

RFID TECHNOLOGY: ECONOMIC IMPACT OF RETAIL ATMOSPHERICS AND STORE FORMATS IN THE RETAIL INDUSTRY

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ABSTRACT

“When the store environment make the customer to purchase more or stay for long in the store, such experiences remain in the memory of most of customers. About half of them had said that they spend more money in the store” – (Vincent Poupard). Therefore a conclusion can be arrived at that store environments can drastically boost up sales figures. Atmosphere refers to the store’s physical attributes that can build a brand image to attract customers. The picture of the store as viewed by the customers is the retailer’s vision, hearing, fragrance and other physical characteristics. The mental and emotional feeling that a customer experiences in the store is often termed as “Atmosphere”. The characteristic of the store that enables or deters customers in their experience with a retailer is defined as the “total retail experience”. It comprises of the number of sales executives, product showcases, costs, brands, stock availability, and vehicle-parking facilities. Any shortcoming of these attributes will result in dissatisfaction (for example, poor sales assistance, poor parking facilities, not too many brand selection, poor stocks).

Key Words: Retailing, RFID, Customers, Supply Chain, Atmospherics, Store formats

1. INTRODUCTION

Retail atmospherics are the subtle things that need to be followed by the retailers to make the sales experience seamless, and more encouraging, on the part of the customers. Retail atmospherics are the subtle steps that will normally improve the revenue and profitability of the store with minimal possible effort contributed by the retailer. The expenses incurred of implementing these steps are somewhere between the additional income, and the revenue lost by not adopting those steps, in almost all the situations. To make the customer more pleasant with their buying experience, these are subtle initiatives that need to be followed by the retailer (Vincent Poupard, 2010). Berman and Evans (2001) classify the environmental attributes into four categories, which are the external attributes of the store, the interior attributes, the overall layout of the store and the design factors which are considered, and the point-of-sale conditions and the aesthetic factors of the store.

1.1 Exterior

The physical exterior of the store comprises of the marquee, store entry and exit points, ventilation, lighting, and fabrication. A retailer can project an upscale, trendy, discount, conservative or other picture with these external attributes. A marquee is a sign that shows the name of the store, which should capture the attention of the customers. Showcase windows or shelves have two important objectives: to identify the store and its merchandise, and to attract customers towards the store. Good exterior visibility means storefronts or marquees should be easily visible to the pedestrian and/or vehicular traffic. The prime goal for a retailer is to present its store uniquely to the customers. The adjacent stores and their environment influence the general atmosphere, which project the brand image cues. Parking facilities can positively or negatively influence store atmosphere, depending on easy access, price and proximity. The store's image is diminished by congestion, when the parking spaces, walkways, and/or entry points and exits are jammed, it will have a negative influence on the store's image. Customers may not be able to devote more time for shopping if there is congestion.

1.2 General Interior

When customers are within the store, various their perceptions and cognitive factors are influenced by various interior elements including floor patterns, Colors and Shades used, Fragrances, Painting textures, broad and spacious aisles, vertical movement (Staircases, Elevators and Escalator), can all contribute to the atmospherics. Many of the retailers have arrived at the conclusion that musical audio helps people to relax, and hence more probable to purchase more. But the music should make the customers more pleasant, and not irritating. It would be a better experience if the music were related to the goods on sale. Along with climate control, ventilation, and lighting, other aspects of store's utilities include restrooms and hygienic drinking water facilities. The customer is more likely to spend time in the stores, which have these facilities. There are instances, where bigger stores might be mandated to close if their restrooms are unfit for use (Vincent Poupard, 2010). Store fixtures should be only added depending on their usage and aesthetics. All the infrastructure components like piping, structures, entrances, storage areas, and showcasing shelves and tables all affect the ambience. The number, mannerism, and physical outlook of store personnel influence the store atmosphere. Self-service makes a low, impersonal picture while the top of the line merchandise items create a different image than the lesser-quality items. Pricing influences the image in two ways. First, the pricing levels create a cognitive image of the store in the customer's mind. Second, the display of prices forms a critical part of the store atmosphere. Cash counters are located in inconspicuous areas in the premium store, whereas it is in a central location in a discount store location, and the signs are displayed. The store ambience depends on the latest technologies adopted by the store and the modern trends of the infrastructure and fittings used in the construction of the store.

