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Effective Use of Retail Store Management System for Small Retail Store

Gunawardana W.J.D.Y.¹ and Wedasinghe N.²

Abstract: Small retail store owners make a huge commitment to the daily running of customer requirements. The retail sector categorized as retail store, moderate store, clean food store, specialty food and non-food store, and unorganized retail store. This research focuses specifically on effectively use of a small retail store management system. Small retailers face numerous key problems and the researchers highlighted that the main reason for the problems they face is lack of use systematic information system. Nevertheless, some retailers use an existing basic computer application and they are fundamental system. Therefore, focuses on effective management information systems to achieve their business objectives become a fashion. Research has conducted with the exploration in subjective and quantitative basis survey. This study, conducted with twelve structured interviews had with retail store owners covering the Sabaragamuwa Province of Sri Lanka. Research reveals that the basic need of the retail owner is to increase profits by maintaining the retail outlets in a systematic manner even at the rural level. Furthermore, including system features with retrieval of transaction details, effective stock management reminders about stock for effective management, forecast using artificial intelligence on stock management would be the key features to implement an effective retail store management system.

Keywords: *Retail store management system, small retail store, Information systems, small retailers, First-in-First-out method, artificial intelligence*

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I. INTRODUCTION

Many retailers have a tendency to grow the scope of their offerings to integrate considered products outside of their traditional space. In this way, necessities store and retail stores advertise their products, such as hardware, textiles, engine parts, drugs, and electronics.

Nevertheless, the focus of this research is on small retail stores. The objective of every small retail store is to generate revenue by converting visitors into buyers. Apart from considering the relationship between retail owners, manufacturers, and consumers, the focus should be principally on increasing sales. However, many small retailers in Sri Lanka still use the manual method to carry out their retail process, while some small retailers use a simple computerized method to calculate profits, income and expenses. Small retail store owners constantly considering retail products to prevent wastage of goods. The existence of retail stores depends on providing quality products with satisfactory service. One of the basic issues of retail stores is that the goods expire due to unknowing their expiration dates. This is a key factor in consumer decision-making and can lead to a drop in wholesale consumption as well as a loss to many retailers. Retailers sell both packaged and unpackaged goods. Retailers have to pay close attention to their expiration dates as they do not record the expiration dates on unpackaged items. Assessing upcoming purchases and moving on to purchases can help the retailer avoid unnecessarily stockpiling items. They should also be sold quickly before they expire. The above problem can often occur in small retail stores because many small retail stores sell their products under the “First in first out” method. In the First In-First-Out system, retailers do not pay attention to expiration dates as the goods are sold in the order in which they were stored. The purpose of this research is to minimize product waste and maximize profits by minimizing the problems that exist in the small retail system using a computer application.

Most of the retail trade still takes place in physical stores and these small retail outlets in Sri Lanka are of great financial importance and proposals to digitize them should be considered. While the selection is moderate, the part of the physical store is to strengthen adaptations, and modern retail concepts, small retailers must survive, take advantage of digital innovations, and focus on flexibility and modern client exchanges. However, these measures can be seen as a solution to the problem of product waste, focusing more on mismatches in orders and sales without focusing on the root of the problem. That is, ordering more than can be sold. In this manner, it should not attempt to divert consideration from the most issue, but instep should be a measure to play down the harm drained finding a solution to the most problem. The current small retail system, such as the manual method or the outdated computer system, has no expiration date and one of the purposes of this research is to improve it. Using the new computer application as a more appropriate technical solution to the retailer's waste problem, it is possible to indicate that the item is about to expire a week or a few days before it expires. It facilitates all the activities related to the goods by properly storing the goods on the storage racks and including the details of that storage into the system. It is easy to find out which item shows the expiration date of the item as it is displayed with the storage location on the storage rack. Also, estimating future sales and minimizing unnecessary stockpiling can reduce product waste and increase retailer profits. These findings further confirm that the primary purpose of this paper is to reduce waste of goods and increase the profitability of the small retailer.

