual demand for a product and the perceived demand by the manufacturer. The orders that are placed with the suppliers have a larger variance than the sales to customers. This variance was first termed the 'Forester Effect' but has subsequently changed to the 'Bullwhip Effect'. *Lee Hau, et al (1997: p1)* credits the Procter and Gamble executives as the first to call this phenomenon the Bullwhip Effect. They were, at the time, investigating the fact that although the consumer demand for diapers was stable, the orders placed down the supply chain varied considerably.

*Hau Lee, et al (1997: p2)* identified four causes of the Bullwhip Effect namely:

a) Forecast updating.
b) Order batching.
c) Rationing and shortage gaming.
d) Price fluctuations.

In an article *Hau Lee, et al (1995: p1)* explained that one of the causes of the Bullwhip Effect was that accurate information was not shared among all of the participants in a particular supply chain. The exact final sales to the end consumer are never passed down the supply chain, which leads to speculation amongst the different suppliers. *Goran Svensson (2002: p103)* explored the internal effect of the Bullwhip arguing that the Bullwhip Effect depended, in part, on the gap between the degree of speculation and postponement of business activities. *Lummus, et al (2003: p317)* researched the impact marketing initiatives had on the supply chain of a retailer. They found that the price fluctuations and price discounts did have an impact at the final stage in the supply chain.

This research identifies previous research done on the topic of the Bullwhip Effect. It further highlights the impact that the strategy of the marketing department has on the Bullwhip Effect. The research will identify the challenges that the supply chain function faces with the flow of stock in the Clicks' retail chain due to the advertising, promotions and extra space displays. These three tools are used by the marketing and buying teams to achieve their strategic objectives.

The movement of stock at Clicks moves in the same manner as displayed in the research conducted by *Lummus, et al (2003: p320)*. *Lummus, et al* evaluated the impact of promotions and wholesale trade deals on the performance of a supply chain. They found that the marketing actions alone had a significant impact on supply chains and caused the Bullwhip Effect in retail outlets.

The difference between this research (at Clicks) and that of *Lummus, et al* is that this research compares the different strategies of two functional departments, i.e. supply chain and marketing. The understanding is that these two functions work together to achieve the strategic objectives of Clicks yet the impact of the promotional activities creates the Bullwhip Effect in the supply chain of the company.

## 2.2. Introduction to Strategy

This section defines strategy with the intention of achieving an understanding of the two different functions and the methods employed to achieve the objectives. The overall corporate strategy of the organisation is the bedrock from which all other strategies are formed. The strategies must however, take into account the other departments' strategies to produce synergy in the workplace. If marketing in the Clicks chain does not include the supply chain strategy in their plans and objectives, there will be no working to one common purpose and therefore no synergy.

### 2.2.1.    Defining Strategy

The common theme in all management textbooks is that a company's strategy is the most crucial factor in determining a corporate's success in the future. In *Walker, Boyd, Mullins and Larreche (2003: p9)* a strategy is defined as "a pattern of the present and planned objectives, resource deployments, interactions of an Organisation within its markets, competitors and other environmental factors".

"Strategy is a set of dynamic integrated decisions that have to be made to position your business in its complex environment" according to *Lambert, Stock and Ellram (1998: p549)*. In *Thompson and Strickland (2001: p3)* they state that "a company's strategy is the game plan management utilises to find a market position, conduct its operations, attract and please its customers, compete successfully, and achieve organisational objectives".

Without a strategy the management has no prescription for doing business and no road map to a competitive advantage. The goal of a good strategy is to create and sustain a unique community.

In essence, a strategy is a road map of where an organisation would like to be in the future. The objectives are decided upon and the plans are set in place as how to achieve them. A good strategy should include all aspects of the organisation and most importantly the strategy must be achievable.

Strategies of all strategic business units (SBUs) consist of five different components. They are scope, goals and objectives, resource deployments, a basis for achieving a sustainable competitive edge, and synergy; *Walker, et al (2003: p70)*.

## 2.2.2.    The Different Levels of Business Strategy

In large organisations there is an internal hierarchy of strategies, *Walker, et al (2003: p7)*. The strategies begin with the corporate strategy, and move down to the business strategy and ends with the functional strategy. The corporate strategy is used by each SBU to decide on the SBU's strategy. The SBU's strategy with goals and objectives is handed down to the different functional departments. The functional departments use this strategy to derive their own strategies and objectives. The functional strategies will formulate the goals and objectives for the different functional departments that make up the organisation. The issue of the scope, goals and objectives, the allocation of resources, the source of competitive advantage and the sources of synergy remain the same; *Walker (2003: p12)*.

The different functions or departments need to work together to have the organisation work in synergy. The research will show that there are a number of conflicting strategies between the marketing and supply chain departments.

This research identifies the methods that the marketing department uses to achieve their objectives and how the Bullwhip Effect is created in the Clicks' supply chain.

### 2.2.3.    Marketing as a Functional Strategy

What is marketing? According to *Kotler (2001: p5)* "Marketing is simply the delivery of customer satisfaction at a profit". Sound marketing practises are critical to the success of any business. A more self-explanatory definition is "marketing is a social and managerial process whereby individuals and groups obtain what they want and need through creating and exchanging products and value with other individuals"; *Kotler (2001: p6)*.

The objectives of marketing are the attraction and retention of profitable customers and the penetration into new markets; *Foster and Mahendra (1994: p2)*.

According to *Walker, et al (2003: p71)* there are three important performance dimensions to the business units and marketing managers as illustrated in the following table.

| Effectiveness | Measured against sales growth relative to competitors or changes in the market share. |
| Efficiency | Measured in profitability as a percentage to sales and return on investment. |
| Adaptability | Measured against the number of new products and the percentage of sales generated by new products. |

**Table 2 : Marketing Performance Dimensions** *(according to Walker)*

### 2.2.4.    The Role of Marketing in a Retail Environment

Marketing, in some form or another, is all around us. Wherever we go, we see the results of someone's marketing activity *Kotler (2001: p5)*. We see the results of marketing every day; in the shopping centres, the local stores and at home, through the products that we use. There are ever increasing marketing vehicles. Telemarketing, infomercial home shopping networks and joint venture advertising are joining the traditional vehicles such as advertising, promoters, catalogues, and brochures; *Foster and Mahendra (1994: p3)*.

Trade discounts, price reductions, coupons and other promotional methods are used to increase demand for the products; *Lummus, Duclos and Vokurka (2003: p318)*. Sales promotions, according to *Grover, et al (1992)* and *Mulhern and Padget (1995)*, as quoted by *Lumus, et al (2003: p318)*, are used as loss leaders in order to draw in customers who, once in the store, purchase items not on promotion. Due to the competition in the marketplace, manufacturers utilise promotions to maintain their market share; *Raju, et al (1990)*.

Promotions form a bond between the sales force of the manufacturer and the retailer. Trade deals attempt to stimulate the demand from the wholesaler and the retailer and this is particularly true for consumer products; *Lumus, et al (2003: p318)*.

The measurement of the success of the adverts is difficult, but as *Kotler (2004: p11)* states "marketing occurs when people satisfy their wants and needs through exchange, and exchange then becomes the core concept of marketing". The transaction is the marketing department's unit of measure. Therefore each sale that is recorded, measures the success of the promotion and every transaction that is recorded for that specific product is used to measure the effect and efficiency of that specific marketing effort.

## 2.2.5.    The Definition of a Supply Chain

*D.W. Dobler and D.N. Burt (2003: pxxxvii)* define the supply chain as follows:

"This chain is the upstream of the organisation's value chain and is responsible for ensuring that the right materials, services, and technology are purchased from the right source, at the right time, in the right quality. The value chain is a series of organisations, extending all the way back to firms which extract materials from mother earth, to firms performing a series of value-adding activities, and fabricating the finished goods or service purchased by the ultimate customer".

*Reddy (2001: p2)* has SCM (Supply Chain Management) covering the process and technology of coordinating the uninterrupted flow of raw materials and products across the supply chain. The ultimate goal is to use the company's resources profitably. Supply chain management is made up of three areas: supply chain planning, supply chain execution and supply chain transaction. These systems all work together to synchronise the activities within and out the firm. The role of the supply chain function is that of continuous improvement of all areas in the supply chain with the objective of improving the profitability and survival of the organisation and its business partners; *Burt, et al (2003: p6)*.

## 2.2.6. The Role of the Logistics Department in the Retail Environment

"The art of retailing is to make available the right goods, at the right price, at the right time and in the right quantities" according to *Hugo and Van Rooyen (1992: p377)*. Where the focus of the marketing team is to search for new markets and scan how the competition operates, the supply chain management is in search of new technologies, materials and equipment for the organisation to use.

Supply chain management coordinates the different parties in the pursuit of delivering the product to the ultimate consumer. The demand information is vital as this information is used in each step in the supply chain for planning purposes, including production scheduling, inventory control and delivery plans; *Lumus, et al (2003: p317)*. The use of the correct materials and methods of production are looked at to reduce the cost of the final product so as to give the firm a competitive edge. Supply chain is constantly focused on the bottom line of the organisation and it has to have its core competency based on this fact; *Burt, et al (2003: p21)*.

*Dobler, D W (1996: p10)* lists five value-adding benefits that the organisation should derive from the supply chain. The five value-adding outputs of proactive procurement or supply chain management are quality, cost, time, technology and the continuity of supply. The total cost of ownership of the inventory has to be the focus as this is a major portion of a retailer's expense. Some of K-Mart's bankruptcy and restructuring can be blamed on its inability to compete with the likes of Target and Wal-Mart; *(Silwa, 2002)*. Both Target and Wal-Mart had an efficient supply chain where K-Mart struggled to keep up. Supply chain is not just a method of distribution, but a means to a competitive edge. *Huang, et al (2004: p21)* stated that "the advances in information technology make information sharing possible". They did find, however, that businesses, due to the highly competitive and adversarial nature of business itself, are reluctant to share information with their trading partners even though there are benefits. Managers over estimate the risk involved.

The latest technology is concurrent engineering, which is a generic framework for information sharing on supply chain performance in an organisation. Concurrent engineering is a process for collaboration, coordination, and co-decision making within and between cross-functional teams, with the purpose of sharing information effectively and efficiently to assure engineering and manufacturing conformity with design specifications and to optimise the use of scarce resources; *Anumbi, Siemieniuch and Sinclair (2000: p2)*.

## 2.3. Introduction to the Automatic Replenishment System

One of the key factors to success in modern organisations is the use of an automatic replenishment system. This is used to drive down the costs in stock holding and to enable the staff to focus on more important tasks than the counting and ordering stocks.

### 2.3.1. The Automatic Replenishment System

*Peppers and Rogers (2000: p1)* put forward the ideal automatic replenishment scenario when they depicted a situation where regularly consumed goods were brought directly to the customers homes when they needed them. This is the ultimate goal of the logistics and SCM of the retailer. Two of the more difficult decisions that inventory management must make are the quantity of the product that is required and where it is actually needed; *Sabath, Autry, and Daugherty (2001: p91)*.

With the latest technology at the retailer's disposal, new techniques have evolved in the replenishing of inventory. According to *Myers, Daugherty and Autry (1999: p2)* the implementation of scanning at a retail level has allowed, for the first time, accurate sales history of the products enabling accurate sales forecasting. This has enabled new ordering systems such as ECR (Efficient Customer Response) and QR (Quick Response).

These new systems are based on the historical trends over the past number of months to accurately forecast the demand from the customers for the product. Accurate forecasts and high fill rates are what the logistics departments strive for according to *Britt (1998: p43)*; but what cannot be analysed is that where there is no product available, what is the customer's substitution decision?

Though the electronic ordering systems are revolutionising the way inventory is maintained, there are still flaws in the system. Executives at one company held that the data they were using was 99% accurate only to find when an inventory audit was done, that two thirds of the data was off the mark. Two thirds of the stores' SKUs (Stock Keeping Unit) were found to have different counts to what there should have been. The main cause was that of human error. The staff were guilty of misplacing the stock on the shop floor and leaving stock in the storeroom. As if that was not enough, the staff had been scanning the items through the till incorrectly; *Raman (2001: p1)*.

## 2.3.2.    Inventory Costing Techniques

The general pricing approach that fits in with the retail environment is the Cost-based Pricing Method; *Kotler (2001: p384-385)*. This method takes the cost price and adds a profit margin to it to arrive at a selling price. Each different commodity has a set profit margin percentage thus each item that is purchased in has the profit percentage added to the price. This price is not completely devoid of the impact of competition as the competitor's price is used as a yardstick. It would depend on the importance of the product to the overall business as to whether the price of the competitor would be challenged and the price in the store dropped. The price is dictated by the marketplace, which forces' negotiations to take place around the profit margins of the products.

## 2.3.3.    Measurements within the Supply Chain

The performance of a supply chain is measured in terms of profit, average product infill rate, response time and capacity utilisation. In the retail sector the measurements of the supply chain are in the stock turns. The faster a product is moved into the stores and then out to the customer the more efficient is the supply chain. The stock turns in the stores and the different DCs is an excellent indicator of how efficient the supply chain is working.

In the FMCG (Fast Moving Consumer Goods) sector of the retail market, a target of twelve stock turns a year is used as a benchmark. However Clicks, as a chain, has not achieved a stock turn result higher than five. This may be due to a store that has a combination of high and low stock turn items in the store. The focus of this research is to test the movement of the FMCG lines when and after they are on promotion.

## 2.4. Introduction to the Bullwhip Effect

The Bullwhip Effect is the name given to the fluctuation in demand for specific products that is seen through the supply chain. J. W. Forrester first discovered the Bullwhip Effect, which he reported on in his article in the Harvard Business Review in 1958. Initially the Bullwhip Effect was termed the 'Forrester Effect' but over the years was adapted to the Bullwhip Effect. The Bullwhip Effect is seen where the different levels in the supply chain have different levels of stock holdings. The orders between the different suppliers in the supply chain vary considerably from order to order, yet the consumer demand for that product is a constant variable.

# The Bullwhip Effect
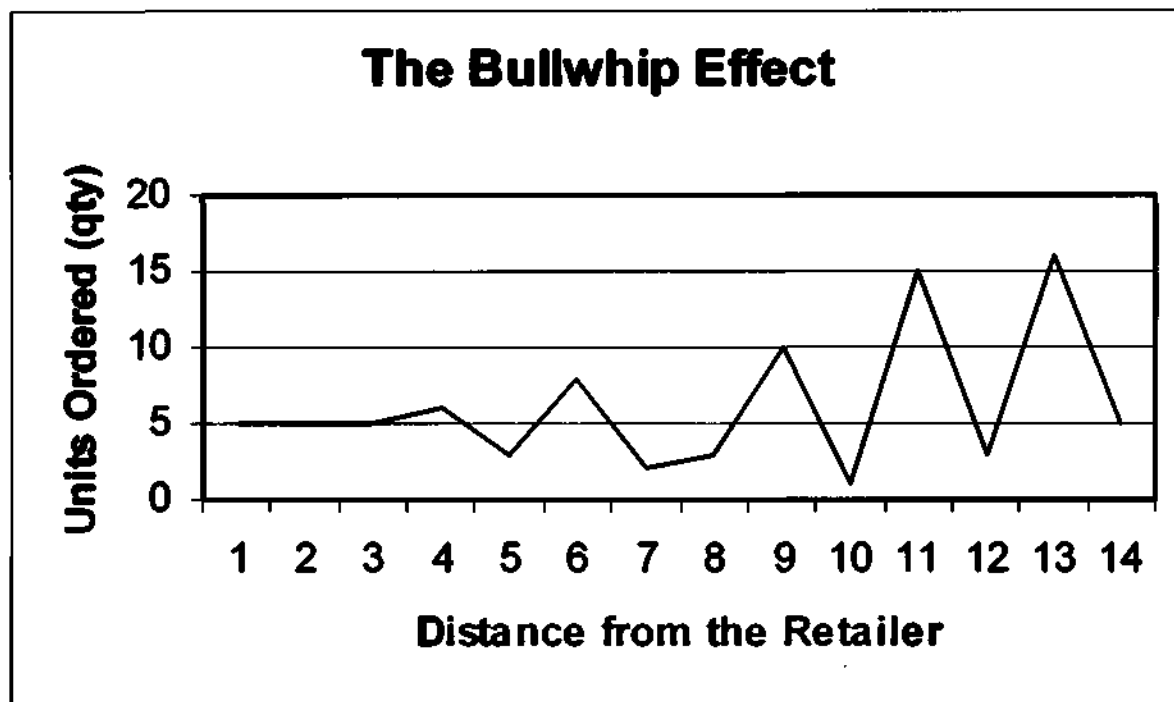
**Graph 1 : The Bullwhip Effect**

*Lee Hau, et al (1197: p1)* mentioned that it was the Procter and Gamble executives who first termed this phenomenon the Bullwhip Effect. Seung Whang conducted a survey on the demand for babies' diapers with the logistics executives of Procter and Gamble and found that, though the sales of this product were fairly stable, there were certain fluctuations in the orders. When they took it further up the supply chain, they discovered a greater degree in the variation of orders between suppliers. Looking at the material orders revealed greater variability. *Lee Hau (1997: p1)* found that this was true for Proctor and Gamble's suppliers, such as 3M. They found the swing in the orders were higher. This situation was true for other industries; Hewlett Packard discovered the same situation was occurring in the supply chain of their printers. They concluded that minor fluctuations at the retail level grew greater as they travelled down the supply chain; *Factory Logic (2003).*

*Goran Svensson's (2002: p104)* research showed that there is an internal Bullwhip Effect in organisations. He identified that the Bullwhip Effect was created between the inbound and outbound logistics flow. This, he argued, was due to keeping higher inventory levels due to speculation and lower inventory levels due to postponement in the inbound and out bound flows.

## 2.4.1.    Definition of the Bullwhip Effect

There is not a clear definition of the Bullwhip Effect. However, a clear description of what happens and how the Bullwhip is actually caused defines the phenomenon. The Bullwhip Effect is that if the numerical demand of that product were to be displayed graphically it would appear as a bullwhip being cracked. The following definitions are taken from the latest research in this area.

*Lee Hau, et al (1997: p1)* state that the Bullwhip Effect is the demand order variables in the supply chain as the orders move up through the supply chain. The orders are larger than the sales that are occurring and the orders tend to become larger the further away that one moves away from the end user.

While the demand for the product at the retailer does not vary much under normal pricing conditions, inventory and backorder levels tend to fluctuate considerably across the supply chain *Hieber (2003: p2)*.

*Jennifer Baljko (1999: p1)* quotes Hau Lee and states that as the information is passed from one location to the next in the supply chain there is often a fidelity loss and information gets distorted.

*Hau Lee, V Padmanabhan, and Seugngjin Whang (1995: p1)* have developed the opinion that the Bullwhip Effect is caused due to information becoming more and more distorted the further up the supply chain that it travels.

*Nienhaus, Ziegenbein and Dujits (2003: p1)* define the Bullwhip Effect as "the phenomenon that causes the variation of demand of a product as it moves up the supply chain from the customer to the supplier". The bullwhip is mainly caused through distorted information through the supply chain from one end of the supply chain to the other, leading to huge inefficiencies.

## 2.4.2.    The Impact of the Bullwhip Effect

The Bullwhip Effect has been labelled the cause of excessive stock levels, poor product forecasts, poor service, lost profits, misguided capacity plans, ineffective transportation and misused production schedules; *Lee, Padmanabhan, Sloan, (1997: p1)*. *Layth, et al (2001: p210)* state that the Bullwhip Effect causes excessive inventory throughout the supply chain system, insufficient or excessive capacities, product unavailability and higher costs in general.

The Bullwhip Effect is one of the main reasons for inefficiencies in the supply chain. Mason-Jones and Towill, as quoted by *Ralf and Hartel (2003: p123)*, both agree that if the demand for products is sent through a series of stock control ordering systems then the demand would increase at each transfer. This was due to each ordering system adding on an element of safety stock. Uncertainty is systems-induced and magnified by the Bullwhip Effect as opposed to being introduced by the final customer or the marketplace.

According to *Nienhaus, et al (2003: p3)* the Bullwhip Effect has a negative effect on the supply chain in three respects: dimensioned in capacity, the variation of inventory levels and high levels of safety stocks. *Factory Logic (2003: p3)* quote a Georgia Technical University study, in that the supply chain problems cost firms on average anywhere between 9% and 20% of their overall value over a six-month period. The consequences of the Bullwhip Effect in supply chain are excessive inventory, poor service, lost revenue, and unsatisfactory quality.

*Lummus, et al (2003: p320)* identify the fact that though the marketing activity may have little long term effect on the demand by consumers, it has a massive impact on the supply chain. The temporary increase in demand exceeds available inventory, the disturbance is passed upstream to other links in the supply chain as suppliers scramble to get in more stock and increase capacity. They find that as soon as there is sufficient stock to cope with the demand the demand drops and the newly manufactured stock is now an overstock. Costs are thereby increased, as suppliers are forced to increase capacity in order to react to increased order sizes placed to meet short-term promotions. Increased warehouse space is required to house the added inventory during the promotional activity and inventory carrying costs and manpower requirements increase.

### 2.4.3.    The Main Causes of the Bullwhip Effect

In all of the current literature there are four causes of the Bullwhip Effect, namely demanded forecast updating, order batching, price fluctuations, rationing and shortage gaming. *Lee Hau, et al (1997: p2)*. *Frank Chen, et al (2000: p1)* identified five causes of the Bullwhip Effect namely: the use of demand forecasting, lead times, batch ordering, supply shortages, and price variations. *Reddy (2001: p2)* was of the opinion that another cause of the Bullwhip Effect was that of the traditional commission or incentive structure for sales and marketing staff.

The famous beer game demonstrates that the Bullwhip Effect is caused by the lack of transparency throughout the supply chain. Excessive transactions are another contributory factor to the problem; *Factory Logic (2003: p4)*. The beer game is played where players receive only orders from each other but no sales data. Each player adds on safety stock to his or her order as it is placed higher up the supply chain. In the end excessive stocks sit in the different stages yet the demand for the product by the customer only increases once and is held constant at that level.