Many signboards will be used in Retail atmospherics to direct the customer to the items

put for sale. Demarcation should be clearly made to differentiate from the other merchandise on the sales floor. All sale items should be marked as a mandate by the retail atmospherics, most of the laws governed by the state have their own means of tackling with the issues in spite of that mandate. In spite of being stated that cleanliness is the basic criteria of retail atmospherics, we could notice unhygienic and unclean environments even in the strictly managed retail stores (Vincent Poupard, 2010). Retail atmospherics directly influence the employees as well. Their responsibility lies in providing the best level of customer service. They should easily locate, and should be aware and have detailed information about the products being sold. Always, employees should wear ID cards bearing their names and roles, should be smiling, and should entertain the customer. Among the various sections of retail atmospherics, the employee area is moving apart from any other section. Megastores like Wal-Mart and Target are not devoting more time for retail atmospherics related employee training. It may be delightful to observe the future trend of this (Vincent Poupard, 2010).

1.3 Store Layout

The interior of the store is constructed based on the specification of the layout of the store. Store layouts are designed for the maximum display and accessibility of the merchandise. They are built to provide an enticing picture of the stores to the customers (Jennifer Van Baren, 2013). The ultimate aim of any retail store is to attract more buyers into it and make them to buy goods from the store. Marketing effort makes customers to visit the store, but the actual purchase by the customer is influenced by the retail atmospherics especially the layout of the store. The layout plays a bigger part in how customers feel about their experiences in the store and their decision of purchase, and if they would like to come back or share good opinion about the store to others. The store needs to have such a layout, which enables to traverse across the stores, browse the items on sale and pay for purchased items without any confusion or any other hurdles, so that it creates a memorable experience to the customers. The objective of the layout design is to free out more space for the free motion of the buyers and the sales personnel with more access to the products. The fundamental types of store layouts that help in achieving the above aspects are the first one is the free flow layout, next is the grid pattern layout and the last is the spine layout

2. LITERATURE REVIEW

Ramakrishnan and Sudharani (2012) argued that India has witnessed significant growth in the organized retail store format and customers prefer shopping in new formats. Customers expect quality service from the store. However, the expectations vary from store to store, or depend on the store format. Srinivasan and Saravanan (2013) studied the financial hurdles faced by the retailers in Tamil Nadu. They argued that the unorganized retail format has been rapidly replaced by the modern organized retail format not only in metro and urban cities, but semi-urban areas. Even though it signifies the development in one hand; another side it severely disturbs the livelihood and survival of unorganized retailers. Though the retailers face many hurdles in the wake of modern retailers, financial challenges occupy a critical place. The study found that low margin of profit, high investments and non-availability of financial resources are

the most important financial challenges faced by the unorganized retail players. Shashikant Rai et al. (2012) argued that the continuous removal of restrictions over investment and frequent entry of foreign retailers offers more options to Indian consumers. The authors studied the diversity and preferences of consumer behaviour in India with those from Allahabad city which fastest growing city of the Uttar Pradesh state of India, They found that in the city, preference of local store is higher than foreign retail store. They compare with the consumers in an advanced city like Bangalore which favouring foreign retail stores more than local stores.