II. LITERATURE REVIEW

The appropriate area of a retail store contributes significantly to the success of the business in terms of turnover and returns. Considering how important the retail market is, there is a good demand for retail items such as general goods and apparel. High quality retail markets often meet management shortcomings and small retailers try to manage efficiently. As noted here, a researcher who named Westbook examined what constitutes consumer satisfaction and dissatisfaction in a retail store and concludes that it is the distance between the consumer's home and the store. The nature and character of the industries in the city are considered. This is because they affect the number and stability of potential customers and the need for merchandise customers in the area. According to this paper, rural and urban populations determine the number of retail customers. When assessing purchasing power and purchasing the habits of prospective customers, store management should consider the number of people employed, the total wages in the industries located in the area, the average salary, the regularity of payments, and the frequency. Researchers point out that the nature and strength of the competition need to be carefully analyzed to determine the extent to which they are aware of the services they provide, the current and potential demands of customers, and their marketing strategy in general. As society becomes more aware of time and retailers increasingly expand their business definitions, consumers will engage in hassle-free shopping for product and service plans. The emergence of shopping malls and neighborhood shopping malls indicates that this trend has been going on in the United States and Western Europe for many years. In these countries, the traditional location between supplier and consumer goods, products and services, and supplier boundaries are rapidly disappearing. (Okwandu, 1998)

It is clear that the goal of every retailer is to transform visitors into buyers. It appears that retailers need to focus on improving the sales target so as to generate revenue in addition to serving the relationship between manufacturers and consumers. Retailers often need to focus on many important aspects of retail, such as improving communication with customers, building a brand image among the general public, and providing efficient customer service to ensure business inflows. Retailers generally focus on these services to ensure that customers are satisfied. Furthermore, in order to transform visitors into buyers or customers, retailers need to pay more attention to the most important aspects of organized retailers' retail. These important aspects of retail are visual marketing, warehouse design and retail-friendly retail space management. These features not only attract customers to retail stores but also transform them from visitors to buyers. The purpose of visual marketing is to attract customers through the display of effective sales in stores. Visual Affiliate visual marketing manages to attract customers and provide a better engaging experience for customers. Similarly, effective store design is crucial for retailers and influences customer decision. Furthermore, the researchers say that it is important for retailers not to use any retail space and to focus on product display so that the right products can be found in the right space. From the information provided here, it is clear that the existence of any organized retail business in any competitive environment can only take place when retailers are able to attract customers to their stores. Attracting visitors to retail stores and turning them into customers can be done through proper management of the essential elements of retail. The elements of retail are visual marketing, warehouse design and retail space management, and if retailers can effectively manage these essential elements of retail, such as visual marketing, store design and retail space management, they will not only attract visitors This study reveals that they will be transformed into customers.(Sulaiman and Ahmed, 2017)

The Swedish University of Agricultural Sciences coordinated a three-year research project entitled "Reducing Food Waste in Retail Stores - Measurements and their

Impact on the Economy and the Environment". Researchers have studied six stores in the Willis retail chain. The results of this project showed that the meat in a normal shop is wasted. Prevention of meat contamination in grocery stores is a matter of urgency as meat has a high environmental burden and represents a high economic and nutritional value. It also appears that some research has been done on other food spoilage. (Strid and Eriksson, 2013)

The entry of online retailers and the widespread use of digital technology has posed a threat to the business models of small retail stores in India. This is because small retail outlets use technology less. Using a qualitative methodology and a techno-organizational environmental framework, the study explores the challenges facing these small retailers as the main reasons for the government's push for digital payments and increased competition from large retailers and online retailers. Lack of control, cost of technology, low consumer socio-economic background, influence of suppliers, tax and security implications, bureaucracy and lack of confidence in regulatory and external environment are the challenges identified by the researchers in this study. In addition, poor physical and digital infrastructure, inadequate access, and poor reliability and cost of digital technologies hinder the use of digital technology. According to the report, increasing competition from large supermarkets and digitization is rapidly changing the landscape of retail, accelerating the decline and adaptation of small retail stores. Despite the urbanization and supermarket chain and the arrival of online retailers, it has been reported that these small retail outlets still control 98% of the retail market in India. Many retail sales are still taking place in the physical stores manual system and as these small retail outlets in India have great economic significance, the implications of digitization for them should be considered. (AU *et al.*, 2018)

