

Modeling Agility in Kenyan Supermarkets Chain Expansion

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Abstract.

Using the Interpretative structural modeling, this research sought to determine the key retailing model enabling implementation of agile retailing practices in supermarkets branch expansion .Using store layout, pricing, storelocation, customer service, merchandise assortments, retail mix utilization, communication mix, Training and development, and research and development as variables for the study we developed a model to use when designing retailing activities in supermarkets. The developed model is derived from retailing strong points of Nakumatt limited, a supermarket retail chain that has expanded from a family business to a market leader in Eastern Africa.

Keywords: *Branch expansion Agility, Supply chain, branch expansion, supermarket, Interpretative structural modeling.*

1. Introduction.

1.1 Background

The Kenyan supermarket sector is composed of four main domestic retail chains: Uchumi, Nakumatt, Tusker Mattresses, and the Ukwala Group. There are two foreign-owned chains, Metro Cash & Carry and Woolworths. Although this is the case, the market concentration has kept on increasing and several independents supermarkets have also come up. Nairobi, with a population of 2.5 million has many supermarket chains due the growing trend of self service and because of the touch and feel nature of Kenyan customers (Kenyaweb 2002). Urban centres opportunities have also driven investment to spread over into other major cities and towns such as Mombasa, Nakuru, Eldoret, and Kisumu.

The high growth of this single stop shopping has placed Kenya as a supermarket hub in comparison to the rest of Eastern Africa in supermarkets presence. Kenya has approximately 206 supermarkets beside the existing hypermarkets .Uganda has one supermarket and Tanzania has four(Business Report 2000). The McKinsey Global Institute (MGI 2010)projects that the number of African households with discretionary

income over \$5,000 will rise from 85 million to 128 million by 2020 .The increase in income will further increase the retail branches, till rate and rise in competition.

While most retail outlets tend to cherish competition and encourage growth, it is surprising that two third of these firms drop out of the growth curve of the product lifecycle. A significant fraction of these progress to maturity and stagnate shortly before crashing down. Most of these firms face this trend because retail business is volatile and there is also increasing competition in major markets due to inadequate contingency planning and incompatible growth retail models (Agarwal, & Audretsch, 2001). Moreover frequent changes in consumer trends and short business cycles are also some of the challenges in the retail supply chain requiring agile models.

Global research by Siggelkow(2001) show that most business that has employed agility in their operations have succeeded. However for this to happen each industry needs to formulate their on model depending on its operation environment. The objective of this study was to model a framework used by Nakumatt advertently or inadvertently to maintain their stable growth rate .This is because after starting three decades ago as a small mattress shop in a provincial town of Nakuru, the family-owned supermarket chain has expanded to an annual turnover of \$500 million (UNIDO, 2002).Moreover it has quickly expanded into Eastern African countries like Rwanda, Uganda and Tanzania (Wahome 2001).In Kenya it has recently expanded to Kakamega, and Nanyuki towns .Other developments include the recently opened 24-hour shopping mall in Westlands (NakumattUk) followed by Ngong Road, Nakumatt Household in Eldoret, and Mega Nyanza in Kisumu .Nakumatt has distinguished itself from other supermarkets by offering ambience, 100% till rate, a layout encouraging repeat purchases and managing its business model by being among the first supermarket chains to introduce electronic tax registers in its branches (Mburu 2001).Nakumatt's quality policy ensures that customers are afforded products that meet quality standards as well as maintaining professional retail store management standards at all times.

Nakumatt's store formats range from supermarkets to hypermarkets that display distinctive, world-class shopping floor layouts and amenities. All Nakumatt branches offer a range of over 50,000 quality products as well as shopping and entertainment centers for the whole family in most of their hypermarkets(The East African 2001). They have also introduced a smart card and a gift card.TheNakumatt smart card enables customers to accumulate points with their purchases which claim rewards and prizes. The Nakumatt gift voucher is available in any denomination, the value of which the shopper is required to redeem at once.

1.2 The Objectives of the Study

The objective of this study was to model a framework that can increase agility in supermarket branch expansion in East Africa.