Amine Ayad, (2008) examined the key factors within the purview of store managers for inventory optimization and store output in a big box retail environment. The study found that different stores within same organizations and different sections within same stores deliver different results mainly due to mental factors specifically, critical thinking, functional knowledge, and leadership. The study proposed a practical tools and ideas for inventory optimization and business output in big-box stores. Deepika Jhamb and Ravi Kiran (2012) found that young consumers are more interested to shop from modernized retail outfits as compared to older ones. Consumers prefer modernized retail stores due to its significant product factors like enhanced quality, choice of brands and assortment of merchandise and store features like parking facility, trained sales personnel and complete security. The retention strategies, promotional strategies, growth and improvement strategies, pricing strategies and competitive strategies are the major contributors for the growth of organized retailing and play a crucial role in improving the sales of retail formats. Dineshkumar & Vikkraman (2012) argued that the customer looking for organized retailing is found even in tier-3 cities because of the quality service provided by the new formats. Customers prefer new formats because of Fast Checkout and Time saving, Easy accessible layout, and variety of Mode of Payment.

3. BACKGROUND OF THE STUDY

3.1. Retail Formats

The overall gross look and feel of the store that is experienced by customers, predominantly its look and layout, the stocking range and the approach taken towards pricing, constitutes the outlook of the retailer. The external appearance of the store which is called fascia, is different from format which is sometime by the retailer as an alternative word for the format of the store. The success of a retailer is determined mainly by the format, along with price range and promotion. Among these, the format is always the hardest to get right. Customers are attracted by the good format of the store (creating footfall) and the format also enables presentation of products in a better way to increase the sale of goods. Investors consider the format as a very critical factor that could be leveraged to gain advantage, they target smaller retail players with better formats to provide an environment for the continuous growth of the store (<http://moneyterms.co.uk/retail-format/>).

Mom-and-pop Stores: Customers can buy small collection of merchandise from these stores and are small-scale entities, which are family-owned. They provide their services to smaller pockets of the society and are operated individually. Customer service levels are higher

in these stores, which are predominantly operated by families. The built up area of the store is based on the type of the ownership of the store.

Convenience store: These stores are run near residential areas and are relatively small stores. They are available throughout the week for extended hours daily and sell minimal items of convenience like food items, eggs, milk etc. This store is more suitable for any urgent and immediate buying since it is usually open for long hours, stocking goods on a daily basis;

Department stores: Department stores are business establishments that sell general merchandise. The merchandise consists of a large number of different products and it is usually a larger retail outlet, mostly multi-storeyed. They provide a huge category of both "soft" and "hard goods; similar to the collection offered by specialty stores, which consist of medium to higher quality levels of the merchandise. Along with the general merchandise, some of the stores offer only a selected line of items, which are predefined by those stores depending on consumables, clothes and household related items. They also provide reasonable levels of customer service.

Super markets: The next most common retailing format in India is the supermarket. Super markets are huge, low price and margin, large volume and self-servicing which offer health care, beauty care goods and food items like groceries. Customers are usually found to buy from supermarkets for replenishing sufficient quantity of groceries and other items or they want to buy in large quantities.

Hyper markets: Hyper Markets are a format that combines the features of both super markets and departmental stores. These stores offer different types and large quantities of exclusive goods at lesser profit percentages. The operational overheads of these stores are relatively lesser than other formats. These stores typically have a sales area of above 2500 square meter, and about 38 % minimum of selling space dedicated to non-grocery products like dress materials, jewellery, hard goods etc..

Specialty stores: These are the stores dealing with a particular type of merchandise or single categories of products. Exclusive designs and patterns are the peculiarity of Specialty stores. Because of higher demand among customers and increasing consumer earnings there is tremendous availability of apparel products. Narrow categories of products with in-depth assortments within are typical characteristics of these stores. Specialty stores mostly deal with clothing, jewellery, furniture etc. These also consist of branded stores.

Category killers or Category Specialist: By offering a vast range of assortment in a single product category for more economical rates, a retail player can "kill" that category among the competing players. Certain categories of products, like consumer electronics goods are showcased at the central location of the retail unit and there will be sales representatives to provide proactive suggestions and solutions to the customer. If a category specialist retail store is available in a particular area then the nearby retail format stores are compelled to bring down the prices.

Off-price retailers: These retailers purchase products from manufacturers in off seasons at a higher discount and offer them for sale at less than the prevailing prices. The merchandise may be of uncommon sizes and colors or minor defective ones. They are called factory outlets and are owned by the manufacturing companies.