## Demand Forecast Updating

One of the main causes of the Bullwhip Effect is the updating of the demand forecast. *Chen, et al (2000: p7)* summarised the impact by showing that when the retailer periodically updates the mean and variance of demand, based on observed customer demand data, then the variance of the retailer's orders would exceed the variance of the demand. *Dejonkckheere, Disney, Lambrecht and Towill (2002: p134)* proved that the regular contributing factor to the Bullwhip Effect is due to various players within the supply chain using a forecasting algorithm to smooth over the demand for the product.

*Lee Hau, et al (1997: p3)* state that demand forecast updating is done by all companies that usually do product forecasting for its product scheduling, capacity planning, inventory control and materials planning. In *Lee Hau, et al (1997: p3)* they investigated the phenomenon of the Bullwhip Effect with the use of the beer game. Here it was found that the players formed opinions and based their judgements on projecting the demand pattern based on what they perceived. Due to safety stock creating the Bullwhip Effect, it is understandable that the longer lead times between resupply, the greater the fluctuation.

The recommended solution to this situation is to allow all role players of the supply chain access to the sell through data via EDI (Electronic Data Interchange), and that one role player assumes the responsibility of forecasting and placing of all the orders. VMI (Vendor Managed Inventory ) is another solution, as is the reduction of the lead times, to combatting the Bullwhip Effect that is caused through demand forecast updating *Hau Lee et al (1997: p556)*.

## Order Batching

Order batching occurs where the company utilises certain methods of inventory monitoring or control. Certain business practices are used to save the company time and money, such as ordering of stock in batches; *Lee Hau (1995: p2)*. According to *Lee Hau (1997: p3)* there are two types of order batching, the first being periodic ordering and the second being push ordering. The periodic ordering occurs where the supplier cannot handle frequent orders and orders weekly, biweekly or monthly. The push orders are caused through the sales people who, being regularly measured, e.g. quarterly or annually, force orders to fill quotas. They will force companies to take orders that they do not require so that it appears they have met their sales targets at the end of the period. They take sales from the next period to boost the current period.

*Cahon, et al (1999: p10)* discovered that balanced order intervals would reduce the supply chain holding and backorder costs. This was especially useful where there was little consumer demand variability. The problem occurs where the supplier, to ensure that they would never run out of inventory, orders up to cover the uncertainty portion of the order. The manufacturer will then increase the amount manufactured to meet demand. This situation may continue until they find themselves in a situation where the demand disappears and the manufacturer sits with too much inventory. This is more prevalent with high technology products such as computer software and cell phones, though it can happen in the FMCG market.

*Hau Lee (1997: p557)* recommend that the lowering of transaction costs, employing third-party delivery agents and by allowing the retailer to order an assortment of products to fill truck loads will reduce the Bullwhip Effect caused by order batching.

## Rationing and Shortage Gaming

A manufacturer may be forced to use the rationing of its products where it finds itself in a situation where demand exceeds supply. In this situation a manufacturer may proportion the amount ordered to satisfy as many of their customers as possible; *Lee Hau (1997: p5)*. When the supplier receives an order, they will supply the customer with 50% of their order.

This is prevalent in the automobile industry where cars are issued to dealers according to an allocation process; *Cahon, et al (1999:p2)*. Vehicles are sent to dealerships according to their previous sales. In order to receive a new car in the next quarter, the dealer would have to ensure that they sold one in the last quarter. This may cause dealers to inflate their sales in order to

receive more vehicles to sell, especially where the cars prove to be popular sellers. The exceptions being where a new business was being introduced or where there was a slump in the sales for that sector.

This practice is known as gaming; *Lee Hau (1995: p2)*. Gaming is the deliberate act of passing on inflated demand to the manufacturer in order to receive the correct quantity of the products that were ordered.

The solution to the issue of rationing and gaming is to issue products to the retailers in proportion to their market share and not to the last sales history when there is a shortage of the products. The sharing of accurate information would aid to reduce the impact; *Lee Hau (1997: p556)*.

**Traditional Commission Structure**

*Reddy (2001: p2)* describes the traditional commission or incentive structure for the sales and marketing team as an important factor in the creation of the Bullwhip Effect. In most organisations, the sales and marketing teams dictate what is to be done in the company and the efforts to change the traditional sales commission practices to support supply chain management objectives were brushed aside.

The task of supply chain management is to plan for the forthcoming demand for the products. Unfortunately, the sales team will frequently change the budgeted demand forecast before the close of the planning period. These deviations from the planned sales move up the supply chain causing the Bullwhip Effect; *Reddy (2001: p2)*.

**Lead Time Review Adjustment**

*Frank Chen, et al (2000: p4)* showed that the lead times from the retailers played a prominent role in creating the Bullwhip Effect. If the lead times were to be doubled, then it stands to reason that the demand data would, by necessity, have to double to maintain the same variability in the order process.

The longer the stock takes to move from the supplier through to the retailer, the more stock the retailer will have to order. This is due to the fact that the retailer will then order fewer times than in the past but have larger quantities on order.

## Price Fluctuations

*Lee Hau, et al (1997: p4)* quote a figure of 80% of all transactions, between manufacturers and distributors in the grocery industry, were made in a forward buy arrangement. This was due to the manufacturer granting attractive prices to the retailer. Inventories of $75 to $ 100 billion are purchased in by way of the forward buy arrangement.

Manufacturers and distributors often have promotions such as price discounts, quantity discounts, coupons and rebates. All of these promotions result in price fluctuations. This is costly to the supply chain as the customer, when the price is low, will then take advantage of the offer and will stock up. The customer will then hold back on further purchases until the item is back on special.

The customer will make do with what is left of their items at home before purchasing more; i.e. the customer will not purchase the product at its normal price structure. There are certain items that are normally promoted at specific times of the year or are advertised a number of times in the year. The practice of allowing price reductions to increase the sale of the manufacturers products may backfire however, as in the period that the discounts are given, the targets are achieved while the following periods no orders may be received; *Lee Hau (2003: p4)*.

The pricing and promotion policies of organisations cause distress in the supply chains; *Reddy, R (2001: p3)*. The reducing of the price on items to clear out excessive stock holding and price markdowns not only train customers to wait for these events but compound the overstock problem through causing the overreaction of the supply chain due to the sudden stock shortage situation.

To control the Bullwhip Effect, the best solution is to reduce the frequency and level of the price discounting. The long-term solution, according to *Hau Lee et al (1997: p557)* and *Hau Lee et al (1997: p7)*, is to establish EDLP (Every Day Low Pricing). Implementing EDLC (Every Day Low Costs) would aid the process.

To measure the costs involved in forward buying it is recommended that an activity based costing system be used. This will show up the costs of inventory, storage, special handling, and premium transportation. These costs are generally hidden and may outweigh any benefits derived from the promotion.

*Lummus et al (2001: p320)* suggest that supply chain partners can improve supply chain flexibility by adding inventory cushions or increase capacity to meet peak demand caused by short term marketing promotions. The problem is the costs involved in implementing these programmes. Companies need to determine which promotions really add value and which are losing money. The retailer has added costs as more space is needed for the extra inventory, extra manpower and increase in the inventory carrying costs are incurred. The manufacturer has to deal with increased manufacturing requirements, larger shipping quantities, extra personnel and increase in excessive inventory.

*Lummus et al (2003: p322)* found that supply chains can benefit from planning deals and promotions to avoid an overlap, better communication between manufacturing and marketing to understand the implications of the deal and finally to use management's judgment to override statistical forecast methods when it comes to random deals and promotions.

## 2.5. The Clicks Strategy

**Compare the Bullwhip Effect**
**from the sources to the stock and sales movement from Clicks**
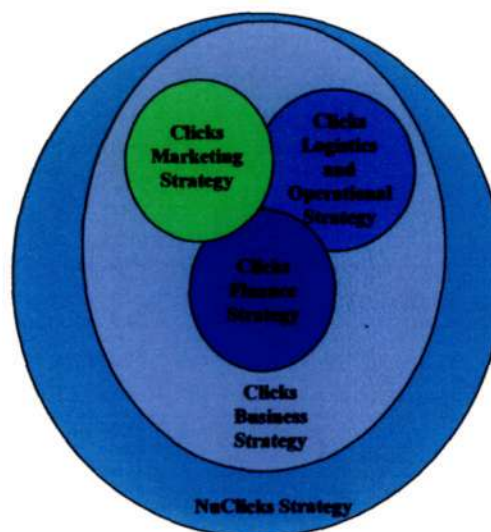


**Figure 1 : The Nu Clicks strategy**

In large organisations, such as Clicks, there is an internal hierarchy of strategies, which agrees with *Walker, et al (2003: p7).* The strategies begin with the corporate strategy, moves down to the business strategy and ends with the functional strategy. The retail chain Clicks, is owned by Nu Clicks. Nu Clicks has a number of different businesses: Musica, Diskom, CD Warehouse, Clicks, UPD couriers and PNA pharmacies. The ownership of these different companies makes up the corporate strategy of the organisation.

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┌─────────────────────────────────────────┐
│        Nu Clicks Groups Strategy         │
└─────────────────────────────────────────┘
                    │
                    ▼
┌─────────────────────────────────────────┐
│             Clicks Strategy              │
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                    │
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┌─────────────────────────────────────────┐
│        Merchandise Services Strategy     │
└─────────────────────────────────────────┘
        │                         │
        ▼                         ▼
┌─────────────────┐     ┌─────────────────┐
│ Category Buyers │     │   Supply Chain  │
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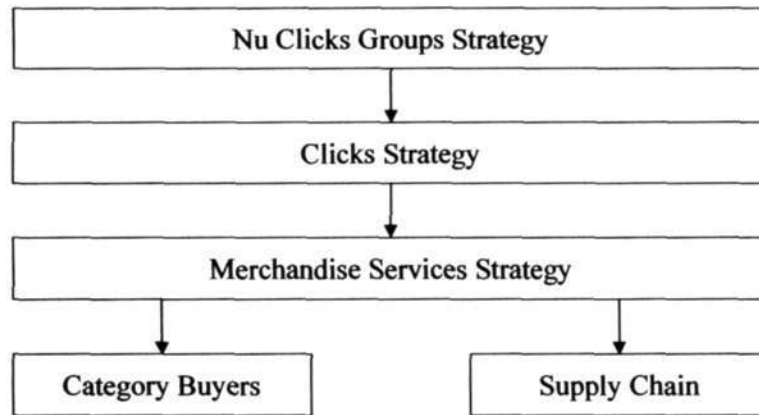
**Figure 2 : The Nu Clicks Hierarchy of Strategy**

As illustrated, the corporate strategy of the Nu Clicks group is handed down to the different brands, in this case Clicks. From here the strategy is handed down to merchandise services of Clicks who, in turn, hand it down to the functional departments. The different departments then derive their strategy with the focus on the brand strategy. The different functions or departments need to work together to have the organisation work in synergy. The research will show that there are a number of conflicting strategies between the marketing and supply chain departments. The research identifies the methods that the marketing department uses to achieve their objectives and how this creates the Bullwhip Effect in the Clicks' supply chain.

### 2.5.1.    The Clicks' Marketing and Supply Chain Tradeoffs

The following diagram illustrates the different functions and responsibilities that occur within Clicks. It is important to note that a number of the tasks that are normally are dealt with by a marketing department, are handled through the category buyer. This individual decides which products to keep, at what price, when to promote them and through which media.

The category buyers determine the quantity of stock to purchase, the selling price and the quantity that should be despatched to each store for promotions. The automatic replenishment system will ensure that stock is in the stores under normal conditions. The category buyers deal exclusively with the suppliers in deciding which products are to be advertised and the price that the product will be advertised at.

**Cost Tradeoffs and Responsibility Diagram**
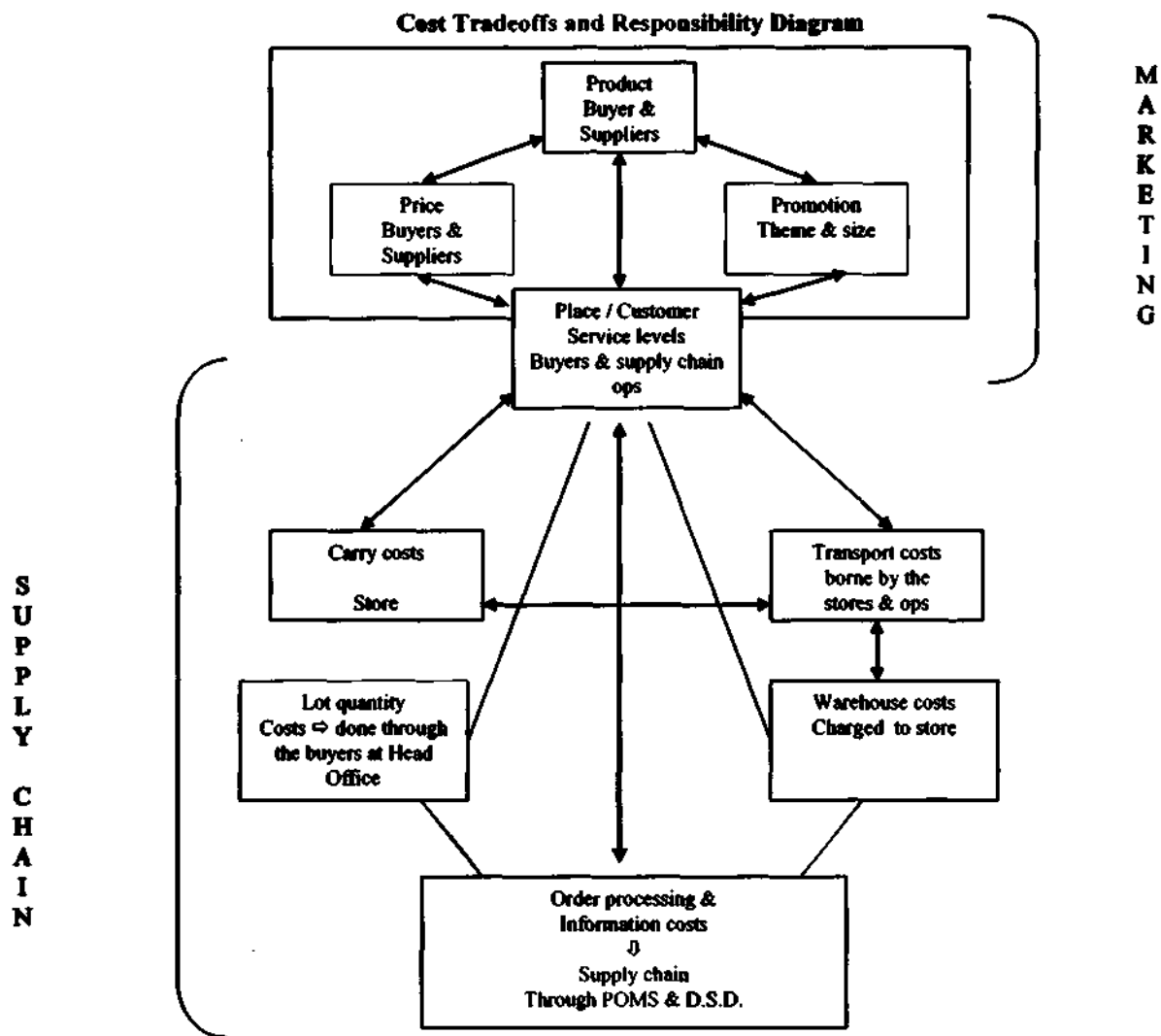


*Adapted from Douglas M. Lambert, et al, (1998: p556) Cost Trade Offs Required in Marketing and Logistics*

**Figure 3 : The Clicks' Marketing and Supply Chain Trade Off**

### 2.5.2.    The Clicks' Supply Chain

The Clicks' supply chain is divided into two different sectors: The first sector deals with DSD (Direct Store Delivery) orders where the supplier will deliver straight to the stores. The second sector is where the supplier will deliver to the DCs and the stock is then sent out to the stores.

The DSD system works on the same computer system as the JDA system that orders stock for the stores from the DC. Both use the stock balances in the stores to order new stock and both use the sales rate of the products in each store to determine the size and frequency of the orders.

# CLICKS SUPPLY CHAIN

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┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│   SUPPLIER   │─────▶│ DSD TO STORE │──────│   CUSTOMER   │
└──────────────┘      └──────────────┘      └──────────────┘

┌──────────────┐   ┌──────────────────┐   ┌──────────────┐
│STOCK DELIVERED│  │    STOCK IS      │   │    SALES     │
│TO DISTRIBUTION│  │SHIPPED TO STORES │   │ INFORMATION  │
│   CENTRE     │   │  IN SMALLER      │   └──────────────┘
└──────────────┘   │QUANTITIES & BIG  │
                   │  PACKS MADE      │
                   │   SMALLER        │
                   └──────────────────┘

┌──────────────┐   ┌──────────────┐   ┌──────────────────┐
│REBATE GIVEN TO│  │STOCK ISSUES  │   │ HEAD OFFICE MAN  │
│CLICKS TO PAY  │  │  SHIP PACKS  │   │    COMPUTER      │
│TRANSPORT COSTS│  └──────────────┘   │ PROGRAM AS 400   │
└──────────────┘                      └──────────────────┘

        ┌──────────┐
        │  ORDERS  │
        │ DONE BY  │
        │   DOMS   │
        └──────────┘

        ┌──────────┐
        │  ORDERS  │
        │ DONE BY  │
        │  D.S.D   │
        └──────────┘
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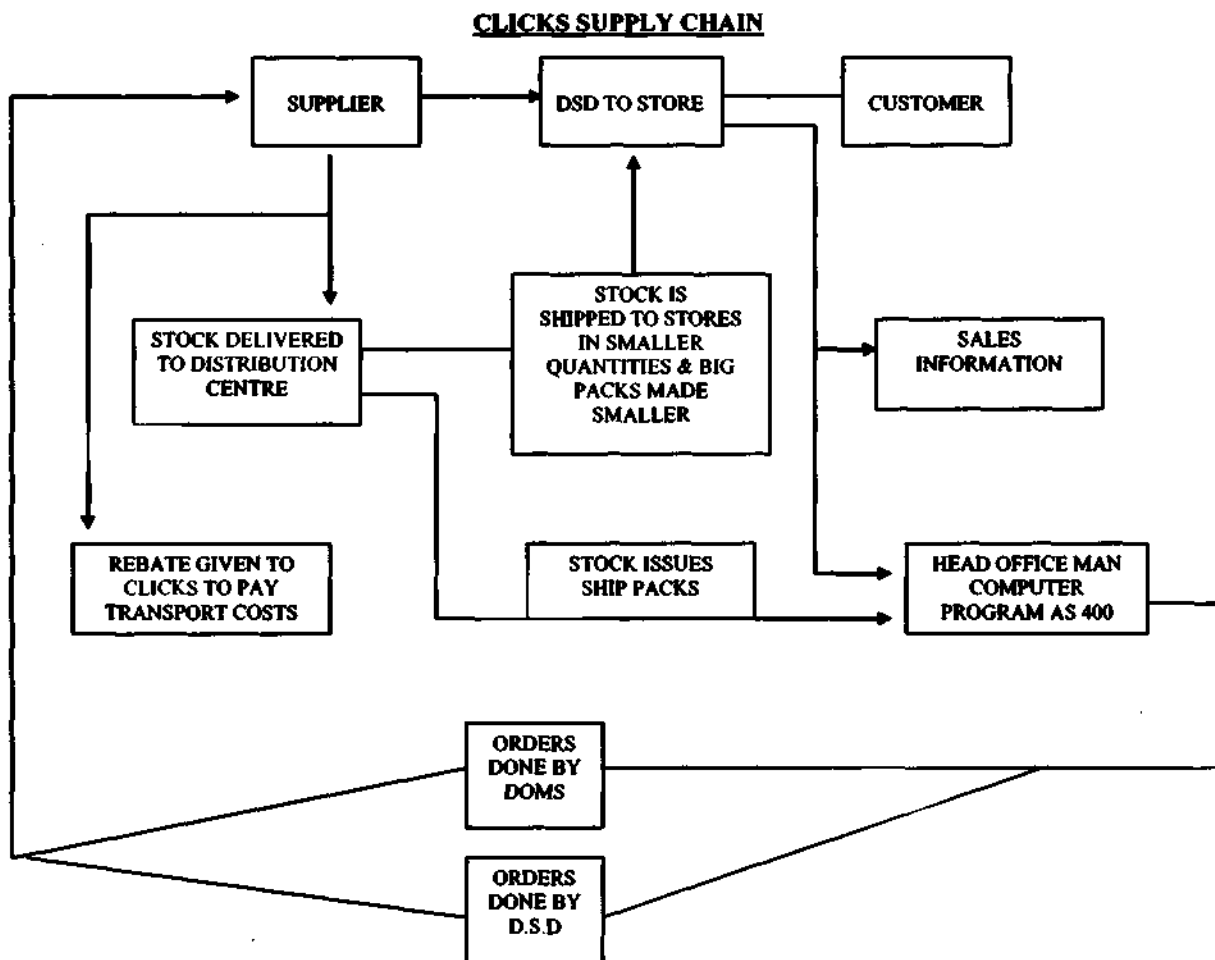
**Figure 4 : The Clicks' Supply Chain**

The DSD system will place orders with the suppliers based on the sales and the balances of the stock in the store. The orders are then sent to the stores, who will check the order and if it is not correct will adjust it. The stock will then be received in the stores and the balances adjusted accordingly.

In the JDA system the stock is first ordered into the DCs by the team at the POMS department. The supplier first delivers the stock to the DCs, the JDA system will then work out orders and the DC will send these orders out to the respective stores. This method assists with the reducing of the quantity of stock that can be sent to the stores. It makes it possible to send to the stores single units instead of larger ship packs. This reduces the amount of safety stock that the stores have to carry for customer service.