It has been stated that the unorganized retail trade in India consists of small retail outlets called 'Kirana Shops'. More than 70% of the retailers are unaccounted for and

they play a strategic role in Indian retail. In India, there are 12 million small shops spread over 5,000 cities and 600,000 villages. These small retailers maintain low prices, offer products and services tailored to local customers and are easily located in residential areas. Small grocery stores are run by family members. The latest findings reveal that India has the highest retail dens in the world with one retail outlet per 100 people. About 95% of the retailers in the country are small retailers. According to the sales statistics of small retail stores, the significant contribution of small retail stores to the retail sector cannot be underestimated. Previous researches have shown that the expectations of these stores in the changing retail environment are that culture controls the preferences of consumers to shop in specific stores. (Khare, 2013)

In the U.S, retailers face a variety of challenges, including smart shopping, home delivery innovations, conditions for transparency in their food chains on the one hand, and food pollution reduction in their operations on the other. The social, economic, and environmental benefits of food waste strategies for U.S. retail operations, as described here, represent a potential of nearly \$ 20 billion. Retailers have an impact on their operating costs, profits, and the retailer's service provider, and the above factors are key factors in retail success. Significantly, very little research at present has tested the level of operation of retail stores in the food supply chain. Instead, the current research aims to eliminate the sub-optimal effects of retail processes on the availability of inadequate shelves. Here, the prevailing assumption is that enhanced retail and warehousing operations will primarily lead to the level of availability on top shelves, thereby reducing out-of-stock conditions for customers, ultimately contributing to greater profitability at the store and retail organization levels. Researchers have given a different perspective in this article by assessing the incidence of food waste from the point of view of retail and storage operations. That is, the negative effects of retail and warehousing operations are focused on reducing the number of shares in the warehouse. The term "food waste" is used throughout

the paper, and the FAO defines it as "removing food from the food chain that is unfit for consumption or spoiled or expired, mainly economic behavior, poor stock management or neglect". In addition, the FAO addresses the issue of "food loss" as "occurring in the manufacturing and distribution sectors of the food supply chain, and is largely driven by the food production and supply system or its institutional activities." Food loss can be considered an unexpected and unavoidable consequence of supply chain operations, even if the product is considered unfit for consumption if it is better managed throughout the supply chain and especially at the retail level. In the retail industry, food waste is a product that is disposable or recyclable. Thus, food waste at the retail stage, with lower overall margins of food products and increasingly higher operating costs, represents a significant commercial problem, especially at the warehouse level. Another problem for retailers has been identified, with the paper stating that a large number of discarded products are still fit for consumption.(Teller *et al.*, 2018)

It describes the potential for energy efficient energy management to improve the energy efficiency of retail stores. Implementing energy management in retail stores is currently a challenge due to the roles of different stakeholders and different storage features. (Zheng Ma *et al*, 2018)

It is clear that many retail outlets today do not have an adequate understanding of the comprehensive service management system and cannot provide clear and high-quality services to customers due to lack of clear management objectives. Increased customer flexibility is not conducive to the expected economic benefits of retail. It says there are some issues, and some enterprises recognize the importance of comprehensive services. It states that the quality of service cannot always be improved, and that the basic competitiveness of retailers has always been low. Customers cannot make an objective assessment of in-store services, even if they are services provided by various positions in small retail stores. Also, retail stores

do not attach much importance to setting up service outlets and providing retail services as required considering the basic demands of the customers. Lack of service integrity is cited as an important reason for many customer complaints. The retailer's understanding of retail services is still in its infancy, and undeveloped small-scale retailers are a prime example. The service is inefficient because even small retail stores are small in size and do not pay enough attention to processing service items. Some large retail stores will train service officers and use advanced technology to improve the quality of service. In practice, the main reason why the services provided by these small retailers have not yet reached a good service effect is considered to be the lack of utilization of technology. Some retail services run them uninterested and do not focus on upgrading and optimizing. (Lu, 2020)