Catalogue showroom: The Catalogue retailers mostly deal with hard goods such as household, jewellery, and consumer electronics. A customer visiting the catalogue showroom, view the product catalogue and will decide on his purchase item.

Malls: Malls are very famous and very much frequented and largest retail formats in India. They usually have multiple retail shops at a single outlet and they offer almost anything that a person would like to purchase, all within the same complex. They sell everything ranging from clothing and accessory goods to food items or cinemas.

Discount Stores: The Discount stores offer a broad range of products and services with price offers and deep assortment of merchandise at discounted and slashed-rate prices. Normally these retailers offer less fashionable goods. Discount stores sell their goods much below the MRP of a particular product. These types of stores do their business with the left over stock, when a season gets over. To target bargain shoppers Discount stores sell their products at a discounted price.

Street vendors: Street vendors or hawkers are those who sell goods on the sides of streets. They capture the attention of consumers by shouting about their goods. Every city in India has got street vendors, and Mumbai, the business capital has many shopping areas, which consist only many of street vendors. Along with clothing and accessory items, they also sell local food items.

Kiosks: Kiosks are shops that are in the form of a box, and offer cheaper necessities like newspapers, cigarettes, water packets and toffees. They occasionally sell magazines and tea and coffee. They are predominantly present in every street in a city, and serve mostly the local residents.

Warehouse stores: Warehouses are the units that sell low-cost, mostly huge-volume of products stocked on pallets at a lesser price. The members have to pay a fee to these stores;

E-tailers: The consumer can purchase goods online and the purchased items are delivered at the customer place. The drop ship technique is used by the E-tailers. The customers make the payment for the purchased item to the E-tailers and the manufacturer delivers the product directly to the customer. The customers who don't like visiting the retail store and want to enjoy the convenience of buying sitting in their house are targeted by this format. But the customer is exposed to the risks of getting defective products and fraudulent and inappropriate online transactions.

Vending Machines: This is an automatic machine, which provides products when the customer makes the payment by depositing cash in the machine.

Automated Retail: These are automatics box-like equipment located in airports, malls and grocery stores. Payment is made with the plastic cards are normally available round the clock. Good examples of these machines are ZoomShops and Redbox.

Big-box: These are stores, which contain bigger departments, offer huge discounts, provide common goods, and a warehouse for stores.

4. METHODOLOGY

Fundamentally, the study is designed as descriptive research. The phenomenon of study are not controlled or modified. They are just measured and reported to highlight the facts. As descriptive research mainly uses interview or survey technique to collect the data, it is proposed to use a self administered questionnaire. Before research instrument is developed, a thorough review of literature and series of interview was conducted among the subject experts and possible respondents to find the items that need to be measured. Multi item constructs that measures phenomenon are framed. Proper scales such as five point agreeableness likert scales, importance scale and satisfaction scales are used. The sources of data include both primary and secondary. The primary source includes opinions of top management of the respondent retail stores and the opinion of customers visiting retail stores. The secondary source includes reports, standard textbooks, journals, magazines, web sites, newspapers etc. The population consists of retail outlets, which are operating in India. For convenience the sample framework was created limiting samples to the major cities in south India, Bangalore, Chennai, and Coimbatore. Though Indian retail sector has majority of retail stores in unorganized sector, the application of technology was found relevant in the organized retailing. Therefore, sampling framework restricted to retails stores of various product categories of modern format. 300 stores were randomly selected for collecting data. However, only 268 stores responded the survey.

5. ANALYSIS AND DISCUSSIONS

5.1. ANOVA on viewpoint on the retail sector among various store formats.

ANOVA is used to test the difference on viewpoint on the retail sector among the selling units of various formats.

5.1.1. Hypothesis

The null hypothesis is formulated as follows.

Ho1: There is no difference on the viewpoint on retail sector among the various store formats.

