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Impact of Information Technology on Retail Sector in Pakistan

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Abstract

Pakistan's retail business or retail sector has greater opportunity and huge scope or potential growth in the business of retail. Even compared to its south Asian counterparts, Pakistan is behind in terms of development, structure and organization. Awareness through media and overseas employment has created a market for large general stores and supermarkets during the last 25 years. Modern retail businesses require better information technology for efficient operation and management utilizing systems such as Point of Sale (POS), Retail Management Systems (RMS), retail inventory management systems and thus an increased demand for these systems in Pakistan. The purpose of this research project was to explore the potential of information technology (IT) based systems in retail sector in Pakistan. The research was based on interviews and structured surveys to find the answer to the research objectives. The research found that IT penetration in the retail trade is taking place at an astounding rate and while tiny corner street store/village stores may be reluctant to use the electronic registers or POS, all medium and large stores see using information technology making massive inroad into the retail business. The attempt to introduce Revised General Sales Tax (RGST) and better documentation of retail and other businesses will only accelerate the use of modern information technology

Keywords: *POS, RMS, IT, RGST, GDP, VMI*

Introduction

Most supply chains were dependent upon retailers to provide the final vital link with the consumers. Retailers strive to provide competitive, affordable, and timely delivery of goods and services required by consumers.

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In Pakistan, retail sector accounts for 18% of the gross domestic product (GDP). There was also a major contributor to the employment of work force FIAC (2005). In terms of employment benefits or job opportunity the retail business was very important, with 14.8% (4.43 million people) GOP, (2005) of the working population engaged in retail business or increased the satisfaction level in terms of availability of products for customer requirements. The retail trade was undergoing rapid change from the corner grocers to mini supermarkets and hyper marts on the format an international standard. While no one was predicting demise of corner stores any time in near future, metropolitan cities and small towns had seen a considerable changed to supermarkets as well as fast food retailing chains. Availability of cheap information technology and the changes taking place in retail industry such as arrival of medium size retailer, convenience stores and such as the large supermarkets had increased penetration of information technology in the retail sectors (Sekhar, 2010).

Packages of the retail management control a range of variety of the operation management, store operations and customer marketing tasks; (Sudalaimsthu & Devi, 2008). These packages that includes point of sale; operations; control of inventory and pricing; tracking; sales and the promotion; customer satisfaction and management, marketing; employee management; customized reports; and security of information (Salim, 2008). Spread of information technology can be a great help in managing the supply chain. Options such as the collaborative planning forecasting and replenishment (CPFR) as the supply chain function and the Vendor Managed Inventory (VMI) the most useful drives of inventory management require the availability of information technology at retail sector. The project proposes to investigate, how successful these systems had proved in the area of their application and the factors such as

education level of retailers and the size of retail business was play in continued expansion of information technology in the retail sector.

Statement of the Problem

Wider use of information technology applications in retail sector would improve the supply chain performance and improve the profitability of retail sector. The objectives of retail stores was to provide all sorts of store products which gives customer good quality and at a discounted price with time saving use of the information technology applications. The trend was going to be a dynamic and the concentration towards the retail industry was becoming more viable

Delimitations

In this study the use of information technology in retail industry, only think of web based retail. This internet based business was growing fast but was still in infancy in Pakistan. Most websites offer catalog of products available (Makro, 2011) and often the prices too but the business was still in infantile state due to internet security concerns. In any case several research reports had been developed on web based retail systems. The thesis limits itself to information systems which allow automation of retail sales and inventory management systems within the stores. The web based IT systems are not considered. The web based expansion is just an expansion of the store-based IT system and will indeed be helped by the Store based IT systems.

Hypotheses

The retail management systems, point of sale systems, automated tills, bar code reader and many other information technology applications were available to assist small and large retailers. Supply chain management was facilitated by these and similar systems by keeping

stock replenished, avoid stock outs and even permit vendor managed inventory through these systems. The hypotheses for this study project include:

H1: The Small business has a positive significantly impact of Information Technology based on retail systems

H2: The Routine Computer usage has a positive significantly impact of Information Technology based on retail systems

H3: The Staff usage computer routine has a positive significantly impact of Information Technology based on retail system.

H4: The Academic has a positive significantly impact of Information Technology based on retail systems.

H5: The Super market has a positive significantly impact of Information Technology based on retail systems.