1.3 Methodology: Performance measurement model

Initial meeting was held with stores managers of Nakumatt. In this meeting, eight experts, three from middle management and four supervisors from marketing, stores and supplies were identified. Each had more than eight years of experience in the area supermarket retailing. Literature related to supermarket retailing was circulated among them. Within a period of two weeks, a brainstorming session was organized to identify the variables. In this session, experts identified 12 most crucial variables for the supermarket operation success and study areas for target markets. After seven days, a session was organized to establish the relationship among these variables. The purpose of the focus group discussion was to identify relationships among the variables. After identifying relationships in terms of how a

particular variable helped to achieve other variables, on a fortnight, the list of variables and contextual relationship were circulated for further modification. These variables are explained below.

1.3.1 Store layout and design

According to Vrechopoulos et al (2004) store layout refers to the ease of user movement through the store providing maximum exposure of goods and attractive display .This includes doors, merchandise placement, shelf orientation, music, check-out counters, interior decorating, staff attitude, lighting and location of the loading facilities. Store layout is key to having customers purchase items and their ability to locate items in the store. Good store layout tempts customers in their shopping expectations to shop more than planned. The internal layout of supermarkets is the internal paths that customers use as they view the merchandise (Economist 2001).In most cases, customer traffic flow affects a customer's impression of the store and determines the level of spending within the store. Store layout can also be used as a tool to assists retailers to differentiate merchandise and ease identification of merchandise. According to Fox et al (2004) layout management areas cover store environment and packaging. Store design also involves atmospherics and ambience that attracts customers by creating a pleasurable buying experience (Vazquez 2002). It further entails developing certain areas and creating strategies that enhance customer commitment in the process.

Nakumatt designs its layout by employing chevroning in grocery placement and shelve design. According to Newmann and Cullen (2001) this involves placing shelves or racks at an angle instead of the traditional ninety-degree angle to the aisle .The outcome of chevroning is that shelves are located at forty-five degrees. As a result more of what the shelves hold is exposed to the customers atsupermarket's (Baltas&papastathopoulou 2003). Although most supermarkets chevrons, it needs to be done in consideration of available space. Enough floor is essential to minimize the Butt-Brush Effect area (Ricardo &Ma's-Ruiz 2008). This is an area when invaded causes customers to feel uncomfortable. Moreover enough space extends time customers spend in the store enhancing the probability of purchasing. Design areas can also extend to include packing, storage and corporate design. These assist in effective design, and make it easy to move within the store.

According to Ricardo and Ma's-Ruiz (ibid) retailers should design their stores to draw shoppers to the right side of the entryway. Their studies show that most people naturally look left first, and then to the right when entering a store .Steering such customers to the right involve placing floral departments and other attractants to the right. According to Dean(2003) bright colors of flowers and floral scents remind shoppers of happy times, putting them in a good mood and encouraging them to move right and begin walking counter-clockwise.The music in the retail mall will also guide and relax the customer allowing them to put attention on their shopping. Such music needs to be soft allowing the ear to struggle to locate the source. Strategic location of the music involves locating the speakers in all corners but at distances that reduce dissonance and calms the brain. According to Morin and Chebat (2007) music has been shown to affect consumers' responses in retail environments, in a positive manner. Fulberg (2003) explains that, customers can be motivated to make purchases by certain types of music or scents. The music modifies the customer's behavior, reduces stress and boosts employee confidence levels poking them to solicit customer feedback (Caruana 2002).

Appropriate arrangement and display also ease product location and assortment of products. Nakumatt Store layout and design initiatives encourage the placing of small things at the counter. These are items that can be forgotten and at times they are used strategically by the retail chains to offload small amounts

of coins remaining after shopping. These goods include chocolates, razors and sweets. This strategy ends up causing impulse buying to the advantage of the sellers as such commodities represent an insignificant fraction of the budget as well as allowing customers offload coins. Other layout issues in supermarkets include lighting (Wikinson et al 2009). Lighting inside supermarkets is a powerful tool to improve the willingness of customers to buy. Lighting in a store creates a shopping atmosphere. This is best applied if high wattage lighting is well distributed through the entire establishment and the arrangement employs the use of bright colors that attract and retain customers once in the store.