### 2.5.3. The Clicks' Automatic Ordering System (JDA)

The Nu Clicks organisation employs an automatic ordering system known as the JDA system. This system is named after the person who developed this system, James Dean Anderson. This system works on the stock balances and sales of the products. Where stock is sold, new stock is ordered for that store. The orders are placed both with the DCs and with suppliers. The balances are on hand for the staff, both at a store level and a Head Office level, to use in order to place promotional orders and other distributions, as required. The system is possible due to the latest technology being available through front end scanning and sales data transmitted to the main frame computer system in the Clicks' Head Office.

### 2.5.4. The Stock Costing Methods at Clicks

The method that is employed at Clicks with regard to the accounting of the product is to assume that the last price received is the price of the product. The prices for the items that were received prior to the promotion are not taken into account which, if the sale is successful, will cause the store to lose profit margins. The prices are dropped by means of a manual count sent to the stores. This is used to calculate the drop in the product margin for the duration of the promotion. At the same time the count is used for accounting purposes to establish the value of the stock in the store and any possible shrinkage.

To complicate matters further there are two separate retail chains that draw inventory from the same source, namely Clicks and Diskom. The one chain may have a promotion and draw all of the stock or may draw stock that was purchased at a higher price. Then, to throw in one more problem, there is the fact that the DCs may be over stocked from previous promotions or buy-ins.

### 2.5.5. The Supply Chain Measurement at Clicks

In the FMCG sector of the retail market, a target of twelve stock turns a year is used as a benchmark. However Clicks, as a chain, has not achieved a stock turn result higher than five. This is, in part, due to the stores having a combination of high and low stock turn items in the store. The lifestyle products are slower sellers than the FMCG lines and skew the rate of stock turns of the stores. The basis of this research however, is to test the movement of the FMCG lines when, and after, they are on promotion.

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The important fact in measuring the supply chain in relation to the Bullwhip Effect, is the overstock measurement. In the two different categories, being toiletries and lifestyle categories, there are different acceptable stock levels before the line becomes an overstock.

According to Ted Parzydlo and Winnie Thys, the toiletry category lines are in the FMCG line and the overstocks start from three to eight weeks stock. Due to the supply equation of lead time + review time + safety stock being different in each store, the overstock level is different in each. There are stores in the major centres that receive deliveries from the DCs every day, in these stores the overstock level starts at a nine-day stockholding. In stores where there is a delivery every three days, the overstock level begins from three weeks stock. In the lifestyle category the movement of stock is slower and therefore the level where the overstocks start is set higher.

## 2.5.6. Clicks and the Bullwhip Effect

In the Clicks retail environment, price reductions are sought for the purpose of advertising products to gain more feet into the stores. This is common practice amongst the retailers where discounts are received from the manufacturer and are then passed on to the consumer. In his interview, Jonathan Shifrin, a category buyer, stated that if the practice of lowering prices and aggressively advertising items stopped, it would destroy the company. Clicks ran sixty-two (62) different advertising campaigns for the year 2004. This equates to 1.19 promotions a week. An advert theme has between thirty-six (36) and seventy (70) different products advertised, which equates to a rough figure of 4340 products. For the purpose of advertising, an extra eight (8) weeks of stock of each line is purchased in, which equates to 34,720 weeks of stock ordered for the purpose of advertising. There is not a single week where there is no advertising activity. There are no months in the year where the suppliers do not purchase gondola-ends, stands and dumps. Every month, stock is purchased in for the purpose of promotions, either promotion advertisements or extra displays.

When the supplier offers the discounts, these are not passed on to the consumer but are used to boost the gross profit margin received on these products. It is a method that is used to boost profits, though the cost involved in carrying higher quantities of these products has to be taken into account.

## 2.5.7. Examples of Items that are Promoted
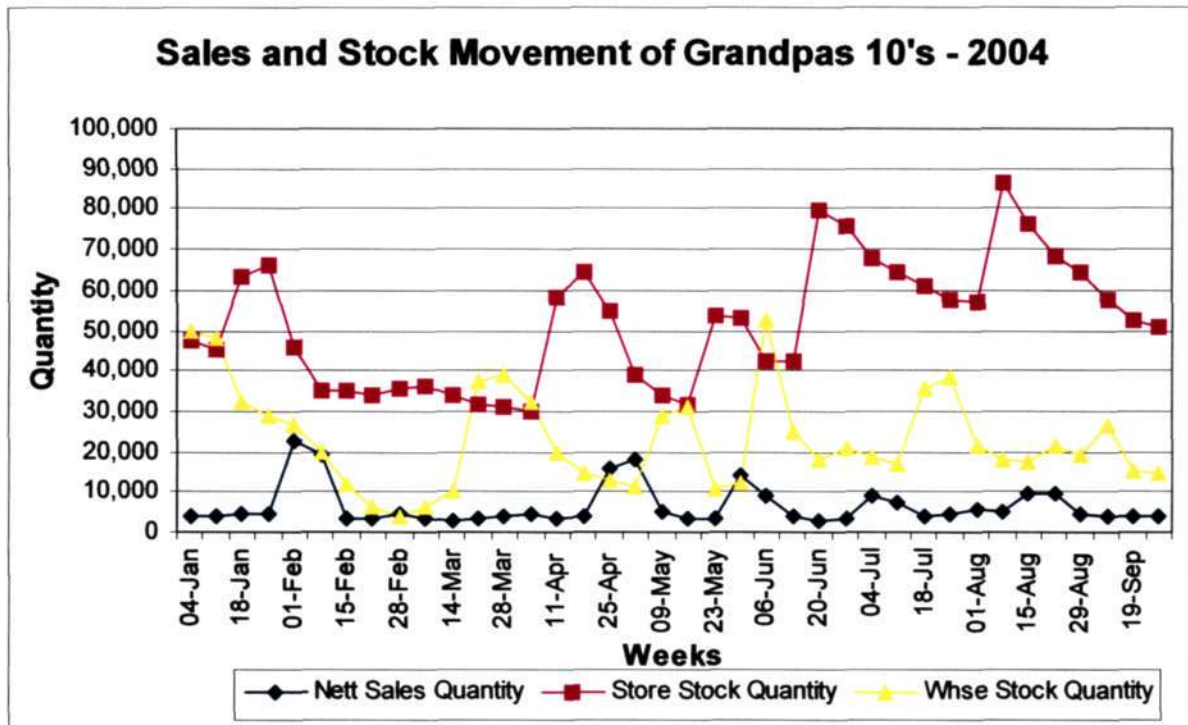


**Graph 2 : Sales of Grandpa Powders**

Graph 2 is of Grandpa Powders 10s, which is frequently advertised, and the price is frequently dropped. In this example, the trends are easily followed though it is difficult to plot what the sales would be without the promotional activity. The graph clearly illustrates the increase in inventory stock levels prior to an advert. The stock in the DCs is affected just prior to the stores as this is where the stock is delivered by the supplier before being sent to the stores.
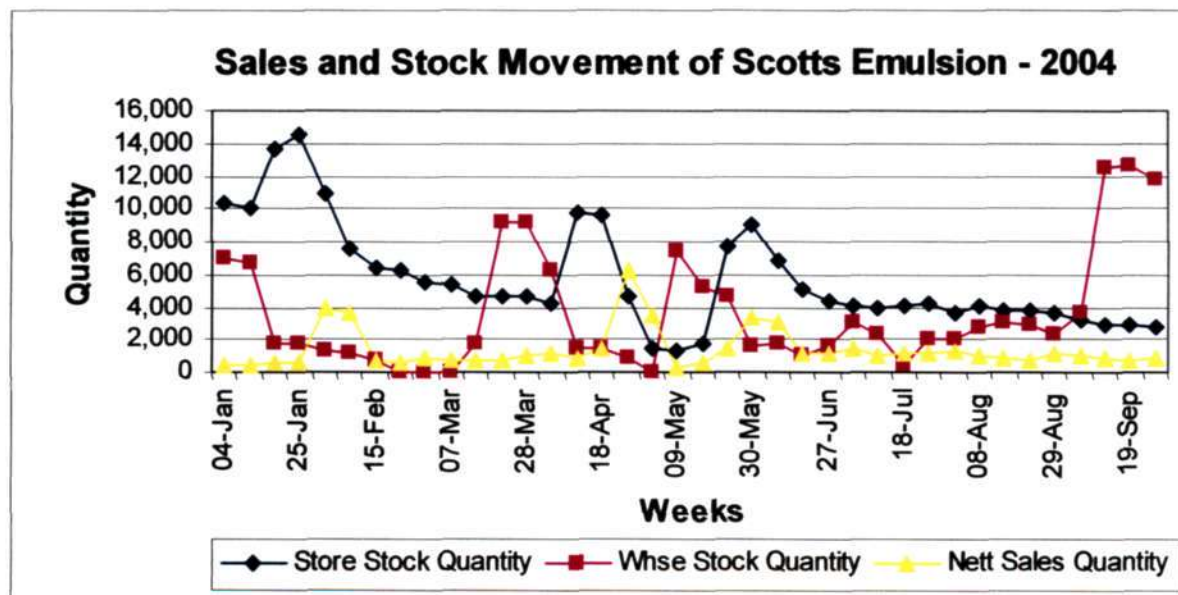


**Graph 3 : Sales of Scotts Emulsion**

Graph 3 illustrates the sales for another product, that of Scotts Emulsion 200ml. It is clear when this product is on promotion and when it is not. The huge spike clearly identifies high sales volume and prior stock holding. The sales after the promotion then dip back to the normal sales volume. The issues in this scenario are the impact on the stock in the DCs and the stock that the supplier has on hold.

*Goran Svensson (2001: p104)* reason for the Bullwhip Effect is that of rational decision making in the companies' inventory management is, in part, based upon the postponement or speculation of business activities. The business will keep higher inventory levels during or prior to periods where the products will be on promotion, with the business attempting to keep as little as possible the rest of the time.

*Lummus, et al (2003: p320)* produced Graph 4, which is a fair comparison to the overall movement and sales of a line promoted in Clicks.
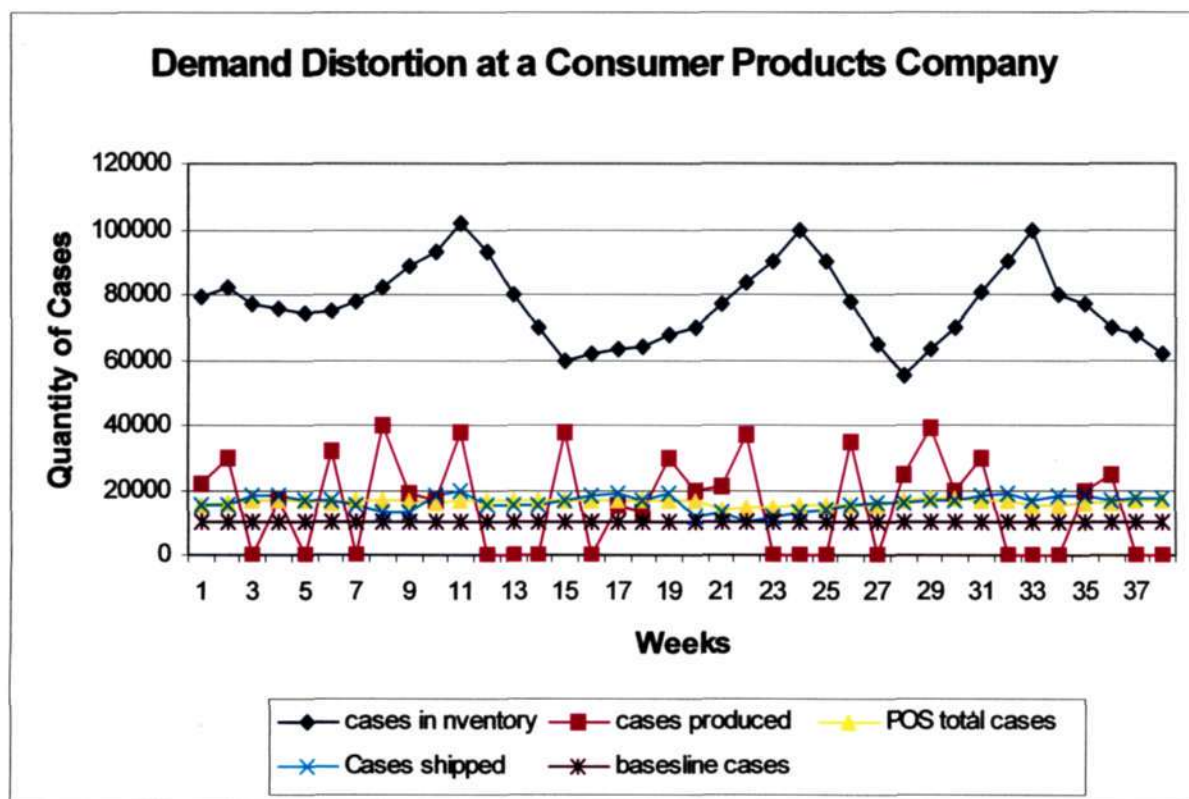


**Graph 4 : Demand Distortion at a Consumer Product Company**

This graph illustrates the uneven movement of stock from the production through to the sales. This concurs with the information that was discussed from the relevant literature reviews that there are large orders placed for product items on promotion.

What *Lummus, et al* have failed to display though, are sales to the final consumer. They have shown the sharp increases in stock that is produced and sent to the retailer and the very even amount of stock that is kept in the stores.

## 2.6. Concluding Remarks

There are a number of issues that create the Bullwhip Effect and there is a strong link between the strategies that the different functions employ within and inter organisations that conflict with each other. The main strategies employed within the marketing function are in direct contradiction to the strategies that are in place for the supply chain function within the organisation.

The most glaring difference is the method to add value to the organisation. The marketing department has to drive sales to add value and this costs the organisation money, while the aim of the logistics department within the supply chain is to save as much money as possible to add value. The tools at the disposal of the marketing team are used to drive up the sales. This can create a situation where the demand for the products is unknown, which can create either a stock shortage, or it can create a situation where there is excessive stock in the supply chain.

What most scholars concentrate on is the direct cost involved, where in the retail industry the cost of the stock on hand is largely ignored. The implication for this is that stock is purchased in at different prices yet is sold at one price. This can be both a benefit and a loss to the company. The main issue here is that where a product is oversold then the margins for those products are eroded away, which may lead to a loss for the company. On the other hand, if too much stock is purchased, this may lead to a situation where the stock is put back to the normal selling price after the promotion and the profit margins on the products are increased. The problem here is that the cost of carrying the stock is very high.

There may never be a solution to the problem of the Bullwhip Effect as the competition of the major retail chains is very intense and for one retailer not to be aggressive in the marketing field may lead to a drop of the market share and ultimately to their demise. There may, however, be methods employed to reduce the Bullwhip Effect. This may be achieved through identifying the correct information that is to be sent downstream. Jennifer Baljko quotes *Hau Lee (1999: p2)* in saying that the evaluation of the correct data to send to the suppliers would aid in reducing the Bullwhip Effect.

The use of modern technology to pass on information twenty four hours a day would aid those down the supply chain and enable faster response times. *Hau Lee* carried on to say that cross functional teams, with all of the companies' main players working together and in the same direction, would assist in reducing the Bullwhip Effect.

*Baljko (1999: p2)* writes that "the Bullwhip Effect may be reduced considerably through the sharing of knowledge with suppliers and customers to better gauge the demand and cooperation with the supply chain partners, to better determine which information passed on is causing the overreaction".

The reduction in the Bullwhip Effect to a reduced level would benefit both the retailer and the supplier. This would lead to better efficiencies, effectiveness and ultimately better profitability. This study clearly identifies that the promotional system that is used in Clicks creates the Bullwhip Effect. It identifies that the strategies that are used to move the business forward are the main catalysts and that the strong competition in the marketplace is one of the factors sited.

The graphical depictions of actual stock and sales movement mirror that of the research conducted by *Lummus, et al*. Where the Bullwhip in the supply chain is proven to exist, then all of the impacts of the Bullwhip Effect must manifest themselves in Clicks. The excess stock holding and wastage that the other researches have identified must exist in the stores and the DCs. The research will further show that this does occur and will establish methods to reduce the Bullwhip Effect in the Clicks' supply chain.

# 3. RESEARCH METHODOLOGY AND DESIGN

## 3.1. Definition of the Research Problem

The research topic of this paper is based on the effect that the marketing department has on the supply chain of a retail outlet. The study is based on the Clicks' retail chain.

The research attempts to get a holistic view from three different perspectives.

The individuals that were interviewed are responsible for the maintenance of the stock holding and flow of stock from the supplier through to the end consumer. The research samples are the store managers, the category buyers at Head Office, and account managers for the suppliers. The samples of these groups are small due to the facilities at the disposal of the researcher and the amount of category buyers. Twenty store managers were interviewed; they were chosen due to the size, sales turn and position of the store. The sample is a true reflection of the population of store managers in the country.

The store managers represent the operations side of the business and they are tasked with ensuring that the stock balances and stock levels are kept at optimum levels. They have specific KPAs (Key Performance Areas), which are listed in their job descriptions and specify what they have to achieve. The store managers are more involved with the operations aspect of the Clicks' strategy and are responsible for implementing all of the strategies.

The category buyers were chosen from the FMCG side of Clicks. The category buyers interviewed deal with most of the FMCG departments. The category buyers are tasked with driving the sales and setting the gross profit margins for specific categories or sub departments within the store. The presumption is that there is an internal conflict between these departments. The suppliers' perception is important as they then complete the picture from the external perspective.

The final section of this study is to analyse the actual stock movements to the stores and to measure the success of the promotions in relation to the plans of the category managers. This data is available to all of the category buyers, but unfortunately not to the store managers and to the suppliers.

## 3.2. Introduction

In the research, it was not possible to send a questionnaire out to all of the role players, but rather to have a cross section of role players involved in an interview process. The interview process consisted of a number of questions that covered open-ended questions to invoke a discussion, with quantitative questions in order to categorise certain responses.

The store managers and the suppliers had their interviews conducted telephonically. This was necessitated by the physical locations of the store and the suppliers. There are a number of regions in which the stores are situated and it was not possible to see them all. This would be an issue if different types of stores were not included, as would the differences in the store turnover not taken into account. However, this is not the case.

The marketing and category managers were done in person as they are within the same office and in easy access to the researcher.

After the interviews, secondary data was pulled from the data warehouse system to test the validity of the statements that were made by the interviewees

## 3.3. Summary of the Research Pattern Followed

- Interviews were conducted with store managers. A sample of twenty store managers was chosen The sample was drawn from the different regions and was from both high sales turnover to low sales turnover stores. Interviews were conducted with willing participants, unfortunately there were a number of individuals who refused to take part in the interview process.
- Interviews were conducted with category buyers. A sample of five category buyers was chosen. The sample was drawn from across the different toiletry departments. Only willing participants were interviewed, though no person declined to be interviewed.
- Interviews conducted with suppliers. Four of the largest suppliers were interviewed. These are the suppliers who are included in all of the adverts and promotional activity. These suppliers were chosen based on the strong impact that they have on the selection of products to advertise and promotional activity in Clicks.
- The information was analysed and compared, highlighting the different areas that are in conflict.

- The sales and stock movement data was pulled from the computer and the promotions analysed. This data was used to determine the presence of the bullwhip effect in the Clicks' stores. The sample of products selected were advertised on more than one occasion during the year and findings clearly indicated the bullwhip effect. Two promotions were analysed, the 'Expect to Pay Less' promotions for May and June of 2004. These were both month end adverts and covered all the departments in the store.
- The different results were examined and interpreted.

## 3.4. Interviews

A cross section of twenty store managers was chosen as not all managers could be interviewed. Store managers from different regions, with mainly higher sales turnover figures, were chosen. However, there were a number of store managers interviewed that were from lower sales turnover stores. Though all of the stock is sent out from the NSSC (*National Store Support Centre*) the different regions may have different approaches to dealing with the problem. The sales turnover of the store is important as stock will take longer to sell in a quiet store compared with the higher turnover stores.

The category buyers that work on the FMCG side of the business were chosen as they are responsible for more of the advertised lines than any other department. The five category buyers that were chosen were from across all of the different toiletry departments in the store. They are responsible for a large percentage of the products that are purchased in and promoted for the Clicks stores. They have more insight into the problems experienced in the stores.

A cross section of the largest suppliers with the most advertised products was chosen. They supply the more popular brands and are international suppliers, thus they have more experience with the promotion of items than the smaller suppliers. These suppliers have the resources at their disposal to promote their products extensively within Clicks. These suppliers are very important to Clicks in that they supply the bulk of Clicks' top sellers.

## 3.4.1.    The Data Collection

All interviews were conducted by the author. Store manager interviews were conducted telephonically during the course of the working day. During the months of August and September three interviews a day were conducted and each interview typically lasted twenty minutes.

The category buyers were interviewed over the same period, during working hours. These interviews were conducted face to face and lasted thirty minutes each. The suppliers where contacted telephonically over the same period, during working hours. The interviews lasted approximately 25 minutes each.

## 3.4.2.    Analysis of the Data

The data from the store managers was analysed with the use of spreadsheets to compare the different point of views from the different questions. The descriptive questions data was compared across all of the different responses. All of the different responses were noted, though most stated the same issues.

In the data collected from the suppliers and the category buyers, the same method was utilised to analyse the data. All of the responses were compared to each other. Again, a number of the responses were very similar and this was recorded.

## 3.5. The Validity of the Computer Data

It must be noted at this point that the data taken from the computer, though from a secondary source, may not in all instances be 100% accurate. The computer system is the AS 400. Two sources of reports are available, *Webi Intelligence* reports on the sales performance while *Info House* supplies more comprehensive information. All the promoted items are listed, together with the quantities of products sold and the number of products ordered. The same system is used throughout the organisation. The data is utilised by the category buyers to establish the performance of the promotional activity.

The concern with this data is that it is based on the stock balances in the stores. As *Raman (2001: p1)* discovered, the stock data that is available to base orders on and to have an accurate stock picture is flawed. The Clicks' stores are tasked with keeping the stock balances and sales data as accurate as possible.