H6: The Large high street stores has a positive significantly impact of Information Technology based on retail systems

H7: The Reduced costs 33% of user friendly software availability has a positive significantly impact of Information Technology based on retail systems

H8: The Reduced costs 50% of user friendly software availability has a positive significantly impact of information technology based on retail systems.

Model for the Study

This was believed that awareness, computer literacy, increase in modern retail outlets and more cost effective information technology resources was result in increased use of information technology resources and maximum benefits of use penetration of information technology. The resources of the information technologies that were in turn improved the factors related to improvement in operations and management of retail business. The model suggested to depict these factors was shown below.

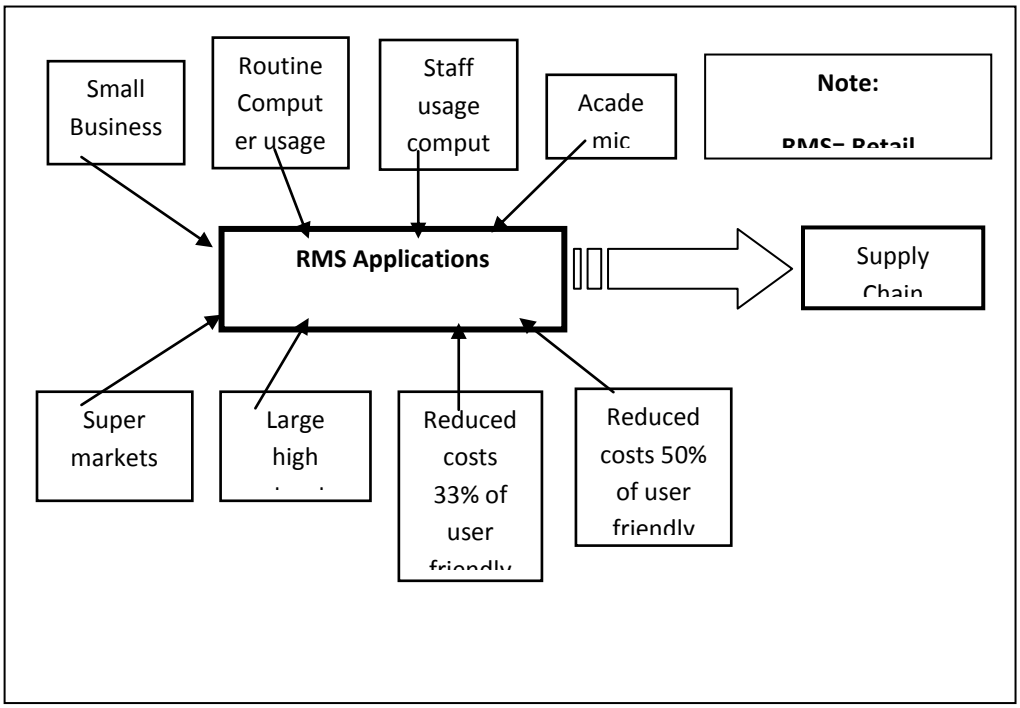

Figure 1.1: Research Model

Scope of the Study

This project proposes to investigate, how successful these systems had proved in the area of their application and the factors such as education level of retailers and the size of retail business was played in continued expansion of information technology in the retail sector. This

study proposes to study the likely applications such as the systems of point of sale and the retail management systems and other electronic data interchange systems to study the potential of these systems in Pakistan retail industry and the benefit the supply chain would receive of application of these systems.

Wooden Shack-Shops

Small wooden shops built of wood and mud or stand alone wooden structure for use of grocery and other items, a common sight in villages and towns.

Co-Ops:

It was the form of the cooperative stores if seen in past the late sixties. The province of Punjab Lahore was the famous city of Pakistan introduced cooperative stores in Lahore; that was new facility introduces new channel market in retail sector industry known as a CO-OPS.

CSD:

Canteen Sores Department super store which were opened for government servant and defense force personal since independence, now also open for civilians which were still functioning in cant were as (Canteen Stores Department).CSD provides the good quality products at the competitive price. CDS provide the best networks in the form of largest and modern chain retail sector in Pakistan. Consumer has purchased bulk of the products without the middle men. CSD managed the inventory and monitor all the stocks regulated and was distributed on consumer demand.CSD management provides the good shopping atmosphere and customers suggestion and observation quickly response.