1.3.2 Pricing

According to Chintagunta (2002) price in any transaction represents the value attached to a product. In its simplest terms it represents the lowest figure the customer is prepared to pay for a product. The essence of a supermarket price survival model is that prices should be driven by customer understanding and ability. Nakumatt's model is based on demographic characteristics since their frequent customers tend to be young educated as well as high and low income groups (Wandera 2002). In this case, Nakumatt has reduced the usage of price as a promotional weapon. This corroborates studies of Jason and Marguerite (2006) in the US grocery market that suggests that price at times can start price wars and in the long run teach customers to postpone purchases waiting for further price falls. Central business outlets in East African cities have customers who are price sensitive and are thus concerned with prices of substitute's supermarkets. Price is therefore not opportune to be used in underlying environments. This is so because these consumers are more inclined towards supermarkets which provide a large assortment of merchandise together with occasional discounted prices. In this case pricing is pivotal components of the retail mix and should be carefully managed to consider all income groups who conveniently walk in supermarkets after work in the evenings.

1.3.3 Store Location

Retail location is considered to be an important element of the retail mix due to the time and expense that is needed to find the right location of a retail business (Kotler 2008). On the side of consumers the store choice decision can be conceptualized as a problem of deciding where and when to shop (Durieu 2003). Retail location entails location with good entry and exit, better parking and auxiliary facilities such as banks. Store location affects the timing of shopping trips since consumers may go to a smaller convenient retail stores for short fill-in trips and go to a larger store for regular shopping trips or go to 24 hours malls. Nakumatt's locational aspect are localized depending on the type of customers (Business Day 2002). Nakumatt Moi avenue in Nairobi is ideally located next to Matatu terminuses targeting low class shoppers who shop in evenings after work due to demanding lifestyles and extreme time pressures. Such customers seek retail supermarkets which are conveniently located and easily accessible. On the other hand Nakumatt Ngong road and Ukay in Nairobi target the upper income customers and have enough parking space, have good entry and exit roads and offer food courts for all customer classes.

1.3.4 Customer Service.

According to Parker and Lehmann (2011) effective customer service satisfies customers and in turn increases loyalty. Market leaders such as Nakumatt have employed customer service strategies in their upmarket branches. For instance Nakumatt Ngong road and Mega in Kisumu have party zones for children's birthday parties and have relaxation courts for college student hangouts. Customer service is further extended by effective channel aimed at achieving customer service in retail whereby favorable relationships between employees and customers are created first hand. This is done by placing eye-

catching display up front to make customers slow down and not hurry on through the store. Nakumatt attains these through store layout displays placed at entrances, where shoppers can stop to touch, smell or try slowing them so that they can settle down for customer shopping.

Customer service can also be established first hand by the employees. According to Kim et al (2002) the first few words between the employee and the customer will always set the tone for the entire dialog and relationship. Nakumatt stores in city centres trends show that branches stress on assigning additional shift staff around 7-9 pm during peak sales. Other strategies employed to maintain good customer service includes point of sale data collection approaches and the development of private label lines for most products such as flour, oil cereals and chocolates termed as the 'blue label'. Customer service, provide additional value for customers, leading to increased customer satisfaction (Anderson & Mittal, 2000). Satisfaction, in turn, leads to increased customers numbers through word-of-mouth (Zeithaml et al 2000). Good retailer customers service has been found to also increase repurchase intentions and willingness to recommend (Singh & Sabol, 2002).