However there will always be errors that creep in.

### 3.5.1.    The Sales Performance - Secondary Data Review

The sales data for this research is from the *Webi Intelligence* reports. These reports are generated every week and are used to identify the latest sales trends for the promotions throughout the business.

### 3.5.2.    The Stock Holding Data - Secondary Data Review

This data is taken from two sources the *Webi Intelligence* reports and the *Info House* system. Both offer similar results and draw their reports from the same data warehouse.

The information was used to trace the movement of both the purchases of stock and the sales of stock through the Clicks supply chain. This information was utilised to check whether the stock purchases and sales illustrated graphically took the form of the bullwhip effect. The data was collected from *Info House* and entered into MS Excel where graphs were drawn up to identify trends.

### 3.5.3.    Concluding Remarks

This chapter discussed the research methodology used to generate the data for analysis. It was decided that the best method to gather information for this research topic was to explore all the different points of view. It was hoped that this would give a more unbiased view of the problem of overstocks in the Clicks' retail environment.

The next section analyses and interprets the discussed data; including data gleaned from interviews, data pulled from the *Info House* system, and data taken from the *Webi Intelligence* reports.

# 4. RESULTS OF THE RESEARCH

## 4.1. Introduction

This chapter examines the data gathered and provides the cognitive results from the interviews conducted. The interview information is tested against information gathered from the computer.

The main question in this research is to determine whether the activities that the marketing department and category buyers employ to achieve their strategic objectives, have a major impact on the supply chain of a retail outlet. From the literature review it was established that promotional and advertising activities are used to achieve these objectives and this increased the flow of products into the organisation. The retail outlet in this research is Clicks. The individuals that were interviewed are employed either by the organisation or by their direct suppliers.

The individuals, being the category buyers, store managers and the suppliers, who deal directly with the issue of stock promotion were questioned and their replies condensed into an easily readable format. The questions were of a similar nature though the exact same questions were not asked of the different groups of participants. It was difficult to interview individuals on the phone, as it was not possible to see and identify specific problems in the store. The fact that the life style categories are the slower selling items, creates an impression that this is the biggest problem in the stores.

The service to the customer due to stock shortages is an important part of this research. If the customer is ignored then the Clicks chain will ultimately fail to deliver on its promises to the public. The store managers, who deal at a store level with any service complaints, confirmed this.

The data pulled from the computer is based on the stores' balances, sales and week stock holdings. The individual buyers find that they only use this data as a rough guideline but do not believe that it is completely accurate. The store managers have similar misgivings. It was not possible to analyse all of the promotions during the year due to the high quantity of promotions. It was decided to choose two different promotions that would include all forms of advertising. Both promotions were based on the same theme; the *'Expect to Pay Less'* promotions covered all categories in the store.

The interview with the suppliers gives a completed picture of the problems surrounding the movement of stock between the two organisations. The problems faced by the suppliers and the cost implications allow for the understanding of the complete picture of promotions.

The results are presented in a question sequence where each different group of individuals is asked similar questions. The statistical data is presented at the end of the interview results.

Drawing data from the computer programme, *Info House*, the data was used to determine whether the advert process did create an overstock situation. All of the data was pulled from the *'Expect to Pay Less'* advert that took place in June of this year.

What made this promotion attractive to analyse is the fact that it looked at all of the different aspects of the organisation. The data was complete with FMCG and life style data. Following is an analysis of the complete promotion and this is then broken down to separate products or product groups.

## 4.2. The Strategies in the Clicks Organisation

### 4.2.1.    The Decision of the Different Strategies

**The Store Manager's Strategy**

According to Jeff Steenkamer, the business support leader in charge of the Western Cape, the store managers have, as a main strategy, to improve the financial performance of the store they work in. Each store manager has as a job description to achieve the KPAs budgets that are set.

The Store Managers KPAs are:
> To drive the Clicks' brand strategy.
> To achieve sales targets.
> To reduce shrinkage.
> To reduce expenses.
> To increase stock-turns.
> People development.

Once a year sales targets, expense targets, stock turn targets and shrinkage targets are set. The store managers will then decide how they will achieve these targets. Included in the expenses, is a charge of interest which is levied against the stock in the store as the money used to purchase the products is borrowed from a bank. The benchmark for the expenses is that they never exceed 75% of sales. A benchmark for the return on investment per store is 29%. The sales targets are set in line with the current sales target performance. The targets are influenced by the local factors with an estimated figure that would be acceptable to the operations directors.

Shrinkage has to be controlled and reduced. The stock turns should increase compared to the previous year's stock turn. The stock turn figure is a good indicator of how well the stocks are controlled. If the sales are increasing then the stocks in the store should be increasing by the same figure. The movement of the stockholding figure should mirror the sales turnover figure. The benchmark for Clicks is to achieve a stock turnover six per year. The stock turns as at the end of August 2004 was at 3.96 turns per year.

## The Category Buyer's Strategy

The category buyers decide, together with the business directors, what strategy they want to adopt for their category. The category manager has to take into account the business view point on that particular category.

The convenience categories are there to satisfy the needs of customers while they are in the store as a customer will not go into a Clicks' store just for that particular item. The item could be obtainable from any retailer.

A destination category is a category that the customer will go to the store for. Categories such as hair care and stationery are destination categories and this is where Clicks has a big share of the market. The category buyers decide upon the objectives of the strategies.

Sweets as a category, for an example, are not viewed as a destination category but as a convenience category. This means that there will not be aggressive advertising campaigns to increase the market share of this category in the marketplace. They will defend the category and position it as a convenience category. Categories such as hair care, which is viewed as a destination category, will be aggressively advertised. The market share will be looked at and an attempt made to increase it.

The Category Buyers KPAs are:

- To achieve *stock sales figures as planned.*
- To achieve stock sales margins.
- To achieve planned gross profit margins.
- To maintain agreed upon stock levels.
- To plan and negotiate promotions with suppliers.
- To source new products.

Category buyers decide on the sales growth, sales margins, stocks holding and percentage gross profit of the different products. They do have to present their figures to the directors of the Clicks brand, who will then decide whether they are acceptable and will assist the Clicks brand to achieve their strategic objectives. Within each category, a plan is drawn up to measure the performance of that specific area of the business. The same is done for each promotion. Sales figures are planned for each commodity. This figure is then compared against the actual sales at the end of the promotion.

This is the deciding factor as to the success of the promotion. If the actual sales exceed 60% of the planned figure then the sale was deemed to be a successful promotion. If the sales are between 60% and 90% then it is a very successful promotion. The stock should not sell in excess of this figure as then too much stock is sold and margins have been eroded.

To the category buyers, it is an advantage to have some of the purchased stock left over as it aids their margin targets when stock was purchased at a lower than normal price and is then sold at the regular price. The stock is purchased in at a lower cost and sold at a higher price. As Rob Jones stated in his interview, the medicinal lines are aggressively advertised at the expense of a fair margin. This loss can be reduced through extra stock sitting in the stores when the price is returned to the normal level. In this instance, the special deal price is over an extended period and this helps to boost the gross margins. The category buyers' strategies must be aligned to the Clicks' brand strategy, as they have to work towards the goals that were set by the directors.

## The Supplier's Strategy

The suppliers have a strategy in place for their stock that is kept at Clicks. They will communicate this strategy to the category buyers and the two parties will negotiate as to the promotions and extra display that the suppliers' product will have.

In cases such as Glaxosmithkline, they have a strategy to have 40% of their revenue for the next year to be achieved through the sales of new products. In this case they will negotiate for shelf space, promotional activity, and for extra displays in the stores during the new product launches. Each supplier has new products that they would like to launch and they have a budget of how much they want to spend. In all of the instances where adverts are concerned, the supplier will pay for the advertising. They have to pay for their product to be advertised and for any extra displays such as gondola ends, stands and dumps around the stores.

As opposed to the Clicks' store, which is just intent on driving the sales and the profit margins, the supplier is attempting to achieve a greater market share for their products. The whole reason for the advertising is to get more customers to try out the product and to continue to use it after the price has returned to the normal price.

### 4.2.2.    The Tools Used to Achieve Objectives

### The Store Manager's Perspective

The store managers rely on the promotional activity to achieve their stores' sales budgets. The store managers do not have the resources to have any extra promotions in their stores. This is handled exclusively at a National Support Centre level. In the promotions there has to be a strong working relationship between the two functions. The cooperation benefits both the managers to achieve their budgets and the category buyers to achieve the targets that they set themselves. Apart from the promotional activities, the store managers concentrate on service in the stores. This includes having stock on the shelves at all times that is clean and clearly marked. Service is monitored by the way that the staff interact and satisfy the needs of the customers in that store.

## The Category Manager's Perspective

The category buyers utilise the promotional activities such as adverts, coupons and extra displays to achieve their targets. They work together with the different suppliers to set up the different products and prices for the adverts. The more important the product or category is to the Clicks' brand, the more it is promoted. KVIs are promoted more than the other stock items, as these lines are more important to the Clicks' business.

The product that is advertised is reduced in selling price to draw the customers into the stores. The category buyer decides upon the price that the item will sell for during the promotion. A deciding factor for the price of the item, is the price that the item is advertised at by the other retailers. The margin of the product will be reduced and the cost from the supplier reduced to achieve this price. The margins are considered for the promotion and the amount of money that is made during the promotion has to be taken into consideration.

The buyers will conduct a postmortem of the promotion and decide whether the promotion was successful. One of the indicators is whether there is extra money that the promotion has brought in compared with any cannibalisation of other products in the category. The suppliers pay for all of the advertising of the products in the store and they assist by reducing their price of the item to the agreed upon price.

### 4.2.3. How the Performances are Measured

## The Store Manager's Perspective

The store managers receive a BPR (Branch Performance Report) each month. This is an income statement which identifies the different KPAs and lists the performance of each one. It includes the sales for the month, money spent on expenses, shrinkage provision and the Rand value of stock that is in the store at that time. With the information from this report, decisions can be made as to the performance of the store and to what level the store is achieving strategy. This report gives the store managers a good indication as to whether the store will receive bonus pay out at the end of the period. The bonus that they work toward is called the EVA bonus scheme. This scheme works to reward the staff when they have achieved their targets and goals. It works off the previous year as a base year and will issue a payment to the staff where there is an improvement. The greater the improvement the greater the bonus.

## The Category Buyer's Perspective

The category buyers are measured against their plans that they made for the year. They set targets for the sales of their items, and the margins that are received on the sales of these products. There is a tool at their disposal to monitor their performance called *performance tracking*. This highlights the performance of each stock item and allows the category buyer to see how it is performing against their plans. The category buyer will then have a chance to attempt to improve the performance of their category.

The amount of money that is brought in is a vital measure of the success of the promotion. There is a comparison of the rest of the items in that specific category to see if there is a big negative impact on the sale of the items that were not promoted.

The category buyers are not measured against the amount of stock that is kept in the company, either in the stores or in the distribution centres. They are eligible to receive a performance bonus but this is not granted from their performance, but rather on the performance of the organisation as a whole.

Jonathan Shifrin and Avril Lewis would prefer a system where their individual performance determines the bonus that they could receive. They feel that the overall performance of the different category buyers would then improve and those individuals that did not improve would not be rewarded.

## 4.3. Stock Movement

### 4.3.1.    Adverts and Promotions Creating Overstocks in the Clicks' Stores

## The Store Manager's Perspective

88% of the store managers were of the opinion that adverts and promotions did in fact create overstocks, but it depended on the item being promoted. There were lines that were fast movers and would not sit in the storerooms for any great length of time and could not be considered an overstock.

The problem was that the lines were replenished as fast as they were being sold and this was creating an overstock more than the initial push of stock into the store. Certain managers felt that the extra stocks were creating space problems in the storerooms. The storerooms are small and cannot keep stock for too long a period. This is due to the stores receiving frequent deliveries during the promotions from the JDA system.

There is more emphasis put on the slower moving lines such as the life style SKUs (Stock Keeping Units). The overstocks in electrical items had a strong representation in the answers given, though this research is directed more towards the FMCG SKUs. 12% of the store managers felt that the promotions did not create an overstock with one store manager stating that there was not enough stock ordered for his store. He is the manager of Tyger Valley, which is the busiest store in the Cape Town area.

## The Category Buyer's Perspective

All of the category buyers felt that it is very possible that the advertising process could create an overstock situation. Though normal lines can be measured against sales history of previous promotions, one cannot accurately predict the sales of lines that are bought in just for that promotion. These lines cause a greater problem; if they are sold out then no more could be sold and if the sales did not do well then an overstock is created.

The category buyers are of the opinion that the sales may create a stock problem with some benchmarking the success of the promotion at 60% sell through of the stock purchased in for the sale. The products, according to one buyer, were 'sell or return' and due to the product having an expiry date it was better to return the remainder of the product that did not sell to the supplier straight after the promotion. In other scenarios the product may be a seasonal line and, if left, would eventually sell through. The sales of the products are reviewed each week and the trends analysed to determine if the products would sell out prior to the end of the advert.

The category buyers all had to have an exit strategy that they could fall back on should the item on promotion not have performed as it had in the past. If there was a particularly poor sell through then the category buyer may decide to retain the price at the lower price until a greater sell through is obtained.

## The Supplier's Perspective

The suppliers identify the existence of the overstock in visits to the stores and through communication with the field marketers. Where the stores sit with too much stock, the flow from the distribution centres is reduced and orders from the suppliers are reduced. Glaxosmithkline noted that the stock would be ordered through the distribution centres but after the advert, the sales would be reduced for a number of periods.

The quantities would be determined by the importance of the product, whether it was a KVI and in what media and for what price it was advertised at. If the product was advertised through television adverts then the sales would recover quicker. If the product was launched into the marketplace then the sales would be expected to be very high and, due to the reduced price, large volumes of products would be sold. Colgate Palmolive experienced a large drop in sales after a promotion. It was noted that the price that the item was advertised and the type of media used, determined the sell through of the product.

### 4.3.2.    Stocks in the Stores

## The Store Manager's Perspective

The store managers are not consulted with the ordering of the initial push of stock to the stores. 100% of the store managers stated that they were not consulted prior to any of the advertised stocks being ordered for their stores. They are able, in cases where the line is a normal line, to place special fill-in orders to cover the excess demand. In the case where the line is not a normal line, it becomes more problematic as the supplier will only have stock for the initial push.

This is evident with the special offers when a special pack is purchased, but the stock may sell out too soon. Normal stock sold out too soon can be ordered, but no stock may be available for special packs. If too much stock is ordered then the store may have attempts to sell out of the stock over time. The stock may be broken up into single packs, where possible, and sold as regular stock items. The only method of controlling jabs to the stores is when the stores have DSD (Direct Store Delivery) orders placed for them. This gives the managers time to check their stock balances and to attempt to reduce the orders with the suppliers. This system is not in place with the JDA lines.

## The Category Buyer's Perspective

The category buyer will not consult the store managers for input for the lines to be advertised or promoted. This would be too costly in the long run and there are computer systems that enable the stock counts to be pulled at Head Office. This is presuming that the counts are accurate and that the balances at a store level are managed. In the instances where the line is a KVI line and that the line has previously been advertised, then the historical sales data is used as a base to order for the new promotion.

The comparison has to be conducted on promotions that are the same. If the previous promotion was a television advert then it would not be possible to base a normal newspaper advert on this. The same is true where the previous advert was a *buy one get one free* offer or a *buy three get one free* offer. The stock that is required is then subtracted from the stores and the distributions stock on hand.

## The Supplier's Perspective

The Suppliers are restricted in the quantities that are requested from Clicks. The quantities are given to them, though they may negotiate these quantities with the category buyers. The suppliers do have a system where, due to the drop in the price of the product, they have to sell in bigger volumes to make a profit.

The volume sold into the chain decides whether the promotion was successful. In Glaxosmithkline they have a quantity worked out and if the order is less than that, then they will not make any profit at that cost price. It is rare though, that the sales of a KVI product will not make it profitable to promote the item.

Colgate Palmolive uses a promotion grid that identifies what should be advertised for each different retailer. This prevents two competing retailers from advertising the same product, at the same time. In the case of the quantities they will take the order quantity as handed down by the Clicks' buyer and will plan it through their production plant.

If they request an extra 1000 units for a specific month then this is manufactured. The next month they will return to their original production quantities, whether they sold out of the requested quantity or not. This then causes an overstock situation at the manufacturing plant.

Reckitts use two different computer programmes to determine the performance of the promotion. The first measures how well the promotion worked and the other how well they invested in the promotion. This measures the effectiveness of the promotion and the efficiency. The supplier has to sell a certain quantity of stock into the Clicks organisation, at a specific price, in order for the promotion to be profitable. If this does not occur then the supplier will not make any profit, or profit to the desired level.

### 4.3.3. System of Pushing Out Stock to the Store

**The Store Manager's Perspective**

The store managers are not consulted with regard to the amount of stock that is pushed into the stores when it is a line that is held in the distribution centre. The only control of this area is the stock balances as the orders are based on the balances that are drawn from the computer. In the case of lines that are ordered DSD, these orders are sent to the store prior to the arrival of the stock. The store may then reduce the orders through communication with the category buyers and the suppliers.

In the case where the product is sold out, a new order may be placed to replace the stock sold and to cover any additional customer demand.

**The Category Buyer's Perspective**

The category buyers will decide prior to the advert, the quantity that is needed to satisfy the anticipated demand of the forthcoming promotion. The amount of stock that is anticipated to sell will be listed on the advert plan. Two individuals, the category buyer and the merchandise planner, agree upon the quantity of the stock ordered. The stock once received in the distribution centre is sent out by the promotion assistant to the different stores. The promotion assistant has to send out all of the stock that has been requested and uses the sales and the stock balances to judge the quantities required.

## The Supplier's Perspective

The Supplier has no say as to the quantity of stock that is sent out to the stores. They are only included in specific promotions that are held such as coupons and promoters. This is only as far as the different stores that the product is sold in. It does impact on the suppliers when too much of the items are sent to the stores as the next cycle order will be smaller. This may continue on until the stock is reduced at store level and the demand returns to normal. Certain stock items have a sell by date and once this is past, the items are returned to the supplier or are marked down in the store. When this occurs the stock may sit on the shelf unnoticed by the staff and the customers will not purchase it.

### 4.3.4.    Factors Taken into Account when Pushing Stock Out

## The Store Manager's Perspective

The store manager has no control over how much stock is sent to their store. They do, however, have control over the store's balance, which is used to determine the amount of stock that will be sent to them. The lines that are sent to the stores via the distribution centres are received without prior notification that the lines are going to be sent and in what quantities. The promotion assistant is responsible for distributing all of the stock to the stores that was purchased in for the promotion. If the products are sent DSD then the store will receive a jab order, which they may alter if there is an incorrect quantity ordered. The procedure that they follow is to contact the store help line who will attempt to assist with reducing the order. It is not always possible as the stock may be in transit when the request is put to the supplier.

## The Category Buyer's Perspective

The category buyer studies the computer data that shows the rate of sales and the quantities that are held in the stores. This data will be used to determine the quantity of stock that is sent to the individual stores. The quantity that is pushed out to the stores is handed to the promotion assistant who then, using the stores balances, will distribute stock to the stores.

The promotion type will determine the amount of stock that is sent to the stores. If the product is to appear on a television advertisement and at a highly reduced price that is below the marketplace norm, then larger than normal quantities will be sent.

If the product is of a seasonal nature, then more than normal will be sent, as then there will be enough stock in the store to last through the season. An example of this is the hot water bottles with animal covers and warm heart teddies. These lines will appear in an advertisement and the remainder will be left to sell out during the balance of winter. Cough mixture and suntan lotions are another example.

### 4.3.5. Channels Open to Assist the Stores with Excess Stock

The store managers use their store support leaders to move the stock around from store to store. The store managers will move the stock where there is a store that agrees to assist them. The DCs' delivery trucks may be used to move stocks to stores that are too far or if the quantities are too big. The different store support leaders are in charge of different stores and these stores will network amongst themselves in order to reduce the stock in the individual stores. The other channel that is open is to request assistance from the category buyer. The category buyer is seldom contacted though, as the store managers feel that no assistance is given when asked. There were only two managers who stated that they received assistance from their category buyers, when it was required.

The category buyers all stated that they were willing to assist the stores with their excess stock. They all had an exit strategy in place to assist the stores. Where special banded offers are promoted, the lines were separated and sold individually. In the banded offer, the products are all normal products and it is possible to sell them individually.

The suppliers can be called upon by the buyers to assist the stores through promoters and coupon promotions or even to uplift the excess stock. Suppliers can uplift the stock where the stock is delivered direct from the supplier to the store. Where the stock is delivered via the DC, this is not possible. The stock cannot be returned to the DC from the different stores.

### 4.3.6. Pricing of Promotional Lines

**The Store Manager's Perspective**

The store manager has no control of the pricing of stock. Though if the stock is not sold out in the store they may request that the stock is held at the promotion price to ensure a sell through. This is at the discretion of the category buyer. The price is sent through to the store via a physical price change. A list of the items is sent to the store, and the staff will then count each

line and capture these counts onto the computer system. This process can lead to a stock loss where items that are reduced are not accounted for.

The same process is used where the price of the item is increased. The profit margins are reduced in the store through this process and the stores are penalised through lower profit margins. There is a definite impact on the profitability of the store by prices being so drastically reduced.

## The Category Buyer's Perspective

The category buyers are aware of the prices that the competitors charge for this particular product and may choose to match the price or drop below the competitor's price. The price cannot be more expensive than the competition when advertising the products. Customers are aware of the price of items that are promoted in the marketplace and are aware of which items are usually promoted and who is the cheapest.

The price of the product is determined through this method and the cost price of the product is negotiated in the same way. The supplier is asked to come to a level in the price so that the retailer will still maintain a specific profit margin. Prices are reduced through price changes sent through to the stores. This is a method that can create shrinkage as the stock is physically counted in the stores. If items were not counted then a loss would occur to the branch.