Automatic Vending machines:

Automatic Vending Machines which was very common aboard and international airports of Pakistan, also now facility in universities or colleges through which consumer can get any drinking and eating stuff present in machine by entering money/coin in it.

Literature review

The field of retailing or retail business is both fascinating and appealing for customer .Retailing consists of business activities for the sale of goods and services to consumers for their personal, family, or house hold use in terms of customer requirement or needs. Retailing is the culmination of value addition process that the supply chains so laboriously add to make their product attractive to the customer. The consumer is now conscious that retailing should not just be a process of purchasing but also the experience, the service and the atmosphere attract the customer to the retail outlets that provide the "customer experience".

The shacks and the corner store just meet the minimum requirement of supplying what customer needs, but the superstores and the market chains are offering customers the value advantage that the customer desires. The modern retailing meets these requirements and the customers are attracted to the larger stores. The size and market of these large stores gives them the power to negotiate an attractive price from their suppliers and the difference can either increase their profit or can be passed on to the consumer to make the stores even more attractive to their customers.

The arrival of general stores, supermarkets, mega-malls is a relatively new phenomenon that has appeared in the last 25 years or so. The arrival of these superstores has made the management of the stores of critical importance to ensure that the inventory is constantly replenished and the customer does not have to spend long time in the queues. This has created a

demand for information systems that can automate most of the store management work. The retail trade has to perform many functions which are discussed below.

Retail Trade

Four Functions of Retailers

a. Retailers to provides the availability product information to the channel members and also give the information consumers these information useful to consumers and channel members.
b. As the suppliers and wholesaler purchased the products and give the offer to consumers, all these collected in the form of assortment of services and products
c. As the retailers that stored in the form of frequently available products and decided prices all the products and finally soled end consumers
d. They conclude transactions and inventory availability with the final consumers.

Functions of Retail Business or Sector

Retail sectors that was the main objective fulfilling the purpose of distributive necessary items which consumers needs, all of these in the form of types of retail outlets, these function in the form of four ways:

- with help of stores
- Selling of house hold items
- Using the email facility
- Machines of automatic vending

All of these known as range and type of merchandise was and these form known as the organization of retail stores or retail shops. These were the basic different function included:

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- Mini retailer and chains system
- In the form of big super chain or super store mart.
- The store of departmental and outlet shop
- The store of the cooperative form in retail business
- Ordering through email

Retailing in Pakistan

In our country, Pakistan the sector of retailing working traditionally in the form of local and mini business and all these business had been uneducated peoples and lack of knowledge business and education, information technology.

In Pakistan, if we see in the past, till late sixties unheard the name of big retail sector institutions such as Imtiaz super store, Metro super store, Naheed Super store, concession super store, Makro super store, Ali super store and Bahawalpur super store. Like the form of store of utility and store of canteen department, these were the form of mini super store markets all these were the independence time of functioning. But these mini stores had given the mutual benefits of the servant of government and the servant of defense respectively. In the past late sixties introduction name of store Cooperative, in the super market chain in the city name was Lahore. In Pakistan retail sector industry the retail sector such the government provides the facility such as utility stores had been opened for general public and the CSD also remains a mutual benefit store. In Pakistan the form of Utility Stores Corporation Pakistan in Lahore given the facilities organized by the chain of CO-OP store, these functions to given the government of Pakistan in the form of utilities stores. We see that in Pakistan the rural areas was the form of traditional shacks system and the villagers peoples open the local retail shops that gives the facilities peoples of villages. In rural area were as in these days maximum all grocery for consumers such

as items, cosmetics, vegetable oil, and ghee, and all other necessary items and the facilities of medicines also available on these shacks, if we see that lat sixties some of the items peoples purchased to these shacks.

In our Pakistan such as the area of urban the facilities of all related retail sector shops available. The Islamabad capital of Pakistan that gave the new dimensions to modern retailing sector in Pakistan was established new sector market. All other cities of Pakistan established new colonies and towns especially organized the retail sector markets such as the area of residentially where the needs of peoples easily fulfilled.

Urban area main retail outlets were:

a) Mini retailers shops or retail outlets
b) Largely retailers/ wholesale retail stores
c) Departmental stores or retail shop
d) The form of Super markets
e) Street vendors of retail business
f) Vending machines for point of sale system
g) Mail order selling system for retiling
h) Stores of Utility for consumers needs
i) Stores of Cooperative shopping outlet
j) General Stores & Medical store
k) Specialty Outlets Stores
l) Day Bazaars (Sunday Markets etc.)