1.3.5 Merchandise Assortments

Merchandise assortment is a surrogate measure of the average inventory investment per square meter of the chain's selling area (Herpen&Rik 2002). It also reflects the related expenses and total chain floor space and number of outlets. In this case, it represents supermarket chain size and reflects capital investments in the supermarket (Laroche et al 2003). In an effort to become increasingly more valuable to time-poor consumers, supermarkets now offer multiple services like pharmacies, photo processing, money transfer, bill payment and banking options (Julia, 2001). In doing this they also cater for varied consumer tastes within their categories. The increased demand for ethnic, natural products such as fish fingerlings, quill eggs, millet, cassava, amaranth, sweet potatoes, sorghum flour and ready-to-eat lines is expanding quickly. Merchandise assortment was identified as the single most influential variable affecting the choice of retail format across all conventional supermarkets (Tucker, 2003; Kahn & Wansink 2004). Private label brands are also another variation of merchandise assortment which retailers employ to generate store differentiation, store loyalty and store profitability (Ahmed 2008). The growth of private label brands has traditionally been attributed to two major causes. The first being the advertising of national brands by retailers which entice customers. Secondly, private label brands typically have lower variable costs and thus potentially result in higher margins (Corstjens & Kumar 2005). This also provides a chance for retailers to supply high quality merchandise and not just focus on offering inexpensive low-quality products. Nakumatt employs a combination of these by offering a wide variety of units in its blue label.

However it should be realized that display format may affect customer decision negatively. Literature on information overload has shown that increasing the number of product alternatives increases the consumers' decision difficulty (Kerfoot et al 2003). A large number of product alternatives also lead to consumer confusion lowering consumer satisfaction. This may lead consumers to walk away from the displays. In a series of studies, Iyengar and Lepper (2000) compared consumer reaction to small assortment and large assortment in an upscale grocery store. They found that consumers were attracted to a sampling station when it offered 24 varieties of product than when 6 varieties were offered. As the number of options increased consumers became less certain in selecting the best option.

1.3.6 Retail Mix Utilization

The retail mix is the decision variable retailers use to satisfy customer needs and influence their purchase decisions. Elements in the retail mix include stock assortments, location, pricing, customer service, store

design ,display, and the communication mix elements employed (Ailawdi et al 2001).Most times, the dilemma faced by retailers is to develop a retail mix satisfying target markets, building customer commitment and loyalty over a long period of time (Weatherspoon, & Reardon 2003). .This is true because supermarket retailing is a long term business, and supermarket malls that have too much of one type of complementary shops but not enough of others are treated to have poor retail mix (Krishna 2012). The retail mix is a key aspect within effective retailing management and plays an integral part of customer commitment analysis. The elements of the retail mix highly depend on whether merchandise is ordered from wholesale markets or from the producers. The contemporary supermarket retailing trends lies in value addition of products such as frozen foods, ready to eat, baked items, packaged fruits, vegetables, food pastes and curries from producers and own production lines. Studies by Hossain and Azim (2004) show that the supermarket industry is customizing operation strategies to be able to effectively communicate expectations and operations. Efficient consumer response (ECR) standards are becoming a common method used to increase the supermarket supply chain efficiencies targeting the customers increased retail mix utilization.

1.3.7 Communication Mix

According to Rintama et al (2003) communication relationships usually begins with a shopping experience, and continuing shopping maintains it .Rintama maintains that loyal consumers are able to generate 79 percent of store sales .In this case the most important part of the customer retention strategy is to ensure that shopping is sufficiently pleasurable. More customers should not be lost through lack of follow up, and customers' indifference. Today most supermarket shopper programs use bar-coded cards to track consumer purchases, offer discounted prices and customize promotions (Corsten& Kumar, *ibid*). It is imperative for supermarkets to heed changing buying habits, in cities, that have highly competitive markets as consumers focus on value, convenience, variety and a better shopping experience (Kukar-Kinney et al 2007) .According to Magi (2003) industry communication takes the form of sales promotion, free gifts, and quick counter processing and trolley assistance services where attendants push trolleys for the customers to the parking bay. In totality these will affect communication to other parties feeding the supermarket such as suppliers. This is because procurement in this sector has unique characteristic involving perishable products such as food which need immediate delivery and sale which depends on good communication.