## The Supplier's Perspective

The supplier will reduce the cost price of the products to assist with the reduction of the retail price. There is a normal price level where most of the competing retailers will advertise their products. It would be futile to advertise a price more expensive and the promotion would not attract sufficient attention. The profit for these price reductions is made up in the volume of stock that is sold to the retailer. It is important that the supplier maintains the market share of the KVI lines and will want the items promoted as often as possible. The lower the price, the larger the quantity of stock that needs to be sold in order for the promotion to be a success. If the volumes of the anticipated sales do not materialise, then profits from the advert are diminished.

### 4.3.7. Who is Responsible for Stock Levels?

**The Store Manager's Perspective**

The store manager is held totally responsible for the stock turns in the store and is required to maintain specific stock levels. The store manager will receive specific stock turn targets to achieve through the year. It is important to have an increase in sales that are larger than the increase in stock in the store.

If the stock is growing more than the sales, then this will lead to overstocks. The higher the stock levels in the store, the higher the interest charges levied against the store. All store managers are held responsible for reducing the expenses in their store and the interest paid for the stock is the greatest expense.

The store managers are entitled to a bonus known as the EVA bonus payout when all of the KPAs in the store improve against the previous period. The capital charge levied against the store hinders any improvements and is detrimental to the size of the bonus. The store manager has to answer for the stock turns in the store. The higher the quantity of the stock against the sales turnover, the lower the stock turns.

**The Category Buyer's Perspective**

Although the category buyer orders the stock into the store and plans for the sales of these items, they are not held responsible for the levels of stock in the stores. There is a computer system that is used to monitor the sales of the products and each buyer uses a different system to determine if there is indeed a problem with overstocks.

In one buyer's category, if the sales are less than a 60% sell through, then there is an overstock problem. Another category buyer will set a benchmark that if there is 10% stock remaining then that is a successful advert. A bonus is available to the category buyers, though they are not measured against the amount of their stock in the stores and in the DCs.

**The Supplier's Perspective**

The supplier has no responsibility for the stock holdings of the stores though they will assist the stores to clear the overstocks. The problem with the stores having overstocks is that stock does

have expiry dates and after this date has passed, the supplier will have to uplift the stock. The suppliers that were contacted all responded that the sales after the promotion were lower than before the promotion as the stores had enough stock for a while and the stock that was in the DCs was sufficient to last a while.

The suppliers had all previously negotiated a specific quantity of the product to be ordered at the requested price of the category buyer. If this quantity was not ordered then the success of the promotion was reduced. The ultimate decision of the quantity of stock that Clicks will order is the responsibility of the category buyer.

### 4.3.8. The Measurement of the Success of the Promotion

**The Store Manager's Perspective**

The store managers do not have a clear indication of the success of the promotions other than the increase in the sales of the stocks and an increase in the turnover of the store, in comparison to the previous year's sales.

The sell through information of the products may be obtained through the back office computer. This allows the store manager to test the sell through of the sale though this method would not give an indication of how the products sold against a previous promotion. The final measurement of the success of promotions would be the BPR (Branch Performance Report), which compares the different sales history month on month.

**The Category Buyer's Perspective**

The category buyers measure the success of the promotion through the sell through of the products that are on promotion. The reduction of the price on the items reduces the profit margins. This means that the stock is sold at a lower margin than normal and there has to be more sales volume to make up the deficit. Jonathan Shifrin, in his interview, mentioned that the ultimate success of the promotion was to have more users of the product after the promotion but not at the loss of users for the other products. For the category buyers, reports are generated after each promotion. This same information was used to determine the success of the promotions in this research paper.

## The Supplier's Perspective

The suppliers measure the success of a promotion through a number of different methods and each supplier has their own method. Glaxosmithkline measure the success of the promotion through the volume of the products sold and the price that it was sold at. According to Sue Brewwin at Colgate, a computer software package known as *Computer Power* is used. This package shows the percentage growth the products have against the previous year's performance and works out incremental profits on the promotion. The account manager at Reckitts, Herman Rheerder, stated that they expected a five to one return. For every one Rand spent they expected a return of five Rand.

### 4.3.9.    The Supplier's Return on Investment

The supplier's return on investment is vested on the stock that is purchased by Clicks for the promotions. Glaxosmithkline will have worked out a figure prior to the ordering of the stock as to how profitable the adverts will be. If these sales are not realised then the return from the advert will not meet expectations.

Colgate Palmolive has a computer system called *Promotion Power*. They utilise this programme to measure the performance of the promotion. The computer programme shows the percentage volume growth against the previous years volume growth. The suppliers all reduce the price of the items on promotion in the same way Clicks does. The two organisations rely on sales volume to make the promotion a success.

Therefore, it is in the best interest of the suppliers to get as much stock into the stores as possible.

### 4.3.10.    The Actual Sales Increases of the Products

The category buyers determine the actual sales of the products through the computer programme's sell through analysis. These increments are used in determining the success of the promotion. It may be detrimental to the promotion if there is a complete sell out of the products. The items purchased for the sale are purchased at the special price but any existing stock on hand before the promotion, were purchased at a higher price and therefore sold at a loss or very minimum profit.

The sales history of the product is used to plan the following amount of stock that is ordered from the supplier. The history is used to decide whether the product is worth advertising. The important factor is that the different methods of advertising the products must be taken into account before the sales are used.

All of the category buyers are very careful not to base the promotional orders on different types of advertising due to a very different type of stock movement that results. A product that is advertised on the television will outsell any item that is advertised in the newspaper.

## 4.3.11. Inventory Left After the Sale

**The Store Manager's Perspective**

The stock left over is the responsibility of the store manager. They have to clear the old promotional items even though the prices may have increased after the advert. There are methods that are employed to attempt to clear these lines.

The store manager will call stores in the area to check if they require these lines. Then, if that is not successful, a list of lines is given to the SSL (Store Support Leader), who will check with SSLs from other areas to see if they require any of the products. The category buyers are seldom contacted for assistance and only one store manager admitted to using the category buyers to reduce stocks.

There is a noticeable lack of control for past promotional lines and no proper channels in place to conclusively deal with the leftover stock problems. This has, for a number of years, been highlighted as a problem. The one method of contacting the buyers is to phone the store help-line who assists the store with any stock issues that they have.

**The Category Buyer's Perspective**

The category buyers maintain that if the stock has a poor sell through then they will assist the stores to clear the stock. Methods that could be employed include maintaining a low price, asking for supplier assistance and moving the stock from store to store. The sell through analysis is monitored through the promotion and if the promotion is poor, further steps can be taken to rectify the situation. The problem, however, is that the report is only received a week after the sale has started and this makes it difficult to put measures in place that will aid the stores in time.

The store will seldom ask the buyers for assistance with most of the store managers stating that the only methods available to them to reduce the stock are to inter-branch the stocks to other stores and to hand overstock lists to the SSLs.

**The Supplier's Perspective**

The supplier finds that the next ordering cycle has small to zero ordering quantities. This is on top of poor initial ordering quantities if the products that are promoted were previously overstocked. It must be noted at this point that the stock in the distribution centres would have been ordered in at the previous promotion price.

### 4.3.12. The Costs of the Inventory that is Left

**The Store Manager's Perspective**

The cost of the stock that is left in the stores after any promotional activity, or from any problem area, is costed out in the form of an interest charge. This charge is termed the *capital charge*. In the past years, this figure has grown even though the interest charge rate itself has reduced. The cause for this is the increase in stock levels in the Clicks company.

The store manager bears the brunt of this charge as it falls under their KPAs in the store. They have to reduce the stock in their stores in order to increase their stock turns and to ensure the stores' profitability.

**The Category Buyer's Perspective**

Although they have a large stake in the movement of the stock out of the organisation, having too much stock sitting in the stores does not penalise the category buyers. The bonus scheme is not for the individual performance and there is no income statement that can be drafted to measure the individual performance.

The stock is a focus point of the category buyer and they are tasked with reducing stock levels after promotions.

### 4.3.13.    The Service Issues

**The Store Manager's Perspective**

When asked if there were any service issues that were created by the promotional process, the store managers had a number of points that created areas of concern. The first issue was that the prices of the items do not change to the advertised price at the time that the advert breaks. The stocks' prices had to be manually changed and a count taken of the products and kept until the official count sheet is received. This process is not very efficient and could lead to losses in the store.

The second issue was that the Club Card specials are not always activated. The *three-for-two* offers do not always go through automatically and this creates a problem for the customers at the till points. The counts of the products that were given away had to then be manually marked down, creating another area of concern as losses could occur.

The third issue is that when products are sold out, no extra orders can be placed. The service implication when the product is sold out is that it is not possible to have more stock available to meet the customer demand. The stock may be sitting in the incorrect stores and it is difficult to move the stock to stores that required it.

The last issue is that when normal lines are sold out it takes too long to get more stock in the store. This causes a high level of customer dissatisfaction in the stores.

### 4.4. Analysis of the Computer Data - Two Promotions

Full details of the data collected can be reviewed in appendices 4 through 6 at the end of this report.
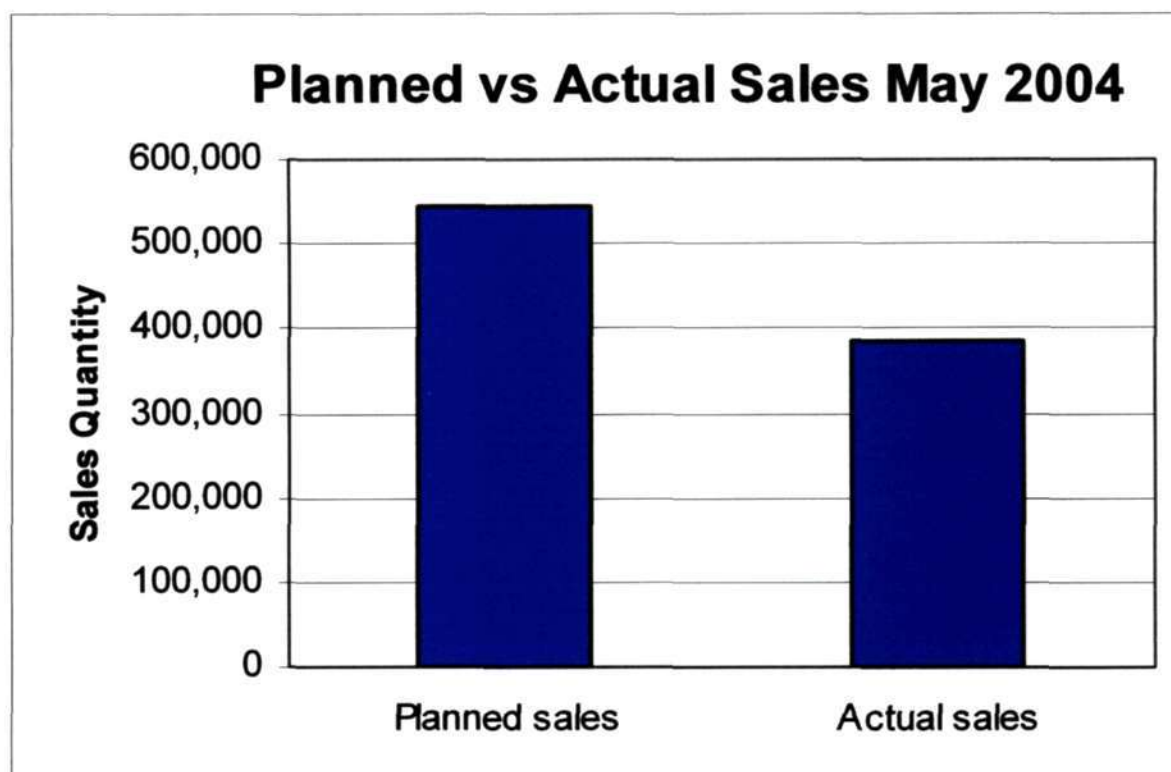
**Graph 5 : Planned vs Actual Sales for the *'Expect to Pay Less Promotion'* - May 2004**

Graph 5 depicts the Total Planned Sales versus the Actual Sales for the *'Expect to Pay Less'* advert that was run in May 2004.

From the data pulled from *Info House,* the computer software programme, it can be seen, from the complete promotions sales viewpoint, that these promotions were not too successful. The sales of the items promoted for May showed a sell through of 70%. The planned sales figure for May was 544,872 units but the actual sale was 303,442 units. This exceeds the 60% level that is used as a benchmark for a successful sell-through. The data presented in the graph are all of the planned sales for all of the commodities added together. The actual sales are depicted in the same manner. From this perspective, it can be assumed that the stock ordered did not cause overstocks for the stores, but did increase the flow of stocks.

**4.4.2.    Planned versus Actual Sales for the *'Expect to Pay Less Promotion'* - June 2004**

## Planned vs Actual Sales June 2004
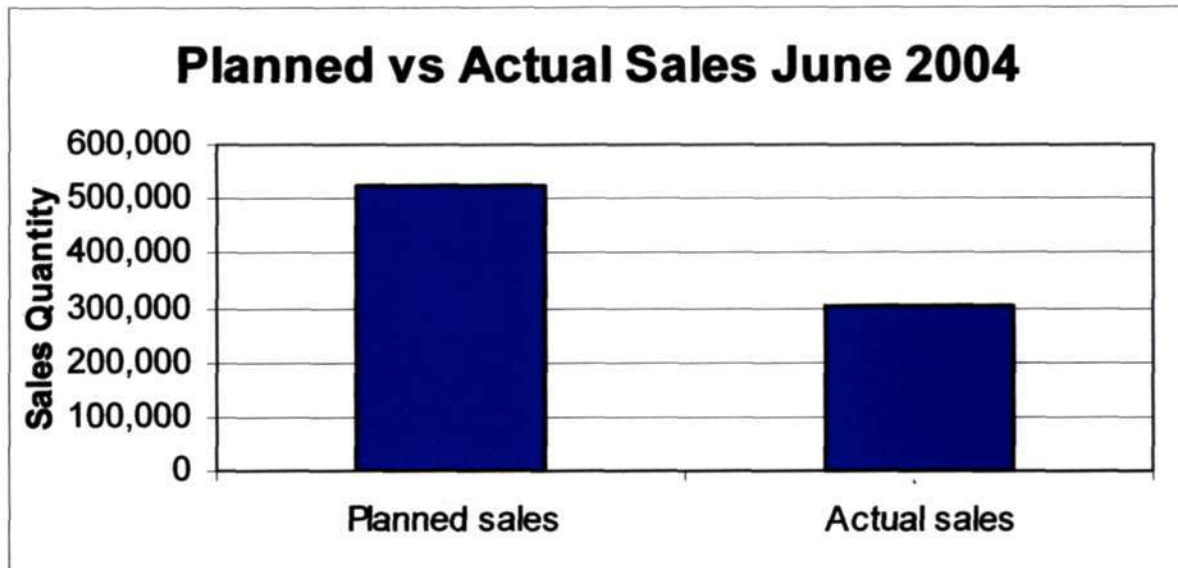


**Graph 6 : Planned vs Actual Sales for the *'Expect to Pay Less Promotion'* - June 2004**

Graph 6 depicts the Total Planned Sales versus the Actual Sales for the *'Expect to Pay Less'* advert that was run in June 2004.

The sales for the June promotion were not as high as the May promotion and a 57% sell through was obtained. 43% of the planned sales for this promotion was not achieved. The planned sales figure for this promotion was 524,641 units but the actual sales were only 303,442 units. In terms of the benchmark set, this promotion was not successful.

It must be remembered at this point that the planned sales figures were added up to arrive at this figure. The actual figures are added up in the same manner. This promotion, according to this data, had more overstocks caused through it than the *'Expect to Pay Less '* promotion in May.

**4.4.3.     Planned versus Actual Sales for the *'Expect to Pay Less'* - May 2004**
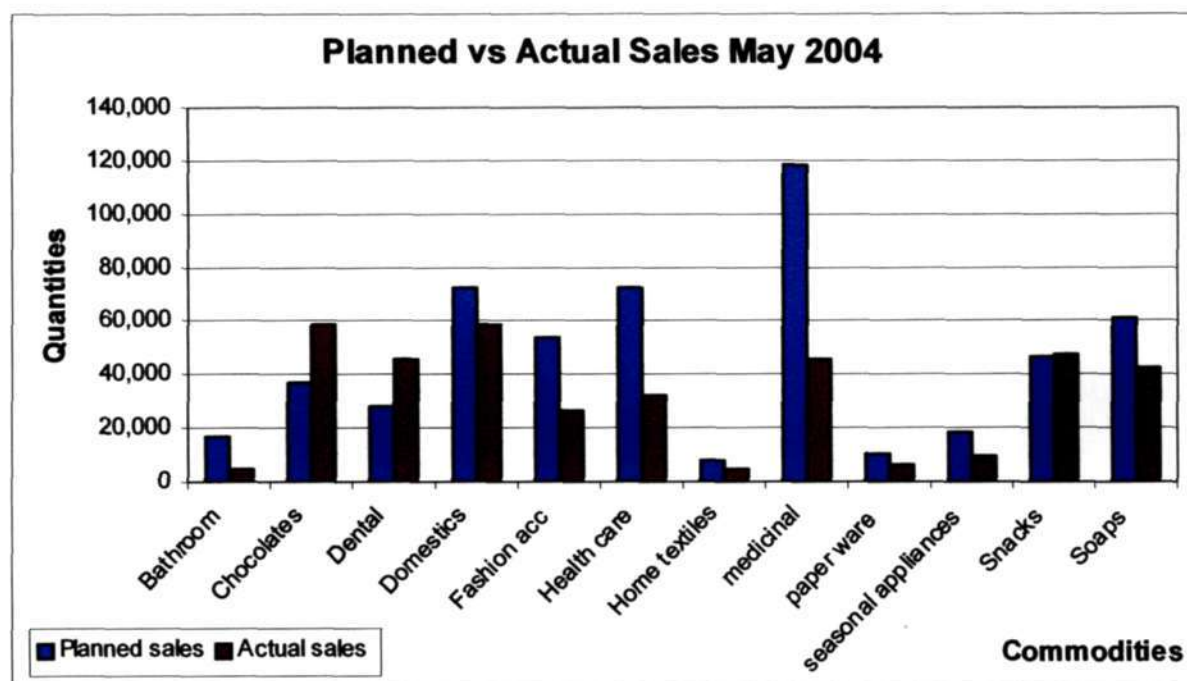


**Graph 7 : Planned vs Actual Sales for the *'Expect to Pay Less Promotion'* - May 2004**

| Product Type | Planned Sales | Actual Sales | % Increase |
|---|---|---|---|
| Bathroom | 16,500 | 5,033 | 31% |
| Chocolates | 37,325 | 58,957 | 158% |
| Dental | 28,000 | 46,264 | 165% |
| Domestics | 72,600 | 58,720 | 81% |
| Fashion Accessories | 54,100 | 26,603 | 49% |
| Health Care | 72,668 | 32,308 | 44% |
| Home Textiles | 8,000 | 4,480 | 56% |
| Medicinal | 118,299 | 46,065 | 39% |
| Paper Ware | 10,500 | 6,644 | 63% |
| Seasonal Appliances | 18,800 | 9,553 | 51% |
| Snacks | 46,580 | 47,324 | 102% |
| Soaps | 61,500 | 42,965 | 70% |
| **TOTAL** | **544,872** | **384,916** | |

**Table 3 : Planned vs Actual Sales for the *'Expect to Pay Less Promotion'* - May 2004**

Graph 7 charts the Planned Sales versus the Actual Sales and depicts the different categories that were advertised during the two promotions. In the graph of the May promotion the sales, the medicinal department is the worst of all the sales in the graph. A total of a 38% sell through was achieved on all lines that were advertised. 62% of the stock that was ordered for the promotion did not sell and would be left to sell out at the normal price level.

The chocolate's category sold 157% against the planned sales level. This leads to a greater loss to the Clicks' brand as stock was sold at a lower margin than it was planned to be. The outcome is that the stores profitability during this promotion would be reduced.

The only commodity to sell close to plan was the snack's department. The planned sales for this were 46,580 units and it sold 47,324 units. The domestic's category performed very well with a sell through of 81%. From the data it can be determined that this promotion was not a success. 50% of the categories did not achieve the benchmark 60% sell through mark. Out of the twelve (12) categories that were promoted six (6) under achieved. Three (3) categories exceeded their planned sales and three (3) categories performed to the desired standard of sales.