Information Technology for use in retail business

A large variety of cash management system, elaborate point of sale systems, inventory management systems were available in the market. A retail business cannot work without a system for managing cash. . The mechanical cash register only allowed the cash to be placed in appropriate drawers and offer a degree of security through a locking facility. Many small stores still used these machines but as advancement of technology sent the Abacus and other similar counting devices to the museum with the advent of calculator, the mechanical register had also been replaced with electronic cash registers.

Electronic Cash Registers

A new business starved of cash was often forced to make compromises and for a small budget electronic cash registers were often the choice. Electronic cash registers were easy to use can perform basic cash management functions and prepare basic reports and were simple in construction with few components. A typical electronic cash register cost around Rs 32,000-45,000. Cash registers had an expected life of over 10 years and can be upgraded in stages if desired, Waters (2011). While the cost of an electronic cash register was low, it often does only a little more than what a mechanical cash register can do. It does not help in activities such as customer tracking, automated purchasing, generation of historical sales record or inventory management.

Point of Sales (POS) Systems

Good retail points of sale system were much faster than electronic registers and allow fast checkouts. The software provided with the POS system allows inventory position generation and

help in minimizing the chances of a stock out, minimize inventory and keep track of available inventory and also the in transit inventory. It can also simplify and speed up the ordering procedure, POS (2011) .Point of sale systems allow tracking of customer information and help launch programs such as customer loyalty program. A variety of reports customized to the retail store requirements can also be generated by the POS software. Most importantly, a POS system can be upgraded for web based e-business. The POS allow secure card transactions using Payment Card Industry Data Security Standards or PCI DSS to ensure that credit and debit cards information were secure and protected.

Advances in POS systems were adding new potentials to the handling of retail business and development of new software was constantly removing problem areas and adding to the capability of POS systems, Anand (2008). The advantage of POS systems such as ability to track inventory, improved accuracy, more detailed reports were even more enhanced by the ability to gradually add on hardware and software to truly benefit the retail business, Anand (2007). The advances such as multi-channel integration can allow the retail business to handle web-based business using the POS system Anand (2008a).

Retail Management Systems (RMS)

The convenience brought by information technology such as Point of Sale System opens opportunities to application of IT for truly integrating retail business. A variety of RMS were available for managing a single large store of if the company decides to integrate a chain of store for better control of inventory and prices.

The RMS integrates the head office and/or the other branch stores, manage critical business information across regional chains and obtain chain wide centralized control. The RMS system

POS Function Classification	Major Types of POS Procedural Problems	Where Outdated Technology is to Blame
Order Management	▪ Scanning inaccuracy ▪ Price inaccuracy ▪ Promotion offer inaccuracy ▪ Errors in populating orders ▪ Error in order submission	▪ Lack of software updates ▪ Frequent touch-screen failure or outage ▪ Screen, receipt printer, and keyboard malfunction ▪ Lack of 2-D scanning capabilities
Payment Processing	▪ Payment non-acceptance or delays ▪ Payment authorization failure issues ▪ Identity verification failure issues	▪ Lack of payment software upgrades and updates ▪ Magnetic card reader and check scanner malfunction ▪ Lack of pin entry device for payment self-service ▪ Lack of 2-D scanning capabilities for signature capture and returns verification ▪ Poor network management leading to high downtime
Loyalty Programs and Guided Selling	▪ Rewards non-acceptance ▪ Lack of promotion execution ▪ Absence of up-selling and cross-selling procedures	▪ Magnetic card reader and barcode scanner malfunction ▪ Lack of software upgrade that provide promotion updates and guided selling prompts

Source: Aberdeen Group, June 2008

can operate as a stand-alone store application and can also be connected to integrate other stores and the central control (head office.

Figure 2.1:Up-gradation of POS software was necessary to remove problems, (Anand, 2008)

The RMS can thus perform many of the retail management activities much more efficiently than a standalone POS system. The store can gain advantages not considered possible before such as expanding to multi-store operations, reducing POS systems costs, the Product of Control prices, purchasing of the product and inventory management chain-wide by region or store, integrate with ERP systems etc.