1.3.8 Training and Development

Thirty percent of Kenyan supermarket workers have not completed high school, compared with 43 percent of Uganda (Neven et al 2002). Several positions in retail stores, such as till operators and bakers, are apprenticeable trades in supermarkets. There a general consensus among Nakumatt managers that while they held managerial positions most of them had O level or college qualification and rose up the ranks after being hired internally strategically. The supermarket retail industry operates in a fast-paced, competitive environment. It is often not practical to send employees off-site for training. Common among all Nakumatt store supervisors and managers is that they rely on on-the-job training to meet most of their training needs. Training needs depend on level of employee skills relatively to the firm .Store supervisors and head cashiers need oral communication, problem solving and decision making. Sales clerks potential induction areas were identified to be documentation, computer skill job task planning and organizing of the chains. Generally, larger chains have on-the-job training programs delivered in-house. Some components may be delivered in a group setting, or made available to employees through tertiary colleges

evening programmes. New employees are also paired with a more experienced employee in the same department depending on the complexity and risks of the job. The essential skill that all stores include in their training is oral communication. This consistently emerged as a key skill in every supervisor and was frequently mentioned as the most valuable skill an employee could bring to the job.

One setback to this industry is that supermarket retail is not yet seen as a career and therefore does not attract people seeking long-term work in the numbers required to ensure development of future industry leaders. In some cases, supervisors attributed the difficulty with retention to wage levels in the industry. Time and costs are also major barriers to training. Many managers and supervisors stated that they had excellent senior staff, very good in-house trainers, but the demands of the industry made it difficult to free employees for training provision. Nevertheless Luoma (2000) argues that the essence of employee training must at all-time be aligned to specific customer needs which is best attained through on the job training. In this case setting clear operational controls for retail employees before opening of supermarket doors, communicating them and training them effectively is the basis for daily requirements (Magi, *ibid*).

1.3.9 Research and Development

Retail formats are complex combinations of visible and hidden components. This helps to explain why it can be difficult for outside observers to identify retail formats with precision, develop clear definitions of even the main types and gain consensus for these definitions of the main types in the industry. Successful research departments need to carry out probes of what is happening. This collection of information should target sales, checkouts, self-service procurement and merchandise offer needed in a particular location.

Research includes all components of format visible hidden factors such as the systems supporting the stores organizational structure and the management culture. Through research and development competitive advantages are realized by creating a retail format that is tailored to specific needs of a carefully determined segment of the total market. Research and development need to target two parts: the offering and the know-how. The first includes elements such as product assortment, shopping environment, service, location and price. The second part, considers a retailer's operational strength and strategic direction. Its research is on retail technology dimension (systems, procedures and techniques used by the retailer and the retail culture. Supermarket retail chains should provide a competitive advantage at all levels before entry into new areas so that average cost of the whole store can fall when targeted efforts are employed.

1.4 Interpretative Structural Modeling (ISM)

ISM can be used for identifying and summarizing relationships among specific variables, it provides a means by which order can be imposed on the complexity of such variables (Jharkharia & Shankar, 2005). The various steps involved in the ISM methodology are as follows:

- (1) Variables affecting the system under consideration were listed as store layout, pricing, own branding, retail mix, customer service, store location, communication mix, assortment, purchasing performance, training and development, research and development and agility.
- (2) From the variables identified, a contextual relationship is established among variables.
- (3) A structural self-interaction matrix (SSIM) was developed for variables, which indicates pairwise relationships among variables.

(4) Reachability matrix was developed from the SSIM and the matrix was checked for transitivity. Four symbols were used to denote the direction of relationship between the variables (i and j):

- (1) V – variable i will help achieve variable j;
- (2) A – variable j will be achieved by variable i;
- (3) X – variable i and j will help achieve each other; and
- (4) O – variable i and j are unrelated.

Table 1: Structural self-interaction matrix (SSIM)

	A	B	C	D	E	F	G	H	I	J	K	L
A Store layout	I	O	O	X	V	X	O	X	O	X	O	V
B Pricing	O	I	A	V	O	O	X	O	X	V	A	V
C Own branding	O	V	I	V	X	O	X	O	O	V	A	V
D Retail mix	X	A	A	I	V	O	V	A	A	V	A	V
E Customer service	A	O	X	A	I	O	X	A	A	V	A	V
F Store location	X	O	O	O	O	I	O	V	O	V	A	V
G Communication mix	O	X	X	A	X	O	I	O	A	V	A	V
H Assortment	X	O	O	V	V	A	O	I	X	V	A	V
I Purchasing performance	O	X	O	V	V	O	V	X	I	V	X	V
J Training & development	X	V	A	A	A	A	A	A	A	I	X	V
K Research and development	O	V	V	V	V	V	V	V	X	X	I	V
L Agility	A	A	A	A	A	A	A	A	X	A	A	I