### 4.4.4. Planned versus Actual Sales for the *'Expect to Pay Less'* - June 2004
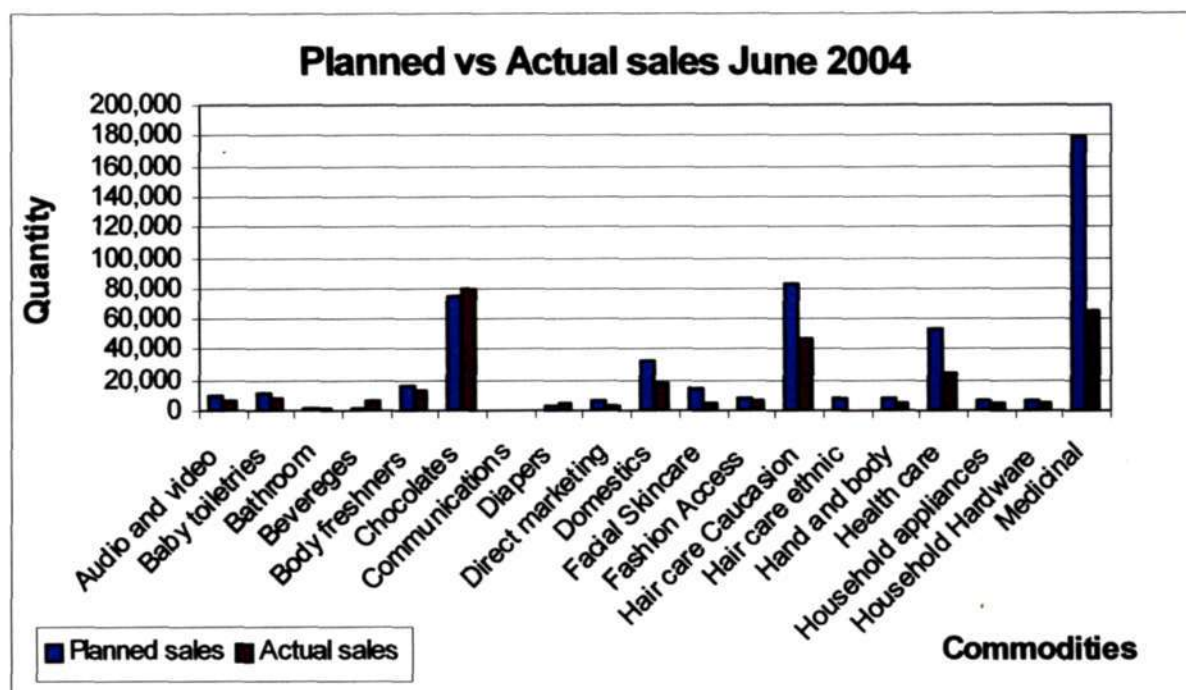


**Graph 8 : Planned vs Actual Sales for the *'Expect to Pay Less Promotion'* - June 2004**

| Product Type | Planned Sales | Actual Sales | % Achieved |
|---|---|---|---|
| Audio and Video | 9,600 | 6,677 | 70% |
| Baby Toiletries | 12,100 | 7,648 | 63% |
| Bathroom | 1,000 | 934 | 93% |
| Beverages | 2,000 | 6,241 | 312% |
| Body Fresheners | 16,051 | 12,650 | 79% |
| Chocolates | 74,860 | 79,071 | 106% |
| Communications | 600 | 606 | 101% |
| Diapers | 3,600 | 4,291 | 119% |
| Direct Marketing | 6,000 | 3,538 | 59% |
| Domestics | 31,900 | 17,432 | 55% |
| Facial Skincare | 15,400 | 4,337 | 28% |
| Fashion Access | 8,687 | 7,239 | 83% |
| Hair Care Caucasian | 83,024 | 47,875 | 58% |
| Hair Care Ethnic | 7,500 | 570 | 8% |
| Hand and Body | 7,500 | 5,676 | 76% |
| Health Care | 53,000 | 24,097 | 45% |
| Household Appliances | 5,900 | 4,420 | 75% |
| Household Hardware | 7,300 | 5,394 | 74% |
| Medicinal | 178,619 | 64,746 | 36% |
| **TOTAL** | **524,641** | **303,442** | |

**Table 4 : Planned vs Actual Sales for the *'Expect to Pay Less Promotion'* - June 2004**

Graph 8 charts the different commodities which were advertised in the *'Expect to Pay Less'* promotion that was run in June 2004.

In the June promotion, the ethnic commodity was the worst in terms of planned sales versus actual sales. The plan was to sell 7500 units and only 570 units were sold. This equates to a 7.6% sell through. The communications commodity was closest to plan at a 101% of planned sales, though there was an oversell in this department. Other areas to oversell are the chocolates, beverages, and diaper categories at 105%, 312% and 119%. The bathroom department had a 93% sell through of the products, though the amount of stock was fairly small at 1000 units planned to sell and it achieved a sell through of 934 units.

Of all the categories that were promoted, eight (8 ) achieved sales in excess of the benchmark 60%. They made up 42% of the categories that were advertised. Seven (7) categories achieved sales of less than 60% and they made up 36% of the advertised categories. There were four (4) categories that sold in excess of their planned sales and these made up the remaining 21% of the advertised categories. From these figures the promotion was not as successful as it should have been. If one was to add those categories that achieved more than 60% of planned sales to those that achieved more than 100% of planned sales then the promotion would be a success as then 63% of the categories were over the 60% bench mark.

### 4.4.5. Stock in Store versus Sales for the *Expect to Pay Less Promotion* - May 2004
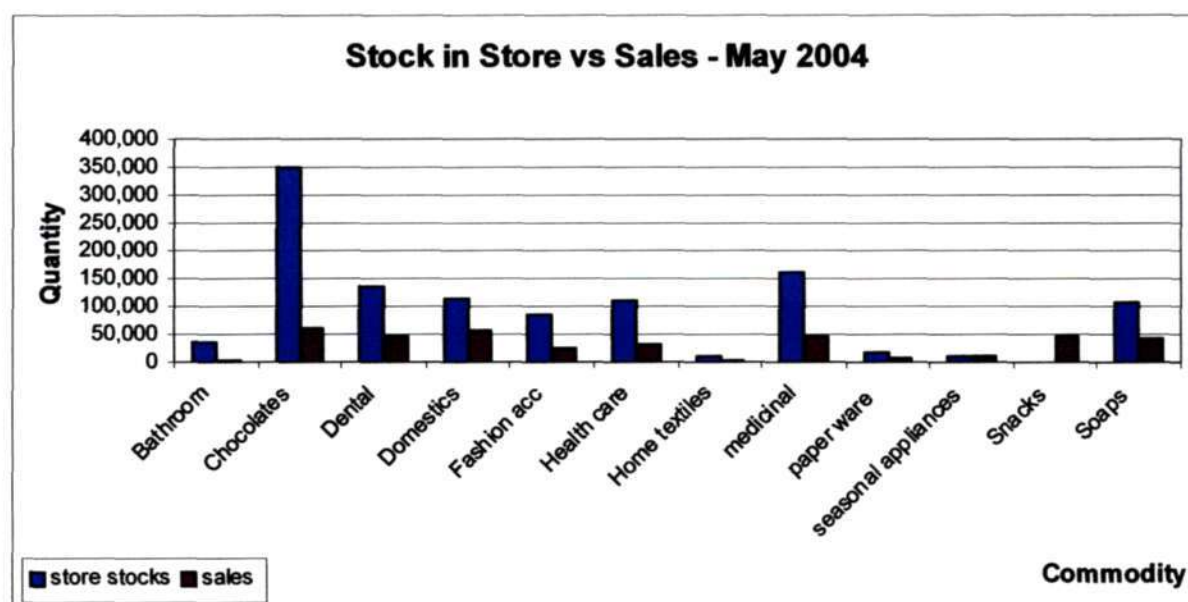


**Graph 9 : Stock in Store vs Actual Sales for the *'Expect to Pay Less Promotion'* - May 2004**

| Product Type | Store Stocks | Sales | % Sales |
|---|---|---|---|
| Bathroom | 36,488 | 5,033 | 14% |
| Chocolates | 350,317 | 58,957 | 17% |
| Dental | 134,559 | 46,264 | 34% |
| Domestics | 113,335 | 58,720 | 52% |
| Fashion Accessories | 86,200 | 26,603 | 31% |
| Health Care | 109,583 | 32,308 | 29% |
| Home Textiles | 12,133 | 4,480 | 37% |
| Medicinal | 159,388 | 46,065 | 29% |
| Paper Ware | 17,264 | 6,644 | 38% |
| Seasonal Appliances | 11,046 | 9,553 | 86% |
| Snacks | 0 | 47,324 | n/a |
| Soaps | 108,784 | 42,965 | 39% |
| **TOTAL** | **1,139,097** | **384,916** | |

Table 5 : Stock in Store vs Actual Sales for the *'Expect to Pay Less Promotion'* - May 2004

The number of products in the store that were available during the promotion mirrors the same findings as those from the total number of products that were available during the promotion. It does show a slightly better sell through than was shown by the total stocks. Bathroom showed sales of 13%, which is a slightly better figure than 8,75%. The other figures have similar sales percentage improvements. These figures do illustrate the fact that the stores do have substantially too much stock in comparison to the sales for the advert. From the tables it is interesting to see the average sales against the promotional sales. The increase in the rate of sales is phenomenal with the smallest increase in sales at 212% over the average sales figure. The greatest is a 900% increase.

### 4.4.6. Stock in Store versus Sales for the *'Expect to Pay Less Promotion'* - June 2004
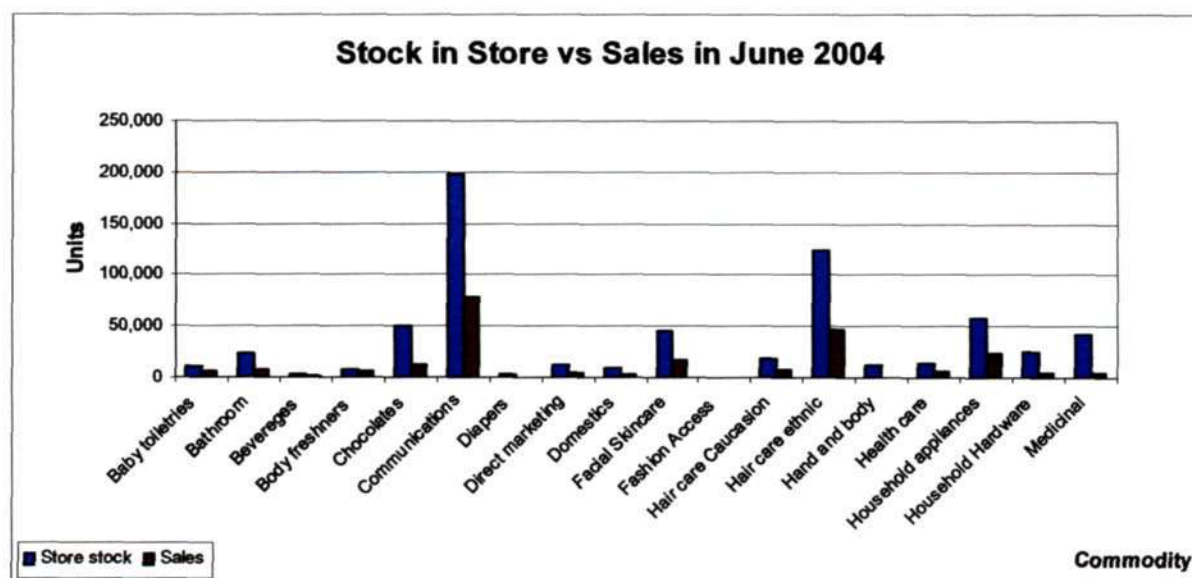


Graph 10 : Stock in Store vs Actual Sales for the *'Expect to Pay Less Promotion'* - June 2004

| Product Type | Store Stock | Sales | % Sales |
|---|---|---|---|
| Audio and Video | 11,646 | 6,677 | 57% |
| Baby Toiletries | 23,341 | 7,648 | 33% |
| Bathroom | 2,988 | 934 | 31% |
| Beverages | 7,216 | 6,241 | 86% |
| Body Fresheners | 50,570 | 12,650 | 25% |
| Chocolates | 198,640 | 79,071 | 40% |
| Communications | 3,416 | 606 | 18% |
| Diapers | 11,808 | 4,291 | 36% |
| Direct Marketing | 8,841 | 3,538 | 40% |
| Domestics | 46,354 | 17,432 | 38% |
| Facial Skincare | | | n/a |
| Fashion Access | 19,222 | 7,239 | 38% |
| Hair Care Caucasian | 123,758 | 47,875 | 39% |
| Hair Care Ethnic | 12,428 | 570 | 5% |
| Hand and Body | 13,813 | 5,676 | 41% |
| Health Care | 57,432 | 24,097 | 42% |
| Household Appliances | 25,426 | 4,420 | 17% |
| Household Hardware | 42,282 | 5,394 | 13% |
| Medicinal | 141,776 | 64,746 | 46% |
| **TOTAL** | **800,957** | **299,105** | |

**Table 6 : Stock in Store vs Actual Sales for the *'Expect to Pay Less Promotion'* - June 2004**

The June promotion sales improved against the May figure. The best-selling category is the beverage category with an 86% sell through. The worst selling category is the ethnic hair care category with a total of 12,428 units in the stores and yet the sales were only 570 units, which equates to a sell through of 5%. Household appliances sold only 5394 units out of 42,282 units over the promotional period giving a total sell through of 13%. Household appliances sold 17%

### 4.4.7. The Stock Movement of Apple Cider Vinegar
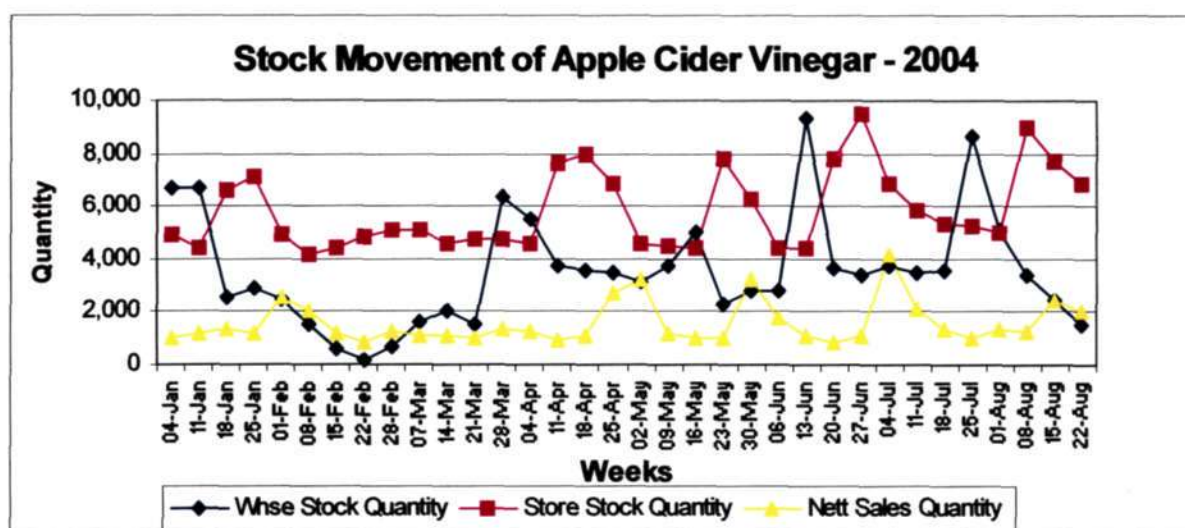


**Graph 11 : The Stock Movement of Apple Cider Vinegar**

The stock movement of Apple Cider Vinegar is erratic. The stock is ordered in and ten thousand units are in the stores but the sales generated are less than four thousand units. The stores appear to have just reduced the stock when more is sent for another advert. The week's cover graph is very erratic. Though the stock does not exceed the eight-week level, it is still not an ideal stock movement.

The sales of the line remain very constant over the year, the promotional periods can be easily seen and the sales move down to the normal level almost straight after the promotion has finished and the price put back to the normal price.

The graph clearly illustrates the great fluctuations in the stock orders and receipts but the sales of the product are not as erratic as the orders placed for the promotions. The data that was used for this graph is the stock holding and the sales throughout the Clicks' stores in the country.

### 4.4.8. The Week's Stock Holding of Apple Cider Vinegar
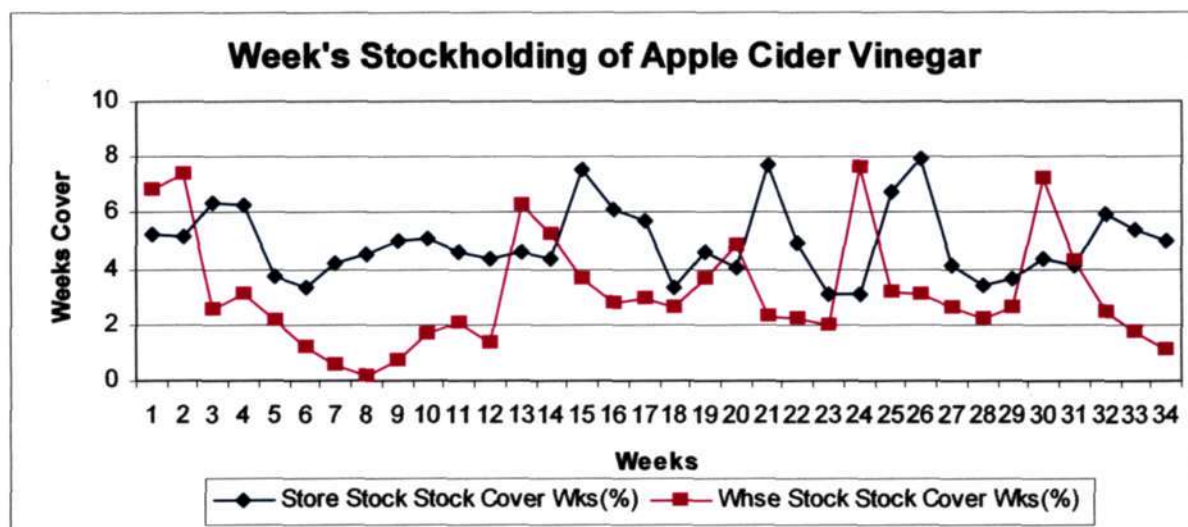


**Graph 12 : The Week's Stock Holding of Apple Cider Vinegar**

Graph 12 illustrates the stores' and the distribution centres' stock cover. The promotional orders are evident with the higher stock holdings over the year. The graph highlights the fact that specific items are advertised throughout the year. It was *Lee Hau (2003: p4)* who stated that products which are advertised a number of times through the year, causes the consumer to stock up on the items. *Reddy, R (2001: p3)* pointed out that this practise of promotion where the price was greatly reduced caused distress to the supply chain.

**4.4.9.  The Sales and Stock Movement of Nice and Easy Hair Colours**



**Nice and Easy Stock Movement (2004)**

Legend: Store Stock Quantity — Whse Stock Quantity — Nett Sales Quantity
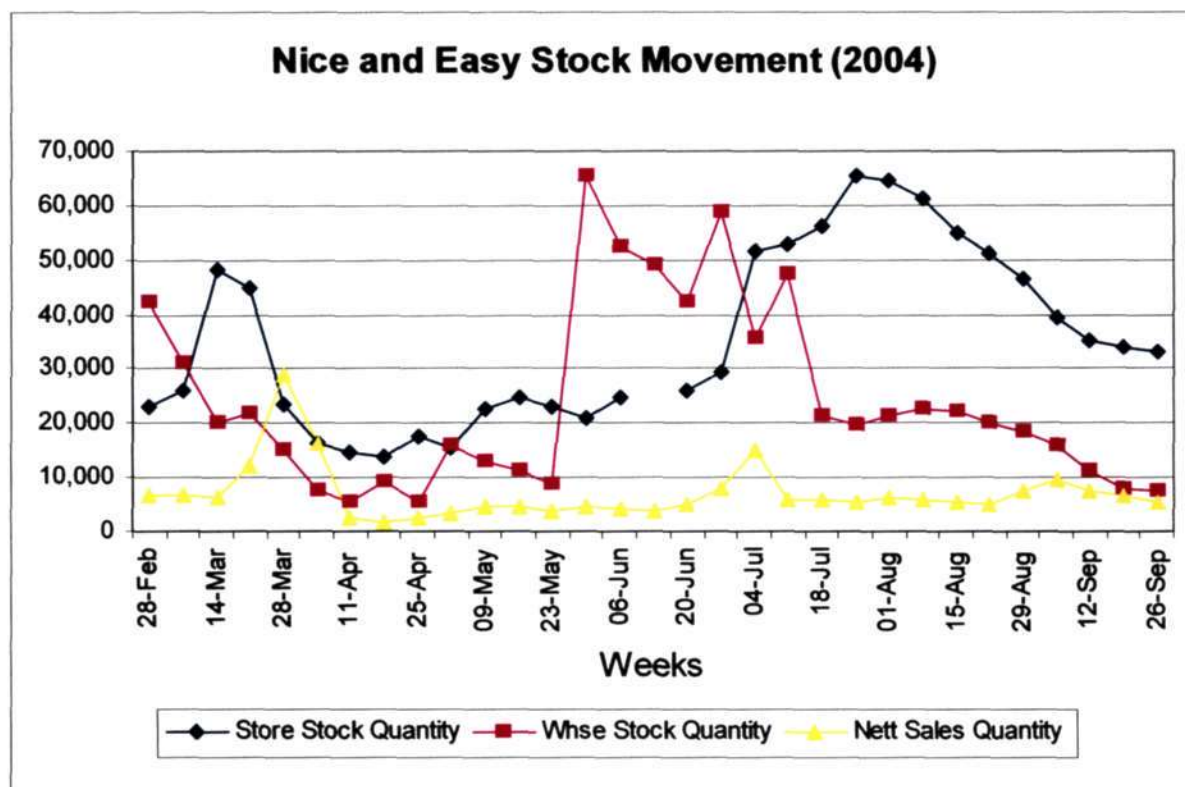
**Graph 13 : The Sales and Stock Movement of Nice and Easy Hair Colours**

Graph 13 illustrates the movement of all the Nice and Easy hair colours through the Clicks' stores and distribution centres.  There were two promotions during the year, the first was in February and the second occurred in June.  The stock movement during the promotion was poor with the stock only moving back to the pre promotion figure after September, which was two months after the advert.  The stock was initially ordered for the promotion in May and the Clicks' supply chain had to hold the stock for four months before the original stock levels were achieved.

**4.4.10. The Week's Stock Holding of Nice and Easy Hair Colours**

Graph 14 reinforces the stock movement graph, though it does illustrate that the week's cover is well over the three weeks overstocks level.  It illustrates the slow sales of graph 13 and the time that it took to sell the stock that was ordered.