Web Based Retail

As Discussed in the introduction, we were limiting our research to store based management system. Many of the larger stores had web base presence and were offering web based retail services. We believe that the web based retail services were a normal progression of the IT application in stores and once the store based IT management system flourish, supply chain applications such as Vendor Managed Inventory (VMI), collaborative Planning, Forecasting and Replenishment (CPFR) and Internet based retail services was simply be an extension of the IT in Stores.

Research-methods

The research study aims to investigate the potential customer of modern information technology systems in retail business. A well defined research design was mandatory since it helps in getting the best possible results. This study was based on both qualitative and quantitative methods. Qualitative researches conducted through personal interviews allow evaluation of perceptions about the retail IT applications. The quantitative surveys conducted through questionnaire such as Likert survey identified the potential of future growth in retail

sector as well as the likely market of IT applications. The research began with literature review to identify the present status and allow the need for additional data. The work included:

- Studying secondary data
- Surveying individuals with ideas and knowledge
- Analyzing and comparing cases & scenarios

Respondents of the study

There were two types of sources available for data collection regarding research purpose i.e. primary and secondary data. In this study, both primary and secondary sources were utilized to complete the study. Secondary data was obtained from the books, journals, articles and internet while primary source was dependent on the questionnaire survey. The study depends on both the sources for theoretical and empirical data according to the requirement. This study aims to examine the impact of information technology on retail sector in Pakistan. The study was based on the retail sector using the information technology. There were 200 respondents in this study including sales peoples, counter staff, sales managers and owners of the retail shops. The research study was conducted on primary data, first hand and the collection questionnaire was designed which include the main independent variable and dependent variables, data had been collected from different locations in Karachi and also out of the city such as Bahawalpur, Lahore, Multan, Islamabad, Sukkar, Ahmad Pur east.

Research Instrument

In addition to informal interviews the data was collected through a survey form shown in Appendix

Sampling Technique

The study of research thesis used convenience sampling technique and purposive sampling approach for research projects. As collecting this data based most often on questionnaire, data were standardized form and allow easy comparison data on the basis on respondent opinion. The data collection approach used for the research was survey method with questionnaire, being the measurement tool.

Sample Size

The research thesis includes the 200 respondents, which includes:

- Retail shops owners
- Sales staff of Retail sectors
- Local Bazaar

Instrument of Data Collection

There are the two types of approach for data collection regarding research purpose i.e. primary is the first hand and secondary data. In this research study, both primary and secondary sources were utilized to complete the study. Secondary data was obtained from the books, journals, articles and internet while primary source was dependent on the questionnaire survey. The study depends on both the sources for theoretical and empirical data according to the requirement. This research aims to examine the potential of modern information technology systems in retail business. There were 200 respondents in this research including retail shops owners, sales staff. This study was conducted on primary data and collection, the questionnaire was designed which include the main variables, data had been collected from different locations in Karachi, such as area of sadder, area of Quaidabad, Landhi, Korangi, Shahfaisal Town, Malir

city, Tariq Road, Bahadarabad, Golimar, Defence, Local Sunday Bazaar, Thursday Bazaar, Friday Bazaar and through phone and getting information from Bahawalpur, Multan, Lahore, Islamabad.

Secondly, questionnaires were filled by selected super stores sales managers such as Makro, Matro, Imtiaz super store and Pak Super store, Zubaida, Moni Super store Bahawalpur , Agha Super Store Data super store and so on.. The close ended questionnaires consist in different type of question regarding the opinion on retail business to select the products. These question focus on the impact of information technology on retail sector in Pakistan. The opinion differs from retail shop to retail shops. These question focus on awareness, computer literacy, and increase in modern retail shops and more cost effective information technology that was be results in increased use of information technology resources.

Data Analysis

The collection of the qualitative data by various sources, or approach in the form of tabulated and further analyzed the data. The following steps used for summarized the data.

1. Editing and coding data.
2. Eliminating unanswered responses.
3. Counting of responses according to it was answered.
4. Eliminating irrelevant alternatives.
5. Explaining the results

Statistical Tool Used

In this research the instruments used for collecting data for this study consisted of questionnaire for surveys and SPSS as testing tool. During the analysis of data in SPSS,

researcher had used The Spearman Rank Order Correlation and was notation as was known as the non-parametric measure of the strength and direction of association that exist between variables measured on at least an ordinal scale.