The SSIM was transformed into a binary matrix, (initial reachability matrix) substituting V, A, X, O by 1 and 0. The rules for the substitution of 1's and 0's are the following: If the (i, j) entry in the SSIM is V, then the (i, j) entry in the reachability matrix becomes 1 and the (j, i) entry becomes 0. If the (i, j) entry in the SSIM is A, then the (i, j) entry in the reachability matrix becomes 0 and the (j, i) entry becomes 1. If the (i, j) entry in the SSIM is X, then the (i, j) entry in the reachability matrix becomes 1 and the (j, i) entry also becomes 1. If the (i, j) entry in the SSIM is O, then the (i, j) entry in the reachability matrix becomes 0 and the (j, i) entry also becomes 0.

Table 2: Binary (reachability matrix)

	A	B	C	D	E	F	G	H	I	J	K	L
A Store layout	1	0	0	1	1	1	0	1	0	1	0	1
B Pricing	0	1	0	1	0	0	1	0	1	1	0	1
C Own branding	0	1	1	1	1	0	1	0	0	1	0	1
D Retail mix	1	0	0	1	1	0	1	0	0	1	0	1
E Customer service	0	0	1	0	1	0	1	0	0	1	0	1
F Store location	1	0	0	0	0	1	0	1	0	1	0	1
G Communication mix	0	1	1	0	1	0	1	0	0	1	0	1
H Assortment	1	0	0	1	1	0	0	1	1	1	0	1
I Purchasing performance	0	1	0	1	1	0	1	1	1	1	1	1
J Training and development	1	1	0	0	0	0	0	0	0	1	1	1
K Research and development	0	1	1	1	1	1	1	1	1	1	1	1
L Agility	0	0	0	0	0	0	0	0	0	0	0	1

Table 3: Iteration 1

variable	Reachability	antecedent	intersection
A	A,D,E,F,H,J,L	A,D,F,H,J	A,D,F,H,J
B	B,D,G,J,L	B,C,G,I,J,K	B,G,J
C	B,C,D,E,G,J,L	C,E,G,K	C,E,G
D	A,D,E,G,J,L	A,B,C,D,H,I,K	A,D
E	C,E,G,J,L	A,C,D,E,G,H,I,K	C,E,G
F	A,F,H,J,L	A,F,K	A,F
G	B,C,E,G,J,L	B,C,D,E,G,I,K	B,C,E,G
H	A,D,E,H,I,J,L	A,F,H,I,K	A,H,I
I	B,D,E,G,H,I,J,K,L	H,I,K,L	H,I,K,L
J	A,B,J,K,L	A,B,C,D,E,F,G,H,I,J,K	A,B,J,K
K	B,C,D,E,F,G,H,I,J,K,L	I,J,K	I,J,K
L	I,L	A,B,C,D,E,F,G,H,I,J,K,L	I,L I

Table 4: Iteration 2

variable	Reachability	Antecedent	Intersection
A	A,D,E,F,H,J	A,D,F,H,J	A,D,F,H,J
B	B,D,G,J	B,C,G,I,J,K	B,G,J
C	B,C,D,E,G,J	C,E,G,K	C,E,G
D	A,D,E,G,J	A,B,C,D,H,I,K	A,D
E	C,E,G,J	A,C,D,E,G,H,I,K	C,E,G
F	A,F,H,J	A,F,K	A,F
G	B,C,E,G,J	B,C,D,E,G,I,K	B,C,E,G
H	A,D,E,H,I,J	A,F,H,I,K	A,H,I
I	B,D,E,G,H,I,J,K	H,I,K	H,I,K
J	A,B,J,K	A,B,C,D,E,F,G,H,I,J,K	A,B,J,K II
K	B,C,D,E,F,G,H,I,J,K	I,J,K	I,J,K