**Week's Stock Holding of Nice and Easy Hair Colours (2004)**
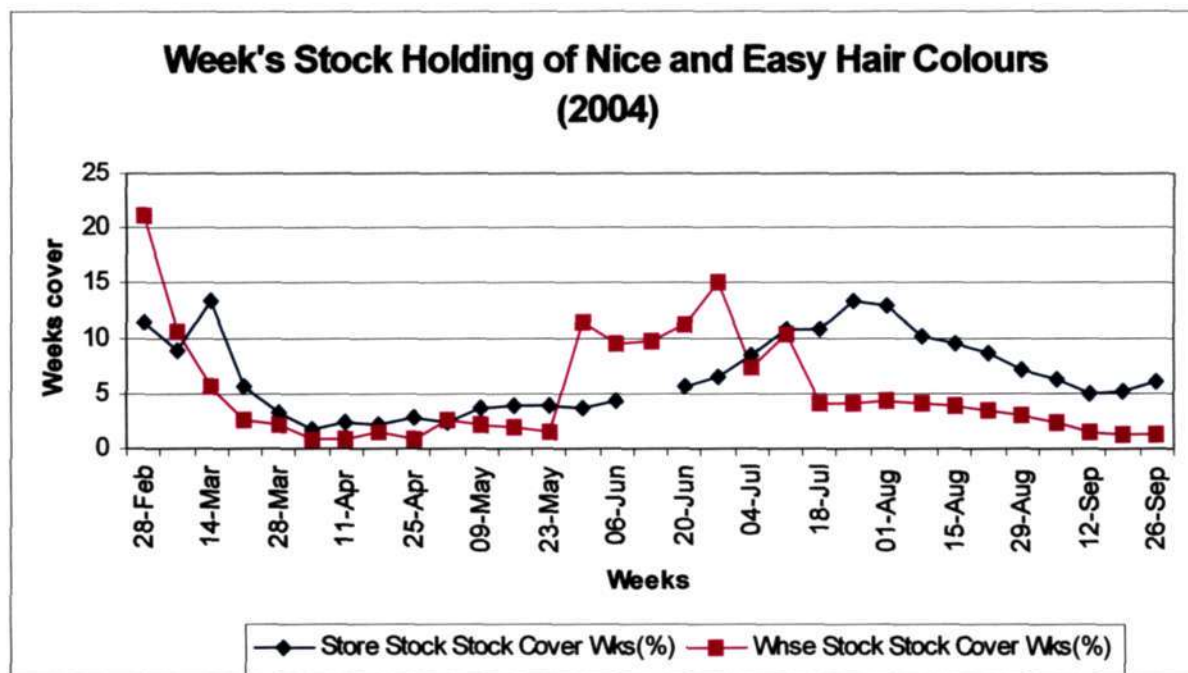
**Graph 14 : The Week's Stock Holding of Nice and Easy Hair Colours in Clicks' Stores and DCs**

The graph shows the sales and stock movement for the Nice and Easy hair colours in the stores and distribution centres. As depicted, the sales movement is very steady and yet the stock movement is very erratic. The stock movement does not mirror the sales. The stores have to sit with too much stock for far too long after the advert. The level of stock holding was only reduced in the middle of September, whilst the stock was received in the distribution centre in the first week in June. The stock was in the Clicks' supply chain for four months before it went back to the post promotion level.

This concludes the research. The following chapter analyses the results of the research with recommendations.

# 5. DISCUSSIONS AND RECOMMENDATIONS

## 5.1. Introductory Remarks

This chapter reviews and debates the research questions and the resulting themes with reference to the literature review in Chapter Two and the results obtained from Chapter Four. The main theme of the research is to determine the impact of the marketing activities on the supply chain of Clicks.

This chapter debates this topic to arrive at a plausible conclusion to the question.

Even with the modern technology available, there remains an important issue with the supply chain of a retail outlet; the data that computer systems use to replenish stocks in the stores, are of dubious quality. The data being the stock balances in the stores and the distribution centres together with the sales data from the stores. The data that was used from the computer could be questioned, but as this information is used for the actual decision making, it is held to be of an acceptable standard for this research.

The literature review also found that the stock balance in other retail chains was questionable and similar to the pattern found in Clicks; *Raman (2001: p1)*. The same reasons such as incorrect scanning, counting, inputting of information and general mishandling of the product would be the cause.

## 5.2. The Lessons that were Learned from the Study

This paper set out to ascertain what effect the marketing department has on the supply chain of a retail outlet. This research has shown that the promotional activity used by the marketing department has a direct impact on the movement of stock throughout the Clicks organisation. The research has further shown that the Bullwhip Effect that is displayed in supply chains, from retailers to manufacturers, occurs in the movement of stock within the Clicks organisation. The main reason for the Bullwhip Effect in the Clicks chain is the use of price reductions in the promotion process, which stimulates additional demand for the advertised products.

The results of the research found that the implementations of the strategies employed by the category buyers have an impact both at the store level and at the distribution centres. The impact felt in the stores affected their return on investment through the interest charges levied against the volume of stock kept in the store and not sold in that particular month.

**Recommendations:**

✓ To include the store managers in the stock quantity ordering.

✓ To improve top-down communication to store managers, so that the store managers understand the reasons for the strategies that they have to implement.

✓ Concentrate on advertising the generic Clicks' brand rather than price reduced products.

✓ Advertise products that are not KVIs to build up their market share.

✓ Return excess products to the DCs after the promotions.

✓ Create a staff position to control the stocks, especially the overstocks and redistribution of such stocks.

✓ Use every day low prices rather than reduced pricing specials.

✓ Stagger the stock delivery to the stores (i.e. deliver with more than one drop).

✓ Allow the suppliers access to the sales and stock holding data.

## 5.3. The Strategies and Objectives

This research found that the category buyers conduct most of the marketing activities in the Nu Clicks organisation. The category buyers lead the main drive of the strategies for the marketing department. These strategies have to be aligned with the Clicks' brand strategy and have to be approved by the merchandise directors. The store managers only strategy is to achieve the KPAs of their respective stores. The store managers are the implementers of the strategies, more so than any other group in the organisation. The store managers will implement the category buyers' strategies and the strategies of other departments. The store managers fall in the operational aspects of the business.

This report found that the strategies of the two different functions conflict in one issue and that is the stock level in the stores. *Walker, et al (2003: pg 7)* pointed out that the different functions within the business had different strategies and the only way to integrate the strategies is to develop cross functional teams.

The category buyers are tasked to promote specific products at different times of the year. The category buyers use the promotions to drive their strategies. The report found that by the category buyer advertising their products, they have to reduce the profit margins, which necessitates the sales volumes of the product being escalated sufficiently to cover this loss of margins. Trade discounts, price reductions, coupons and other promotional methods are used to increase demand for the products; *Lummus, Duclos and Vokurka (2003: p318)*. Due to the competition in the marketplace, manufacturers utilise promotions to maintain their market share; *Raju, et al (1990)*.

The suppliers of the product have to ensure that the promotion is a success from their perspective, which requires that extra stock has to be purchased for the promotion. Just as the buyer uses stock movement and volumes to establish the success of the promotion, so do the suppliers.

As ascertained in the research, the suppliers reduce the costs of the items to arrive at the particular selling price of the promotion. As with the category buyer, the supplier then has to rely on sales volumes for profitability of the promotion.

It is important to note that the suppliers all have their own strategies in place. They will prefer certain lines to be promoted, rather than others, as they are attempting to build the market share of the product. The main purpose for the suppliers to advertise products is to have an increase in the short-term profitability and at the same time increase the long-term returns. Strategies of all strategic business units (SBUs) consist of five different components: scope, goals and objectives, resource deployments, a basis for achieving a sustainable competitive edge, and synergy; *Walker, et al (2003: p70)*.

The objective of the category buyers is to achieve the profit and sales margins, gross profit margins and sales of the products. Though they are conscious of overstocks in the stores, their performance is not measured against stock holdings of their products in the organisation.

The store managers' objectives are to improve on the performance of the store in four key aspects: shrinkage, sales, expenses and stock turns. All of the managers that were interviewed were held responsible for the level of stock that was kept in the store. 88% of the store managers had the opinion that the promotions created overstocks for the stores. It was emphasized that the overstocks were created more in the lifestyle's department than in the FMCG department. Of the store managers that were questioned regarding the level of stock in their stores, 24% stated that they were reducing the stock levels and 76% stated that their stock holding was growing. One

particular manager stated that his stock growth exceeded the one million Rand level when measured against the previous year. *Hugo and van Rooyen (1992: p377)* stated that the art of retailing is to make available the right goods, at the right price, at the right time and in the right quantities.

The main issue is that in the organisation there are no measurements set against all of the role players in the order of and selling of stock. The measurements are not consistent against the category buyers, unlike the store managers. The category buyers are as responsible for the stock in the stores as the store managers, due to the fact that they order large volumes of stock for promotions. With this in mind, it should not just be the responsibility of the store managers to reduce the stock within the stores, but a concerted team by all relevant role players.

**Recommendations:**

The use of promotions in the retail environment is the ultimate concern of this research. The method that Wal-Mart uses, is to have every day low prices and to advertise the store as a brand instead of the product. *Hau Lee (1997: p557)* recommended every day low pricing to defeat the Bullwhip Effect, caused by the reduction of prices, in the supply chain. The pricing and promotion policies of organisations cause distress in the supply chains; *Reddy, R (2001: p3)*. The reducing of the price on items to clear out excessive stock holding and price markdowns not only train customers to wait for these events but compound the overstock problem through causing the overreaction of the supply chain due to the sudden stock shortage situation.

In the South African market there are retail chains such as Woolworths and Spar that advertise the actual stores. Promotions of the store should be reserved for inside the store through extra advertising material to highlight that although the price of the product may be reduced, the product is always at a price that is better than the competition.

By changing the way that business is conducted, you will have a more consistent stock movement through the supply chain and this will eliminate the Bullwhip Effect. By reducing the flow of stock to the stores you will assist the managers to achieve the KPA of the store. By not reducing the price but keeping it at a constant level will assist the category buyers to maintain their targets.

The final recommendation for the strategies employed by the two functions, category buyers and managers, is to have more participation and communication between these functions. The store managers who implement the strategies are only given a list of instructions to follow without any

understanding of the reasons behind the task. The buyers need to meet with the store managers on a regular basis to both give and get understanding of the role the promotions play in achieving the organisation's goals.

## 5.4. The Promotions Process

The category buyers acknowledge that the promotional process does create overstocks in the stores. *Sabath, Autry and Daugherty (2001 : p1)* pointed out the difficulty of deciding the quantity of product required and where it is required.

However, they also state that the promotional process is vital to the survival of the Clicks retail outlet, as the competition in the FMCG market is very strong. Their main concern is that the suppliers give the Clicks organisation money to promote their products and it is with this in mind that the category buyers are able to advertise the Clicks organisation. If the Clicks organisation does not use this money then other retailers will and they will advertise the products and pull the customers away from Clicks. The lines that are advertised are usually KVI lines.

*Huang, et al (2004 : p21)* stated that the more efficient that the supplier chain was, the more of a competitive edge it created. This contradicts the promotional concept supported by the category buyers, as promotions undermine the supply chain efficiency. *Lummus, et al (2003: p320)* identify the fact that though the marketing activity may have little long term effect on the demand by consumers, it has a massive impact on the supply chain. The pricing and promotion policies of organisations cause distress in the supply chains; *Reddy, R (2001: p3)*.

The report found that the two sales periods studied (May 2004 and June 2004) were different in the sales pattern that they achieved. The May promotion had a sell through of 70% and the June promotion a 57% sell through. When the different commodities were analysed to find which items did not sell it was found that 50% of the commodities advertised did not meet the required sell through standard. In the June promotion, 42% did not meet the required sell through standard.

33% of the lines advertised in May 2004 did not achieve a sell through that exceeded 50% and in June this figure was 21%. These adverts created overstocks for the stores in these commodities.

**Recommendations:**

The main recommendation is to restrict the advertising of products in the media and to advertise lines that are not KVI lines. This will aid the suppliers to build up other products. *Hau Lee (1997 : p557)* recommends the use of everyday low prices and the promotion of regular priced items.

For the lines that are advertised, there has to be a plan in place to reduce the stock in the stores where overstock exist. The most unpopular method, but the most productive method, is to return the stock to the distribution centre and to have the stock (redistributed) sent to stores that require it.

## 5.5.    Factors Used to Push Stock into Stores

The category buyers use information from previous sales to plan for future promotions. This information is used to decide the quantities of the product that will be needed for the promotion to be a success. Though this is compared to promotions that were similar, there is still a view from the category buyers that the sales performances of the products are never the same. Only television adverts are thought of for being the same from advert to advert. The store managers do not have access to the quantities of stock that they are to receive for the promotion, until they actually receive the stock. The stock balances are used to plan how much stock is to be sent to the stores. However, it has been established that there are too many inconsistencies with the counts. The counts are not accurate according to the store managers and this leads to incorrect orders for the store.

The presence of inaccurate data agrees with the statement of *Ramon (2001 : p1)* in that the stock data that is available to base orders on and to have an accurate stock picture is flawed. *Jennifer Baljko* also quoted *Hau Lee (1999 : p2)* in saying that the evaluation of the correct data to send to the suppliers would aid in reducing the Bullwhip effect.

**Recommendations:**

*Lummus et al (2003: p322)* stated that consumer supply chains can benefit from using manager's judgement to override statistical forecasting methods that cannot count for random deals and promotions.

It is recommended that the quantities of the products to be sent to the stores are communicated to the store managers prior to that stock arriving at the stores. This information must be given to the store manager in time for the stock to be checked and the quantities reduced or increased before receipt. There should be a count sheet attached to the quantity of stock that will be received so that the stock balances can be updated. This will ensure that the information used for future promotions are more accurate.

The next recommendation is that the distribution of the products should be done in a number of different drops. Where, for example, all of the distribution is done at one time it should be spread over a number of drops. This will enable the person doing the distribution to check on the rate of sale during the promotion and enable them to send more stocks to the stores that require it and less to those that do not.

This will work only where the stock issues of the item are from the DCs, as it will not be possible to have numerous deliveries from the suppliers. With the extra drops, the order timing with JDA must be speeded up so that when the stores sell out of the lines advertised, they will be replenished before there are serious customer service complaints.

## 5.6.    Information Channels

There is an acknowledgement that although there are too few category buyers to attend to all of the queries, there should be open communication between the two functions. All of the store managers were of the opinion that the buyers paid insufficient visits to the stores. At this moment the stores do not communicate directly with the category buyers. The category buyers do have exit strategies that they will use to reduce the stock in the stores and all of the buyers interviewed stated that, if requested, they would assist the stores with the reduction of left over stocks.

There was however, a comment that where the product was purchased through the POMS department into the distribution centres, it was more difficult to assist the stores. The category buyers normally will advertise KVI lines, which according to them, will, even if there is too much stock left after the promotion, sell out without any assistance. The problem was associated more with remaining stock that is not a KVI line or was a special banded pack.

**Recommendations:**

A staff position should be created in each of the different divisions in Clicks that deals specifically with the overstocks that are created by the promotional activity. This will give the stores a channel that they can use to send through any lines that are overstocks. By having a dedicated staff position looking after a particular division, rather than a region, will allow the stock to be moved into more stores by moving stock from overstocked stores. It allows the person in charge of the stock to identify stores that have a more serious stock problem and to assist these stores in solving their overstock problem.

Another recommendation is to have the two different functions meet on a regular basis to discuss the problems experienced. It is advisable that the two groups spend time in each other's working environment to gain an understanding of the problems faced. This will aid in the understanding of the difficulties experienced.

In addition to improved communication amongst internal stakeholders, the suppliers need to be given access to all relevant information with regard to the sales and stock holdings of promotional products. This will reduce supplier frustrations when the orders that come through to the suppliers are not the quantities negotiated with the category buyers. The quantity ordered differs from the quantity negotiated due to current stock holdings in the stores and distribution centres.

### 5.7. Overstock Assistance

The fact that there is no return logistics in place at Clicks for the lines that are held in the three DCs around the country, means that there is very little margin for error in stock movement. The suppliers will, in specific instances, assist the store to remove the stock but as the store managers have discovered, the suppliers often state that the order was placed from Clicks' Head Office and they are unable to help. The suppliers will assist with reducing the cost of the item by writing off some of the products or supplying coupons and promoters to sell the products.

A concern to the managers is that there is no real channel in place to assist the stores with stock that is left after promotions. Even if they can move stock amongst the stores in the region, they find that the stock items that they are overstocked with, are the same line that is sitting in all of the other stores.

This fact is especially pertinent with the lifestyle products, which have a considerably smaller turnover rate. The stores can utilise their store support leader to assist with overstocks but they all found that this does not really work.

**Recommendations:**

The distribution centre should remove any overstocks that the stores are left with. The removal of overstock costs from the supply chain would aid in the creation of a competitive edge *Huang, et al (2001 : p21)*. This stock should be returned so that it can be delivered to the stores that may require it. The return of stock will prevent more stock being ordered into the organisation and reduce the costs of stock throughout the chain. The individual who is tasked with the monitoring of the stock in the stores will be tasked with organising the stock to be returned to the distribution centre to prevent stock flow problems occurring.

### 5.8. Pricing of the Advertised Lines

The price of the product that is advertised is reduced at a store level through manually counting the products and entering these counts into the computer to account for the loss in margin of the products. The main concern is that this process may create shrinkage in the stores. Incorrect counts entered, or stock not counted, could create a high shrinkage in the stores.

One concern from the stores is that the price of the items and the loading of the Club Card special offers are not received in time for the advert. This creates bad service to the customers and at the same time reduces the professional image of the organisation.

**Recommendations:**

It main recommendation is that the stocks are held at a price that is sufficiently lower than the competitor's price. This will allow the product to be advertised but the product will not have to be reduced in price for the promotion. This will prevent the stock from having to be counted. The promotional deals that are for the Club Card specials should be able to be activated at a store level, though these promotions should be limited.

## 5.9. Stock Movement

The computer data that was used to show the stock movements of the lines that were advertised highlighted the fact that large volumes of stock are bought in anticipation for the expected increase in demand. *Goran Svensson (2001 : p104)* found that the rational decision making in the company's inventory management is, in part, based upon the postponement or speculation of business activities and causes the Bullwhip effect.

The graphs highlight the fact that stock is first purchased in to the distribution centres and then sent out to the stores. The stock levels are at the highest points prior to the promotion and reduced after the promotion. The graphs illustrate the fact that the sales figures of the item promoted did increase but only for the sale period and then the sales figures returned to their previous levels.

This stock movement strongly associates with the research done previously. The levels of stock that is purchased in, exceeds the stock sales of some items and is not sufficient for some of the other lines.

## Recommendations:

Here, the recommendation is to order the required stock with more than one main drop, i.e. stagger the stock issues. Half of the total stock needed to be delivered must be sent out to the stores before the advert. The other half should be sent during the promotion, but only if the sales are going according to plan. If the sales are below the planned sales, this order could be cancelled. This will aid those stores who sell out quickly as they can then receive additional stock during the promotion and not when the promotion is over. The stores that struggle to sell the stock will not receive extra replenishment.

*Lummus et al (2001: p320)* suggest that supply chain partners can improve supply chain flexibility by adding inventory cushions or increase capacity to meet peak demand caused by short term marketing promotions.

## 5.10. The Future at Clicks

As a footnote, Nu Clicks is presently installing an ERP 11 system, which is viewed as the tool that will reduce the stocks in the store further than the present system. The technology that is currently employed in Clicks should have reduced the stock levels as it was felt at the time that the automatic ordering systems were more accurate than the manual systems.

This new system will enable Clicks to conduct B2B (back to back ) transactions with the stakeholders and allow the suppliers to have more information, quicker than is possible at this moment in time. There is a pilot in place to conduct a perpetual inventory system. This system will remove the responsibility of the stock counts for price changes from the individuals at a store level. However, the price change system will move over to the stock balances within the stores' current system.

## 5.11. Concluding Remarks

This chapter has debated the findings of Chapter Four and has established the key problem areas associated with the promotions activities. Chapter Six concludes this dissertation.

# 6. FINAL CONCLUSION

Having investigated the impact that the marketing department has, through the promotional activities, on the inventory management and stock levels of the Clicks' retail chain, this study revealed that the promotional process did create a movement of the stock through the Clicks' supply chain that can be compared to the Bullwhip Effect found in the supply chain of products.

The process of reducing the cost price to the customer and the increase in demand that this brought about, concurs with the findings of other researchers mentioned in Chapter Two. The impact of the promotions is felt at a supplier level as there is extra stock manufactured, but not ordered in by the Clicks organisation. The suppliers noted that the demand for their products in Clicks returns to the regular level after the promotion is over and in most instances does not increase the market share. Most suppliers found that cannibalisation of other products occurs and after the promotion this will return to the previous level.

The main concern is the strategy of the marketing department which relies on the promotional process to achieve the goals and objectives of the different categories. There is no thought to other possibilities of conducting business but through the promotional process. This culture is entrenched in the thoughts of the individuals that control this sphere. The issue is that this creates false demand and it does not create a loyal customer, but a customer that is very price sensitive and not brand loyal. The customer is not going into Clicks and enjoying a shopping experience but rather shopping for the cheapest price.

Important to the study is the lack of communication of the strategies between the two functions studied. This working in isolation, yet relying on different individuals to fulfill the objectives and goals, creates a negative impact on the overall performance of the company.

As the Bullwhip Effect is caused through incorrect information being sent down the supply chain, so not communicating with all role players has the same effect.

A discussion on possibilities for future research concludes this dissertation.

## Possibilities for Future Research

From the results it is evident that the promotional activity in a retail store does create the Bullwhip Effect. The main issue is the data that is used for ordering purposes. With so many individuals complaining that the store balances are incorrect, research should be conducted to validate this and to find out if the information is correct.

In line with the promotion policies of the retailers in South Africa, is it possible to conduct business on a national level without advertising campaigns? When does a store move from being a convenience store, such as the corner grocer, to becoming a destination store such as Woolworths? Does the advertising of products cause this swing?

The integrity of the stock balances is important. Research should be conducted to see how much of the data is incorrect and measure the impact of the incorrect data on the supply chain.

Research should also be conducted to see if the correction of stock balances, by either issuing more/less stock or correcting stock errors, by the retailer, could create the Bullwhip Effect.

Another related topic of interest is where a retailer uses the facilities of a DC. Does the presence of a DC, in addition to the stores, create an internal Bullwhip Effect?

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# APPENDICES

## Appendix 1 : Questionnaires for MBA Dissertation

For the interview process, three different sets of questions were drafted.

The first set of questions focused on the *store managers*. Their purpose was to try and gain an understanding of the problems that the store managers experience and to test whether the answers obtained from the other participants in this research are, in fact, correct. It was used to determine the extent of the problem at a store level.