For this research work, all the store attributes were taken and along with the store attributes the information about all these variables was collected through a questionnaire, which consists of structured questions with quantitative value assigned to Likert Scale. It was denoted by the symbol or this was the Greek letter such as ρ and was pronounced rho. The range of Correlation coefficient was from -1 to +1. The output of the data attached appendix.

There are three types of correlations.

1) Correlation of Positive and Negative

When of the one variable of the goes to same direction, knows as the positive correlation, when one variable move to opposite direction know as negative direction known as negative correlation

2) Correlation of Linear and Non- Linear or Curvilinear

If both variables change at the same ratio, then it known as the linear correlation and when both variables do not change in the form of same ratio, is the curvilinear correlation. For example if the sale and expenditure were in the same direction then it is called linear correlation. When sale and expenditure do not move in the same direction, a curvilinear correlation is appropriate.

3) Correlations of Simple, Partial and Multiple

The two variables have a simple correlation. If the one variable taken as a factor and this variable with respect to that factor variable, then the correlation of the variable, known as a partial correlation and if multiple variables to be taken for correlation, then it is said to be a multiple correlations.

Results

The research studies both the primary and secondary sources were utilized to complete the study that is based on retail business. Secondary data was obtained from the books, journals, articles and internet while primary source was dependent on the questionnaire survey. The researcher depends on both the sources for theoretical and empirical data according to the requirement. This research objective was to examine the potential of modern information technology systems in retail business. During the research were 200 respondents in this research including retail shops owners, sales staff. This study was conducted on primary data and collection, the questionnaire was designed which include the main variables, data had been collected from different locations in Karachi. For data analysis, SPSS was used as the statistical analysis tool. The Spearman Rank Order Correlation that was non-parametric measure of the strength and direction of association that exist between variables measured. The questionnaire developed was used to collect data and the collected data has been analyzed using SPSS.

Interpretation of the Results

The following pages summarize the outcome of the analysis. Altogether eight hypotheses were tested and the observations on each of the hypothesis are as follows:

H1: Routine Computer usage was related to information technology based on retail systems.

Correlation: Table

		Estimated Turnover Per Month
Routine Computer Usage	**Correlation Coefficient**	***.518*** **
	Sig. (2-tailed)	***0.000***
	N	***200***

From the above table showed that there was a positive relationship between Estimated Turnover per Month and the routine computer usage. It means that if the routine computer usage in the retail sector increases Estimated Turnover per month was also increased. The correlation between these two variables found to be moderate because the coefficient value was (0.518). Significant value (0.000) shows that the relationship was significant. In this study observed which retail shops used the computer usage in the business; their efficiency of the performance had increased and the Estimated Turnover per month was also increased.

H2: Staff usage computer routine was related to information technology based retail systems.

Correlation: Table

		Estimated Turnover Per Month
Staff Usage Computer Routine	**Correlation Coefficient**	***0.124***
	Sig. (2-tailed)	***0.081***
	N	***200***

From the above table showed that there was relationship between Estimated Turnover per Month and the staff usage computer routine and the significant value found to be greater than 0.05, the value was not significant.In this study results showed that so many retail shops the staff

had not used the computer usage in the business and had no computer training. In this study results showed that father and son performed the duty in their retail shops. There was low relationship between the variables, but if they used the technology of information in their retail sector then efficiency of the performance had increased and the Estimated Turnover per month was also increased.

H3: Academic was related to information technology based on retail systems.

Correlation: Table

		Estimated Turnover Per Month
Academic	**Correlation Coefficient**	***.212*** **
	Sig. (2-tailed)	***0.003***
	N	***200***

The result of the table showed that there was relationship between Estimated Turnover per Month and the academic. It means that if the staff well educated in the business of retail sector increase Estimated Turnover per month was also increase, and the value of correlation coefficient found 0.212. The value (0.003) showed significant relationship between the variables.

It was observed that education played an important role the in the management of retail shops and as it provided the information related to management of the business and the use of information technology. It is clear that education and familiarity with information technology is positively related to good management as well as inclination to use technological assistance in the management of the retail trade.

H4: Super markets were related to Information Technology based on retail systems.

Correlation: Table

		Estimated Turnover Per Month
Super Market Based on Point of Sale System	**Correlation Coefficient**	***.387*********
	Sig. (2-tailed)	***0.000***
	N	***200***

From the above table showed that there was a relationship between Estimated Turnover per Month and super market based on point of sale systems. It means that if we use the point of sale system in super market then we increase Estimated Turnover per month was also increase with high Ratio because they had relationship which was (0.387). The value (0.000) shows that the relationship was significant. The results showed that information technology had a positive impact on retail sector.