The table 5.1 presents the outcome of ANOVA test. The table reveals that there is significant difference on viewpoint among the stores which are classified on the basis of store format that foreign retailers will not be rivals ($F = 2.715, P = 0.025$), Indian retail sector needs protection from the government ($F = 2.254, P = 0.054$), better supply chain and technology are adopted by foreign retailers ($F = 2.494, P = 0.033$), foreign retailers are beneficial to farmers and

suppliers ($F = 4.864, P = 0.003$), and that they are capable of facing the competition ($F = 3.584, P = 0.005$). But there is no significant difference on the other factors. Hence it leads to the rejection of the null hypothesis and arrived at the conclusion that viewpoint on retail sector will differ among various store formats, from the outcome of the test.

Table 5.1: OPINION ON RETAIL SECTOR AMONG VARIOUS STORE FORMATS

ANOVA						
BY FORMAT		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
ECONOMIC CONTRIBUTION	BETWEEN GROUPS	6.565	8	1.085	.735	.633
	WITHIN GROUPS	190.385	136	1.485		
	TOTAL	196.95	144			
HUGE GROWTH POTENTIAL	BETWEEN GROUPS	7.115	7	1.193	.675	.683
	WITHIN GROUPS	224.785	133	1.781		
	TOTAL	231.9	140			
SIMILAR TECHNOLOGY AS FOREIGN PLAYERS	BETWEEN GROUPS	9.245	8	1.544	1.172	.345
	WITHIN GROUPS	168.293	138	1.325		
	TOTAL	177.538	142			
FOREIGN PLAYERS ARE NOT RIVALS	BETWEEN GROUPS	23.573	8	3.933	2.715	0.025
	WITHIN GROUPS	184.325	132	1.463		
	TOTAL	207.898	140			
NEEDED PROTECTION FROM GOVERNMENT	BETWEEN GROUPS	17.885	9	2.993	2.254	0.054
	WITHIN GROUPS	168.965	132	1.342		
	TOTAL	186.85	141			
BETTER SUPPLY CHAIN AND TECHNOLOGY ARE ADOPTED BY FOREIGN PLAYERS	BETWEEN GROUPS	19.664	8	3.285	2.494	0.033
	WITHIN GROUPS	167.585	134	1.331		
	TOTAL	187.249	142			
FOREIGN RETAILERS ARE BENEFICIAL TO SUPPLIERS AND FARMERS	BETWEEN GROUPS	34.793	5	5.785	4.864	0.003
	WITHIN GROUPS	151.615	139	1.194		
	TOTAL	186.408	144			
CAPABLE OF FACING COMPETITORS	BETWEEN GROUPS	25.756	8	4.285	3.584	0.005
	WITHIN GROUPS	152.42	132	1.215		
	TOTAL	178.176	140			
VERY DYNAMIC	BETWEEN GROUPS	9.033	5	1.513	1.114	.372
	WITHIN GROUPS	172.865	136	1.372		
	TOTAL	181.898	141			

5.2. ANOVA on prominence of technology among the various store formats.

ANOVA test is used to investigate the difference on prominence of technology among the various store formats.

5.2.1. Hypothesis

The null hypothesis is formulated as follows.

Ho2: There will be no significant difference on the prominence of technology among the various store formats.

The table 5.2 presents the outcome of the test. The table reveals that there is significant difference on opinion of the importance of Software usage for Customer Relationship Management (CRM) (F=3.571, P=0.005), Usage of Electronic Data Interchange (EDI) (F=2.635, P=0.031), Adoption of Kiosk Technology (F=2.873, P=0.025), RFID (F=2.385, P=.0321), Usage of Plan-o-gram (F=2.282, P=0.04), Usage of Hand Held Computing devices and Portable Data Terminals (PDT) (F=2.815, P=0.023), Shopping Carts & Websites (F=3.024, P=0.015) and Usage of Store Traffic Counters (F=2.435, P=0.041) among the various store formats.