Table 5: Iteration 3

variable	Reachability	Antecedent	Intersection
A	A,D,E,F,H	A,D,F,H	A,D,F,H
B	B,D,G	B,C,G,I,K	B,G
C	B,C,D,E,G	C,E,G,K	C,E,G
D	A,D,E,G	A,B,C,D,H,I,K	A,D
E	C,E,G	A,C,D,E,G,H,I,K	C,E,G III
F	A,F,H	A,F,K	A,F
G	B,C,E,G	B,C,D,E,G,I,K	B,C,E,G
H	A,D,E,H,I	A,F,H,I,K	A,H,I
I	B,D,E,G,H,I,K	H,I,K	H,I,K
K	B,C,D,E,F,G,H,I,K	I,K	I,K

Table 6: Iteration 4

variable	Reachability	Antecedent	Intersection
A	A,D,F,H	A,D,F,H	A,D,F,H IV
B	B,D,G	B,C,G,I,K	B,G
C	B,C,D,G	C,G,K	C,G
D	A,D,G	A,B,C,D,H,I,K	A,D
F	A,F,H	A,F,K	A,F
G	B,C,G	B,C,D,G,I,K	B,C,G IV
H	A,D,H,I	A,F,H,I,K	A,H,I
I	B,D,G,H,I,K	H,I,K	H,I,K
K	B,C,D,F,G,H,I,K	I,K	I,K

Table 7: Iteration 5

variable	Reachability	Antecedent	Intersection
B	B,D	B,C,I,K	B
C	B,C,D	C,K	C
D	D	B,C,D,H,I,K	D V
F	F,H	F,K	F
H	D,H,I	F,H,I,K	H,I
I	B,D,H,I,K	H,I,K	H,I,K
K	B,C,D,F,H,I,K	I,K	I,K

Table 8: Iteration 6

variable	Reachability	Antecedent	Intersection
B	B	B,C,I,K	B IV
C	B,C	C,K	C
F	F,H	F,K	F
H	H,I	F,H,I,K	H,I IV
I	B,H,I,K	H,I,K	H,I,K
K	B,C,F,H,I,K	I,K	I,K

Table 9: Iteration 7

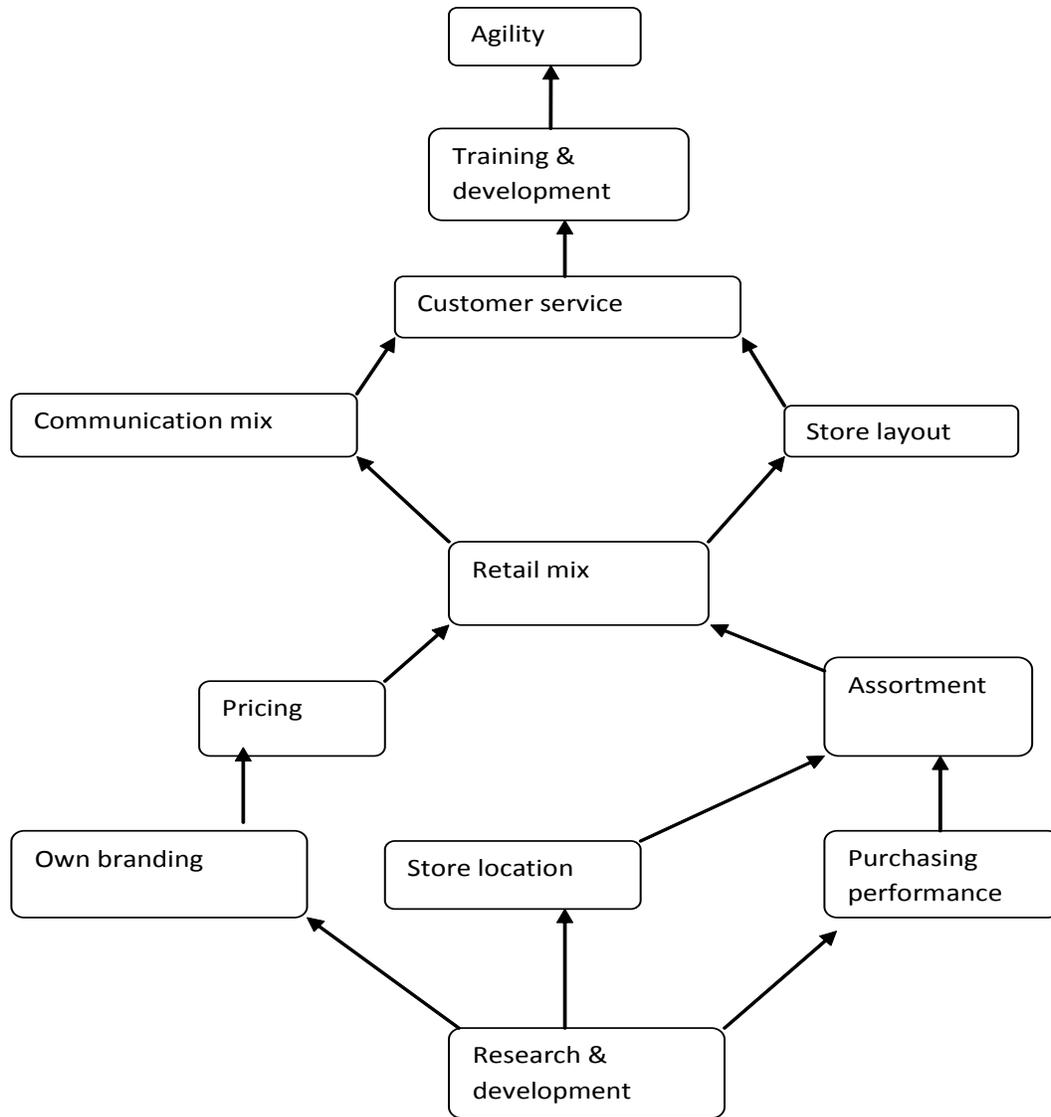
variable	Reachability	Antecedent	Intersection
C	C	C,K	C VII
F	F	F,K	F VII
I	I,K	I,K	I,K VII
K	C,F,I,K	I,K	I,K VIII