Archade's shops, such as those of many years ago, are well-known and still trade, such as the Burlington Arcade in London, the Galleria Vittorio Emmanuelle II in Milan and the Arcade in Paris. This research paper states that many of the smaller traditional arcades that currently exist in the traditional way have been demolished and replaced by larger "shops". A number of shops located in one area combine to form a "shopping mall" and the concept has a long history and has benefited all sections of society. The proliferation of large shopping malls outside the city has resulted in small shop owners losing customers. (Mathews, 2018)

Indian retailers are often recognized as the sunrise sector of the economy, say Indian explorers. India's strong growth in the retail sector has been driven by higher savings and investment rates, faster labor force growth and rising consumer spending. Traditional retail markets are now paving the way for new models such as department stores, supermarkets, supermarkets, large showrooms and specialty retail stores. Western-style supermarkets are fast appearing in metro and II-tier cities, introducing incredible shopping prices for Indian small retail customers. The Indian retail industry is also divided into organized and unorganized sectors. The Indian

retail sector is fragmented and most of the business is unorganized retail outlets such as ‘Kirana’ shops, general stores and corner shops run by traditional families. However, it is clear that organized retail is still in its infancy. Over the past decade, despite trying to increase its rate, there is a huge opportunity for future new players in the Indian retail industry. (Jadhav and Karangutkar, 2017)

Inventory in a retail store is the supply of raw materials, the progress of semi-finished goods, and the supply of finished goods. Inventory is defined by researchers as inventory maintained by a business in anticipation of future demand. The amount of inventory that should be dropped to signal that an order must be placed to refill an item. It states that the optimal cycle time is largely controlled by the traditional trade between ordering and retention costs. It also points out that the reorganization point is linked to a promotion-oriented cost-benefit perspective. Optimal policy offers significantly higher returns than cost-based inventory policies, and researchers emphasize the importance of profit-based inventory management. In order for a retail store to work to perfect ordering standards, it must have aggressive inventory management, supply chain operations restructuring, and standards upgrading to the absolute standard. Parametric updates include timely orders, data synchronization, damaged and unusable products, delivery dates, order timelines, and rack-level services. (Sohail and Sheikh, 2018)

III. METHODOLOGY

The purpose of this research paper is to study the existing small retail store management system and to streamline the small retail management system using technology. Data collected from published research papers related to retail management systems facilitated the analysis of existing problems and shortcomings

of the existing system. Finding solutions to existing problems and changing the current small retail management system is essential for small retailers.

Prior to writing the research paper, the data was collected through interviews conducted as a key data collection method using twelve small retailers covering rural areas of the Sabaragamuwa Province. Since there are many small retail store owners, first, a sample of retailers had to be randomly selected. Mainly after creating a questionnaire, Researcher was able to get information through it and interview small retailers and some employees. It became clear that many of them were trading in a manual method and some traders were using a fundamental computer system for accounting process. It was able to reveal a lot about the major problems that small retailers face in running retailers, the losses caused by those problems, the manual methodology they currently use for retailing, and the computer methodology used by some retailers. After confirming and analyzing the new objectives, it was possible to suggest a better solution. It is advisable to find all the details of today's small retail stores and add numerous parts to the system to suit the technology as a solution to the problems of small retail stores. A closer look at what former researchers have said makes that task easier. The new system, which is being developed using technology, will effectively help small retail systems that do not have such an advanced system to increase profits.

After discussing with them all the information needed to design the system that is expected to be improved, it was possible to analyze even possible shortcomings in the future. It was necessary to have an accurate understanding of how the whole process of the current system works. This approach is a further investigation into the identification of variables and thus an indirect way of making new changes. Another reason for choosing this data retrieval method was that it was a cheap and fast data retrieval method. Fixed basic issues such as storage issues on storage racks, sales system issues and expiration issues due to contamination, and stock issues for

effective management. It also focuses on the problems that exist in forecasting using artificial intelligence for stock management. This enhanced system should lead to an easy-to-understand and easy-to-use system.