H5: Large high street stores were related to IT based on retail systems

Correlation: Table

		Estimated Turnover Per Month
Store Based of Point of Sale System	**Correlation Coefficient**	***.225*********
	Sig. (2-tailed)	***0.001***
	N	***200***

From the above table showed that there was a relationship between Estimated Turnover per Month and store based of point of sale system. It means that if store based of point of sale

system used in the business of retail sector then we see that increase the Estimated Turnover per month was also increase and they had the relationship which was (0.225). The value (0.001) shows that the relationship was significant.The results showed that information technology had a positive impact on retail sector.

H6: Reduced costs 33% of user friendly software availability was related to IT based on retail systems.

Correlation: Table

		Estimated Turnover Per Month
Impact of Reduced Prices By 33 %	**Correlation Coefficient**	**.264****
	Sig. (2-tailed)	**0.000**
	N	**200**

As the above result of the table showed that there was a relationship between Estimated Turnover per Month and impact of reduced prices by 33%. It means that if cost of the user friendly reduces by 33%, so many retail shop keeper interested in the use of information technology in their business. The result of the table had shown that Estimated Turnover per month relationship which was (0.264) and the value showed significant value (0.000) and its mean that the relationship was significant. The output shows that the IT had positive impact on retail sector in Pakistan.

H7: Reduces costs 50% of user friendly software availability was related to IT based on retail systems.

Correlation: Table 4.1.7

		Estimated Turnover Per Month
Impact of Reduced Prices By 50%	**Correlation Coefficient**	**.530****
	Sig. (2-tailed)	**0.000**
	N	**200**

As the above result of the table showed that there was a strong relationship between Estimated Turnover per Month and impact of reduced prices by 50%. It means that if cost of the user friendly reduces by 50%, I had observed many of the retail shop keeper interested in the use of information technology in their business due to decreased the price of the user friendly software. The result of the table had shown that Estimated Turnover per month had a strong relationship which was (0.530) and the value showed significant value (0.000) and its mean that the our hypothesis was accepted. The analysis shows that information technology had a positive impact on retail sector in Pakistan.

H8: Small business was related to Information Technology based on retail systems.

Correlation: Table

		Estimated Turnover Per Month
Premises area of Retail Outlet	**Correlation Coefficient**	**.832****
	Sig. (2-tailed)	**0.000**
	N	**200**

From the above table showed that there was a positive relationship between Estimated Turnover per Month and Premises area of Retail Outlet. It means that if Premises area of Retail Outlet Increase Estimated Turnover per month was also increase with high Ratio because they had very strong relationship which was (0.832). Significant value (0.000) shows that the relationship was significant.

Empirical Conclusion

S #	**Description**	**R value**	**Sig: Value**	**Outcome**
H1	Routine Computer usage was related to IT based on retail systems.	***0.518****	**0.000**	**Accepted**
H2	Staff usage computer routine was related to IT based on retail systems.	***0.124***	***0.081***	**Inconclusive**
H3	Academic was related to IT based on retail systems	***0.212****	***0.003***	**Accepted**
H4	Super markets were related to IT based on retail systems	***0.387****	***0.000***	**Accepted**
H5	Large high street stores were related to IT based on retail systems	***0.225****	***0.001***	**Accepted**
H6	Reduced costs 33% of user friendly software availability was related to IT based on retail systems.	***0.264****	***0.000***	**Accepted**

H7	Reduces costs 50% of user friendly software availability was related to IT based on retail systems	***0.530*** **	***0.000***	**Accepted**
H8	Small business was related to IT based on retail systems.	**0.832** **	***0.000***	**Accepted**

Summary of findings

The research survey promises huge expansion of information technology in the retail sector. The hypotheses designed to check the factors that were likely to affect increased use of information technology all indicate that the factors were positively related to increased use of information technology resources in retail sector. The small family shop was had a limited use due to limited profit margin and low turn-over but high street stores, general stores and supermarkets was see many fold increase in application of IT based retail management.

Discussion and Conclusions

The interviews and surveys provided very useful information regarding the progress being made in the retail sector in Pakistan. The application of information technology had become possible due to improved computer literacy, reduced prices of electronic appliances and computers. On the other hand, disruptions due to power failures, damage caused to electronic appliances by voltage fluctuations were voltages were often major concerns in choosing voltage sensitive instruments.