The second set of questions was developed to highlight the impact that the *category buyer* had on the stock situation. It was developed to attempt to understand the reasons that they did specific tasks and the methods that they employed to complete them.

The final set of questions focused on the *suppliers* and was drawn up to find the impact of the promotional activity from the suppliers' point of view. The questions were drawn up in a similar format and were interlinked with the questions from the other two groups. This was done so that a complete view could be obtained and to highlight any areas that could possibly create problems.

## The Interview Questions for Store Managers :

1. Are adverts and other promotions causing overstocks in the store?

2. Are you consulted with regard to the advertised lines prior to having stock ordered and delivered to your store?

3. How do you deal with the overstocks that are ordered for the advert?

4. Are you held responsible for your overstocks and shortages?

5. Do customers ask when specific items will be on promotion?

6. Do the other activities, such as extra displays, cause any stock issues, overstocks etc.?

7. Do you have regular visits from the buyers from Head Office?

8. Is there a channel for you to pass on any stock problems and does it help?

9. Is the cost of carrying the stock in your store high?

10. What would you attribute/blame for incorrect promotion orders?

11. Are there any service issues related to the promotional activity in the stores?

*Refer to page 90 for results of this questionnaire.*

## The Interview Questions for Category Buyers :

1. Do you decide on your own strategy?

2. Do you decide by how much your category will grow?

3. Do you use the promotion process as a vehicle to achieve these figures?

4. How do you measure the success of a promotion?

5. Are you measured against the stock left after the promotion?

6. Do you aid the stores in the clearing out of past promotional stocks?

7. How does the promotional pricing affect your performance?

8. What is used to measure your overall performance?

9. What do you use to decide the amount of stock to push to each store?

10. What measure is in place to reduce the stock in the DCs?

11. How do you calculate the drop in price for the items on promotion?

12. How do you work out how much you want to buy in?

13. How does it affect you when you cannot buy the quantities you request, i.e. the DC is overstocked and an order is not needed?

14. Do you have any problems with coop promotions, i.e. stocks etc.?

## The Interview Questions for Suppliers :

1. How do you work out whether the promotion was a success or not?

2. Do you notice a drop in orders after the promotion?

3. How can you afford to drop the price of the products?

4. Do you work out the quantities that you will offer for the promotion?

5. How does it affect your promotion when the products are not ordered to the quantities that you have agreed on?

6. Do you subsidise the adverts and promotions?

7. For items that are put on stands and gondola ends, do you get a return for these promotions?

*Refer to page 91 for a sample of a promotional Effectiveness & Efficiency Analysis Sheet from a supplier.*

## Appendix 2 : Store Manager Responses to Questionnaires

| | Question 1 | | Question 2 | | Question 4 | | Question 5 | | Question 7 | | Question 9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No | Yes | No |
| Lieghanne | 1 | | | 1 | 1 | | 1 | | | 1 | | 1 |
| Wayne | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Devina | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Bashnie | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Winnie | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Theo | | 1 | | 1 | 1 | | 1 | | 1 | | | 1 |
| Vernon | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Nancy | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Florence | 1 | | | 1 | 1 | | | 1 | | 1 | 1 | |
| Kobus | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Sam | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Gulam | 1 | | | 1 | 1 | | | 1 | | 1 | 1 | |
| Anne Marie | | 1 | | 1 | 1 | | | 1 | | 1 | | 1 |
| Gavin | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Shareen | 1 | | | 1 | 1 | | 1 | | | 1 | 1 | |
| Mercia | 1 | | | 1 | 1 | | | 1 | | 1 | 1 | |
| Tokozane | 1 | | | 1 | 1 | | 1 | | | 1 | | 1 |
| **Totals** | 15 | 2 | 0 | 17 | 17 | 0 | 13 | 4 | 1 | 16 | 13 | 4 |
| **Percentages** | 88% | 12% | 0% | 100% | 100% | 0% | 76% | 24% | 6% | 94% | 76% | 24% |

**Appendix 3 : Promotional Effectiveness & Efficiency Analysis Sheet from Supplier**

## PROMOTIONAL EFFECTIVENESS & EFFICIENCY

| | | | |
|---|---|---|---|
| Customer | Clicks | Account Manager | HRheeder |
| Product | Mr Min | Type of Promo | Broadsheet |
| Date of Promo | June 2004 | Name of Promo | |

| 1. EFFECTIVENESS | 2. EFFICIENCY |
|---|---|
| How well does the promotion work? | How well did we invest in a promotion? |
| => P  PROMOTIONAL<br>=> S  SALES<br>=> I  INDEX | => P  PROMOTIONAL<br>=> E  EFFICIENCY<br>=> R  RATIO |
| PSI = Promotional Sales<br>         Base Sales | PER = Additional Contribution<br>          Promotional Cost |

### PRE PROMOTION

| | | | | |
|---|---|---|---|---|
| Base Line | VOLUME (units) | 2,800 | PSI = Promotional Sales / Base Sales | |
| | VALUE | R32,760 | = | 1.07 |
| | PRICE/UNIT (excl) | R11.70 | | |
| Assumptions | VOLUME (units) | 3,000 | PER = Additional Contribution / Promotional Cost | |
| | VALUE | R35,100 | = | 0.56 |
| | DISCOUNT (%) | 6% | | |
| | COST | R2,106 | | |
| | COST PY | R0 | COST = | n/a |

### POST PROMOTION

| | | | | | |
|---|---|---|---|---|---|
| ACTUAL | VOLUME (units) | 3,663 | PSI = Promotional Sales / Base Sales | | |
| | VALUE | R42,857 | = | 1.31 | must be above 1.1 |
| | DISCOUNT (%) | 6% | PER = Additional Contribution / Promotional Cost | | |
| | COST | R2,571 | = | 1.96 | |

### POST PROMOTION COMMENTS

**Appendix 4 : Clicks Promotion Sell Through by Sub-Dept : May Expect to Pay Less**

**Clicks Promotion Sell Through by Sub-Department**

**MAY EXPECT TO PAY LESS**

CL200405-7

From: 2004-05-25
To:   2004-05-30

| Sub-Department | Sales % to Plan | % Sell Thru - Store | Wks Supply | Planned Sales Units | Value At Sell | Actual Sales Units | Value At Sell | Margin | Margin % | Uplift AveWk Sales U-5 | AveWk Sales U-Promot | Sales uplift % | O/S units | Intake Units | Store Stock C/S Units | Avail Units | Avail Stock at Sell | DC Units | Value at Sell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bathroom | 28.52% | 13.97% | 20.29 | 16,500 | 1,003,135 | 5,033 | 286,093 | 121,510 | 42.5% | 1,543 | 5,033 | 226.2% | 23,681 | 12,807 | 31,455 | 36,488 | 2,047,878 | 20,984 | 1,109,706 |
| Chocolates & Sweets | 163.75% | 16.17% | 11.69 | 37,325 | 165,772 | 58,957 | 271,445 | 39,034 | 14.4% | 24,916 | 58,957 | 136.6% | 306,228 | 45,089 | 291,360 | 350,317 | 1,678,312 | 26,130 | 200,638 |
| Dental | 164.64% | 34.52% | 4.76 | 28,000 | 120,209 | 46,264 | 197,907 | 24,830 | 12.6% | 18,568 | 46,264 | 149.2% | 111,298 | 23,261 | 88,295 | 134,559 | 573,295 | 57,256 | 243,351 |
| Domestics | 80.79% | 53.45% | 4.77 | 72,600 | 704,626 | 58,720 | 569,269 | 76,165 | 13.4% | 11,461 | 58,720 | 412.3% | 78,547 | 34,768 | 54,615 | 113,335 | 1,065,096 | 32,964 | 313,829 |
| Fashion Accessories | 52.65% | 29.59% | 9.86 | 54,100 | 1,024,886 | 26,603 | 539,568 | 303,361 | 56.2% | 6,045 | 26,603 | 340.1% | 65,059 | 21,141 | 59,597 | 86,200 | 1,823,514 | 8,027 | 164,844 |
| Healthcare | 38.29% | 28.82% | 4.80 | 65,972 | 2,279,966 | 28,466 | 872,988 | 93,272 | 10.7% | 13,394 | 28,466 | 112.5% | 78,269 | 14,550 | 64,353 | 92,819 | 3,029,558 | 20,463 | 519,372 |
| Home Textiles | 55.99% | 36.69% | 15.59 | 8,000 | 118,526 | 4,480 | 66,363 | 22,772 | 34.3% | 493 | 4,480 | 808.7% | 8,880 | 3,286 | 7,686 | 12,166 | 180,884 | 17,372 | 258,837 |
| Medicinal | 36.86% | 27.04% | 6.41 | 69,257 | 717,789 | 26,421 | 264,572 | 36,573 | 13.8% | 7,930 | 26,421 | 233.2% | 58,023 | 19,204 | 50,806 | 77,227 | 978,283 | 15,010 | 188,379 |
| Medicinal & Slimming | 45.81% | 28.05% | 5.69 | 55,738 | 380,802 | 23,486 | 174,432 | 34,820 | 20.0% | 13,264 | 23,486 | 77.1% | 79,743 | 19,182 | 75,439 | 98,925 | 621,761 | 14,327 | 84,491 |
| Paperware | 75.00% | 43.70% | 4.82 | 10,500 | 123,139 | 6,644 | 92,352 | 6,466 | 7.0% | 2,204 | 6,644 | 201.5% | 12,724 | 4,540 | 10,620 | 17,264 | 211,312 |  |  |
| Seasonal Appliances | 51.92% | 91.60% | 0.93 | 18,800 | 3,041,527 | 9,553 | 1,579,071 | 243,636 | 15.4% | 1,600 | 9,553 | 497.2% | 2,182 | 8,864 | 1,493 | 11,046 | 1,723,814 | 38 | 4,447 |
| Snacks | 101.57% |  |  | 46,680 | 93,632 | 47,324 | 94,997 | 25,091 | 26.4% | 16,492 | 47,324 | 187.0% |  | 0 |  |  |  |  |  |
| Soaps | 70.49% | 38.17% | 5.50 | 61,500 | 138,019 | 42,965 | 97,286 | 6,914 | 7.1% | 11,966 | 42,965 | 259.1% | 83,716 | 25,068 | 65,819 | 108,784 | 254,866 | 45,921 | 102,890 |
| **Promotional Total** | **51.52%** | **35.75%** | **6.17** | **544,872** | **9,911,931** | **384,916** | **5,106,343** | **1,034,444** | **20.3%** | **129,876** | **384,916** | **196.4%** | **907,350** | **231,760** | **801,538** | **1,139,130** | **14,185,575** | **258,492** | **3,190,784** |

# Clicks Promotion Sell Through by Sub-Department

## JUNE EXPECT TO PAY LESS
CL200405-7
From:   2004-06-29
  To:   2004-07-04

| Sub-Department | Sales % to Plan | % Sell Thru - Store | Wks Supply | Planned Sales Units | Planned Sales Value At Sell | Actual Sales Units | Actual Sales Value At Sell | Actual Sales Margin | Actual Sales Margin % | Uplift AveWk Sales U-5 | Uplift AveWk Sales U-Promo | Uplift Sales uplift % | Store Stock O/S units | Store Stock Intake Units | Store Stock C/S Units | Store Stock Avail Units | Store Stock Avail Stock at Sell | DC Units | DC Value at Sell |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Audio and Video | 89.27% | 53.66% | 9.25 | 9,600 | 155,566 | 6,686 | 138,871 | 41,419 | 29.8% | 535 | 6,686 | 148.8% | 9,493 | 2,144 | 4,951 | 11,637 | 258,783 | 3,840 | 198,416 |
| Baby Toiletries | 61.62% | 31.85% | 4.53 | 12,100 | 133,611 | 7,737 | 82,328 | 13,656 | 16.6% | 3,450 | 7,737 | 124.3% | 21,207 | 2,164 | 15,634 | 23,371 | 258,518 | 10,171 | 98,096 |
| Bathroom | 93.68% | 31.33% | 20.50 | 1,000 | 17,549 | 937 | 16,440 | 8,876 | 54.0% | 100 | 937 | 835.1% | 2,758 | 233 | 2,054 | 2,991 | 52,467 | 1,083 | 19,011 |
| Beverages | 129.51% | 72.65% | 0.28 | 2,000 | 17,520 | 6,414 | 22,691 | 6,871 | 30.3% | 3,436 | 6,414 | 86.7% | 1,222 | 6,167 | 975 | 7,389 | 31,232 | | |
| Body Fresheners | 79.50% | 25.63% | 6.37 | 16,051 | 195,564 | 12,736 | 155,475 | 18,884 | 12.1% | 5,930 | 12,736 | 114.8% | 43,985 | 6,529 | 37,778 | 50,514 | 606,624 | 18,257 | 215,309 |
| Chocolates & Sweets | 100.04% | 40.43% | 4.27 | 74,680 | 198,156 | 79,463 | 198,231 | 34,978 | 17.6% | 28,016 | 79,463 | 183.6% | 150,632 | 48,385 | 119,554 | 199,017 | 490,336 | | |
| Communications | 77.82% | 15.61% | 7.20 | 600 | 368,070 | 612 | 286,439 | 48,331 | 16.9% | 390 | 612 | 56.8% | 3,110 | 312 | 2,810 | 3,422 | 1,835,119 | 2,753 | 1,205,765 |
| Diapers | 122.19% | 37.04% | 6.26 | 3,600 | 79,214 | 4,354 | 96,789 | 17,056 | 17.6% | 1,194 | 4,354 | 264.5% | 9,280 | 2,545 | 7,471 | 11,825 | 261,333 | 2,763 | 60,641 |
| Direct Marketing | 59.33% | 39.94% | 5.01 | 6,000 | 526,823 | 3,560 | 312,542 | 78,243 | 25.0% | 1,058 | 3,560 | 236.6% | 8,059 | 804 | 5,303 | 8,863 | 782,550 | | |
| Domestics | 58.04% | 41.74% | 6.89 | 31,900 | 371,404 | 17,514 | 215,573 | 15,168 | 7.0% | 4,182 | 17,514 | 318.8% | 42,896 | 3,450 | 28,832 | 46,346 | 516,411 | 14,856 | 240,472 |
| Facial Skincare | 28.62% | | | 15,400 | 175,027 | 4,408 | 50,089 | 11,948 | 23.9% | 500 | 4,408 | 782.3% | | 0 | | 0 | | | |
| Fashion Accessories | 53.20% | 42.15% | 7.71 | 8,687 | 216,874 | 7,295 | 115,383 | 39,764 | 34.5% | 1,550 | 7,295 | 370.5% | 18,071 | 1,177 | 11,953 | 19,248 | 273,765 | 5,041 | 66,301 |
| Haircare Causcasian | 58.84% | 39.77% | 7.73 | 83,024 | 2,986,436 | 48,203 | 1,757,154 | 397,848 | 22.6% | 9,793 | 48,203 | 392.2% | 65,129 | 58,736 | 75,662 | 123,865 | 4,418,337 | 48,770 | 1,683,848 |
| Haircare Ethnic | 7.67% | 4.63% | 126.15 | 7,500 | 65,510 | 570 | 5,023 | 855 | 17.0% | 94 | 570 | 506.4% | 11,337 | 1,091 | 11,858 | 12,428 | 108,543 | 4,336 | 37,961 |
| Hand & Body Skincare | 72.44% | 36.24% | 3.04 | 7,500 | 55,585 | 5,739 | 40,267 | 12,216 | 30.3% | 2,670 | 5,739 | 115.0% | 11,619 | 2,236 | 8,116 | 13,855 | 111,120 | 11,507 | 70,209 |
| Healthcare | 47.76% | 44.67% | 5.52 | 65,600 | 3,148,131 | 32,291 | 1,503,521 | 186,424 | 12.4% | 8,492 | 32,291 | 280.3% | 62,023 | 17,186 | 46,918 | 79,209 | 3,365,854 | 17,694 | 478,348 |
| Household Appliances | 58.97% | 16.11% | 13.90 | 5,900 | 780,485 | 4,438 | 460,229 | 103,967 | 22.6% | 1,511 | 4,438 | 193.8% | 16,291 | 9,148 | 21,001 | 25,439 | 2,856,304 | 464 | 203,944 |
| Household Hardware | 75.51% | 11.38% | 11.80 | 7,300 | 123,850 | 5,435 | 93,524 | 24,296 | 26.0% | 3,126 | 5,435 | 73.9% | 39,886 | 2,437 | 36,888 | 42,323 | 822,174 | 5,004 | 65,811 |
| Medicinal | 30.74% | 54.83% | 2.57 | 166,019 | 3,747,311 | 58,360 | 1,152,023 | 300,585 | 26.1% | 24,429 | 58,360 | 138.9% | 87,463 | 33,725 | 62,828 | 121,188 | 2,100,917 | 28,874 | 356,444 |
| Medicinal & Slimming | 31.63% | 20.32% | 10.69 | 58,500 | 1,026,719 | 15,072 | 324,786 | 45,249 | 13.9% | 7,926 | 15,072 | 90.2% | 95,200 | 4,595 | 84,723 | 99,795 | 1,598,044 | 19,481 | 141,327 |
| Paperware | 74.34% | 28.47% | 8.09 | 38,000 | 285,617 | 27,227 | 212,337 | 19,412 | 9.1% | 8,195 | 27,227 | 232.2% | 82,227 | 11,304 | 66,304 | 93,531 | 745,755 | 1,483 | 8,445 |
| Photographic | 27.53% | 6.66% | 27.05 | 2,200 | 87,455 | 620 | 24,074 | 7,346 | 30.5% | 313 | 620 | 97.8% | 8,833 | 263 | 8,476 | 9,096 | 361,526 | 10,857 | 392,815 |
| Sanitary Protection | 113.32% | 31.71% | 6.52 | 11,000 | 131,882 | 15,840 | 149,455 | 28,118 | 18.8% | 3,738 | 15,840 | 323.7% | 34,311 | 5,912 | 24,383 | 40,223 | 471,336 | 5,066 | 44,409 |
| Shaving | 36.98% | 23.09% | 7.14 | 35,100 | 1,154,522 | 13,473 | 426,980 | 73,856 | 17.3% | 7,030 | 13,473 | 91.6% | 56,554 | 7,136 | 50,217 | 63,690 | 1,849,319 | 18,018 | 779,624 |

## Appendix 6 : Clicks Stock Holding and Stock Turns as at 31st August 2004

| CLICKS CENTRAL DIVISION | Closing Stock This Year | Closing Stock Last Year | Stock %Chge | Sales %Chge | Stock Turn This Year | Stock Turn Last Year | Stock Turn Change |
|---|---|---|---|---|---|---|---|
| Existing Stores | 218,481,566 | 181,743,461 | 20.21% | 8.16% | 3.80 | 4.23 | (0.43) |
| Opened Prev year | 2,232,796 | 0 | n/a | n/a | 2.31 | n/a | n/a |
| Stores Closed | 0 | 2,305,759 | -100.00% | -99.98% | n/a | 3.29 | n/a |
| TOTALS | 220,714,362 | 184,049,220 | 19.92% | 7.77% | 3.79 | 4.21 | (0.43) |

| CLICKS CLEARANCE STORES | Closing Stock This Year | Closing Stock Last Year | Stock %Chge | Sales %Chge | Stock Turn This Year | Stock Turn Last Year | Stock Turn Change |
|---|---|---|---|---|---|---|---|
| Stores Closed | 0 | 0 | n/a | -77.92% | n/a | n/a | n/a |
| TOTALS | 0 | 0 | n/a | -77.92% | n/a | n/a | n/a |

| CLICKS EASTERN DIVISION | Closing Stock This Year | Closing Stock Last Year | Stock %Chge | Sales %Chge | Stock Turn This Year | Stock Turn Last Year | Stock Turn Change |
|---|---|---|---|---|---|---|---|
| Existing Stores | 186,316,950 | 159,097,445 | 17.11% | 11.27% | 3.98 | 4.19 | (0.21) |
| Opened Prev year | 2,746,762 | 2,351,954 | 16.79% | 10.05% | 3.95 | 4.19 | (0.24) |
| Stores Closed | 3,469,049 | 5,831,209 | -40.51% | -33.03% | 3.36 | 2.99 | 0.37 |
| TOTALS | 192,532,761 | 167,280,608 | 15.10% | 10.14% | 3.97 | 4.15 | (0.18) |

| CLICKS NORTHERN DIVISION | Closing Stock This Year | Closing Stock Last Year | Stock %Chge | Sales %Chge | Stock Turn This Year | Stock Turn Last Year | Stock Turn Change |
|---|---|---|---|---|---|---|---|
| Existing Stores | 231,859,424 | 190,182,768 | 21.91% | 13.06% | 3.89 | 4.19 | (0.30) |
| Opened Prev year | 3,908,280 | 0 | n/a | n/a | 1.43 | n/a | 1.43 |
| Stores Closed | 0 | 0 | n/a | -100.00% | n/a | n/a | n/a |
| TOTALS | 235,767,704 | 190,182,768 | 23.97% | 13.76% | 3.85 | 4.19 | (0.34) |

| CLICKS WESTERN DIVISION | Closing Stock This Year | Closing Stock Last Year | Stock %Chge | Sales %Chge | Stock Turn This Year | Stock Turn Last Year | Stock Turn Change |
|---|---|---|---|---|---|---|---|
| Existing Stores | 168,195,235 | 147,950,719 | 13.68% | 7.79% | 4.36 | 4.59 | (0.23) |
| Opened Prev year | 5,227,843 | 0 | n/a | n/a | 2.79 | n/a | n/a |
| Stores Closed | (138,445) | 3,624,768 | -103.82% | -81.38% | (23.14) | 4.75 | (27.89) |
| TOTALS | 173,284,633 | 151,575,487 | 14.32% | 7.69% | 4.33 | 4.60 | (0.27) |

| BRAND TOTAL | 822,299,459 | 693,088,083 | 18.64% | 9.89% | 3.96 | 4.28 | (0.32) |