IV. FINDINGS OF THE STUDY

In order to prepare this research paper, about 10 research papers were consulted and facts were collected from it. After reading those research papers, it became clear what steps need to be taken in the current technological situation. It was realized that small retail stocks can be wasted using technology. Based on the data obtained from the vendors interviewed, their views on areas that need to be improved in the future were summarized. Accordingly, the highest number of comments (75%) were received on product expiration issues. This shows that it needs a solution that utilizes technical knowledge. They commented on systematic accounting, billing and invoice issues (50%), inventory storage (40%) and technology (35%), respectively. According to data analysis from small retailers, the daily loss they incur due to the disposal of expired goods is a matter of some concern. From those reviews, it is clear that the addition of new technological components is more essential for all of this. In order to do that a bar code system can be added to the existing system as a combination of these reviews. Adding to the retailer interview, in addition to the expiration indication part as they requested, the addition of this bar code system will enable them to manage inventory without unnecessary purchases from distributors.

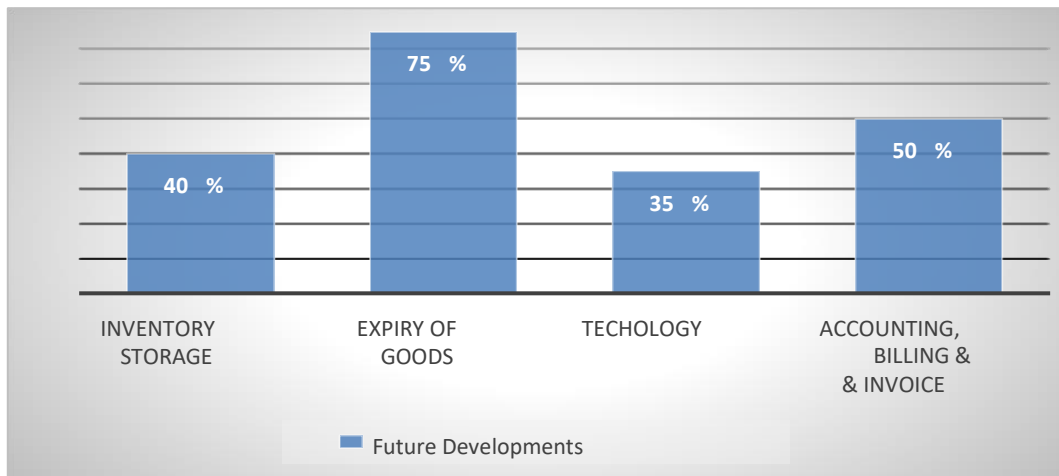


Figure 1. Summary of Analysis

V. DISCUSSION AND RECOMMENDATION

After an in-depth analysis of the content of many research papers, it is possible to think that small retail management systems owned by small retailers are very important. This helps the retailer to minimize the loss of their retail outlets. As a developing country with all that, it must move forward with technology. Accordingly, even small retail stores at the village level should be developed by introducing technological improvements. This can be done by introducing some technology to small retail stores. This is not the case for large scale retail because the system already exists in those large stores. Therefore, this research focuses only on small-scale retail stores. Many rural-level retail stores were surveyed for this research. Because small retailers are daily income earners, the need for development needs to be addressed by small retailers. So, small retailers' ideas for this research paper were very helpful. As retailers traditionally sell goods, that is, the first-in-first-out method, traders have to incur losses due to wastage of goods. Therefore, it should be added to their simple computer system as they are notified when the goods are nearing expiration. Some systems are not systematic. So, it is easy to insert the

place where the goods are stored in the rack if it is to be maintained systematically. Combining it with a bar code system has the potential to be an easy methodology. Adding this to a computerized system may be the best way to increase the orderliness of the product package. This is where increasing the satisfaction of the existing system takes place. The upgraded automation system should have automatic alerts for advance notice of the next expired product. It should be easy to use for older people who do not have IT skills. This effort will offer assistance to avoid the expiration dates will that will emerge when unsuspecting consumers unknowingly purchase something great that will be destroyed close to its expiration date. In addition, vendors can minimize confusion by educating shoppers around the different implications of expiration dates or by embracing a more uniform reviewing framework for food nowadays.

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