But there is significant difference on viewpoint of the importance of Use of Bar Code Scanning and UPC Codes (P= 0.745), Usage of Electronic Point of Sale (EPOS) (P=0.646), Usage of Digital Signage on store (P=0.425), Usage of Inventory Control Software (P=0.259), Usage of software for Retail Accounting (P=0.236) and Measures of Security & Surveillance (P=0.501) among the various store formats. Hence it leads to the rejection of the null hypothesis and the conclusion arrived at that there is significant difference on viewpoint of the importance of technology among the various store formats from the outcome of the test.

Table 5.2: PROMINENCE OF TECHNOLOGY AMONG VARIOUS STORE FORMATS

ANOVA						
BY FORMAT		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
USE OF BAR CODE SCANNING AND UPC CODES	BETWEEN GROUPS	3.672	8	0.73	0.585	0.745
	WITHIN GROUPS	130.795	133	1.15		
	TOTAL	134.467	141			
SOFTWARE USAGE FOR CUSTOMER RELATIONSHIP MANAGEMENT (CRM)	BETWEEN GROUPS	24.685	7	4.123	3.571	0.005
	WITHIN GROUPS	146.93	135	1.163		
	TOTAL	171.615	142			
USAGE OF ELECTRONIC DATA INTERCHANGE (EDI)	BETWEEN GROUPS	20.392	7	3.3993	2.635	0.031
	WITHIN GROUPS	164.493	134	1.29525		
	TOTAL	184.885	141			
USAGE OF ELECTRONIC POINT OF SALE (EPOS)	BETWEEN GROUPS	5.885	5	0.973	0.687	0.646
	WITHIN GROUPS	178.447	139	1.417		
	TOTAL	184.332	144			
USAGE OF DIGITAL SIGNAGE ON STORE	BETWEEN GROUPS	9.034	7	1.517	1.035	0.425
	WITHIN GROUPS	186.829	135	1.471		
	TOTAL	195.863	142			
USAGE OF INVENTORY CONTROL SOFTWARE	BETWEEN GROUPS	9.623	7	1.615	1.285	0.259
	WITHIN GROUPS	156.996	138	1.245		
	TOTAL	166.619	145			
ADOPTION OF KIOSK TECHNOLOGY	BETWEEN GROUPS	19.795	7	3.289	2.873	0.025
	WITHIN GROUPS	146.045	137	1.163		
	TOTAL	165.84	144			
USAGE OF PLAN-O-GRAM	BETWEEN GROUPS	16.543	7	2.762	2.293	0.07

	WITHIN GROUPS	153.356	133	1.213		
	TOTAL	169.899	140			
USE OF HAND HELD COMPUTING DEVICES AND PORTABLE DATA TERMINALS	BETWEEN GROUPS	21.983	8	3.675	2.815	0.023
	WITHIN GROUPS	166.125	133	1.315		
	TOTAL	188.108	141			

BY FORMAT		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
USAGE OF SOFTWARE FOR RETAIL ACCOUNTING	BETWEEN GROUPS	10.625	8	1.772	1.393	0.236
	WITHIN GROUPS	162.173	134	1.283		
	TOTAL	172.798	142			
RFID	BETWEEN GROUPS	17.873	8	2.983	2.385	0.0321
	WITHIN GROUPS	157.693	136	1.242		
	TOTAL	175.566	144			
USAGE OF STORE TRAFFIC COUNTERS	BETWEEN GROUPS	20.45	7	3.393	2.435	0.041
	WITHIN GROUPS	177.517	135	1.386		
	TOTAL	197.967	142			
MEASURES OF SECURITY AND SURVEILLANCE	BETWEEN GROUPS	7.086	7	1.185	0.885	0.512
	WITHIN GROUPS	167.38	136	1.321		
	TOTAL	174.466	143			
AVAILABILITY OF SHOPPING CARTS AND WEBSITES	BETWEEN GROUPS	23.185	8	3.874	3.024	0.015
	WITHIN GROUPS	162.535	132	1.295		
	TOTAL	185.72	140			

5.3. ANOVA on RFID usage among the various store formats.

ANOVA test is used to investigate the difference in RFID usage among various store formats.