The small corner shops had gradually shifted to electronic registers, which can run on small battery back-up support in case of power outages. The general stores and supermarkets had

own generators for lighting and refrigeration requirements and with support from uninterruptible power supply (UPS) can operate most kind of retail management systems. It was apparent that while small shops, small grocers and perishable edible items outlet was for sometime rely on electronic cash registers as the limited of high technology use, the larger stores, general stores and supermarkets had found considerable use of point of sale systems. The benefits of retail management systems were also being recognized and while many of the larger retailers were already equipped with the state of art retail management system, vendor managed inventory capabilities and even on-line business capabilities were available. The expansion of medium size retail outlets, chain retail stores and franchised outlets was allowed the real potential of information technology systems to be exploited.

The large supermarkets and stores were often considered to be expensive. In the early stages the overheads of these stores were considerable. They could not compete with the small family shop that offered low prices while offering minimal customer service and comforts. The larger stores were only now beginning to benefit from economy of scale and able to compete with small stores on prices too. Many larger stores such as Chen-One, Makro, Rajani were now offering prices that were very competitive. It was clear that improved inventory management through effective use of information technology, and the buying power of a chain of stores was transform the retail sector in Pakistan. The information technology resources were playing a critical role in this the retail stores desire to be effective, efficient and competitive.

This study finds that wider application of information technology was change the retail sector practices in Pakistan and also improve the customer service. The after sales service was determine the success and failure of competing retail chains, which would be good for the consumer too.

Limitations of Research

Previous reported by many research projects, the data collection of the nature required in this project was difficult due to the mistrust that exists in our society and very difficult to collect the data about consumer perception. Most retailers assume that this data was being collected by some government agency in the guise of student research project. Lower staff, which was often assigned the task of assisting in the filling of the questionnaire, was often not cleared to answer the questions, different opinion for fear of divulging something that would get him into trouble with the management.

The present discussion regarding the Revised General Sales Tax (RGST) was the most obvious fear. Many respondents were reluctant to declare their identification.

Recommendations

Information technology was most definitely making major role, inroads into the retail sector. In the research thesis the lack of experience of the users was likely to result in many mismatched, difficult to upgrade acquisitions. We felt that a comparison of the available systems, after sales service capabilities of various systems providers was be essential to ensure that the users were not taken for a ride. Government regulations and certification of systems was not only helped the users but was also make sure that the systems purchased by them help them in their business. The retail-management information technology was also being helpful in documenting the retail sector and help the government in collecting taxes such as value added tax/ RGST.

References

Anand, S. (2007), Twenty-First Century Retailer, *Aberdeen Research Group*, 2007

Anand, S. (2008), Upgrading POS Systems in Small to Mid-Size Retail, *Aberdeen Research Group*, 2008.

Anand, S. (2008a), Technology Strategies for Multi-channel Integration, *Aberdeen Research*

Group, 2007

FIAC (2005), Pakistan-Improving the Performance of the Housing, Tourism and Retail Sectors- A donor funded report by *World Bank and International Finance Corporation*, 2005

GOP- Government of Pakistan, *Federal Bureau of Statistics*, 2005

Makro Pakistan Ltd., (2011) Makro website, http://www.makropakwastan.com/

POS- Point of Sale, (2011), *Basics of a Retail POS System, RetailSystems.com*, http://www.retailsystems.com/choosing-a-retail-pos-system.cfm

Salim, M. (2008), Impact of retail management in the growth of Indian economy, *The Journal of Management Awareness*,

Sekhar, S. V. (2008), Applications of electronic data interchange technology in retail business:

advantages and barriers to implementation, *Journal of Business and Retail Management Research* Vol.4, issue.2, ISSN 1751-8202

Sudalaimsthu, S. & Devi, S., (2008), Impact of Retail management in the Growth of Indian Economy, Also available online http://www.fibre2fashion.com/industry-article/free retail-industry-article/impact-of-retail-management-in-the-growth-of-indian

economy/impact-of-retail-management-in-the-growth-of-indian-econom

Waters, S., (2011), *Cash Registers vs. Point of Sale (POS) Systems*, about.com, available online, http://retail.about.com/od/equipmenttechnology/a/regwaster_vs_pos.htm