(5) The reachability matrix obtained in Step 4 was partitioned into different levels.(Table I,II,III,IV,V,VI,VII and VIII)

(6) Based on the relationships given above in the reachability matrix, a diagraph is drawn as the transitive links are withdrawn. The resultant digraph is converted into an ISM, by replacing variable nodes with statements.

(8) The ISM model developed in Step 7 is reviewed to check for conceptual inconsistency and necessary modifications are made.

Fig. 1



1.5 Discussion and Summary

The East African retail market is a market with high opportunity for supermarket retailing. The entry of retailers with self-service notion has started replacing the small scale shops (dukas).Consequently

informed duka owners are now changing their models to small supermarkets. One of the major problems experienced is mitigating costs associated with expansion into new markets and locations. Models employed by successful supermarkets such as Nakumatt are vital to such entrepreneurs. The models derived depict research and development to be at the base. This shows that research and development is a very significant variable for the expansion of supermarkets branches. Research information such as supplier operations and terms will be able to assist supermarkets on how to engage suppliers, negotiate good terms and organize for merchandise delivery. These information will also avail further information which will assist in backward integration of activities such as grocery offer where some supermarkets own farms to feed their grocery shelves .Other areas to integrate backwards include bakeries .This information is also vital when branding . At the top is Agility. Variables at the top depict success for the organization (Kannan et al 2010).While negotiating for terms from suppliers, identification of exact location will also be attained in identified markets. Based on the correct model most supermarket will also be able to do own branding .The store location and purchasing performance will lead to branch assortment while own branding initiative will guide to the price that is appropriate to the target area. According to Krishna (ibid) pricing and assortment will also guide the branch on the retail mix expected and so on upwards.

1.6 Managerial and Administrative Implications

The research findings put main retail components into focus. Managing these components provides light for retail expansion complexities. Managers need to understand the environment of retail activity before making stride steps into expansion. Expansion of a retail chain branch to new areas is totally different from those related to starting a supermarket from scratch. Based on research and development of new locations, information about prospective markets should be found. This will assist in own branding initiatives and purchasing performance expected. This will also lead to ideal location of new branches. After attaining the main components the supermarkets takeoff lies on training on the necessary identified expectations before agility is attained.

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