5.3.1. Hypothesis

The null hypothesis is formulated as follows.

Ho3: There is no significant difference in use of RFID among the stores of different formats.

The table 5.3 presents the outcome of the test. There is significant difference in RFID usage in product receipt and processing, Check-out within the store, replenishment at item level and Pallet level store replenishments and check in among the different store formats. But there is no significant difference in Customer utility in the process of embedding RFID in home base applications (P=0.464), among the various store formats. Hence it leads to the rejection of the null hypothesis and conclusion arrived at that there is significant difference in RFID usage among the units of various formats, from the outcome of the test.

Table 5.3: USE OF RFID AMONG VARIOUS STORE FORMATS

ANOVA						
		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
PRODUCT RECEIPT AND PROCESSING	BETWEEN GROUPS	1380.515	7	230.095	3.825	0.006
	WITHIN GROUPS	7662.312	138	60.345		
	TOTAL	9042.827	145			
PALLET LEVEL STORE REPLENISHMENT AND CHECK-IN	BETWEEN GROUPS	1136.295	7	189.395	4.585	0.003
	WITHIN GROUPS	5256.817	136	41.385		
	TOTAL	6393.112	143			
MARKETING TO CUSTOMERS WITHIN STORE(CHECK-OUT & INFORMATION)	BETWEEN GROUPS	1600.181	8	266.685	4.253	0.007
	WITHIN GROUPS	7981.431	136	62.855		
	TOTAL	9581.612	144			
ORDER FILLING & REPLENISHMENT IN-STORE (ITEM LEVEL & CASE LEVEL)	BETWEEN GROUPS	421.085	7	70.193	2.785	0.025
	WITHIN GROUPS	3191.983	135	25.145		
	TOTAL	3613.068	142			
CUSTOMER UTILITY OF EMBEDDED RFID IN HOME BASED APPLICATION	BETWEEN GROUPS	31.495	7	5.256	.973	0.464
	WITHIN GROUPS	691.285	137	5.457		

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	WITHIN GROUPS	691.285	137	5.457		
	TOTAL	722.78	144			

6. SUGGESTIONS AND RECOMMENDATIONS

This emphasizes the critical nature of the current scenario and the necessity for technology implementation in the Indian retail sector. Nevertheless the unorganized nature of the retail business is the major setback in the technology adoption in the retail sector in India. Technology implementation has already been initiated by the organized sector, to deal with the competition from internal as well as the foreign retail players. Organized retailers are continuously enhancing their IT infrastructure to improve the buying environment for the customers, to mitigate operational setbacks and to improve profits. They have also implemented important and strategic technology advances like handheld computing terminals, POS systems and tablet PCs. Also innovations in digital signage, mobility, social engagement, E-retailing and payment processing are implemented across the industry, to provide a competitive edge to the selling. On the contrary, the unorganized retail players are confronted with the setbacks in technology adoption, though they are conscious about the advantages. Their IT implementation

is deterred by return on investments that are not sure, major support expenses, threats of data security, cluttered product portfolios that are haphazard, and issues with connectivity Synergy with telecom providers, technology resellers and device OEMs is one of the efficient methods to improve the footprint of SMB retailing in smaller Indian cities. (Sohini Bagchi, 2012).

7. CONCLUSION

The focus is on the retail sector since it is important to the economy of the nation. Research on the issues in the sector is unavoidable to make it more efficient and contributing in all the facets. Technology adoption helps the entire sector to be more rewarding, in addition to creating competitive advantage. The setbacks encountered by the retail sector in India especially on the technology adoption are the main focus of this study. This thesis analyzed the understanding and advantages and setbacks in RFID technology adoption in the retail sector's operational aspects and also discusses from a consumer perspective, the acceptance of technology. The technology adoption in the retail sector in India is already impacted by the various retail formats.

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